

Statement of Qualifications:

A Design-Build Project I-95 Southbound CD Lanes— Rappahannock River Crossing Stafford County/City of Fredericksburg, VA

State Project No.: 0095-111-259 | Federal Project No.: IM-5111(235) | Contract ID Number: C00101595DB94

February 7, 2017



3.2 Letter of Submittal





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CONSTRUCTION COMPANY

February 7, 2017

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

**Re: I-95 Southbound CD Lanes – Rappahannock River Crossing Design-Build
(Contract ID # C00101595DB94)**

Dear Mr. Shah:

Orders Construction Company (Orders) is pleased to submit our Statement of Qualifications for the VDOT I-95 Southbound CD Lanes – Rappahannock River Crossing Design-Build Project. Orders has assembled a strong and efficient Team of highly qualified professionals with exceptional expertise to successfully meet the goals and objectives of this project.

3.2.1/3.2.2 Authorized Representative/Point of Contact

Charles Stokes, Vice President, D-B/Major Pursuits

605 Lithia Road | Wytheville, VA 24382
P. 276-227-0378 | F. 276-223-0134
Email. cstokes@ordersconstruction.com

3.2.3 Principal Officer Information.

Nathaniel R. Orders, President

501 Sixth Avenue | Saint Albans, WV 25177
P. 304.722.4237 | F. 304.722.4230
Email. nate@ordersconstruction.com

3.2.4 Offeror's Structure, Financial Responsibility, and Bonding Approach. Orders Heavy Civil, Inc. is a corporation and will take financial responsibility for this project; we have no liability limitations. A single 100% performance bond and 100% payment bond shall be provided for the total Design-Build contract value.

3.2.5 Full Legal Name of Lead Contractor: Orders Construction Company, Inc.; **Lead Designer:** Volkert, Inc.

3.2.6 Affiliated and Subsidiary Companies. The full legal name and address of all affiliated and/or subsidiary companies are provided on Attachment 3.2.6 in the Appendix.

3.2.7 Certificates Regarding Debarment. Certificates Regarding Debarment for the Upper Tier firms (Attachment 3.2.7 (a)) and the Lower Tier firms (Attachment 3.2.7 (b)) are included in the Appendix.

3.2.8 VDOT Prequalification Certifications. Orders' VDOT prequalification number is 0017, and our status is active and in good standing; the prequalification and certifications are included in the Appendix.

3.2.9 Evidence of Obtaining Bonding. Evidence of a letter of surety is found in the Appendix stating Orders is capable of obtaining a performance and payment bond based on the current estimated design build contract value referenced. This bond will cover the project and any warranty period.

3.2.10 Compliance with Laws and Required Registration. Current SCC Certificates, DPOR licenses, and staff licenses are included in the Appendix.

3.2.11 DBE Commitment. Orders is committed to a 10% DBE participation goal for the entire contract value.

Orders has a long and successful history serving Virginians on numerous projects. As a single, integrated Design-Build Team, we will design and construct the I-95 Southbound CD Lanes and Rappahannock River Crossing Design-Build Project in a manner to ensure the greatest opportunity for success. We will create a transparent working relationship with VDOT and the numerous third party stakeholders to promote trust, confidence, and collaboration. Thank you for the opportunity to submit our Statement of Qualifications.

Respectfully,

Nathaniel R. Orders
President, Orders Construction Company



3.3 Offeror's Team Structure

Per RFQ Instructions, Key Personnel Resume forms are provided in the Appendix.

SECTION 3.3 OFFEROR'S TEAM STRUCTURE



Orders Construction Company, Inc. (Orders) - Offeror, Legal Entity, Lead Contractor. Orders will be responsible for managing the entire project, supervising the construction, and performing major portions of the construction work. Various specialty item subcontractors for: guardrail, signage, and pavement striping will be under direct subcontract to Orders.

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.

The I-95 SB CD Lanes and Rappahannock River Crossing D-B is the type of project we are seasoned constructors in building – a relatively simple, uncomplicated work package adding CD lanes and an independent structure out of traffic as its largest component. It is something that all our team members do every day. We have brought together award-winning partners for this important project.



General Excavation Inc. (GEI) will join Orders as a major subcontractor from their geographically proximate offices in nearby Opal, Virginia just up the road on Route 17. Additional subcontractors for various specialty items such as guardrail, signage, and pavement striping will also be under direct subcontract to Orders. *Volkert and GEI have worked together on numerous projects in Virginia.*



Elite Management Solutions from right here in Fredericksburg brings added value to the team providing their local flavor to public outreach and 3rd party coordination in concert with VDOT.

Volkert Volkert, Inc. – Lead Designer. Volkert is a multidisciplinary transportation engineering and construction management firm with 91 years of experience, established in Virginia since 1957, and a national reputation as a leading provider of design-build best practices for complex transportation infrastructure. This reputation is the result of excellent performance on some of the most complex and regionally significant projects in the country, providing structural and roadway design services for projects up to \$210M.

Volkert will serve as **Lead Designer** from their Springfield, VA office. Design Manager will be responsible for coordinating all of the design disciplines and design activities, roadway and structural design, design QA/QC, and will ensure that Project design is in conformance with Contract Documents. Additionally, Volkert will provide both the lead roadway design engineer and the lead traffic engineer. Staff dedicated to this project are experienced in numerous VDOT D-Bs and complex Level C TMPs including I-495, I-66, I-81, and MLK Extension. *Volkert and Orders have worked on numerous projects together in Virginia.*

Clark Nexsen will join the team bringing the **Lead Structural Engineer** as well as staff to assist Volkert in structural and roadway design support under subcontract to Volkert. Clark Nexsen will also provide the **Responsible Charge Engineer** under subcontract to Orders who will report to the DBPM.

Founded in Virginia in 1920, Clark Nexsen is a full-service architecture, engineering, and planning firm with multiple offices in Virginia. A veteran of the design-build process, they have been the Lead Designer on numerous D-B projects in 17 states including Virginia with total construction cost exceeding \$1.5B. *Clark Nexsen and Orders Construction have worked together on six projects in Virginia.*

The Orders/Volkert Team is comprised of highly qualified individuals and subconsultants extremely knowledgeable in VDOT policies and procedures and experienced with similar VDOT Design-Build projects. The following team of subconsultants has been carefully selected based on their relevant past experience and established working history of project success with VDOT, Orders Construction, Volkert and/or one another. A complete list of team members follows and an organizational chart of the team is included in Section 3.3.2.

ADDITIONAL SUBCONSULTANTS



Geotechnical



**Drainage,
Hydraulics**



Noise Analysis



**Quality Assurance
& Utility Manager**



**ROW,
Permitting,
Survey/SUE**

3.3.1 Identity and Qualifications of Key Personnel

Orders has assembled a team of highly-qualified and experienced individuals, and structured them accordingly for optimal performance. These key staff and design firms come together with a shared past history on successful projects, have established working relationships, and are ready to begin immediately. Our Key Personnel offer extensive road and bridge design and construction experience delivering projects to VDOT standards. *The Orders D-B Team, including Key Personnel, will remain intact for the duration of the Project providing consistent leadership throughout the project.* Our Key Personnel have noteworthy experience on transportation projects similar to their roles on the I-95 SB CD Lanes and Rappahannock River Crossing project. Information regarding their detailed qualifications and experience can be found in their resumes in Attachment 3.3.1 of the Appendix.

| Key Personnel | Reporting Relationships |
|---|--|
| Charlie Stokes Design Build Project Manager | Reports to VDOT Manages DM, QAM, RCE, and CM |
| Dennis Heuer, PE, DBIA Responsible Charge Engineer | Reports to the DBPM Lines of communication to DM, QAM, and CM |
| Avtar Singh, PE, CCM, PMP, DBIA Quality Assurance Manager | Reports to the DBPM Lines of communication to VDOT, CM, and QC Manager |
| Keith Weakley, PE, DBIA Design Manager | Reports to the DBPM Lines of communication to VDOT, RCE, and CM |
| Earl Adwell Construction Manager | Reports to the DBPM Lines of communication to VDOT, RCE, and DM |
| Al Patel, PE, DBIA Lead Structural Engineer | Reports to the DM Lines of communication to RCE and respective design disciplines |

3.3.2 ORGANIZATIONAL CHART

The Orders Design-Build Team Organizational Chart on Page 5 identifies Key Personnel members and depicts the reporting structure of the Orders Team and those personnel who will coordinate with each other integrating design and construction activities relative to respective Project elements. Our team's Organizational Chart illustrates the interconnection and collaborative relationships among our design team, construction team and support team. Solid lines identify the direct lines of reporting relationships of our team members from the DBPM to the Design, Construction and QA teams. Dashed lines represent indirect reporting relationships and obligations/communications to the DBPM and team members.

The Organizational Chart also includes VDOT, third-party stakeholders, and utilities; all integral partners in the successful delivery of the Project. We recognize the importance of inclusivity of the stakeholders and utilities throughout the development of the Project. Existing relationships that team members currently hold with many of the third-party stakeholders and numerous utility companies involved will contribute to successful delivery.

A clear and independent separation of QA and QC for construction activities has also been shown. Separate AMRL-certified QA and QC labs will be used. Our Quality (both QA and QC) staff's responsibilities go beyond keeping records and testing materials. Their roles include the traditional duties of a VDOT inspector and providing

definitive direction to address non-compliance/non-conformance. Our goal regarding QA/QC is to minimize or eliminate non-compliance issues prior to their occurrence. Furthermore, the reporting structure for Quality Assurance shows a clear separation from the Construction Quality Control and field/laboratory testing duties.

DESIGN AND CONSTRUCTION TEAM INTERACTION

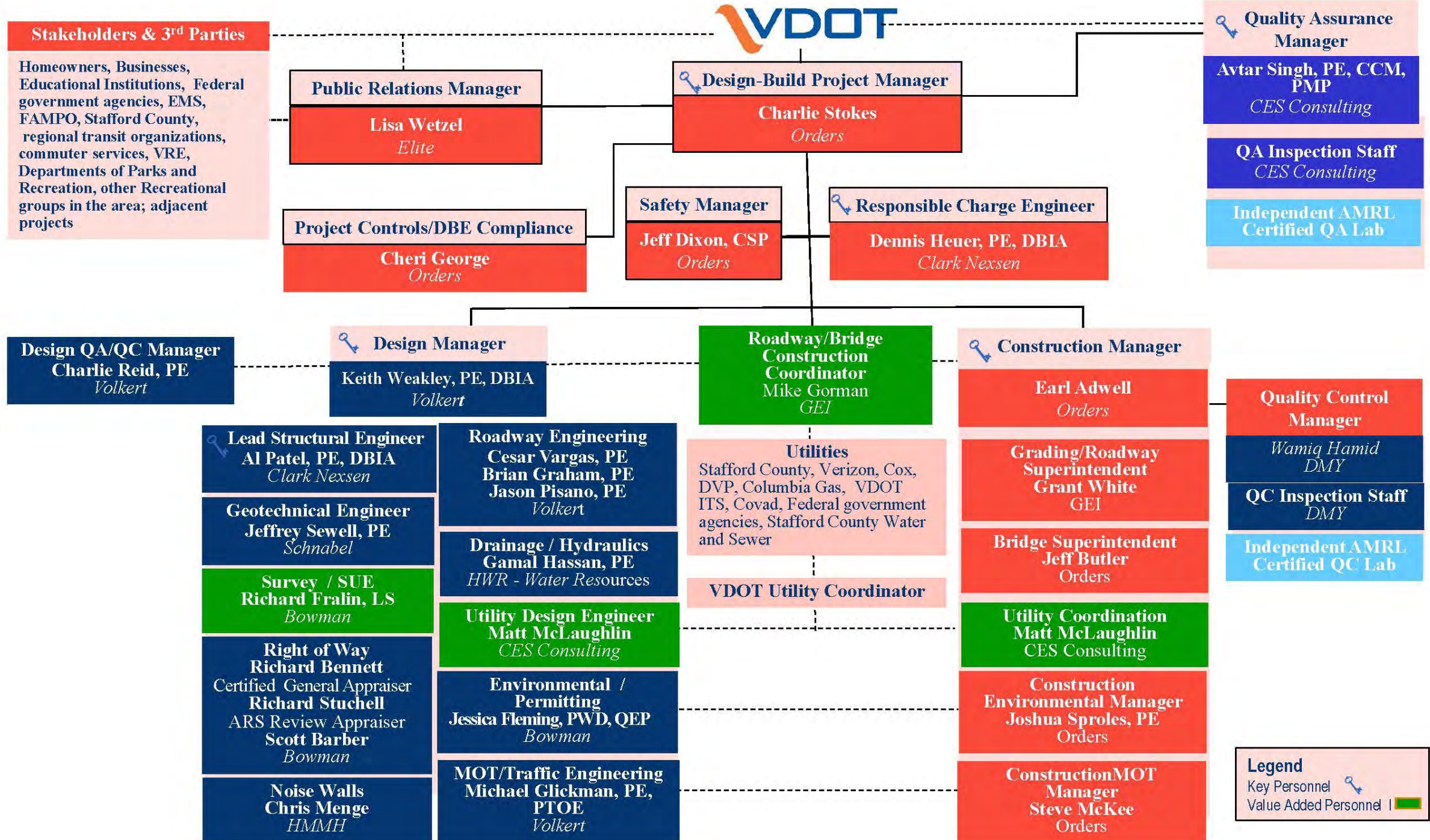
The Orders Team structure integrates the design, construction, QA/QC, right-of-way, utility, permitting, safety, third party coordination, and public relations disciplines into a united, cohesive project team effort from the onset of contract award through delivery. Regular team meetings promote issue discussion and resolution both internally and externally. Open, frequent communications promote collaboration, which helps to expedite Project delivery and minimizes non-conformance issues. D-B projects by their very nature require extensive coordination and integration among the various disciplines involved in design and construction and their ultimate incorporation into a successful Project delivery. Our added-value Roadway/Bridge Construction Coordinator, Mike Gorman (GEI) further enhances this integrated delivery. Designers and constructors both will play an integral role in constructability reviews and field changes (as necessary); constructors will be participating with designers during the design phase and these same designers will stay unified with the constructors until final delivery. Additionally, our Organizational Chart shows our design and construction team interaction clearly with lines of communication firmly established between design and construction task managers.

Our team approach also includes partnering with VDOT, the numerous stakeholders, and utilities (as well as coordinating with the considerable adjacent projects in the vicinity) to collectively design and build this Project to their utmost satisfaction. Our PR Manager, Lisa Wetzel, will assist the DBPM as well as VDOT in this area.

ADDED-VALUE PERSONNEL

The Orders Team has added-value personnel committed throughout the life of the Project in the critical roles of Utility Coordinator, Construction Environmental Manager, and the previously mentioned Roadway/Bridge Construction Coordinator to provide direct attention to these respective elements. Additional bench-strength is inherent in our team structure with two qualified designers on board – Volkert as Lead Designer will provide structural design support to the Clark Nexsen Lead Structural Engineer as will Clark Nexsen roadway engineers provide support to Volkert roadway designers. Similarly, GEI will provide construction boots on the ground to Lead Contractor, Orders.

| Other Personnel | Added-Value Benefits |
|--|--|
| <p>Mike Gorman Roadway/Bridge Construction Coordinator <i>Reports to DBPM</i></p> | <p>Mike will coordinate with the respective designers and their construction counterparts as well as the RCE to ensure that they are aligned throughout project development. Mike has been managing VDOT and other jurisdictions’ roadway and bridge projects for many years. He is particularly attuned to the scheduling and coordination of multiple project elements specifically to advance construction on those elements for which early design packages have been developed.</p> |
| <p>Matt McLaughlin, CCM Utility Design and Coordination <i>Reports to DM and CM</i></p> | <p>Matt has over 30 years of progressive utility coordination and management experience. His expertise is unique in that he practices utility location design as well as managerial support to utility construction field operations for relocation efforts ensuring compliance with safety and environmental laws and regulations, monitoring/recording the horizontal/vertical location of relocated utility facilities.</p> |
| <p>Josh Sproles, PE Construction Environmental Manager <i>Reports to the CM</i></p> | <p>Josh Sproles (Orders) will serve in this specific role to coordinate directly with the Environmental/Permitting Task Leader on the design side, Jessica Fleming, PWD, QEP. Josh has served as DBPM Charlie Stokes’ right-hand man for the last 5 years as a Project Manager overseeing/managing VDOT construction projects, managing superintendents, scheduling, and coordinating with VDOT.</p> |
| <p>Mike Glickman, PE, PTOE MOT/Traffic Engineering Manager <i>Reports to the DM</i></p> | <p>Mike has over 20 years conducting traffic analyses and computer modeling associated with traffic impact studies, roadway design projects, and TMP/MOTs. He developed each of the complex Type C TMPs for VDOT D-B projects on I-495 Shoulder Extension, I-66 Rehabilitation, Elm Avenue over I-581, and the most recently completed MLK Extension on the MidTown Tunnel Project.</p> |



An aerial photograph of a city, showing a complex network of roads and buildings. A semi-transparent blue horizontal bar is overlaid across the middle of the image, containing the section title. The text is white and bold.

3.4 Experience of Offeror's Team

Per RFQ Instructions, Lead Contractor and Designer Work History forms are provided in the Appendix.

SECTION 3.4 EXPERIENCE OF OFFEROR'S TEAM

The Orders Design-Build 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 to provide the best team for this project.

The I-95 SB CD Lanes and Rappahannock River Crossing DB is in the wheelhouse of the type of project Orders' employees tackle every day.

Orders has completed numerous projects of similar scope and complexity to this VDOT project.

LEAD CONTRACTOR – ORDERS CONSTRUCTION COMPANY. 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. Our projects demonstrate experience with a similar foundation system; founded in rock (Clifton Forge) and with repetitive superstructure elements and tall piers (Avens Bridge - drilled shafts in 60 feet of water).

Orders has additional extensive experience with roadway, bridge and interchange work, including the following project examples:

Route 60 Main Street Bridge Replacement Design-Build, Clifton Forge, VA – Orders was the Lead Contractor and Clark Nexsen, Lead Designer, on this VDOT D-B project to replace the bridge in downtown Clifton Forge. This project involved a very high level of complexity and risk; the bridge was literally tucked in between existing businesses and historic buildings with only inches of clearance. Challenges included very limited construction access; preliminary design

requiring drilled shaft foundation into rock; unmapped on-site utilities installed in the late 1800's; and maintenance of pedestrian access to businesses during construction. Success was achieved by attention to detail and planning by the Orders/Clark Nexsen D-B Team, innovative design with built-in flexibility, and a high level of partnering with VDOT and the town.

This success formed the basis of Orders relationship with Clark Nexsen; one based on mutual respect and emphasis on delivering a high quality project through collaboration. Through collaborating on this D-B, our personnel and companies have developed a rapport with each other, and have extreme confidence that our Team will meet VDOT's requirements for delivering this D-B project "on-time" and "on-budget" as well. The design-build project in Clifton Forge earned numerous accolades and awards:

- **ACEC (Virginia Chapter) 2014 Honor Award as Design Build Transportation Project of the Year**
- **APWA (Mid-Atlantic) 2014 Project of the Year**
- **Chosen as a key presentation for Design-Build Transportation Projects at the 2014 National DBIA Transportation Conference. Presentation team: VDOT, Orders, and Clark Nexsen.**

What made this project award-winning and relevant to this I-95 and Rappahannock River Crossing project was the degree of difficulty associated with successful planning and executing the construction of a 180' long, three-span prestressed concrete bridge in congested areas with limited space and the ability to partner among the Contractor, VDOT and community to deliver a project 2 months ahead of schedule and 42% under budget without any change orders.

Route 614 over Cranes Nest River, Lake Flannagan, Dickenson County, VA – This VDOT bridge project over Lake Flannagan is 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.

I-81 Exit 7 Interchange, Washington Co., VA. Orders served as General Contractor for extensive interchange renovations in one of I-81's busiest locations that

included grading, rock excavation, drainage, utility relocations, retaining walls, bridge widening, curb and gutter and traffic signals.

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 D-B 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 D-B Contractor for many clients.

GENERAL EXCAVATION INC. (GEI), our major subcontractor, also has a substantial portfolio of successful projects of similar scope and complexity. These recent projects have included heavy traffic and numerous stakeholders:

- **I-81 Widening, Exit 310 at Route 37, Winchester, VA** (Designed by Volkert and currently under construction – ahead of schedule.)
- **Linton Hall Road and Route 29/I-66 Interchange, Gainesville, VA**
- **Route 250 / MacIntire Road Intersection, Charlottesville, VA**

LEAD DESIGNER - VOLKERT, INC. Volkert provided design (both roadway and structural) on numerous VDOT design build projects that include significant roles in the following notable recent projects:

- **Martin Luther King Expressway Extension for the Elizabeth River Crossing PPTA Project, Portsmouth, Virginia, VDOT** – Civil, roadway, and structural design (\$210M)
- **I-66 Rehabilitation, Fairfax, Virginia, VDOT Northern Virginia District** – Lead designer, quality assurance management, and public relations (\$43M)
- **I-495 Northern Shoulder Lane Use, Fairfax County, VA, VDOT** – Civil and roadway design, TMP/traffic engineering, ITS infrastructure, and QA inspection services (\$15M)

- **Elm Avenue / I-581 Interchange, Roanoke, VA, VDOT** -Structural design, TMP/traffic engineering (\$20M)
- **Rolling Road / Franconia-Springfield Parkway Interchange Improvements, Fairfax County, VA, VDOT** – Structural design, TMP and quality assurance (\$9.8M)

Because Volkert’s personnel, notably the Design Manager, Keith Weakley, PE, is a structural and roadway design engineer, he will be working alongside Al Patel, PE, the Lead Structural Engineer, in the overall management and performance on this project. Both men are seasoned professionals with vast experience in Virginia, both certified DBIA professionals and both excellent technical managers of support staff.

LEAD STRUCTURAL ENGINEER – Clark Nexsen’s relationship with Orders Construction began with the **Route 60 Main Street Bridge Replacement D-B, Clifton Forge, VA**. As Lead Designer, Clark Nexsen leveraged their thorough understanding of innovative bridge design and construction means and methods to mitigate the project’s high degree of complexity and risk as noted above while delivering early and under budget to the acceptance of VDOT and citizenry alike.

Clark Nexsen has since collaborated with Orders on five (5) additional projects in Virginia, providing bridge engineering support during construction which included both interstate and river crossings. By jointly developing engineered solutions to construction problems, Clark Nexsen is fully integrated with the Orders means, methods, sequence of construction, and constructability enhancements to their projects.

KEYS TO SUCCESS: Individually each team member firm is strong and reputable with relevant experience. Together, our Team is exceptional as our interdependent relationships will allow us to find innovative solutions to issues as they arise in the project. Our design-build teaming arrangement promotes collaborative discovery of design alternatives that could better serve VDOT’s project goals and budget concerns. The Team Key Personnel have extensive experience in the design, construction and quality inspection of VDOT projects. As further evidence of our qualifications, we present the following projects on which team members have previously worked together.

| Project Name and Location | Orders Team Members | | | | | | Relevant Projects and Mitigated Risks | | | | |
|---|---------------------|-----|---------|--------------|----------|-----|---------------------------------------|-------------|----------------------------|---------------------------|-----------------------------|
| | Orders | GEI | Volkert | Clark Nexsen | Schnabel | HWR | CES | Complex MOT | Multiple Adjacent Projects | Effective Public Outreach | Complex Utility Relocations |
| Route 64 Bridge over Maury River, Rockbridge Co., VA | ■ | | | ■ | | | | ■ | | ■ | |
| Route 60 Main Street Bridge Replacement, Clifton Forge, VA | ■ | | | ■ | ■ | ■ | | ■ | | ■ | |
| Route 614 over Cranes Nest River, Lake Flannagan, Dickenson County, VA | ■ | | ■ | ■ | | | | ■ | | ■ | ■ |
| I-495 NB Shoulder Extension D-B, Fairfax County, VA | | | ■ | | ■ | | ■ | ■ | ■ | ■ | |
| I-81 Widening,, Exit 310 at Route 37, Winchester, VA | | ■ | ■ | ■ | | | | ■ | | ■ | |
| I-66 Rehabilitation D-B, Fairfax County, VA | | | ■ | | ■ | | ■ | ■ | ■ | ■ | ■ |
| Route 670 Avens Bridge Replacement over South Holston Lake, Washington County, VA | ■ | | | ■ | | | | | | ■ | ■ |
| I-581 over Elm Avenue D-B, Roanoke, VA | | | ■ | | | | | ■ | | ■ | ■ |
| Route 677 over CSX RR, Albemarle County, VA | ■ | | ■ | | | | | | | ■ | ■ |
| Martin Luther King Expressway Extension D-B Portsmouth, VA | | | ■ | | ■ | | ■ | ■ | ■ | ■ | ■ |
| Route 250 / MacIntire Road Intersection, Charlottesville, VA | | ■ | | | ■ | | | ■ | ■ | ■ | |
| Route 220 Business, Franklin Co, VA | ■ | | ■ | ■ | | | | ■ | | ■ | ■ |

LESSONS LEARNED

Through our collective experience having completed numerous design bid build and D-B transportation projects, we have learned many valuable lessons which are relevant to this project:

- Close coordination with VDOT’s Communications office is critical, as the D-B outreach personnel act as an extension of the VDOT staff.
- A well informed public through media and television during construction is critical and helps reduce congestion and traffic delays, and improves safety during construction.
- Designer(s) working closely with the construction manager to determine actual construction space requirements ensures smooth phasing of construction.
- MOT greatly influences construction cost and schedule; therefore, it must be considered earlier in the design phase to facilitate schedule and construction phasing that results in a cost-effective solution.
- Timely coordination and notification to utility owners during the design phase and the incorporation of relocations into construction plans will avoid costly delays and change orders.
- Regular utility partnering meetings during construction are essential to a project’s success.
- An up-front meeting between the D-B team and all VDOT review disciplines, to identify applicable standards and procedures, benefits the review process and schedule.

3.4.1 Work History Forms

Work History Forms for the Lead Contractor (Attachments 3.4.1(a)) and the Lead Designer (Attachments 3.4.1(b)) are included in the Appendix.

An aerial photograph of a city, likely Los Angeles, showing a complex network of roads and buildings. A semi-transparent blue rectangular box is overlaid on the left side of the image, containing the text '3.5 Project Risks' in white. The overall image has a slightly faded, greenish-tinted appearance.

3.5 Project Risks

SECTION 3.5 PROJECT RISKS

The Orders Team has carefully reviewed all RFQ package documents and performed numerous site visits to understand existing conditions and constraints in order to avoid and reduce impacts from project risks. Our team is committed to taking proprietorship of each risk factor and establishing strategies for mitigation. We thoroughly reviewed potential risk factors, including geometric design, and have identified the following risk factors and associated mitigation as the most critical to the success of this project: Maintenance of Traffic; Public Relations/3rd Party Stakeholder Coordination; Utilities Coordination and Overhead Powerlines.

Risk No. 1 – Maintenance of Traffic

Risk Identification: Maintenance of Traffic (MOT) is a priority for this project. Failure to implement an effective Traffic Control Plan in the Transportation Management Plan (TMP) and safe work zone access will contribute to congestion and restrict delivery of materials. Any disruption to material delivery and work operations negatively impacts safety and public perception, as well as adversely impacting schedule.

Why this Risk is Critical: Maintaining a safe and efficient transportation network is imperative in this region, and those concerns are heightened for a major high volume corridor such as I-95. The I-95 corridor is one of the most congested in the nation, providing a vital north-south transportation link for local, regional, and interstate travelers. Minor incidents can significantly impact high volume corridors, resulting in severe traffic events taking hours to dissipate. This causes inconvenience to the public as well as construction operations, disrupting material deliveries and contractor access to the work zone. Access to the work zone is particularly important to public and contractor safety. Given that the project may require the use of overhauls and/or borrow, increasing the number of construction trucks delivering materials to the work zone; slow moving construction vehicles create a speed differential with roadway traffic if not properly addressed. Additionally, the two bicycle and pedestrian trails along both sides of the river must be considered for safe multimodal access. An effective TMP that minimizes traffic disruptions and safely integrates travelers and work crews will be critical to the project's success.

Risk Impact to the Project: The TMP/MOT risk presented with construction improvements on this heavily traveled highway results in the following impacts to the safe and efficient maintenance of traffic in the corridor:

- Narrowing lanes and shoulders; shifting lane alignments; frequent changes to traffic patterns; and construction activities within the corridor reduce capacity and increase distractions to motorists, causing congestion and increasing incidents. Travel delays impact area businesses, residents, project stakeholders, interstate commerce, thru travelers, and will likely generate poor public perception.
- The widening or replacement of existing bridges requires work immediately adjacent to or over existing traffic flows. Bridge locations may have limited space to maintain traffic while carrying out work. Larger work spaces are often required to accommodate larger construction equipment, which narrows existing travel lanes and requires short-term slowing of traffic using Rolling Road Blocks to accommodate critical lifts.
 - Access to the work zone in the median for construction resources will come from the passing (left) lane on the I-95 bridge and/or from the right lane during construction of the CD lanes which violates driver expectations as well as limiting space for adequate acceleration and deceleration lanes at access points.
 - Additional trucks for transporting overhauls, borrow or excess soils will be required.
- Reconstruction of existing travel lanes requires traffic to be shifted entirely off the existing pavement. This may require additional pavement (temporary or permanent) to accommodate travel lanes and barrier service.

- Geotechnical ramifications must be investigated early. They potentially impact MOT, safety, cost, and schedule and may include slope stability, embankment settlement, potentially unsuitable subgrade materials, and acidic soils.

Mitigation Strategies: Mitigation strategies commence with developing a comprehensive TMP focusing on communication, traffic control, incident management, and special attention to construction staging and access. Coordination with the Regional Traffic Operations Center and VDOT’s Fredericksburg District Office will be necessary to ensure consistent messages to all stakeholders seeking transit information. Positive mitigation measures include:

- Dynamic messaging signs to provide advance warning and current work zone activities
- Using media outlets, PSAs
- Speakers Bureau for local organization outreach
- Providing current information for construction progress, work zone changes, and incident reports
- Providing a communication hotline for the public to express concerns during construction
- Commuter lot windshield flyers as needed to alert commuters to upcoming changes
- Strict compliance with Limitation of Work Hour restrictions

Incident Management Plan. An effective Incident Management Plan (IMP) provides accommodations for unexpected/unplanned events such as disabled vehicles, accidents, weather/snow removal and other events. To develop this, we will initiate a partnership with VDOT, Stafford County, the City of Fredericksburg, and first responders to review and comment on the IMP, construction schedules, incident response plans, and changing traffic patterns before implementation. We will develop an IMP to deal with such events, albeit outside of our control, providing the following:

- Active contacts for emergency notification of an incident by the TOC and Fredericksburg District Office
 - Coordination with VDOT Regional TOCs (e.g., to provide advance notification to the traveling public in conjunction with ‘Reach the Beach’ and/or VDOT 511 System)
- Incorporation of any limitations on hours stipulated by VDOT, Stafford County, and local jurisdictions
- Law enforcement, fire, and rescue access to work zones during incidents
- Coordination with first responders and emergency detour routes
- Pre-planned messages for various types of incidents for portable Dynamic Message Signs (DMS)
- Comprehensive on-call towing service provided by Team to quickly respond to disabled vehicles

The TMP will incorporate mitigation tactics shared with Construction Staging and Access risk mitigation, including: strategic work zone access points and staging areas, internal haul roads, and acceleration and deceleration lanes. Specific MOT challenges that will require respective mitigation measures include:

MOT Grade Differential: Raising the grade of I-95 by approximately 2 feet at the crossing of Route 17 in the Fredericksburg District will create major challenges to safely maintain traffic during construction of this critical improvement. Challenges will include:

- The proposed reconstruction of existing travel lanes will require shifting traffic entirely off of the existing pavement; however, the proposed widening is not of sufficient width to accommodate travel lanes and an adequate shoulder for placement of barrier service.
- Maintaining traffic on the ramps during construction will also be critical. Proposed design will be coordinated with the TMP to maximize efficiency and safety.

Temporary Drainage: Temporary drainage methods may be required during construction, such as construction/installation of underdrains/trenching. Drainage spread must be analyzed and mitigated as needed.

Roadway Geometry/Operational Quality & Safety: The existing I-95 Southbound Bridge over Route 17 was constructed in 1963 and has been identified as structurally deficient. **We believe there is risk for the project to be perceived as a failure if the option to replace the bridge under this contract is not exercised.** The options outlined in the RFQ include replacing the bridge and raising the profile of I-95 Southbound accordingly, or retaining the existing bridge and lowering Route 17. The RFQ indicates Route 17 should be lowered by excavating approximately 1'-9". To maintain traffic on Route 17 with this option, the excavation will need to be staged and work restricted to one lane in each direction at a time.

Construction Staging & Access: Significant planning and management are necessary to ensure access is maintained. The Team will locate staging areas and work zone access points strategically to minimize impacts to traffic along the corridor; including pre-staging in off hours. Strategic consideration will be given to minimize access points and develop internal haul roads for the movement of material on-site; for example, creating a deceleration lane behind a jersey barrier to prevent conflicts with the travelling public. Access points will be well signed, delineated, and lighted for construction driver awareness, with adequate acceleration/deceleration lanes to ensure maximum safety for travelers interacting with slower moving construction vehicles. Our Team's construction schedule will optimize the use of access points and material deliveries to minimize disruptions to traffic, potentially restricting deliveries to off-peak hours.

Shoulder Strengthening: The condition and composition of the shoulder pavements must be thoroughly investigated and analyzed to determine if the existing shoulders can safely carry temporary traffic diversions. Determining the necessary rehabilitation to support temporary traffic diversions is critical in developing construction sequencing that minimizes impact to traffic flows. We will perform a thorough review of the pavement history, review the VDOT subsurface exploration data and develop an investigation plan that includes pavement condition surveys, Falling Weight Deflectometer, Ground Penetrating Radar, and soil testing to gain the necessary data to perform our analysis and reduce the risk of unanticipated pavement performance.

Detours: Detours must be carefully planned as needed. Route 17 may particularly present challenges with replacement of the bridge and raising the grade of I-95 by approximately two feet. During operations that require new bridge structure beams to be placed over Route 17, traffic must be diverted for the safety of the traveling public and construction crews. Coordination between VDOT and the contractor will be imperative.

Coordination with Nearby Projects: The I-95 corridor is among the most heavily traveled networks on the East Coast, making coordination with nearby projects crucial to minimize disruptions. At present, nearby projects that may be underway concurrently with this project include two projects on US Route 1 with projected 2020 construction start dates: a bridge replacement over Potomac Creek, and a turn lane near the Prince William County line may impact traffic patterns, including planning of detours.

Our team and stakeholders must also keep tabs on new (and emergency) projects that may arise throughout construction. These may include Dashboard-driven metrics with respect to maintenance (paving, potholes, guardrail, bridge repairs, etc.) that are routinely necessary but not always predictable. Regularly scheduled

Exercising this lowering Route 17 option also means traffic will be disrupted again in the near future when the bridge is ultimately replaced, potentially creating frustration among the traveling public, particularly local and regional residents frequenting this corridor. Additionally, it may be a less efficient approach incurring increased cost and effort on the part of VDOT as MOT will be paid twice.

Replacement of the bridge as part of this project would mitigate, if not eliminate, the associated risk to the project, giving the public confidence that the bridge is safe and taxpayer money is being allocated properly. By eliminating the need to excavate Route 17, relocate multiple utilities, and install a new drainage system, replacement costs may be partially offset. Raising the profile of I-95 SB requires adjustment to ramp tie-ins, but the additional cost would be minimal compared to the cost of lowering Route 17.

meetings will foster effective communication for issues with a planned schedule. Urgent projects such as repairs for culverts, drainage structures, guard rails, bridge hits, slope erosion, and stabilization of failing retaining walls are examples of unanticipated events that would require immediate action to secure the safety of the traveling public and field personnel, keep traffic moving efficiently, and return the roadway to a normal operating condition as rapidly as possible. Additionally, incidents on I-95 could send motorists in search of alternate routes, which may be hampered by construction activities on any or multiple of the aforementioned projects. There must be constant communication among the area's stakeholders to ensure optimal efficiency of the transportation network as a whole.

Role of VDOT and Other Agencies: During development of the TTC and TMP plans, we anticipate VDOT's role to be associated with review and approval of the plans. We recognize that lane closure times and restrictions will be identified as part of the RFP documents, and we have the expertise to work within those restrictions. We will coordinate all design and traffic plans with the numerous regional road network concurrent projects underway and their respective Owners (e.g., Stafford County, Prince William County, etc.) to accommodate their need for uninterrupted traffic flow to their facilities. We anticipate VDOT will also remain involved in the public outreach process during design and construction as deemed appropriate. During construction, we anticipate VDOT will remain active on site and coordinate with our team to ensure a safe travelway through the work area is maintained at all times.

Risk No. 2 – Public Relations/3rd Party Stakeholder Coordination

Risk Identification: Public acceptance of any project of this magnitude is critical to its success. The I-95 corridor is an essential roadway for motorists, commerce, and federal/DoD operations alike within the Fredericksburg District. Between Prince William County (vic Exit 148) to the North and Spotsylvania County (vic Exit 126) to the South, this stretch of interstate has an ADT between 61,000 to 72,000 vpd. Although an eagerly anticipated facility by the regional community, particularly with regard to the collector-distributor lanes, interruptions to this significant corridor caused by construction activities will not be tolerated by the general public, elected representatives, and the numerous stakeholders. Construction activity within this area requires effective outreach to all stakeholders to convey accurate information regarding activities within these noted limits. Audiences include the local residents, commuters and business owners, the 'time is money' truckers, and the many travelers on this major North-South interstate headed to and from vacation destinations.

Within this 13 mile segment, the Fredericksburg District staff have identified and scheduled at least six independently contracted design and construction projects that will impact motorists coincident with the Rappahannock River Crossing project (VDOT, Stafford and Spotsylvania Counties, and other – City of Fredericksburg, Mary Washington University, etc.). The risk is that the general public and 3rd party stakeholders will not be aware of, nor understand the overall impact of these activities on their use of the I-95 corridor. Furthermore, if activities among the contractors are not coordinated and de-conflicted to the extent practicable, intolerable cumulative effects along this section of I-95 will result.

Why this Risk is Critical: The citizens of the Commonwealth have a covenant with VDOT to "plan, deliver, operate and maintain a transportation system that is safe, enables easy movement of people and goods, enhances the economy and improves our quality of life." Any negative perceptions that the trust between VDOT and its citizens is being violated diminish VDOT's credibility – a concerning possibility as the cumulative impacts of six simultaneous construction efforts within 13 miles have the potential to create gridlock along I-95.

When the public lacks critical and time-sensitive information to make informed mobility decisions, they may engage the media, elected representatives, and stakeholder groups to voice frustration. This diverts attention from the project, results in need for "damage control," and has the high probability to negatively impact project progress

and erode support for VDOT’s efforts to improve the I-95 corridor. The effectiveness of the outreach program conducted is critical to maintaining an informed traveling public and VDOT stakeholders. This program must communicate project activities, describe their impact on motorists, and convey respective mitigation strategies. To sustain VDOT’s professional credibility, this information must enable the public to make informed decisions relative to their travel routes, times, and activities.

By working collaboratively with each active contractor (adjacent projects) to coordinate and discuss planned activities, we can minimize cumulative negative impacts to the corridor or appropriately notify the public when impacts cannot be minimized. With this approach, VDOT can demonstrate their consideration of all travelers in the design and construction of I-95 improvements.

Risk Impact to the Project & Mitigation Strategies: The public relations (PR) and 3rd party stakeholder communication process must be led by a strong communications professional and integrated throughout both the design and construction phases. Our team has identified Communications Director, Ms. Lisa Wetzel (M.H.R) as the right PR specialist for this project. Lisa holds a Master’s Degree and offers 13 years of experience in design, communications, PR, web development, and project management. She will maintain continuous dialogue and open communication with the local and regional stakeholders including:

- Local businesses and establishments (city, county, state, and federal government entities; officials, courts, law enforcement, and public services; transportation bodies such as VDOT; parks; utilities including power, water, sewage and communications such as internet, cable, and phone; fire/EMS)
- Residents and homeowners
- Commuters (rail, commercial vehicles, and private vehicles)
- Academia (schools, colleges and universities, training centers)

As a former employee of the American Traffic Safety Service Association in Fredericksburg, Lisa is intimately familiar with the safety requirements of work zones and construction site activities and how they impact motorists in this area. She developed materials for the National Work Zone Awareness Week campaigns in Virginia and distributed materials nationwide. Lisa is able to connect and communicate with all stakeholders as part of the VDOT outreach and planning efforts encompassing the entire affected corridor.

3rd Party Stakeholders
Our team will continually coordinate with affected businesses, educational institutions, EMS, Stafford County, Fredericksburg Area Metropolitan Planning Organization (FAMPO), regional transit organizations, commuter services, Virginia Railway Express, Departments of Parks and Recreation, Department of Defense, and concurrent projects in the area. Our Project work-plan and schedule will be developed by incorporating 3rd Parties’ availability and schedule

Led by Lisa, our PR team will work closely with the Fredericksburg District Communications Office and serve as an extension of VDOT staff, preparing information for targeted engagement, presentations to civic groups and professional societies, community events, and print/media advertisements. This effort will ensure VDOT staff knows what our team is considering as the construction plan is being developed, enabling them to provide insight and accurate information on and to nearby projects. In turn, this prepares District staff to proactively share information with the public and project stakeholders, rather than defend past events. Through close communication, parties can make informed decisions, from staging construction components to family travel.

Each of the contractors identified as part of the I-95 six project improvement plan will be considered individual “stakeholders,” warranting personalized considerations as part of a comprehensive communication, coordination, and de-conflicting plan. *The lane closure de-conflicting system currently used by the VDOT*

Hampton Roads District to minimize conflicts caused by multiple work zones warrants strong consideration for application along I-95.

Role of VDOT and Other Agencies: At the pre-proposal meeting, VDOT identified a newly hired communications specialist within the Fredericksburg District Communications Office to lead a multi-district communications program for travelers along the I-95 corridor. We understand VDOT's role will be to receive, review, and approve project information from our team's PR specialist, releasing it to the public and stakeholders as single point of contact for VDOT's Fredericksburg District Communications Office. Additionally, VDOT will serve as a facilitator of communications among the I-95 corridor contractors to discuss and de-conflict work activities to the maximum extent practicable.

Risk No. 3 – Utility Coordination and Overhead Powerlines

Risk Identification. The major utility challenges to this project will likely be the VDOT ITS and government fiber optic cables that are installed parallel to I-95 and attached to the I-95 bridge over Route 17. This conflict will require early identification of the scope of the conflicts and determining the most cost effective resolution in regards to time and money to avoid scheduling impacts. Additional utility issues that may arise include the need for a temporary system to be put in place to accommodate the VDOT traffic camera near the interchange; protection and resolution of the power distribution system that crosses overhead near the I-95 and Route 17 interchange and the small diameter communications cable attached to the poles as well. Early identification of the existing utilities is a risk on the project because of the ensuing complexity of relocating the utilities prior to demolition and construction of the proposed bridge.

Based on as-builts of the project location, it appears that the following utilities are tied underneath the bridge:

- Communication line
- VDOT ITS/TMS
- Federal un-marked (possibly DOD or other agency cable)

Once the utilities are identified, the owners will be contacted and immediately brought to the table for discussion of re-designing their utilities with constructability review and comments provided by the Orders team. This not only identifies the risk but enables the team to have a clearer picture of the impact on the project.

Why this Risk is Critical. The risk is critical because a total rebuild may be required [last alternative] for the VDOT ITS and government fiber optic cables. Protecting utilities in-place or employing creative solutions similar to the I-495 HOT lanes where coordinated and innovative solutions, tailored to the contractors means and methods and sequence of construction eliminated delays, is our objective. In one case, the cables were transferred to temporary supports creating an overhead catenary while the bridge deck was removed; another transferred cable attachments to an adjacent bridge, while others protected utilities in place.

Risk Impact to the Project. The impact(s) to the project due to utility conflicts or delays in utility relocations could result in several successor activities being delayed, negatively impacting construction time and adding cost to the design-builder which may be unrecoverable. Subsequently, this could also result in cost escalation of other materials used on the project if the delays cause the project to slip.

- Example: The RFQ indicates Route 17 should be lowered by excavating approximately 1'-9" which would require the relocation of five underground utilities including a 4" gas line, 6" main sanitary sewer, 6" telephone cable, 4" main sanitary sewer, and a 12" water main. To maintain traffic on Route 17 with this option as noted above in the MOT Risk, staging of excavation and lane restrictions may become necessary, which could impact the project schedule.

Mitigation Strategies. If there is a clearance issue due to grade changes then the first and most desired resolution is to install taller distribution poles in line to the current system to raise it straight up. This will require 2 new

poles within the current land rights. The communications cable will be attached higher on the new poles. This is a low cost and quick resolution if this becomes an issue (and was successfully accomplished on I-495).

It can be very challenging when working with utility companies, but we have overcome these by creating strong working relationships with the company representatives which will be utilized on this project. At the beginning stage of the project, all conflicts must be identified and mitigated by evaluating what the most cost effective

and timely solution is. It is important to perform this task early to allow for alternate designs, protection in place and/or for the utility companies to perform their adjustments. If the utility has to be relocated, then it is done one time in the correct location to avoid conflicts with the future road improvements. This is accomplished by plotting the horizontal and vertical location of the installed utility on the plans and cross sections. Nothing is installed without first being *verified* for being installed correctly. This avoids costly second adjustments and construction scheduling impacts. Specific mitigation measures:

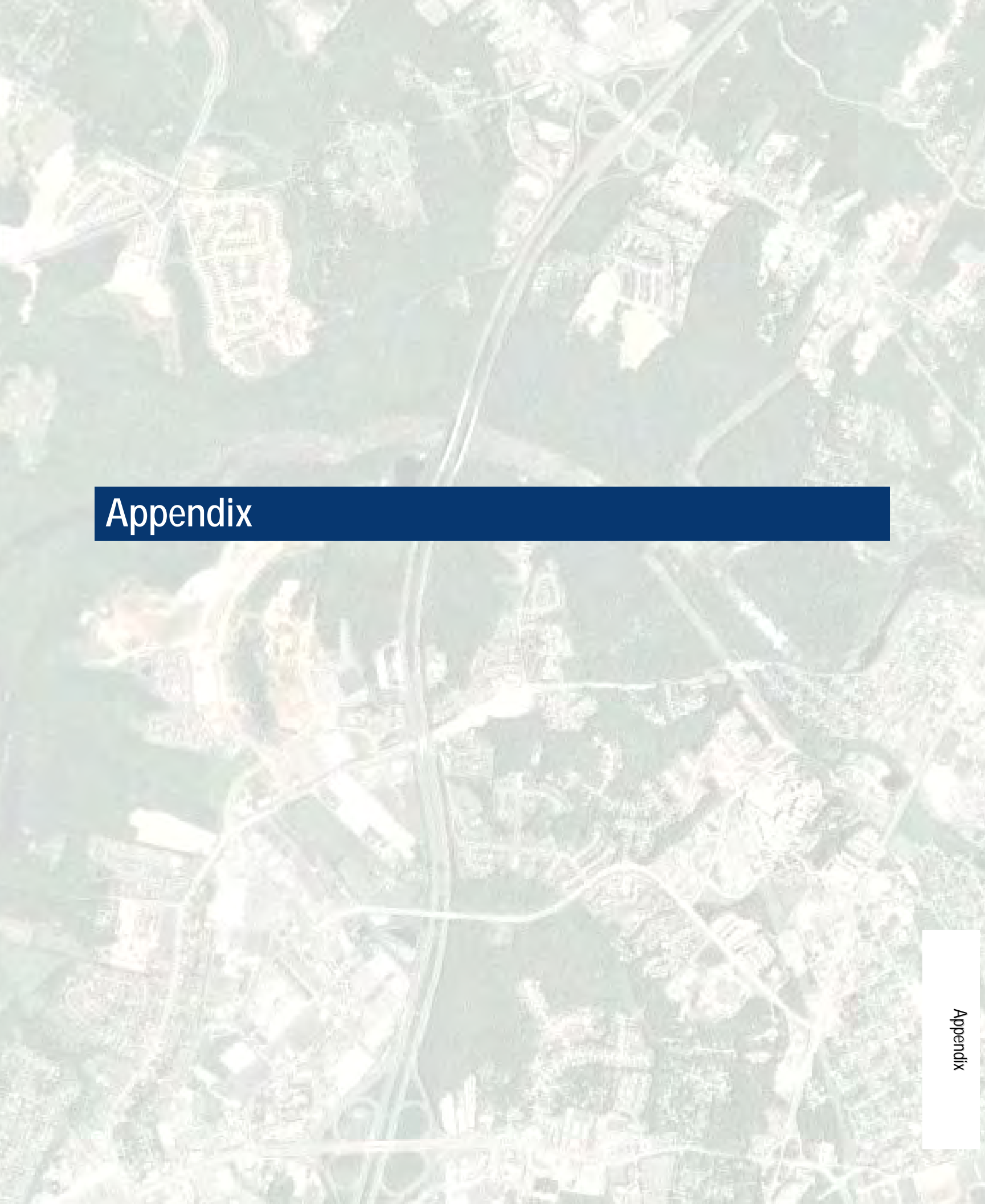
- Review constructability issues, utilize Best Value Concept and resolve utility conflicts
- Coordinate and consult regularly/frequently with other entities
- Work with owners to determine prior rights and work within Franchise Utility Agreements
- Construction utility mitigation and resolution of conflicts
- Utilize our GPS/GIS capabilities for cost effective utility designs through Radio Frequency Identification Technique (RFID) mapping and to store, record and retrieve underground utility data
- Compile field notes, depth verification sheets and verify relocation plan completeness
- Create a utility master as-built plan depicting RFID marker locations; access to electronic as-built plan files
- Cloud based data storage with user name and password protection

Matt McLaughlin, CCM, Utility Coordination Manager is a mitigation strategy: Matt’s expertise is unique in that he practices utility location design as well as managerial support to utility construction field operations for relocation efforts. Matt ensures compliance with safety and environmental laws and regulations, monitors and records the horizontal/vertical location of the relocated utility facilities, including OH as well as underground utilities, and tracks progress of the individual utility operation as well as the overall project to determine if the relocation efforts are on schedule, and recommends corrective actions to get back on schedule. He also reviews relocation plans to determine if all conflicts have been resolved, the concepts are constructible, and work does not create conflicts with other utility work. His other responsibilities include reviewing the status of ROW to determine if parcels are cleared to perform the utility activity, and establishing a Master Utility Relocation Plan to include of all of the relocated facilities using RFID/GPS technologies to create accurate as-builts.

Summary of Benefits

| Area / Section | Benefits |
|-------------------------|--|
| Preliminary Engineering | Establish foot print for Right of Way and Design; Employ the Best Value Concept to reduce or avoid long lead and costly utility relocation efforts |
| Construction | Ease in coordination, conflict identification, resolution and management and Claim avoidance by the utilities |
| Administration | Overall success of projects in cost and conflicts –completes projects on time |
| Utility Companies | Will be more pro-active to coordinate and work with the Department by creating strong working partnerships |

Role of VDOT and Other Agencies. It is very important that all agencies including VDOT play an active role in communicating with the various utility companies and agencies to coordinate the design and relocation of existing utilities. This can be accomplished through a hands on approach with involvement during various phases of design, conducting utility field inspection (UFI) meetings and establishing a risk mitigation/management plan.



Appendix

SOQ Checklist

ATTACHMENT 3.1.2

Project: 0095-111-259

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

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

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

ATTACHMENT 3.1.2

Project: 0095-111-259

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

| Statement of Qualifications Component | Form (if any) | RFQ Cross reference | Included within 15-page limit? | SOQ Page Reference |
|--|----------------------|----------------------------|---------------------------------------|---------------------------|
| SCC and DPOR registration documentation (Appendix) | Attachment 3.2.10 | Section 3.2.10 | no | Appendix |
| Full size copies of SCC Registration | NA | Section 3.2.10.1 | no | Appendix |
| Full size copies of DPOR Registration (Offices) | NA | Section 3.2.10.2 | no | Appendix |
| Full size copies of DPOR Registration (Key Personnel) | NA | Section 3.2.10.3 | no | Appendix |
| Full size copies of DPOR Registration (Non-APELSCIDLA) | NA | Section 3.2.10.4 | no | Appendix |
| | | | | |
| DBE statement within Letter of Submittal confirming Offeror is committed to achieving the required DBE goal | NA | Section 3.2.11 | yes | 1 |
| | | | | |
| Offeror's Team Structure | | | | 2-5 |
| Identity of and qualifications of Key Personnel | NA | Section 3.3.1 | yes | 2 |
| Key Personnel Resume – DB Project Manager | Attachment 3.3.1 | Section 3.3.1.1 | no | Appendix |
| Key Personnel Resume – Responsible Charge Engineer | Attachment 3.3.1 | Section 3.3.1.1 | no | Appendix |
| Key Personnel Resume – Quality Assurance Manager | Attachment 3.3.1 | Section 3.3.1.2 | no | Appendix |
| Key Personnel Resume – Design Manager | Attachment 3.3.1 | Section 3.3.1.3 | no | Appendix |
| Key Personnel Resume – Construction Manager | Attachment 3.3.1 | Section 3.3.1.4 | no | Appendix |
| Key Personnel Resume – Lead Structural Engineer | Attachment 3.3.1 | Section 3.3.1.7 | no | Appendix |
| Organizational chart | NA | Section 3.3.2 | yes | 5 |
| Organizational chart narrative | NA | Section 3.3.2 | yes | 3-4 |

ATTACHMENT 3.1.2

Project: 0095-111-259

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 | | | | 6-8 |
| Lead Contractor Work History Form | Attachment 3.4.1(a) | Section 3.4 | no | Appendix 3.4.1(a)i-iii |
| Lead Designer Work History Form | Attachment 3.4.1(b) | Section 3.4 | no | Appendix 3.4.1(b)i-iii |
| | | | | |
| Project Risk | | | | 9-15 |
| Identify and discuss three critical risks for the Project | NA | Section 3.5.1 | yes | 9-15 |

Form C-78-RFQ

Acknowledgement of RFQ, Revision and/or Addenda

ATTACHMENT 2.10**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION**RFQ NO. C00101595DB94PROJECT NO.: 0095-111-259**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 – November 1, 2016
(Date)
2. Cover letter of RFQ Addendum No.1 – December 19, 2016
(Date)
3. Cover letter of RFQ Addendum No.2 – January 23, 2017
(Date)



SIGNATURE

February 7, 2017

DATE

Orders Construction Company, Inc.

PRINTED NAME

President

TITLE

3.2.6 List of Affiliated & Subsidiary Companies

ATTACHMENT 3.2.6

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

Affiliated and Subsidiary Companies of the Offeror

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

| |
|---|
| <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) Certification Regarding Debarment – Primary

ATTACHMENT NO. 3.2.7(a)

**CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS**

Project No.: 0095-111-259

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

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


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

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

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

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

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

 2/7/17 President
Signature Date Title

Orders Construction Company, Inc.
Name of Firm

3.2.7(b) Certification Regarding Debarment – Lower Tier

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0095-111-259

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

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

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

Dennis C Morrison 2/7/2017
Signature Date

Senior Vice President
Title

Volkert, Inc.
Name of Firm

ATTACHMENT NO. 3.2.7(b)


**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0095-111-259

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

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

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

| | | |
|---|-----------------|--|
|  | <u>02/07/17</u> | <u>Corporate Secretary / Treasurer</u> |
| Signature | Date | Title |

General Excavation, Inc.
Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0095-111-259

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.

W.D. B. Tj 2/7/2017 PRINCIPAL
Signature Date Title

CLARK NEXSEN, INC.
Name of Firm

ATTACHMENT NO. 3.2.7(b)

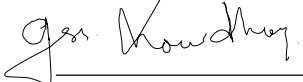
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LOWER TIER COVERED TRANSACTIONS**

Project No.: 0095-111-259

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| | | |
|---|----------|-----------|
|  | 01-30-17 | Principal |
| Signature | Date | Title |

CES Consulting LLC
Name of Firm

ATTACHMENT NO. 3.2.7(b)


**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0095-111-259

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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.

 February 7, 2017 Senior Vice President
Signature Date Title

Schnabel Engineering, LLC
Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0095-111-259

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 2/7/2017 _____ President _____
Signature Date Title

Name of Firm

ATTACHMENT NO. 3.2.7(b)

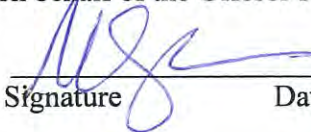
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Project No.: 0095-111-259

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

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

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

| | | |
|---|-----------------|----------------------------|
|  | <u>02/07/17</u> | <u>President & CEO</u> |
| Signature | Date | Title |

Harris Miller Miller & Hanson Inc.
Name of Firm

ATTACHMENT NO. 3.2.7(b)

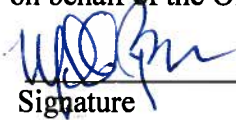
**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0095-111-259

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

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

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



Signature

February 7, 2017

Date

Chief Operating Officer

Title

Bowman Consulting Group, Ltd.

Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0095-111-259

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

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

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



Signature

February 7, 2017

Date

Chief Management Solutions, LLC

Title

Elite Management Solutions, LLC.

Name of Firm

ATTACHMENT NO. 3.2.7(b)

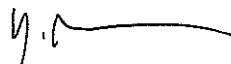
**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0095-111-259

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

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

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

| | | |
|---|------------------|-------------------|
|  | February 7, 2017 | President and CEO |
| Signature | Date | Title |

DMY Engineering Consultants Inc.
Name of Firm

3.2.8 Offeror's VDOT Prequalification Certificate



Department's List of Prequalified Vendors
Includes All Qualified Levels As Of 2/3/2017

- O -

Vendor ID: O017
Vendor Name: ORDERS CONSTRUCTION COMPANY, INC.
Prequal Exp: 07/31/2017

-- 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

Vendor ID: O062
Vendor Name: ORION ASSOCIATES, INC.
Prequal Exp: 07/31/2017

-- PREQ Address --

1317 CAVALIER BLVD.
CHESAPEAKE, VA 23323-1501
Phone: 757-558-6400
Fax: 757-558-1009

Work Classes (Listed But Not Limited To)

- 005 - DRAINAGE STRUCTURES
- 011 - CLEARING AND GRUBBING
- 033 - ROADSIDE DEVELOPMENT
- 045 - UNDERGROUND UTILITIES
- 101 - EXCAVATING

Bus. Contact: HEBENSTREIT, JEFFREY RICHARD
Email: ORIONEMAIL@AOL.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

January 30, 2017

Suril R. Shah
Alternate Project Delivery Office
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219

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

Project: **I-95 Southbound CD Lanes – Rappahannock River Crossing**
A Design-Build Project
Stafford County/City of Fredericksburg, VA
State # 0081-0095-111-259, Federal # IM-5111(235)
Contract ID # C00101595DB94

Dear Sirs:

Orders Construction Company has made us aware of their desire to bid on the subject project in October, 2017. It is our understanding that the estimate on the project is \$100,000,000. 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+, 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,

Douglas P. Taylor
Sr. Vice President

3.2.10 SCC & DPOR Information

ATTACHMENT 3.2.10

State Project No. 0095-111-259

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 | F026850-0 | Foreign Corporation | Active Good Standing | 501 6th Ave. St Albans, WV 25177-1448 | Contractor Class A | 2701032711 | 08-31-2018 |
| Volkert, Inc. | F1366592 | Foreign Corporation | Active | 6225 Brandon Ave. Suite 540 Springfield, VA 22150 | Business Entity - ENG, LA | 0407002610 | 12-31-2017 |
| General Excavation Inc. | 02400679 | Corporation | Active | 9757 Rider Rd. Warrenton, VA 20187 | Contractor Class A | 2701026132 | 04-30-2017 |
| Clark Nexsen, Inc. | 01901750 | Corporation | Active | 4525 Main St. Suite 1400 Virginia Beach, VA 23462 | Business Entity – ENG, LA | 0407006529 | 12-31-2017 |
| | | | | 333 Fayetteville St. Suite 1000 Raleigh, NC 27601 | Business Entity Branch Office - ENG | 0411001117 | 02-28-2018 |
| CES Consulting, LLC | S341600 | Limited Liability Company | Active | 23475 Rock Haven Way, Suite 255 Dulles, VA 20166 | Business Entity - ENG | 0407005783 | 12-31-2017 |
| Schnabel Engineering, LLC | S0889123 | Limited Liability Company | Active | 9800 Jeb Stuart Pkwy, Suite 200 Glen Allen, VA 23059 | Business Entity - ENG | 0407004386 | 12-31-2017 |

ATTACHMENT 3.2.10

State Project No. 0095-111-259

SCC and DPOR Information

| | | | | | | | |
|--|----------|---------------------------|--------|---|---|------------|------------|
| Hassan Water Resources, PLC | S2293282 | Limited Liability Company | Active | 2255 Parkers Hill Dr Maidens, VA 23102 | Professional Limited Liability Company | 0413000299 | 12-31-2017 |
| Harris Miller Miller & Hanson, Inc. | F1451857 | Foreign Corporation | Active | N/A --- Non-Regulated Services | | | |
| Bowman Consulting Group, Ltd. | 04481982 | Corporation | Active | 650A Nelms Circle Fredericksburg, VA 22406 | Business Entity Branch Office – LS, ENG | 0411000421 | 02-28-2018 |
| | | | | 650A Nelms Circle Fredericksburg, VA 22406 | Appraisal Business Registration | 4008001873 | 03-31-2018 |
| | | | | 3951 Westerre Pkwy Suite 150 Richmond, VA 23233 | Business Entity Branch Office – LS, ENG | 0411000610 | 02-28-2018 |
| Elite Management | S320985 | Limited Liability Company | Active | N/A --- Non-Regulated Services | | | |
| DMY Engineering Consultants, Inc. | 07688955 | Corporation | Active | 45662 Terminal Dr. Suite 110 Dulles, VA 20166 | Business Entity - ENG | 0407005631 | 12-31-2017 |

ATTACHMENT 3.2.10

State Project No. 0095-111-259

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 |
| Volkert, Inc. | Keith Weakley, PE, DBIA | Springfield, VA | 124 Meadow Lane Stanley, VA 22851 | PE | 0402031697 | 01-31-2018 |
| Clark Nexsen, Inc. | Achyut G. (Al) Patel, PE | Virginia Beach, VA | 729 Queen Elizabeth Drive Virginia Beach, VA 23452 | PE | 0402025919 | 04-30-2017 |
| Clark Nexsen, Inc. | Dennis W. Heuer, PE | Virginia Beach, VA | P.O. Box 1023 Suffolk, VA 23439-1023 | PE | 0402017594 | 07-31-2017 |
| CES Consulting, LLC | Avtar Singh, PE, CCM | Chantilly, VA | 6773 Leopolds Trail Haymarket, VA 20169 | PE | 0402035169 | 01-31-2019 |
| | | | | | | |
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3.2.10.1 Firm SCC Registration

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ORDERS CONSTRUCTION COMPANY, INC.

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- 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

St

Principal Office

PO BOX 1448
 501 6TH AVE
 ST ALBANS WV25177

New

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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Business Entities

UCC or Tax Liens

Court Services

Additional Services

Volkert, Inc.

General

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

St

Principal Office

3809 MOFFETT RD
 MOBILE AL36618

New

Registered Agent/Registered Office

CORPORATION SERVICE COMPANY
 BANK OF AMERICA CENTER, 16TH FLOOR
 1111 EAST MAIN ST.

RICHMOND VA 23219
RICHMOND CITY 216
Status: Active
Effective Date: 7/13/2011

Screen ID: e1000

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GENERAL EXCAVATION, INC.

General

SCC ID: 02400679
 Entity Type: Corporation
 Jurisdiction of Formation: VA
 Date of Formation/Registration: 3/28/1983
 Status: Active
 Shares Authorized: 20000

St

Principal Office

9757 RIDER ROAD
 WARRENTON VA20187

New


Registered Agent/Registered Office

RUSSELL A JENKINS
 9757 RIDER RD
 WARRENTON VA 20187
 FAUQUIER COUNTY 130

Status: Active
Effective Date: 1/29/2009

Screen ID: e1000

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Clark Nexsen, Inc.

General

SCC ID: 01901750
 Entity Type: Corporation
 Jurisdiction of Formation: VA
 Date of Formation/Registration: 11/27/1978
 Status: Active
 Shares Authorized: 100000

Principal Office

4525 MAIN STREET STE 1400
 VIRGINIA BEACH VA23462

Registered Agent/Registered Office

CHRISTOPHER M STONE
 4525 MAIN STREET, SUITE 1400
 VIRGINIA BEACH VA 23462
 VIRGINIA BEACH CITY 228




St

New

Status: Active
Effective Date: 8/5/2014

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Business Entities

UCC or Tax Liens

Court Services

Additional Services

CES Consulting, LLC

General

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

Principal Office

23475 ROCK HAVEN WAY
 SUITE 255
 DULLES VA20166

Registered Agent/Registered Office

AVTAR SINGH
 6773 LEOPOLDS TRAIL
 HAYMARKET VA 20169
 PRINCE WILLIAM COUNTY 176




St

New

Status: Active
Effective Date: 5/18/2016

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Schnabel Engineering, LLC

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Business Entities

UCC or Tax Liens

Court Services

Additional Services

General

SCC ID: S0889123
 Entity Type: Limited Liability Company
 Jurisdiction of Formation: VA
 Date of Formation/Registration: 12/19/2002
 Status: Active

St

Principal Office

9800 JEB STUART PARKWAY
 SUITE 200
 GLEN ALLEN VA23059

New




Registered Agent/Registered Office

CT CORPORATION SYSTEM
 4701 COX ROAD, SUITE 285
 GLEN ALLEN VA 23060
 HENRICO COUNTY 143

Status: Active
Effective Date: 10/4/2013

Screen ID: e1000

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Hassan Water Resources, PLC

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General

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

Principal Office

2255 PARKERS HILL DR
 MAIDENS VA23102

Registered Agent/Registered Office

GAMAL E HASSAN
 2255 PARKERS HILL DR
 MAIDENS VA 23102
 GOOCHLAND COUNTY 137
 Status: Active

St

New

Effective Date: 5/4/2010

Screen ID: e1000

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Harris Miller Miller & Hanson Inc.

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General

SCC ID: F1451857
 Entity Type: Foreign Corporation
 Jurisdiction of Formation: MA
 Date of Formation/Registration: 12/6/2000
 Status: Active
 Shares Authorized: 300000

St

Principal Office

77 SOUTH BEDFORD ST
 BURLINGTON MA01803

New




Registered Agent/Registered Office

C T CORPORATION SYSTEM
 4701 COX RD STE 285
 GLEN ALLEN VA 23060
 HENRICO COUNTY 143

Status: Active
Effective Date: 6/12/2015

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General

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

St

Principal Office

3863 CENTERVIEW DRIVE
 SUITE 300
 CHANTILLY VA20151

New




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

Screen ID: e1000

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ATTENTION: SCC eFile and CISIWEB will be unavailable on Saturday, February 4, fi apologize for the inconvenience and thank yo

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Elite Management Solutions, LLC

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General

SCC ID: S3209857
 Entity Type: Limited Liability Company
 Jurisdiction of Formation: VA
 Date of Formation/Registration: 3/18/2010
 Status: Active

St

Principal Office

1671 JEFFERSON DAVIS HIGHWAY
 SUITE 203
 FREDERICKSBURG VA22551

New




Registered Agent/Registered Office

MELISSA WETZEL
 7609 BAILEYS ROAD

SPOTSYLVANIA VA 22551
SPOTSYLVANIA COUNTY 188
Status: Active
Effective Date: 4/26/2014

Screen ID: e1000

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DMY ENGINEERING CONSULTANTS INC.

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- Additional Services

General

SCC ID: 07688955
 Entity Type: Corporation
 Jurisdiction of Formation: VA
 Date of Formation/Registration: 9/6/2013
 Status: Active
 Shares Authorized: 10000

St

Principal Office

45662 TERMINAL DRIVE
 SUITE 110
 DULLES VA20166

New

Registered Agent/Registered Office

WEIYI MA
 45662 TERMINAL DRIVE
 SUITE 110

DULLES VA 20166
LOUDOUN COUNTY 153
Status: Active
Effective Date: 9/6/2013

Screen ID: e1000

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Build #: 1.0.0.30644

3.2.10.2 Firm DPOR Registration

DPOR License Lookup License Number

2701032711

License Details

| | |
|-----------------------------------|--|
| Name | ORDERS CONSTRUCTION COMPANY INC |
| License Number | 2701032711 |
| License Description | Contractor |
| Firm Type | Corporation |
| Rank ¹ | Class A |
| Address | 501 6TH AVENUE, ST ALBANS, WV 25177-1448 |
| Specialties² | Highway / Heavy (H/H) |
| Initial Certification Date | 1988-08-22 |
| Expiration Date | 2018-08-31 |

- 1 Refer to the Statutory Definitions (<http://law.lis.virginia.gov/vacode/title54.1/chapter11/section54.1-1100/>) for descriptions of the rank or class of license (A, B, or C) that determines the monetary limits on contracts/projects.
- 2 Refer to the Classification Definitions (<http://lis.virginia.gov/cgi-bin/legp604.exe?000+reg+18VAC50-22-20>) and Specialty Definitions (<http://lis.virginia.gov/cgi-bin/legp604.exe?000+reg+18VAC50-22-30>) for detailed definitions of these classifications and specialties.

The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any reliance on data provided online. While DPOR has attempted to ensure that the data contained herein are accurate and reflect the status of its regulants, DPOR makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this data. If discrepancies or errors are discovered, please inform DPOR so that appropriate action may be taken.

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

DPOR License Lookup

License Number 0407002610

License Details

| | |
|-----------------------------------|--|
| Name | VOLKERT INC |
| License Number | 0407002610 |
| License Description | Business Entity Registration |
| Firm Type | Corporation |
| Rank | Business Entity |
| Address | 6225 BRANDON AVE STE 540, SPRINGFIELD, VA 22150 |
| Initial Certification Date | 1983-07-29 |
| Expiration Date | 2017-12-31 |

Related Licenses ¹

| License Number | License Holder Name | License Type | Relation Type | License Expiry |
|----------------|-----------------------|-------------------------------|------------------------|----------------|
| 0402021932 | VARGAS, CESAR ENRIQUE | Professional Engineer License | Engineering | 2017-01-31 |
| 0402031697 | WEAKLEY, KEITH PAUL | Professional Engineer License | Engineering | 2018-01-31 |
| 0402044791 | MORRISON, DENNIS C | Professional Engineer License | Engineering | 2018-06-30 |
| 0406001168 | BOEHM, OLIVER | Landscape Architect License | Landscape Architecture | 2017-09-30 |

Showing 1 to 4 of 4 entries

- ¹ The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR License Lookup License Number

2701026132

License Details

| | |
|-----------------------------------|--------------------------------------|
| Name | GENERAL EXCAVATION INC |
| License Number | 2701026132 |
| License Description | Contractor |
| Firm Type | Corporation |
| Rank ¹ | Class A |
| Address | 9757 RIDER ROAD, WARRENTON, VA 20187 |
| Specialties² | Highway / Heavy (H/H) |
| Initial Certification Date | 1985-04-24 |
| Expiration Date | 2017-04-30 |

- 1 Refer to the Statutory Definitions (<http://law.lis.virginia.gov/vacode/title54.1/chapter11/section54.1-1100/>) for descriptions of the rank or class of license (A, B, or C) that determines the monetary limits on contracts/projects.
- 2 Refer to the Classification Definitions (<http://lis.virginia.gov/cgi-bin/legp604.exe?000+reg+18VAC50-22-20>) and Specialty Definitions (<http://lis.virginia.gov/cgi-bin/legp604.exe?000+reg+18VAC50-22-30>) for detailed definitions of these classifications and specialties.

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DPOR License Lookup

License Number 0407006529

License Details

| | |
|-----------------------------------|--|
| Name | CLARK NEXSEN INC |
| License Number | 0407006529 |
| License Description | Business Entity Registration |
| Firm Type | Corporation |
| Rank | Business Entity |
| Address | 4525 MAIN ST STE 1400, VIRGINIA BEACH, VA 23462 |
| Initial Certification Date | 2014-05-06 |
| Expiration Date | 2017-12-31 |

Related Licenses ¹

| License Number | License Holder Name | License Type | Relation Type | License Expiry |
|----------------|----------------------------|------------------------------------|---------------------------|----------------|
| 0401011982 | BATTAGLIA, PAUL RAYMOND | Architect License | Architecture | 2017-10-31 |
| 0402032889 | HALL, TERESA SHANNON | Professional Engineer License | Engineering | 2018-07-31 |
| 0406001058 | DALTON, JOHN THOMAS JR | Landscape Architect License | Landscape Architecture | 2018-09-30 |
| 0412000453 | DREW, SUSAN ANN | Interior Designer Certification | Interior Designer | 2018-01-31 |

Showing 1 to 4 of 4 entries

- ¹ The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR License Lookup License Number

0411001117

License Details

| | |
|-----------------------------------|--|
| Name | CLARK NEXSEN INC |
| License Number | 0411001117 |
| License Description | Business Entity Branch Office Registration |
| Business Type | Corporation |
| Rank | Business Entity Branch Office |
| Address | 333 FAYETTEVILLE ST STE 1000, RALEIGH, NC 27601 |
| Initial Certification Date | 2014-05-06 |
| Expiration Date | 2018-02-28 |

Related Licenses ¹

| License Number | License Holder Name | License Type | Relation Type | License Expiry |
|----------------|-----------------------------|----------------------------------|---------------|----------------|
| 0401007508 | CEASE, HEISTER CLYMER JR | Architect License | Architecture | 2017-09-30 |
| 0402040368 | PERKINS, KLAUS LEE | Professional Engineer License | Engineering | 2018-10-31 |

Showing 1 to 2 of 2 entries

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DPOR License Lookup

License Number 0407005783

License Details

| | |
|-----------------------------------|---|
| Name | CES CONSULTING LLC |
| License Number | 0407005783 |
| License Description | Business Entity Registration |
| Firm Type | LLC - Limited Liability Company |
| Rank | Business Entity |
| Address | 23475 ROCK HAVEN WAY SUITE 255, DULLES, VA 20166 |
| Initial Certification Date | 2010-11-05 |
| Expiration Date | 2017-12-31 |

Related Licenses ¹

| License Number | License Holder Name | License Type | Relation Type | License Expiry |
|----------------|---------------------|-------------------------------|---------------|----------------|
| 0402035169 | SINGH, AVTAR | Professional Engineer License | Engineering | 2019-01-31 |

Showing 1 to 1 of 1 entries

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[License Details](#)[Related Licenses](#)

| | |
|-----------------------------------|--|
| Name | SCHNABEL ENGINEERING, LLC |
| License Number | 0407004386 |
| License Description | Business Entity Registration |
| Firm Type | LLC - Limited Liability Company |
| Rank | Business Entity |
| Address | 9800 JEB STUART PKWY STE 200, GLEN ALLEN, VA 23059 |
| Initial Certification Date | 2003-03-10 |
| Expiration Date | 2017-12-31 |

The license information in this application was last updated at Sun Jan 29 02:50:19 EST.

[License Lookup legal disclaimer](#)

DPOR License Lookup

License Number 0413000299

License Details

| | |
|-----------------------------------|--|
| Name | HASSAN WATER RESOURCES PLC |
| DBA Name | HWR |
| License Number | 0413000299 |
| License Description | Professional Limited Liability Company |
| Rank | Professional Limited Liability Company |
| Address | 2255 PARKERS HILL DRIVE, MAIDENS, VA 23102-2244 |
| Initial Certification Date | 2009-07-06 |
| Expiration Date | 2017-12-31 |

Related Licenses ¹

| License Number | License Holder Name | License Type | Relation Type | License Expiry |
|----------------|------------------------|----------------------------------|---------------|----------------|
| 0402033382 | HASSAN, GAMAL ELDIN | Professional Engineer License | Engineering | 2017-06-30 |

Showing 1 to 1 of 1 entries

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DPOR License Lookup

License Number 0411000421

License Details

| | |
|-----------------------------------|--|
| Name | BOWMAN CONSULTING GROUP LTD |
| License Number | 0411000421 |
| License Description | Business Entity Branch Office Registration |
| Rank | Business Entity Branch Office |
| Address | 650A NELMS CIRCLE, FREDERICKSBURG, VA 22406 |
| Initial Certification Date | 2005-10-03 |
| Expiration Date | 2018-02-28 |

Related Licenses ¹

| License Number | License Holder Name | License Type | Relation Type | License Expiry |
|----------------|--------------------------|----------------------------------|----------------|----------------|
| 0402040214 | TROIDL, JUSTIN ROBERT | Professional Engineer License | Engineering | 2018-12-31 |
| 0403002953 | CREEL, ALBERT LEE III | Land Surveyor License | Land Surveying | 2018-06-30 |

Showing 1 to 2 of 2 entries

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DPOR License Lookup License Number

4008001873

License Details

| | |
|-----------------------------------|---|
| Name | BOWMAN CONSULTING GROUP LTD |
| License Number | 4008001873 |
| License Description | Appraisal Business Registration |
| Firm Type | Corporation |
| Rank | Business Entity |
| Address | 650 A NELMS CIRCLE, FREDERICKSBURG, VA 22406 |
| Initial Certification Date | 2016-03-14 |
| Expiration Date | 2018-03-31 |

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DPOR License Lookup License Number

0411000610

License Details

| | |
|-----------------------------------|---|
| Name | BOWMAN CONSULTING GROUP LTD |
| License Number | 0411000610 |
| License Description | Business Entity Branch Office Registration |
| Rank | Business Entity Branch Office |
| Address | 3951 WESTERRE PKWY SUITE 150, RICHMOND, VA 23233 |
| Initial Certification Date | 2009-07-17 |
| Expiration Date | 2018-02-28 |

Related Licenses ¹

| License Number | License Holder Name | License Type | Relation Type | License Expiry |
|----------------|-------------------------------|----------------------------------|----------------|----------------|
| 0402024712 | DELOYE, KEVIN ROBERT | Professional Engineer License | Engineering | 2018-02-28 |
| 0402032887 | JACKSON, JONATHAN HATCH | Professional Engineer License | Engineering | 2019-01-31 |
| 0402042512 | SMITH, GREGORY ALAN | Professional Engineer License | Engineering | 2018-08-31 |
| 0402043805 | FRANCIS, SPENCER MACKENZIE | Professional Engineer License | Engineering | 2018-01-31 |
| 0402049766 | GARCIA, CARLOS G | Professional Engineer License | Engineering | 2017-11-30 |
| 0403001906 | FRALIN, RICHARD LEE | Land Surveyor License | Land Surveying | 2019-01-31 |
| 0403003124 | MACAULAY, CRAIG STEVEN | Land Surveyor License | Land Surveying | 2019-01-31 |

Showing 1 to 7 of 7 entries

DPOR License Lookup

License Number

0407005631

License Details

| | |
|-----------------------------------|---|
| Name | DMY ENGINEERING CONSULTANTS INC |
| License Number | 0407005631 |
| License Description | Business Entity Registration |
| Firm Type | Corporation |
| Rank | Business Entity |
| Address | 45662 TERMINAL DRIVE SUITE 110, DULLES, VA 20166 |
| Initial Certification Date | 2010-03-10 |
| Expiration Date | 2017-12-31 |

Related Licenses ¹

| License Number | License Holder Name | License Type | Relation Type | License Expiry |
|----------------|---------------------|-------------------------------|---------------|----------------|
| 0402041123 | MA, WEIYI | Professional Engineer License | Engineering | 2017-06-30 |

Showing 1 to 1 of 1 entries

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3.2.10.3 Key Personnel DPOR Registration

DPOR License Lookup

License Number 0402031697

License Details

| | |
|-----------------------------------|-------------------------------|
| Name | WEAKLEY, KEITH PAUL |
| License Number | 0402031697 |
| License Description | Professional Engineer License |
| Rank | Professional Engineer |
| Address | STANLEY, VA 22851 |
| Initial Certification Date | 1998-01-27 |
| Expiration Date | 2018-01-31 |

DPOR License Lookup License Number 0402025919

License Details

| | |
|-----------------------------------|-------------------------------|
| Name | PATEL, ACHYUT G |
| License Number | 0402025919 |
| License Description | Professional Engineer License |
| Rank | Professional Engineer |
| Address | VIRGINIA BEACH, VA 23452 |
| Initial Certification Date | 1995-04-05 |
| Expiration Date | 2017-04-30 |

DPOR License Lookup License Number 0402017594

License Details

| | |
|-----------------------------------|-------------------------------|
| Name | HEUER, DENNIS WILLIAM |
| License Number | 0402017594 |
| License Description | Professional Engineer License |
| Rank | Professional Engineer |
| Address | SUFFOLK, VA 23439-1023 |
| Initial Certification Date | 1987-07-29 |
| Expiration Date | 2017-07-31 |

DPOR License Lookup License Number 0402035169

License Details

| | |
|-----------------------------------|-------------------------------|
| Name | SINGH, AVTAR |
| License Number | 0402035169 |
| License Description | Professional Engineer License |
| Rank | Professional Engineer |
| Address | HAYMARKET, VA 20169 |
| Initial Certification Date | 2001-01-18 |
| Expiration Date | 2019-01-31 |

3.3.1 Key Personnel Resume Forms

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

| |
|---|
| Brief Resume of Key Personnel anticipated for the Project. |
| a. Name & Title: Charlie Stokes, Project Manager |
| b. Project Assignment: Design-Build Project Manager (DBPM) |
| c. Name of all Firms with which you are employed at the time of submitting SOQs. 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>6</u> Years With Other Firms <u>36</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): Mr. Stokes has 42 years of experience with heavy highway and bridge construction contributing to his expertise with the management and supervision of design, construction, quality management and contract administration. Name of Firm: Orders Construction Company, Inc. Start Date: 2010 End Date: Present Position: <i>Vice President.</i> Responsible for bidding and project management for roadway and bridge projects including scheduling, contract administration, coordination with stakeholders, safety, resource allocation, dispute resolution and overall project quality. Project Manager for all Order's D-B projects in Virginia, bringing extensive knowledge of VDOT policies, procedures and requirements for successful delivery, along with the coordination of design, construction and public outreach activities. Name of Firm: Corte Construction Company / Fort Chiswell Construction Company, a Wholly-Owned Subsidiary of Corte Start Date: 1992 End Date: 2010 Position: <i>President.</i> Responsible for bidding and project management of grading, bridge and tunnel projects, including daily operations, resource allocation, scheduling, safety and project quality. |
| 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. 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.) Route 60 Main Street Bridge Replacement, Clifton Forge, VA – VDOT (\$3.5M) Design-Build Project Manager. Responsible for the management and supervision of design, construction, quality management, public outreach and contract administration for the replacement of the Main Street Bridge in downtown Clifton Forge. The project also involved temporarily changing Route 60 Business from a one-way to a two-way road, for construction of the new structure and adding traffic signals. 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 to resolve several unforeseen issues during construction without a single change order to the project and still completed the project <i>two months</i> ahead of schedule. Working closely with Clark Nexsen and VDOT, the D-B team provided value-added, no cost increase changes to the project, including utilizing cofferdams and spread footings to lessen impacts in lieu of drilled shafts; and the change of the deck riding surface from asphalt to modified |

concrete at the request of the municipality. **Relevance to the I-95 DB project:** Truck traffic is a significant portion of the 4900 ADT which Orders and Clark Nexsen worked together to accommodate by widening turns and reconfiguring parking. This type of collaboration will be seamless given the history of successful teaming between the parties; and this experience will serve the project well as the team navigates the constraints of the I-95 corridor's high traffic volumes and the required maintenance of traffic, a noted risk for the project. Given the historic nature of the downtown area, public outreach – another recognized risk for the I-95 project – was critical to the success of the project, and throughout all stakeholders remained supportive of the project.

Firm: Orders Construction Company | **Dates:** February 2011 – October 2012

Route 670 Avens Bridge Replacement over South Holston Lake, Washington County, VA – VDOT (\$17.7M) Project Manager. The project replaced the existing truss bridge over the South Holston Lake with a new two lane structure constructed on the upstream side of the existing bridge. The new structure used drilled shaft piers due to water depth of approximately 80 feet. One of the largest challenges was building the bridge in the deep water of the lake, while in close proximity to the existing Route 670 bridge and high voltage power lines. Much of the demolition and construction was completed from barges. Two lanes of traffic were maintained through most of the duration of the project. Charlie was responsible for management of all facets of the project, including daily operations and scheduling, resource management and manpower allocation, contract administration, safety, project quality, and traffic control. A design change from driven piles to drilled shafts was required for one of the abutments due to issues with the foundation. A work plan was developed using temporary bents for steel erection and ground heaters for cold weather concreting; and although 72 days elapsed during the re-design of the abutment, the measures employed allowed the project to meet its original completion date. **Relevance to the I-95 DB project:** This project provided valuable experience with managing a project with both roadway construction and bridge over water construction. Dynamic field conditions required daily adjustments to drilling techniques, pile driving and concrete placement. Traffic impacts required extensive coordination with VDOT Public Relations to ensure public notification of upcoming construction activities, which will be a continuous activity for the I-95 D-B project.

Firm: Orders Construction Company. | **Dates:** September 2013 – June 2015

I-81 Exit 7 Interchange Improvements, City of Bristol, VA – VDOT (\$3.4M) Project/Design Manager. Charlie managed all facets of the project, including daily operations, resource management, scheduling quality, safety, and partnering. The project involved the widening of Old Airport Road, the Northbound Interstate 81 off ramp, and the Bridge over Beaver Creek. Exit 7 on Interstate 81, located in Bristol, VA is one of the most congested interchanges in the area. The project consisted of 6,000 cubic yards of excavation, roadway drainage features, double box culvert extension, utility relocations, 20,000 square yards of asphalt paving, 2,500 linear feet of curb & gutter, widening a 116 linear feet bridge, constructing 225 linear feet of RW-3 retaining wall, signing, and guardrail. The project mandated that all traffic be kept moving through the project with limited off hour interruptions. Working with VDOT and the City of Bristol, the majority of the utility relocations scheduled to be made in the center of Airport Road – one of the busiest thoroughways in the region – were relocated to the shoulder areas behind curb and gutters, lessening the impacts to the public. **Relevance to the I-95 DB project:** This project involved high-traffic volumes – with the added complexity of multiple special events – within a constrained project footprint. Working closely with VDOT and altering the contract transportation management plan, allowed completion of the project with minimal impact to motorists. The project also required bridge (bearing pile) and retaining wall foundations in karst terrain conditions. Led the design of temporary shoring to work and meet standards in the unstable karst conditions.

Firm: Orders Construction Company | **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.

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

| | | |
|--|-------------------------|--------------------------|
| Brief Resume of Key Personnel anticipated for the Project. | | |
| a. Name & Title: Dennis W. Heuer, PE, DBIA | | |
| b. Project Assignment: Responsible Charge Engineer (RCE) | | |
| c. Name of all Firms with which you are employed at the time of submitting SOQs. In addition, please denote the type of employment (Full time/Part time): Clark Nexsen (Full time) | | |
| d. Employment History: With this Firm <u>≤</u> 1Years With Other Firms <u>4</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): Mr. Heuer has 43 years of experience with the design and construction of transportation infrastructure projects, including serving VDOT as the Hampton Roads District Administrator for more than eight years. This cumulative experience brings to the project the requisite expertise to supervise and control the design and construction, with an RCE who also has a keen understanding of VDOT's needs, policies and procedures, and will be able to seamlessly provide the required communication with the Department. | | |
| Name of Firm: Clark Nexsen | Start Date: 2016 | End Date: Present |
| Position: <i>Vice President Transportation Services.</i> Provides engineering quality control and mentoring to transportation staff; and works with Managing Principals and Transportation Department Heads for all activities related to firm's transportation market segment. This includes project oversight and management; and applying transportation knowledge and design experience to enhance the success of projects. Serves as transportation project manager and responsible charge engineer. | | |
| Name of Firm: RK&K. | Start Date: 2013 | End Date: 2016 |
| Position: <i>Director, Transportation.</i> Led transportation efforts through collaboration, cooperation and coordination of engineering resources, with a focus on VDOT projects. Directed, supervised and reviewed all engineering design drawings produced for roadway and environmental work products. | | |
| Name of Firm: Virginia Department of Transportation | Start Date: 2004 | End Date: 2013 |
| Position: <i>Hampton Roads District Administrator.</i> Led a 950-person organization responsible for transportation engineering, construction, operations and maintenance encompassing nine counties, 11 cities, four tunnels, five major bridges, one ferry and 7,400 lane miles of roadways, with an overall budget in excess of \$800M. Led public involvement on the \$98M <i>Battlefield Boulevard Interstate Construction Project</i> which was awarded 9 th place in 2009 <i>Road and Bridge Magazine</i> award for <i>Top 10 Road Projects</i> . Also reviewed and approved Value Engineering proposal to crush and reuse concrete pavement which received Green Project coverage. Additionally, negotiated a change order on the Gilmerton Bridge Replacement project which resulted in a \$400M saving to VDOT. | | |
| Name of Firm: Thompson Engineering | Start Date: 1993 | End Date: 2004 |
| Position: <i>Design Group Supervisor, Senior Project Manager.</i> Led teams delivering complex multi-discipline projects, with a focus on projects requiring governmental agency interface. Provided life cycle project engineering and management emphasizing concept development/evaluation, cost and schedule control, resource allocation, marine/civil engineering, site analysis and development, regulatory and permitting issues, dredging and dredge material disposal and construction inspection. Project principal for the firms first DB contract to deliver a \$9M 747 Nose Dock Facility where Thompson Engineering held the DB contract with the Owner, Mobile Aerospace Engineering. | | |
| e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: The Pennsylvania State University/State College, PA/MS/1983/Civil Engineering Polytechnic Institute of Brooklyn/Brooklyn, NY/BS/1974/Aerospace Engineering | | |
| f. Active Registration: Year First Registered/ Discipline/VA Registration #: 1987/Civil Engineering/ VA Registration # 0402017594 2011/DBIA/Registered Design Build Professional/D1150 Also Registered as a Civil Engineering PE in AL, IL, NI, IA, KY, MO, MS, NE, PA, WV | | |
| g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each 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.) | | |

Gilmerton Bridge Replacement, Chesapeake, VA – VDOT (\$134M) District Engineer/Administrator. The Henry G. Gilmerton Bridge crosses the southern branch of the Elizabeth River in Chesapeake. Built in 1938, the original bridge was a four-lane double-leaf bascule bridge, crossed by more than 35,000 motorists daily. Built on the same alignment, the new Gilmerton Bridge is a state-of-the-art vertical lift bridge featuring 1,908-foot-long approach bridges; towers that are 207-feet tall; a 250-foot, 5.2-million-pound lift span bridge; and among the largest drilled shafts ever constructed in the United States at 12 feet in diameter, using the temporary casing method with an oscillator. Construction of the bridge was carried out in three phases. The first phase involved building of the eastbound side of the bridge. In the second phase, the lift span was moved to the site via barge. Traffic operations were closed for 14 days during the lift span installation. The third phase included completion of the west side of the bridge, demolition of the existing bridge and completion of the new bridge approach. Upgrading the Gilmerton Bridge required ground breaking construction techniques such as a float-in of the new 2,400-ton lift span eight nautical miles down the Elizabeth River. **Relevance to the I-95 DB project:** The complexities of this project, including a bridge over water, coupled with roadway construction; phased construction; high traffic volumes; constrained urban project footprint; and an involved public required diligent oversight and coordination, and are all issues to be found on the I-95 project. Additionally, Dennis participated in the Full Stakeholder/Joint Project Risk Management Plan development and execution to provide a collaborative project-focused process for successful delivery by resolving issues early before negatively impacting the project. As a part of his oversight, Dennis successfully negotiated a foundation design change order that resulted in a savings of \$440k for VDOT; and as evidence of the quality of the project delivered, he and his team received the *2012 VDOT Commissioners Award for Innovation and Quality Improvement* for the project. **Firm:** Virginia Department of Transportation | **Dates:** November 2009 – January 2013

Battlefield Boulevard (Interstate-64), Chesapeake, VA – VDOT (\$98M) District Engineer/Administrator. Within the City of Chesapeake, there are three major arterials that provide connections to Interstate 64 including Interstate 464, Battlefield Boulevard and Greenbriar Parkway. This award-winning project – *Top 10 Roads of 2009* from *Roads and Bridges* magazine – included the expansion of Interstate 64 from six lanes to fourteen lanes, four new interstate bridges, demolition and replacement of the existing Battlefield Boulevard bridge over Interstate 64, widening the replacement bridge from four lanes to six lanes, a sound barrier wall, ten mechanically stabilized earth retaining walls and the completion of the fiber optic traffic management system (TMS) through the project limits. It also included the first braided collector-distributor (CD) lanes in the Hampton Roads area which completely eliminated an existing weave condition that existed between the Greenbriar Parkway and Battlefield Boulevard interchanges. With more than 100,000 vehicles per day traveling the corridor, extensive traffic maintenance was necessary to manage Interstate 64 and Battlefield Boulevard congestion during construction. In his role as District Administrator overseeing the design and construction, Dennis approved an innovative value engineering proposal to crush and re-use the concrete pavement. He led the public outreach process, engaging local government, and business and civic groups, to mitigate impacts to traffic and businesses and kept them informed regarding all project phases, traffic shifts and potential impacts to their businesses. **Relevance to the I-95 DB project:** The complexity of widening this interstate roadway in a congested urban environment provides relevant experience and expertise with oversight of the required coordination between design and construction while maintaining critical traffic flow. In addition, the Battlefield Boulevard project was delivered two months early, with aggressive schedule management and control. The understanding of the critical importance of public outreach throughout design and construction that Dennis brings to the team will also serve the project well, as the team collaborates on solutions. **Firm:** Virginia Department of Transportation | **Dates:** March 2006 – June 2009

Route 164-APM Terminal Roadway Improvements, Portsmouth, VA – VDOT (\$24M) District Engineer/Administrator. Oversaw VDOT's first-ever design-build project which included the location and design of a new diamond interchange on Route 164, including supporting roadways; two new bridges; a new signalized local interchange; relocation of 2,800 feet of roadway, drainage and utilities; pavement design to accommodate heavy truck loads entering the newly constructed port facility; and mitigation of wetland and waterway impacts. There were significant right-of-way and permitting challenges which were managed concurrently with design and construction. Dennis was responsible for the project delivery as measured by its on-time and on-budget performance and the quality of the final product. Oversaw and guided discussions and decisions where value engineering decisions were made by the team to keep work within its original scope and budget. **Relevance to the I-95 DB project:** This project served to reduce congestion on local roadways, and required a detailed maintenance-of-traffic plan to maintain through-traffic on the existing Route 164, and to maintain access for local businesses, residents and the Coast Guard Base in Hampton Roads. Additionally, the project involved significant right-of-way and permitting challenges that were coordinated in tandem with project design and construction. The evaluation of the need for sound wall installation is also relevant to the I-95 DB project. Furthermore, Route 164 (a four-lane limited access highway) was raised to accommodate an overpass over the new APM Terminal Boulevard, very similar to I-95/Route 17 proposed bridge replacement. **Firm:** Virginia Department of Transportation | **Dates:** December 2004 – December 2006

* 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.

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

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| Brief Resume of Key Personnel anticipated for the Project. | | |
| a. Name & Title: Avtar Singh, PE, CCM, PMP, DBIA | | |
| b. Project Assignment: Quality Assurance Manager (QAM) | | |
| c. Name of all Firms with which you are employed at the time of submitting SOQs. In addition, please denote the type of employment (Full time/Part time): CES Consulting, LLC (Full time) | | |
| d. Employment History: With this Firm <u>5</u> Years With Other Firms <u>19</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): Mr. Singh has 21 years of progressive responsibility and experience in major bridge and interstate heavy civil engineering projects for four miles of I-66 and Route 29 Interchange construction that has multiple ramp reconstruction, new bridge construction and extensive maintenance-of-traffic requirements with daily coordination with the VDOT Smart Center and commercial media organizations. He also led the I-95 Widening project team responsible for widening seven miles of the interstate with extensive MOT / Construction / Utility coordination requirements with the 95 Express Lanes contractor and eventually the Express Lanes tolling control centers. This project also had utility relocations that required coordination with government entities to move fiber optic lines. For six years, Mr. Singh served as the Area Construction Engineer (ACE) for VDOT in the Northern Virginia District. As the ACE, he was the Responsible Charge Engineer (RCE) for 28 projects with a cumulative construction value of over \$230M. He was responsible for providing construction management expertise, providing schedule analysis and claims reviews, providing technical expertise for field and design issues on ongoing projects as well as upcoming planned projects. He was also responsible for public outreach through seminars, speaking engagements with the public and various political representatives. As part of his duties, he ensured that all VDOT project startup, execution and closeout processes were followed and ensured that all work was done in compliance with VDOT and FHWA standards. | | |
| Name of Firm: CES Consulting, LLC Present | Start Date: 2011 | End Date: |
| Position: <i>Consultant Project Quality Manager.</i> Oversees Quality Management for bridge and highway projects per VDOT/FHWA guidelines. Works to ensure conformance with contract; reviews baseline schedules; works with designer of record and reviews/negotiates work orders; and assists design engineers with expediting field changes. Coordinates traffic management with Traffic Operations Center (TOC) and adjacent projects to minimize disruptions. Managing a QA staff of up to two construction managers and 40 inspectors, responsible for quality inspection documentation, correct payments and handling all stakeholder concerns. | | |
| Name of Firm: Virginia Department of Transportation | Start Date: 2005 | End Date: 2010 |
| Position: <i>Area Construction Engineer (ACE).</i> As VDOT ACE managed 28 road and bridge construction projects with a total value of \$230M. As Responsible Charge Engineer, managed Quality Assurance (QA) staff of two construction managers and more than 35 inspectors on up to eight concurrent projects. In addition to managing QA and QA staff, provided schedule analysis and claims review, and technical expertise for field/design issues. Responsible for public outreach activities. | | |
| Name of Firm: NXL Construction Services | Start Date: 2004 | End Date: 2004 |
| Position: <i>Project Construction Quality Engineer.</i> Worked exclusively to manage QA for VDOT bridge and highway projects throughout the Commonwealth, as assigned. Provided day-to-day quality management / inspection of bridge and roadway projects, documentation of work and final project closeouts. | | |
| Name of Firm: NXL Construction Services | Start Date: 1999 | End Date: 2004 |
| Position: <i>Project Engineer.</i> Provided QA inspection for VDOT road and bridge projects throughout the Commonwealth. Responsible for project documentation; field inspections; materials testing; and resolution of issues in the field. | | |

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| <p>e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: George Washington University/Washington, DC/Certificate in Management /2009/Project Management Queens University/Canada/MS/1994/Structural Engineering Queens University/Canada//BS/1992/Civil Engineering</p> |
| <p>f. Active Registration: Year First Registered/ Discipline/VA Registration #: 2011/Civil Engineering/Virginia #0402035169</p> |
| <p>g. Document the extent and depth of your experience and qualifications relevant to the Project.</p> <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>Route 29 Solutions Design-Build Improvements, Charlottesville, VA – VDOT (\$150M) <i>Quality Assurance Manager.</i> Manages the Quality Assurance effort including the QA inspection team for three major phases of this D-B Contract including the Berkmar Drive Extension, the Rio Road Intersection, and the Route 29 Widening. Providing leadership and working closely with all project stakeholders to ensure all construction components, including materials, testing and sampling are performed in accordance with contract requirements and that the project is built to specifications. Relevance to the I-95 DB project: This project had significant maintenance-of-traffic (MOT) and public involvement considerations, as does the I-95 project. As a maintenance-of-traffic mitigation strategy, the construction has been phased in a manner that minimizes impacts to travel on Route 29. Real-time adjustments to MOT is provided by the construction inspection team, and this project provides management experience with the level of complex TMP and corridor coordination that will be required on the I-95 project. MOT is often a primary public outreach issue and development of strategies to maintain traffic, access and incident management while promoting public awareness is key to success. Firm: CES Consulting Dates: 2015 – 2017</p> |
| <p>I-95 Widening, Dumfries, VA – VDOT NOVA District (\$42M) <i>Quality Manager.</i> This seven-mile-long, I-95 widening project included roadway widening, installation of drainage pipes, extensive ITS/TMS work, overhead signs, and extensive coordination with the concurrent Express Lanes construction within the same project footprint. With one VDOT CM and nine CES inspectors, responsible for project quality management, including enforcement of VDOT specifications and standards; oversight of all testing, documentation and correct payment for work onsite; ensuring all non-conforming work was documented, remediated and closed out; working with FHWA, design engineers, and contractor to resolve field issues. Relevance to the I-95 DB project: This project required a corridor-wide – from I-95 in Alexandria to Spotsylvania – Traffic Management System for all lane closures; incident management and teamwork to minimize inconvenience to motorists during construction, providing valuable experience with the level of MOT anticipated on the I-95 D-B project. Firm: CES Consulting Dates: 2013 - 2015</p> |
| <p>I-66 HOV Widening from 234 Bypass to Route 29, Gainesville, VA, VDOT (\$103M) <i>Responsible Charge Engineer.</i> On-site Responsible Charge Engineer for widening of 2.8 miles of I-66 – two new lanes in each direction – and construction of five new bridges along with storm sewer, jack and bore, waterline, lighting and TMS work. Project was constructed on-time and on-budget while constructing three new bridges slated for retrofit only. Managed the \$14.6M QA/QC budget and staff of more than 20; served as technical source for resolution of field and design issues; partnered with the contractor to accelerate work, and review and negotiate change orders to build the new bridges; and worked with design engineers to expedite design. (As a part of the partnering approach between the contractor, owner and designer, construction proceeded prior to full design plan completion.) There were no claims on the project, and project success was attributed to team trust in the pursuit of the same goal: successful project delivery. Relevance to the I-95 DB project: With the potential for significant traffic impacts and disruption, the project required extensive public outreach with local HOAs, shopping centers, local hospitals, school board and schools, parks and local civic organizations. Firm: VDOT Dates: 2006 – 2009</p> |
| <p>* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.</p> |
| <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.</p> |

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

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| Brief Resume of Key Personnel anticipated for the Project. |
| a. Name & Title: Keith Weakley, PE, DBIA, Chief Engineer |
| b. Project Assignment: Design Manager (DM) |
| c. Name of all Firms with which you are employed at the time of submitting SOQs. In addition, please denote the type of employment (Full time/Part time): Volkert, Inc. (Full time) |
| d. Employment History: With this Firm <u>6</u> Years With Other Firms <u>17</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): Mr. Weakley has 23 years of experience with the development, design, and project management of transportation projects in the Commonwealth. He has extensive experience managing complex, interdisciplinary projects involving phased construction, methods to accelerate construction, methods to reduce maintenance needs, and aesthetic treatments. Prior to joining Volkert he worked at VDOT for 16 years, and brings a long history of collaborating with VDOT and FHWA officials, local agency representatives, elected officials, special interest groups, and concerned citizens to resolve a wide range of transportation issues including traffic and environmental impacts. Through his extensive work with VDOT he brings an awareness and ability to identify the potential need for design waivers and expertise with their preparation, often with significant time and cost savings. Name of Firm: Volkert, Inc. Start Date: 2010 End Date: Present Position: Vice President and Chief Engineer. Oversees engineering services for the offices in Volkert's Mid-Atlantic Region including resource management, staff performance, quality assurance, and client satisfaction. Provides technical guidance to design teams. Manages multi-disciplined teams and design-build and high-visibility projects including staff, scope, schedule, budget, risk, and quality management. Name of Firm: Virginia Department of Transportation. Start Date: 2007 End Date: 2010 Position: District Structure & Bridge Engineer. Directed all aspects of bridge program for VDOT's Staunton District. Supervised a staff of 60+, managed \$14M maintenance budget, and oversaw \$180M construction program. Managed consultant contracts. Served on Statewide Project Controls Committee and Jointless Bridge Committee (and continues to serve to the present time.) Name of Firm: Virginia Department of Transportation. Start Date: 2004 End Date: 2007 Position: Assistant District Structure & Bridge Engineer for Design. Managed bridge design, maintenance/repair, and project management for the Staunton District Bridge office. Worked with municipalities and contractors to solve construction problems. Managed and negotiated consultant contracts. Responsible for QA/QC and constructability of bridge plans. Name of Firm: Virginia Department of Transportation. Start Date: pre 2002 End Date: 2004 Position: Senior Structural Engineer. Designed highway & pedestrian bridges, earth retaining and other highway structures in VDOT's Staunton District. Performed estimating and construction coordination. |
| e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: University of Virginia, Charlottesville, VA / ME / 2006 / Civil Engineering (Structural) Virginia Polytechnic Institute and State University / Blacksburg, VA / BS / 1993 / Civil Engineering |
| f. Active Registration: Year First Registered/ Discipline/VA Registration #: 1998 / Professional Engineer / Virginia #0402 031697 |
| g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each 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-495 Northern Section Shoulder Lane Use Design-Build Project, Fairfax County, VA – VDOT (\$16M) Project Manager. Working with an accelerated design schedule of two months, coordinated a time-saving and innovative use of work packages, including submissions from multiple design disciplines; facilitated approvals and comment resolution; provided technical and problem-solving guidance; established and oversaw QA/QC program; with contractor to resolve field issues; and managed shop drawing reviews and responses to RFIs for the design of a shoulder-lane control system to regulate the use a 1.8-mile segment of the northbound I-495 shoulder lane during AM and PM peak periods. Relevance to the I-95 DB project: While the I-495 project had a smaller dollar value, the design addressed many of the challenges anticipated on this <i>I-95 SB CD Lanes and River Crossing</i> project – a high-traffic, high-speed interstate with constrained right of way, requiring effective traffic management, while providing the |

required improvements, including complex ITS. Keith confirmed work products were in conformance with the Contract Documents, and met all technical requirements; all potential alternatives were explored; and responsive and constructible design solutions were developed. A key challenge was fitting the shoulder-use lane within the existing right-of-way. The shoulder use lane is 11 feet wide with a minimum 2.5-foot wide lateral clearance from the median barrier. The general-purpose lanes were reduced from 12-foot to 11-foot wide lanes and the 10-foot outside shoulder was reconstructed to full depth pavement with part of the right shoulder becoming part of the outer-most travel lane. The design included a shoulder lane delineated with gray pavement, lane control signals, a shoulder lane monitoring system, additional CCTV cameras, two new dynamic message signs for incident management, and development of ITS architecture to connect to existing VDOT infrastructure and ATMS. The outside shoulder at the Georgetown Pike interchange was widened to provide an emergency pull off area. The original scope required that the shoulder lane be designed so that motorists could see two LCSs at once. However, *Volkert provided a viable design and justification for waiving this requirement due to the horizontal and vertical curvature of the interstate and the bridges of I-495 that was approved by VDOT and saved significant construction time and money.* The project also involved the development of roadway, drainage, barrier modification, sign, and pavement marking plans and the development and implementation of a Type C TMP. **Firm:** Volkert, Inc. | **Dates:** April 2014 – June 2015

I-66 Pavement Rehabilitation Design-Build Project, Fairfax, Virginia, VA – VDOT (\$43M)

Project/Design Manager. Managed design, quality assurance, and coordination with the contractor for the construction of a design-build project involving improvements to a 6.5-mile segment of I-66, bringing a wealth of knowledge regarding the interstate, in particular the high volumes of traffic and other existing conditions, constraints and stakeholders involved with planned improvements to I-66. Prepared and implemented design QA/QC plan and coordinated the work of multiple design disciplines; reviewed plans, shop drawings, and specifications; and worked collaboratively with the contractor to carefully plan an aggressive yet realistic integrated design and construction CPM schedule, planning and implementing concurrent design and construction activities to maximize efficiency and flexibility. **Relevance to the I-95 DB project:** On a similarly congested corridor as this project, many of the same traffic conditions were prevalent including necessary interfaces with adjacent projects, time-of-day restrictions, and constrained conditions. *Volkert's progressive design work packages enabled simultaneous and accelerated construction operations* utilizing a temporary precast modular patching system and an innovative metal grate adjustment collar system which eliminated the need for precast and cast-in-place concrete. The design included a complex TMP based upon a detailed operational-level traffic study and analysis to create complex temporary traffic control and traffic operation plans that maximized safety and minimized impacts to traffic flow and the work zone. As will be the case for I-95, construction was conducted at night only while keeping 2 of 3 lanes plus the shoulder lane in both directions open to traffic at all times during construction; work on ramps was accomplished in a separate phase with partial ramp closures and detours all minimizing impacts to ongoing traffic. In addition, Volkert prepared and implemented the public communications plan. This project received the *NAPA National Pavement Quality Award in 2012* as well being featured in *Road & Bridges*, June 2013 issue. As a result of Volkert's success with this project, VDOT requested that Volkert (and, specifically Keith) manage the development of three design-build RFP packages for four pavement rehabilitation projects covering 158 lane-miles of I-64 and I-264 that also would require fast-track project delivery; Keith received the *VDOT Commissioner's Outstanding Achievement for Outstanding Customer Service in 2014* for his work on this project. **Firm:** Volkert, Inc. | **Dates:** February 2011 – June 2013

Martin Luther King Expressway Extension, Elizabeth River Crossing PPTA Project, Portsmouth – VDOT and Elizabeth River Crossings, LLC (\$210M) Design Oversight. As Volkert's Chief Engineer, responsible for the management of the design of a one-mile, four-lane, elevated, limited-access facility to provide a direct connection from I-264 to the Midtown Tunnel, including two new urban interchanges, modifications to an existing interchange, two bridge widenings, the widening of a 0.8-mile segment of I-264 to add auxiliary lanes, side road improvements, retaining walls, new SWM facilities, and an urban plaza. **Relevance to the I-95 DB project:** This project involved high-traffic volumes and speeds, with roadway widening in an urban area and within a constrained project footprint, requiring phased construction plans and implementation of a Type C, Category V TMP. Keith managed the implementation of the design QA/QC program and oversaw construction phase services. A segment of the project incorporated the design of a soldier-pile wall to hold back the existing embankment and facilitate the widening of I-264, and 22 EPS and MSE walls as a cost-effective alternative to bridge construction and to reduce ROW impacts. *Significant cost savings were achieved by using cost effective materials where appropriate* such as hybrid plate girders and a fiberglass reinforced plastic deck drainage system, which reduced the amount and size of equipment required for construction. High-performance steel reduced the overall quantity and cost of steel. Precast-concrete piles reduced the number of piles required. The project also includes two new urban interchanges, an interchange modification, the widening of I-264 to add auxiliary lanes, side road improvements, and new SWM facilities. The context-sensitive design maintains connectivity of neighborhoods, incorporates aesthetic treatments on the bridges, and minimizes impacts to historic resources in addition to relieving previous congestion conditions. **Firm:** Volkert, Inc. | **Dates:** August 2010 – December 2016

* 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.

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

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| Brief Resume of Key Personnel anticipated for the Project. |
| a. Name & Title: Earl Adwell, Construction Manager |
| b. Project Assignment: Construction (CM) |
| c. Name of all Firms with which you are employed at the time of submitting SOQs. 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>32</u> Years With Other Firms <u>12</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): Mr. Adwell has 44 years of experience with the on-site management of the construction process for transportation infrastructure projects, including ensuring all materials and work meet contract requirements, plans and specifications. |
| Name of Firm: Orders Construction Company, Inc. Start Date: 1978 End Date: Present Position: <i>Construction Manager</i> . On-site management of major bridge and highway projects, with responsibility for communicating with stakeholders; scheduling; dispute resolution and field solutions; management of subcontractors and vendors; MOT review and monitoring of construction QC plans; means and methods; analysis of erection procedures; implementation of erosion and sediment control plans; safety; and implementation of DBE and EEO programs. |
| 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 #: <i>Prior to the commencement of construction, Mr. Adwell will hold Virginia DEQ RLD Certification and VDOT ESCCC Certification.</i> |
| g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each 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 (\$19M) Construction Manager. This award-winning project – 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 was paramount to the success. The Maury River project, twin bridges that included more than 100,000 SF of deck surface, Virginia Style Abutments, major excavation to widen I-81. This project was performed at the same time as a like project to the south over Buffalo Creek makes coordination of construction and traffic control a constant endeavor. Earl managed both construction and traffic flow. A full-time safety patrol service was utilized and the project met or exceeded all expectations. Relevance to the Rappahannock River Crossing DB project: Complex TMP and its Risk Management. 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 interstate, managed risks and beat an aggressive construction schedule. Firm: Orders Construction Company Dates: March 2004 – December 2006 |

US Route 50 over Potomac River, Hampshire County, WV – WVDOT (\$10M) Construction Manager. Full-time Construction and QC Management for this bridge replacement project that included a 900 LF, 5-span stud girder bridge, extensive approach roadway grading that included grade separation elevation changes of nearby 6 VF. The project was located over the Potomac River, a Chesapeake Bay Tributary, so environmental monitoring and maintenance were at the forefront. Project was completed on time and within budget.

Relevance to the Rappahannock River Crossing DB project: Mitigation of environmental issues, grade separations and traffic switches, time-of-year restrictions, long spans of steel erection over water, limited access for material and limited access for material and equipment.

Firm: Orders Construction Company. | **Dates:** March 2006 – August 2010

Relocation of US 35, Putnam County, WV – WVDOT (\$19M) Construction Manager. Earl managed the construction relocation with dangerous tie-in with the existing roads, compounded by high traffic volumes along a section of US 35. The project included twin 4-span bridges nearly 750 LF long over water with 6,000 LF of bearing pile and 17,000 SF MSE Retaining walls. The earth work for new sections of highway and the many ties meant trucks moving in-out and with traffic. Earl managed all construction activities as well as the difficult task of keeping the public moving.

Relevance to the Rappahannock River Crossing DB project: Earthwork along and in a major highway, high traffic volumes, working in and over a major waterway, complex cofferdams, difficult bridge access and an environmentally sensitive area.

Firm: Orders Construction Company | **Dates:** March 2006 – November 2007

* 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 General Construction Manager over three active Bid-Build projects:

1. VDOT Route 501 James River Bridge and Bridge over CSX RR, Bedford and Amherst Counties. Completion: April 2017
2. VDOT Bridge over Shenandoah River on Rte. 624 – S, Warren County. Completion: Summer 2018*
3. VDOT Artz Road Bridge over North Fork of Shenandoah River, Shenandoah County. Completion: Summer 2018*

*These projects should be completed by the time the VDOT I-95 SB CD Lanes and Rappahannock River Crossing project gets underway. As necessary these Bid-Builds can be managed by supervisors working under Earl's tutelage at such time as necessary for Earl to move into the Construction Manager role on the Design-Build.

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

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|---|-------------------------|--------------------------|
| Brief Resume of Key Personnel anticipated for the Project. | | |
| a. Name & Title: Achyut (AI) Patel, PE, DBIA | | |
| b. Project Assignment: Lead Structural Engineer (LSE) | | |
| c. Name of all Firms with which you are employed at the time of submitting SOQs. In addition, please denote the type of employment (Full time/Part time): Clark Nexsen (Full time) | | |
| d. Employment History: With this Firm <u>11</u> Years With Other Firms <u>24</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): Mr. Patel has 35 years of bridge design experience, including experience meeting the needs and requirements of VDOT; and reviewing, verifying and modifying designs based on field conditions and construction activities. He has been involved with projects that included dismantling and removing portions of existing structures, handling and erecting bridge girders, and making superstructure and substructure repairs. Additionally, AI has an extensive background in the design of bridge structures varying types of substructures, including piers with heights up to 60'. | | |
| Name of Firm: Clark Nexsen | Start Date: 2005 | End Date: Present |
| Position: <i>Technical Director – Bridge Engineering.</i> Lead Structural Engineer responsible for the design and management of all types of bridge design projects using AASHTO LRFD and ASD design specifications. Projects include design of straight and curved structures over creeks and rivers, highways and railroads, as well as bridge widenings and the rehabilitation and repair of existing structures, including dismantling and removing portions of those structures. Duties include preparation of preliminary and final bridge design and plans, environmental permit sketches, cost estimates, load ratings, daily coordination with design staff, and review of design to ensure that the production of contract documents is performed in accordance with VDOT standards and specifications. Responsible for coordination with owners' project managers, other disciplines, subconsultants, and supervision of staff engineers. Reviews shop drawings and attends field coordination meetings during construction phase, providing design changes due to unforeseen field conditions. Provides structural engineering support to contractors during construction. | | |
| Name of Firm: Reid Structure & Bridge, Inc. | Start Date: 1995 | End Date: 2005 |
| Position: <i>Senior Structural Engineer.</i> Mr. Patel was responsible for the planning, design and coordination of more than 60 steel and prestressed concrete bridges, using AASHTO ASD and LFD design specifications. Managed and designed bridge projects on straight and curved alignments from preliminary to final design submittals and also worked closely with VDOT project managers to fulfill their requirements and complete projects. Supervised and guided staff engineers in daily design process and production of plans. Duties included design of prestressed and steel superstructures on a straight and curved alignment; integral and MSE wall abutments; multi-column and tall hammerhead piers using design software such as SIMON, CONSPAN, DESCUS, STAAD and RC-Pier; preparation of environmental permit sketches; load ratings and cost estimates. Also responsible for coordination with other disciplines and subconsultants. Reviewed shop drawings and provided design changes during construction due to changed field conditions. | | |
| e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: University of Virginia/Charlottesville, VA/ME/1994/Civil Engineering (Structures) New Jersey Institute of Technology/Newark, New Jersey/BS/1989/Civil Engineering | | |
| f. Active Registration: Year First Registered/ Discipline/VA Registration #: 1994/Civil Engineering/Virginia #25919 1994/Civil Engineering/New Jersey #38327 2015/DBIA/Registered Design Build Professional/D1798 | | |
| g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each 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.) | | |
| Route 60 Main Street Bridge Replacement, Clifton Forge, VA – VDOT (\$3.5M) Design Manager. As Design Manager on the Orders Construction D-B Team, in charge of complete design for the replacement of a 164-foot-long concrete T-beam bridge within a constrained project footprint – historic buildings located less than one inch away for | | |

the length of the bridge. The new structure is a three-span prestressed concrete box beam superstructure supported on concrete frame bent piers founded on rock. The proposed drilled shaft foundation was replaced by shallow foundation supported on rock. This was a value engineering proposal that was accepted by VDOT and reduced the project cost by \$1.5M and accelerated the construction time. Additionally, this substantially reduced the vibration risk to adjacent historic structures from mobilized drilling equipment. AI was responsible for coordination with all support services, including approach roadway design, transportation maintenance plans (TMPs), hydraulics and scour analysis, geotechnical analysis, surveying and utility design. A major challenge for the project was determining the most cost-effective foundation system. Additionally, AI was an integral component of the constructability evaluation for Orders—how best to mobilize heavy equipment within a narrow work zone with height limitations and adjacent to historically significant structures. AI worked with Orders to evaluate crane placement location in order to erect superstructure beams. **Relevance to the I-95 DB project:** The Clifton Forge project required coordination with many of the disciplines forming the Orders team for the I-95 project, and given the history of successful collaboration between Orders and Clark Nexsen, this will facilitate seamless partnering between the design and construction. Additionally, Clifton Forge Bridge is supported over a shallow foundation on rock similar to the I-95 DB project. There were also significant traffic engineering issues on which AI as Design Manager collaborated with Orders to solve by providing a two-way traffic system on Ridgeway Street while the WB Bridge was being replaced.
Firm: Clark Nexsen | **Dates:** February 2011 – October 2012

Lesner Bridge Replacement over Lynnhaven Inlet, Virginia Beach, VA – City of Virginia Beach, VA (\$95M) Lead Bridge Engineer. Currently under construction, this Locally Administered Project replaces the existing structurally deficient and functionally obsolete Lesner Bridge with twin replacement bridges, capable of carrying three lanes of traffic each if necessary in the future. (The replacement bridge structure will initially be striped for two lanes of traffic and wide shoulders.) Each bridge has a 10-foot-wide multi-use path for use by pedestrians and recreational cyclists. The proposed bridge provides a minimum 45 feet vertical clearance above mean high water and 225 feet minimum horizontal clearance at center navigation channel span. This project also includes upgrades to the intersections of East Stratford Street and Vista Circle, as well as aesthetic improvements. AI was in charge of design of the 10-span, 1600-foot-long twin parallel bridge structures as an alternate to segmental design. Designed prestressed concrete bulb – T superstructure, 50' tall piers, MSE wall abutments and drilled shaft foundation in accordance with ASHTO LRFD. He led the preparation of TS&L study report and cost estimates for City comparison to segmental bridge design. Evaluated reconfiguration of drilled shaft foundations to reduce size and spacing. While the bulb – T was \$15M cheaper than segmental design, the Owner selected the segmental bridge construction based upon public input and aesthetic considerations. Designed MSE walls for roadway abutments. **Relevance to the I-95 DB project:** The Lesner Bridge project's primary goal was to ensure that traffic flow on this heavily traveled corridor would not be impeded throughout the construction of the new bridge structures, nor would access to residences and businesses be restricted. Preliminary bridge concept alignments, spearheaded by AI, ensured that four lanes of traffic would be made available at all times while allowing the contractor proper areas of construction operations, thereby ensuring a competitive bidding process. Identifying sequencing of construction early on in the preliminary design concepts was key to the success of this project. Like Lesner, the I-95 replacement's lead bridge engineer will need to focus on these elements throughout the design process. Additionally, Lesner bridge provided span lengths of up to 150', ensuring that that an efficient bridge design could be generated while keeping project scope and cost in mind. In addition to the similarities with bridge span lengths, both the Lesner Bridge and the I-95 bridge replacement projects will have similarly high piers (greater than 50' in height).
Firm: Clark Nexsen | **Dates:** 2009 – 2013 (Design)

Brambleton Avenue Bridge Widening and Deck Replacement, Norfolk, VA – City of Norfolk (\$6M) Lead Structural Engineer. Responsible for the design and overall project management for the 13-span, 700-foot-long bridge over a waterway. Designed prestressed concrete superstructure and substructure widening, and complete deck replacement to accommodate a 10-foot path. The new deck slab was detailed as a two-span continuous unit to reduce the number of bridge joints. Prepared environmental permit sketches and coordinated design with other disciplines and utility companies. Also provided shop drawing review and collaborated with the contractor during construction to provide design changes to resolve unforeseen field conditions. **Relevance to the I-95 DB project:** Maintenance-of-traffic is a primary concern for the I-95 project and staged construction was employed for the Brambleton Avenue project to maintain three lanes of traffic during construction. Environmental issues – permitting and compliance – are also considered a risk and the Brambleton Avenue project required consideration of the same.
Firm: Clark Nexsen | **Dates:** 2006 – 2008 (PE / CN)

* 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.

3.4.1(a) 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 over the Maury River Location: Rockbridge County, VA | Name: Whitman, Requardt & Associates, LLP | Name of Client/ Owner: 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 for early completion) | \$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-95 Rappahannock Project

- ✓ Bridge Replacement
- ✓ Roadway Approaches
- ✓ High-volume, high-speed interstate traffic
- ✓ MOT and TMP
- ✓ Utility Impacts -
- ✓ Geotechnical
- ✓ Environmental
- ✓ Public Outreach

Staff from this project that are proposed for the I-95 Southbound CD Lanes – Rappahannock River Crossing D-B Project:

- ✓ Charlie Stokes – Project Manager
- ✓ Earl Adwell – Construction Manager

PROJECT DESCRIPTION – Orders served as general contractor for the replacement and widening of twin bridges over the Maury River on a heavily traveled section of I-81 in Rockbridge County. Similar in many respects to the I-95 Crossing over the Rappahannock River Project, this project on the ‘other congested north-south interstate in Virginia included significant roadway work, including approach roadways 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-foot 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. Other analogous 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 implemented due to 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 continually improved 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 – Orders has gained valuable experience working in and adjacent to heavily traveled highways and in the development/implementation of TMPs for Type C projects to ensure safety of the traveling public and construction workers. We will capitalize on this experience with traffic control and MOT in a congested corridor on the I-95 Southbound CD Lanes – Rappahannock River Crossing D-B Project. With partnering and a shared commitment to on-time completion ... together we surpassed that and delivered early! Orders spearheaded efforts to compress the project schedule and together with VDOT to resolve design/construction issues quickly.

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.



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 Counties, VA | Name: AECOM | Name of Client/ Owner: 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.



PROJECT DESCRIPTION – Orders served as general contractor for the construction of a 926 linear feet bridge over the James River and CSX Railroad. This project was located on the Bedford County and Amherst County line where Route 501 and Route 130 intersect. Orders Construction used barges and cranes on the James River to perform a majority of the new bridge construction. This project consisted of 38,000 cubic yards of excavation, roadway drainage features, 11 complex drilled shafts, a 931 square feet soldier pile/timber lagging tieback temporary shoring wall, 4 difficult cofferdams, 5,910 square feet of MSE Wall, nearly 1.9 million pounds of structural steel erection, demolition of a 655 linear feet bridge, signing, and guardrail.

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 realignment. Both Route 501 and Route 130 were realigned and widened in phases to keep traffic moving during the nearly 40,000 cubic yards of excavation and rock scaling of Route 130.

“ . . . the contractor has been great to work with. While issues were minimal they were handled at the lowest possible level with resolve for all involved. I’m looking forward to working with Orders Construction in the future.”
Larry Nash
VDOT Construction Project Manager



EVIDENCE OF GOOD PERFORMANCE – Orders is currently scheduled to finish this project ahead of schedule and under budget. – Relationships built during the project led to Orders’ development of Mass Concrete Seminars to assist others in the means and methods for successful mass concrete operations on projects.

LESSONS LEARNED – Orders gained valuable experience which will apply to the I-95 Rappahannock project notably in the attentive up front planning that has led to a very successful mass concrete program. Working closely with VDOT, tough river cofferdams were used with little impact to the environment. Partnering with CSX and VDOT allowed the project to be successfully completed over the CSX Rail System without major interruptions to rail traffic. Working closely with the VDOT Construction Manager and District Traffic Control staff, the 2-phase construction of Routes 501 and 130 allowed traffic switches to take place without impacting the traveling public. Public outreach on this project

was paramount. Not only are Routes 501 and 130 heavily traveled, this project has 2 hydro-electric power plants on the James River within a half mile of the new bridge. The Georgia Pacific Company’s Big Island plant is located downstream of the bridge and keeping trucks moving was critical to them. Similar to the prevalence of numerous adjacent concurrent transportation/construction projects on the Rappahannock River Crossing project, access and respect for the magnitude and constancy of these power plants operations has been a stringent requirement. By establishing a rapport early on and keeping in continual contact with them, in particular, has enabled both of our operations to carry on unimpeded. Fostering this type of productive working relationship was most beneficial to all of the stakeholders on this project.

Relevance to the I-95 Rappahannock Project

- ✓ Roadway
- ✓ Bridge
- ✓ MOT
- ✓ Geotechnical
- ✓ Environmental
- ✓ Retaining Walls
- ✓ Public Outreach

Staff from this project that are proposed for the I-95 Southbound CD Lanes – Rappahannock River Crossing D-B Project:

- ✓ Charlie Stokes
- ✓ Josha Sproles
- ✓ Earl Adwell



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 670 Bridge Replacement over South Holston Lake Location: Washington County, VA | Name: AECOM | Name of Client/ Owner: VDOT Phone: 276-696-3367 Project Manager: Marty Halloway, PE Phone: 276-791-2189 Email: Marty.Halloway@VDOT.Virginia.gov | 06/2015 | 06/2015 | \$16,237 | \$17,677 | \$17,677 |

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.



PROJECT DESCRIPTION – The greatest challenge that **Orders Construction** faced during the replacement of the Route 670 Avens Bridge over South Holston Lake was to build the bridge in the deep water of South Holston Lake, while being in close proximity to the existing Route 670 bridge and high voltage power lines. Similar to the proposed project over the Rappahannock River, this bridge replacement included, not just significant bridge work, but also approach roadway realignment, drilled shafts in 80+ feet of water, and barge/crane work. The 1,005-foot long bridge structure totaled more than 34,500 square feet of deck and included 8 complex drilled shafts in deep water. Like the I-95 bridge replacement over the Rappahannock River, this project included the following notable construction elements:

- Roadway drainage
- More than 5,000 cubic yards of borrow excavation
- Avoidance of high voltage power lines
- Nearly 2,000,000 pounds of structural steel erection and winter concrete work on the bridge took place

EVIDENCE OF GOOD PERFORMANCE – Despite abutment foundation issues that were encountered during the project, *significant enough to require re-design*, **Orders completed the project by the originally planned completion date and even more significantly ... under the final contract amount.** By partnering with VDOT, Orders provided constructability analysis and reviews to VDOT's staff/designer, and utilized temporary bents for steel erection to keep the project on schedule to offset delays associated with the adjustments to the abutment design. Orders also brought in additional crews to keep the project on target. Orders' active participation in outreach to the community — vehicular as well as boating travelers — with the VDOT Bristol District assured public acceptance of the timely and safely delivered project.

LESSONS LEARNED – Orders gained valuable experience handling both roadway and boat traffic on this project and worked with VDOT Public Relations to notify the public of construction activities and MOT impacts. Working through foundation issues presented unique challenges and influenced Orders to change to a more aggressive construction schedule. Foundations were designed to be constructed on drilled shaft and spread footers in karst terrain and required changes daily to meet the conditions encountered in the field. This included adjustments to drilling techniques, pile driving and concrete placement. Ground heaters were added to the list of Orders extensive equipment to better insure quality for winter placement of concrete. The dynamic nature of this project and a common desire for safety and project success established and promoted the strong working relationship between the District's construction staff, VDOT's consultant CEI staff, District S&B Division staff, and Orders construction staff.



Every year the International Partnering Institute recognizes projects and individuals who best exemplify the principles of partnering and promote their mission – to transform the construction industry to achieve exceptional results through a culture of collaboration. The awards celebrate success, share lessons learned and best practices, and acknowledge teams and individuals who achieve extraordinary results. This project was awarded the **2015 International Transportation Project of the Year, Ruby Level**, at the Spring 2016 meeting of the International Partnering Institute in San Francisco, California. According to the award-winning project teams in 2015: \$1 spent on partnering led to \$114 savings for their projects.

Relevance to the I-95 Rappahannock Project

- ✓ Roadway
- ✓ Bridge Replacement
- ✓ MOT
- ✓ Utility Impacts - Power Lines
- ✓ Geotechnical
- ✓ Environmental
- ✓ Retaining Walls
- ✓ Public Outreach

Staff from this project that are proposed for the I-95 Southbound CD Lanes – Rappahannock River Crossing D-B Project:

- ✓ Charlie Stokes – Project Manager
- ✓ Earl Adwell – Construction Manager

3.4.1(b) Lead Designer Work History Forms

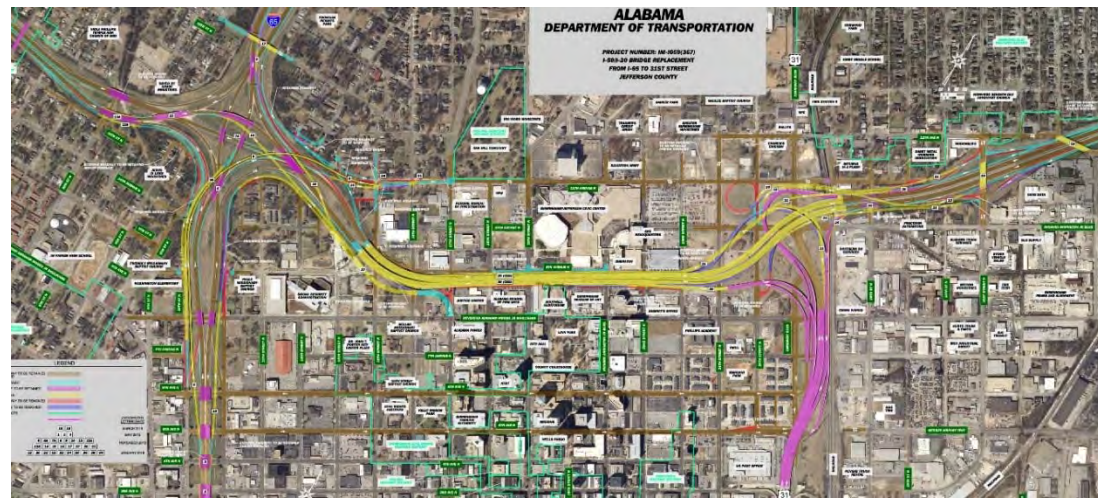
ATTACHMENT 3.4.1(b)

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-59/20 CBD Bridge Replacement Project (Phase II) Location: Birmingham, AL | Name: Granite Construction | Name of Client.: Alabama DOT Phone: (334) 353-6554 Project Manager: William (Tim) Colquett, PE, State Bridge Engineer Phone: (334) 242-6007 Email: colquettw@dot.state.al.us | 01/2016 | 02/2018 | \$208,612 | \$208,612 | \$13,000 |

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.



\$600M Bridge Replacement to Improve Safety and Traffic Flow Uses Fast-Track Design

Constructed in the 1970s, the twin 6,500-foot-long concrete bridges supported by steel girders carrying I-59 and I-20 through Birmingham's Central Business District (CBD) accommodate twice as much traffic as designed for, resulting in a fatigued bridge deck and girders. Volkert led the design contract for the replacement bridge, meeting current standards, providing additional capacity, reducing maintenance requirements, and improving safety and access. This interstate serves as an important link in the Alabama transportation network; therefore, a fast-track design and construction methodology was pursued in order to minimize impacts to Birmingham area traffic – including breaking the design into multiple construction contracts. *Like the I-95 corridor between Washington DC and Fredericksburg, VA, this stretch of Interstate has the highest rate of traffic flow in Alabama, carrying over twice the number of vehicles than it was intended to accommodate.*

Volkert conducted a study of multiple replacement, widening, and new bridge alternatives and conducted extensive public outreach to numerous stakeholders to determine the most feasible solutions. The design includes a limited-access precast segmental-concrete box-girder bridge more than one mile long with new auxiliary lanes and

Relevancy

- ✓ Dense urban area
- ✓ High-volume, high-speed interstate traffic
- ✓ Bridge replacements
- ✓ Retaining wall design
- ✓ Roadway approach design
- ✓ Utility relocation / undergrounding / coordination
- ✓ Complex traffic analysis & TMP development
- ✓ Construction phasing
- ✓ Extensive public outreach activities & agency coordination

replacement of left ramps and weaves with right-hand ramps into and out of downtown Birmingham via 17th street North, US 31, and 31st Street North to improve safety and traffic flow.

Volkert's Springfield Office Led the Design of Seven Bridges in \$209M Phase 2 Construction Utilizing Jointless Bridge Technology to Reduce Future Maintenance

The project also includes six other bridge replacements, 14 bridge widenings, 10 new bridges, and retaining walls along new ramp accesses. **Volkert's Springfield, VA office led the design** of seven of these bridges – four new, multiple-span, curved, steel-girder bridges ranging in length between 2,000 feet and 2,637 feet; a bridge replacement with a two-span steel-girder bridge 390 feet long; and the widening of a two-span, continuous, curved, steel-girder bridge, 327 feet long. In addition the Springfield team is designing two flyover bridge ramps including a variable width, curved, steel and pre-stressed-concrete structure 2,908 feet long and a pre-stressed-concrete structure with pre-stressed-concrete bulb-tee beams 1,210 feet long. As a part of the effort to reduce maintenance requirements, the bridges are jointless and low maintenance.

Design Balances Stakeholder Concerns with Minimizing Traffic and Right of Way Impacts

The design had to meet the needs and address the concerns of numerous stakeholders while minimizing the expansion in scope. A primary challenge was minimizing right-of-way impacts, working within tight horizontal and vertical geometric constraints, and avoiding existing interchange ramps and excessive fill heights. Therefore, bridging of the new ramps was required. Volkert developed a complex, detailed TMP that analyzed regional traffic impacts. Due to the high traffic volumes, all supporting bridge, ramp, and street improvements will be completed prior to the construction of the main I-59 / 20 concrete-segmental bridge. These improvements will be used to accommodate detoured traffic during construction of the main bridge. The project also involved the redesign of intersections into and out of the CBD and the retiming of traffic signals, as well as local street and CD access to the interstate.

Innovative Use of LED Lighting Lowers Maintenance Costs

Volkert designed lighting for 12 underpasses that blends in with the high-mast tower design along the corridor. LED lighting and security cameras will be attached to the main bridge to accommodate parking areas under the bridge and lower lighting maintenance costs. Volkert's design relocates many electrical utilities attached to the main bridge, including the city's fiber backbone, underground, which required close coordination with utility providers.

Staff from this project available for the I-95 Southbound CD Lanes – Rappahannock River Crossing D-B Project

- ✓ Keith Weakley, PE, DBIA
- ✓ Brian Graham, PE
- ✓ David Simons, PE
- ✓ Nipon Jausurawong, PE
- ✓ Brenton Stone, EIT

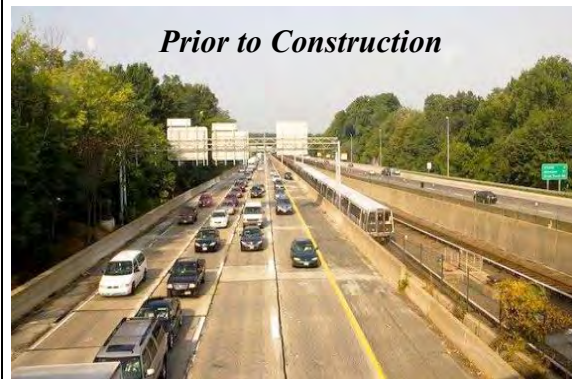
ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

| a. Project Name & Location | b. Name of the prime/ general contractor responsible for overall construction of the project. | c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities. | d. Construction Contract Start Date | e. Construction Contract Completion Date (Actual or Estimated) | f. Contract Value (in thousands) | | g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands) |
|---|---|--|-------------------------------------|--|--|---|--|
| | | | | | Construction Contract Value (Original) | Construction Contract Value (Actual or Estimated) | |
| Name: I-66 Rehabilitation Design Build Location: Fairfax, VA | Name: Fort Myer Construction Corporation | Name of Client.: Virginia Department of Transportation Phone: (703) 259-1995 Project Manager: Susan Shaw, PE Phone: (703) 259-1995 Email: <u>susan.shaw@VDOT.virginia.gov</u> | 11/2012 | 06/2013 | \$38,000 | \$43,000 (due to expanded scope) | \$904 |

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.



Prior to Construction



After Construction

Volkert's Design Improves Overall Ride Quality by 200% on High-Speed Interstate with Multiple Interchanges and CD Roads

Volkert provided Lead Design, Quality Assurance (QA), and Public Outreach services for a \$43M rehabilitation project along a 6.5-mile segment of I-66. The design was managed from **Volkert's Springfield, VA office** and included full-depth patching of concrete pavement; asphalt overlay; and roadway/geometric, drainage, Intelligent Transportation System (ITS), and lighting improvements. Volkert also conducted a sign inventory and developed signing, striping, and sign illumination plans. ITS upgrades involved the replacement of existing loop detection with non-intrusive traffic detection units at 45 locations. The project also included barrier, pavement and drainage improvements at four I-66 interchanges: Route 50, Route 123, Nutley Street, and I-495; and two CD roads – Route 123 and Nutley Street.

Volkert provided a well-integrated team with expertise in the design of interstate infrastructure; critical path method (CPM) schedule development and analysis; the evaluation of constructability and traffic management issues in high traffic areas; maintaining safety for motorists and construction personnel; and the design, planning and implementation of concurrent design and construction, including complex phased construction and sequencing plans. The project received awards for paving and its design, with acceptance ride testing and sound intensity measurements showing overall ride quality improved by 200%.

Work Packages Provided Flexibility, Minimized Delays and Innovative Design Features Accelerated Construction

Volkert and the contractor worked collaboratively to carefully plan an aggressive yet realistic integrated design and construction CPM schedule, implementing concurrent design and construction activities to maximize efficiency and flexibility. Organizing design and construction into seven work packages allowed for greater flexibility because potential issues with one work package would not delay construction of other components. The work packages were quickly approved by VDOT based on Volkert's proactive approach, design quality, and compliance with VDOT requirements. In addition, Volkert's design extended production and accelerated construction with the use of a temporary precast modular patching system and an innovative metal grate adjustment collar system for the drainage design, eliminating the need for precast and cast-in-place concrete, which have time and adjustment limitations. Weekly scheduling meetings and three week look-aheads to plan construction also helped to keep construction ahead of schedule.

Effective TMP Limited Impacts to the Traveling Public

Volkert developed a successful sequence-of-construction plan and Transportation Management Plan (TMP) for the project which was located on a high-speed interstate with high traffic volumes and was constructed within very limited right-of-way. The development of the TMP involved a study of traffic and crash data and an operational-level traffic analysis to determine the best variety of construction phasing and temporary traffic control techniques to meet the schedule while maintaining traffic flow and safety for more than 170,000 motorists each day. Complicating the maintenance of traffic was the temporary ramp closures and detours required at the four interchanges. Due to the heavy traffic volumes, construction was conducted at night only – with two of three lanes, plus the shoulder lane in both directions – open to traffic at all times during construction.

- Relevancy**
- ✓ Innovative solutions accelerated construction
 - ✓ Complex design solutions
 - ✓ Complex MOT for project on urban interstate
 - ✓ Asphalt milling
 - ✓ Signs
 - ✓ Storm drainage
 - ✓ Public communications plan
 - ✓ NAPA 2013 National Pavement Qualify Award

“We’ve had more compliments on this than on any single project. The project had the potential to not go so well. I greatly appreciate the work Volkert did to make this project successful.”

*Garrett Moore, PE
Former VDOT NOVA District Administrator*

- Staff from this project available for the I-95 Southbound CD Lanes – Rappahannock River Crossing D-B Project**
- ✓ Keith Weakley, PE, DBIA
 - ✓ Michael Glickman, PE, PTOE
 - ✓ Hari Thaker, PE, PTOE
 - ✓ Cesar Vargas, PE
 - ✓ Perry Oates, PE
 - ✓ Eduardo Vargas

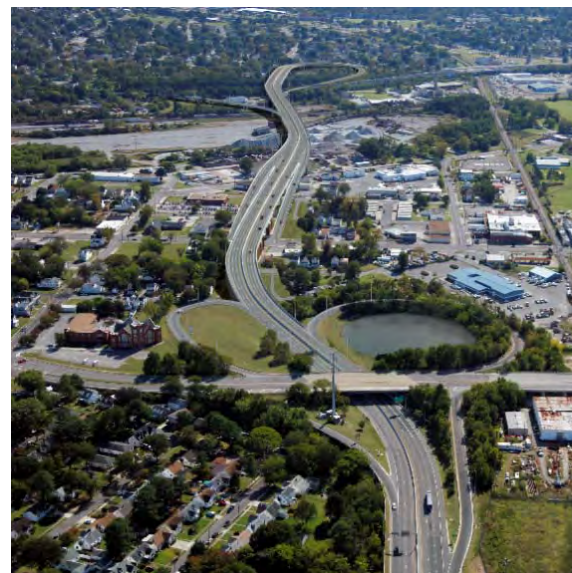
ATTACHMENT 3.4.1(b)

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: Martin Luther King Expressway Extension D-B Location: Portsmouth, Virginia | Name: SKW Constructors (Skanska, Kiewit, Weeks Marine Joint Venture) | Name of Client.: Elizabeth River Crossing, LLC and VDOT Phone: (757) 932-4400 Project Manager: Jeff Sullivan Phone: (757) 673-9483 Email: jeff.sullivan@kiewit | 10/2012 | 11/2016 | \$210,000 | \$210,000 | \$11,922 |

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.



Fast-Track Design – 30% Roadway Plans to RFC in Ten Months

Volkert managed engineering and design of the \$210M Martin Luther King Expressway Extension — a significant component of the \$2.1B Elizabeth River Crossing PPTA project — as a subconsultant to WSP | Parsons Brinckerhoff. **The design work was managed from Volkert's Springfield, Virginia office**, with an extremely fast-track design – the project progressed from 30% roadway plans to RFC 100% drawings within approximately ten months. Services include project management; civil, structural, traffic, and hydraulic engineering; landscape architecture; and construction phase services. To provide controlled-access connectivity to historic downtown Portsmouth, port facilities, and the Midtown tunnel, Volkert developed the design of . . .

- A one-mile, four-lane, limited-access toll facility
- Two bridge widenings on I-264
- An urban plaza
- Two new urban interchanges at I-264 and High Street
- Widening of I-264 to add auxiliary lanes
- Retaining walls
- Modifications to the London Boulevard interchange
- New stormwater management facilities
- Side road improvements

Innovative Design and Construction Techniques Generate Cost Savings & Minimize Right of Way Impacts

Volkert conducted a bridge concept study that evaluated steel and pre-stressed-concrete alternatives and the feasibility of retaining walls vs. bridges in some locations. The final mainline and ramp design includes 45 steel and prestressed-concrete spans; and the piers and abutments are founded on precast-concrete piles appropriate for the highly compressible soil conditions. A segment of the project incorporates 18 EPS and MSE walls as a cost-effective alternative to bridge construction and helps to reduce the project footprint and minimize right of way impacts. The lightweight EPS retaining walls decrease the load on the highly compressible underlying soils and reduce settlement. In addition, significant cost savings were realized by using cost-effective materials where appropriate such as hybrid plate

girders and a fiberglass reinforced plastic deck drainage system, which reduced the amount and size of equipment required for construction. All of the piers are design with similar columns, footings and pier caps to allow the contractor to reuse form work. Above-ground footings were used whenever possible to reduce excavation costs. High-performance steel (70 ksi) in long-span bridges reduced the overall quantity and cost of steel. The plans minimized impacts to approximately 70 properties.

Context Sensitive Design Minimizes Community Impacts

The context-sensitive design minimizes impacts to historic resources (including a cemetery, Calvary Baptist Church, and the Prentiss Park neighborhood); maintains connectivity of neighborhoods with pedestrian friendly amenities; incorporates streetscape enhancements and an urban plaza on High Street to serve as a gateway into the historic district; incorporates aesthetic treatments on and under the bridges; and turned stormwater management ponds into attractive water features. The design of the BMP stormwater management facilities complies with the performance criteria of the Chesapeake Bay

“I’ve been very happy with Volkert’s production staff. They consistently meet deadlines and have been very responsive to our requests.”
Brent Hunt, Client Project Manager

TMDL. The design maximized the available space for stormwater management facilities to minimize impacts on an aging and over-taxed storm drain system.

Maintaining Traffic for 70,000 Motorists per Day

Volkert developed a Type C, Category V TMP, including a Temporary Traffic Control Plan (TTCP) and Traffic Operations Plan to maintain traffic for more than 70,000 motorists per day on I-264. The development of the TMP involved traffic data collection and Synchro analyses of each construction phase to determine the best variety of construction sequencing and TTC techniques to meet the construction schedule while maintaining traffic flow and safety though four phases of construction.

Relevancy

- Interchange modifications
- Interchange ramp modifications
- Bridge design
- Adds auxiliary lane to improve merge area on interstate
- H&H, SWM, ESC, drainage
- Retaining walls and signs
- Type C TMP and MOT for 70,000 motorists
- Minimized right-of-way acquisition

Staff from this project available for the I-95 Southbound CD Lanes – Rappahannock River Crossing D-B Project

- Keith Weakley, PE, DBIA
- Brian Graham, PE
- Michael Glickman, PE, PTOE
- Hari Thaker, PE, PTOE
- Cesar Vargas, PE
- Jason Pisani-Jimenez, PE
- Perry Oates, PE
- Oliver Boehm, RLA, LEED AP, ENV SP
- Brendan August



VOLKERT