



# REQUEST FOR QUALIFICATIONS

## Skiffes Creek Connector, Design-Build

Contract ID Number: C00100200DB104

State Project No.: 0060-047-627, P101, R201, C501, B619, B620

Federal Project No.: STP-5A03(455)

Submission Date: May 30, 2019 at 4:00 PM



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## **3.2 Letter of Submittal**

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# ABERNATHY CONSTRUCTION CORP.

General Contractors

**ABERNATHY**  
**CONSTRUCTION CORP.**

May 30, 2019

Sudha Mudgade, P.E., PMP, DBIA  
Alternative Project Delivery Division  
Virginia Department of Transportation  
1401 East Broad Street, Richmond, VA 23219

RE: Skiffes Creek Connector  
James City County, VA  
Contract ID Number: C00100200DB104  
3.2 Letter of Submittal

Dear Ms. Mudgade,

Abernathy is pleased to submit to the Virginia Department of Transportation (VDOT) our response to the Request for Qualifications (RFQ) for the Skiffes Creek Connector project. Abernathy has a long-standing relationship with VDOT, working in the Commonwealth for over 60 years and completing dozens of projects for VDOT, including the Route 36 Improvement design-build project in Hopewell/Prince George, VA. Our diverse and extensive experience in road, bridge, and utility construction, and our design-build experience make us very well suited for this project. Partnering with Clark Nexsen, we have assembled a team of local, experienced contractors and designers that will deliver a quality project to VDOT, focusing on safety, schedule, value, and innovation.

L. S. Abernathy Construction was founded in 1949 by Lloyd Abernathy. Coming from a farming family out of Brunswick County, Lloyd decided to leave the family farm and venture into bridge construction. Building bridges up and down the east coast for nearly 20 years, he eventually settled in Virginia and began his business in the Commonwealth. Bobby Abernathy, Lloyd's oldest son, reorganized and incorporated the family business in 1971 as Abernathy Construction Corporation. Today, Bobby and his sons continue the family's construction tradition. Their dedication to maintaining high standards and to grow along with the communities they do business are their motivators.

**3.2.1 Full legal Offeror name and address:** Abernathy Construction Corporation, 10891 Winfrey Road, Glen Allen, VA 23059. (P)804.226.1465 (F)04.266.4449

**3.2.2 Point of Contact:** Bobby J. Abernathy, President, 10891 Winfrey Road, Glen Allen, VA 23059. (P)804.226.1465 (F)804.266.4449  
babernathy@abernathyconstruction.com

**3.2.3 Principal Officer:** Bobby J. Abernathy, President, 10891 Winfrey Road, Glen Allen, VA 23059. (P)804.226.1465 (F)804.266.4449  
babernathy@abernathyconstruction.com

**3.2.4** Abernathy Construction Corporation is structured as a corporation and will be the lead organization, taking full financial responsibility with no liability limitations. Team Member D. F. Abernathy, Secretary/Treasurer, will undertake financial responsibility for this project, and can be reached at dfabernathy@abernathyconstruction.com, or at the address/phone number listed in Section 3.2.2.

**3.2.5** The Lead Contractor for the project will be Abernathy Construction Corporation and the Lead Designer will be Clark Nexsen, Inc.

**3.2.6** Abernathy Construction Corporation and has no affiliated companies as reported on Attachment 3.2.6 provided in the Appendix.

**3.2.7** Signed Certification Regarding Debarment Forms for Primary and Lower Tier Covered Transactions are included as Attachments 3.2.7(a) and 3.2.7(b) in the Appendix.

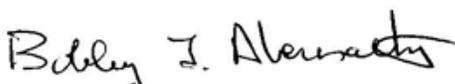
**3.2.8** Abernathy Construction Corporation is currently Prequalified (active status) with VDOT, vendor number A003. A copy of our prequalification certificate is included as Attachment 3.2.8 in the Appendix.

**3.2.9** A surety letter stating the Abernathy Construction Corporation can obtain a performance and payment bond based on the current estimated contract value, along with which bonds will cover the project and any warranty periods, is provided as Attachment 3.2.9 in the Appendix.

**3.2.10** All required DPOR licenses and SCC registration information are provided as Attachment 3.2.10.

**3.2.11** I personally commit to VDOT that the Abernathy Team will achieve a DBE Participation goal of 13% for the entire value of the contract.

Sincerely,



Bobby Abernathy, President  
Abernathy Construction Corporation

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## **3.3 Offeror's Team Structure**

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### 3.3 Offeror's Team Structure

The Abernathy Construction Corporation (Abernathy) Design-Build Team (DBT) was constituted to join the strengths of a seasoned family owned and operated road and bridge construction company with Hampton Roads based Clark Nexsen as the lead design firm to bring local road and bridge engineering design knowledge and experience to deliver the Skiffes Creek Connector project to VDOT. The team includes selected subconsultant support services in the areas of geotechnical engineering, surveying, environmental permitting, utility coordination/right-of-way and traffic management planning.

#### **Abernathy Construction Corporation (Abernathy) – Lead Contractor**

Abernathy is a family owned and operated road and bridge company with a 70-year construction history originating as a bridge builder. In 1971 Bobby Abernathy reorganized and incorporated the current firm to both bridges and roads. Bobby and his sons, along with a group of loyal, hardworking employees focus on quality products. All members of the Abernathy family are fully invested in each project: Bobby as the Project Manager, David as the Roadway Superintendent, Jeffrey as the Bridge Superintendent and Kevin as the project controls manager. This unique ownership and division of responsibilities permits Abernathy to deliver a quality project for VDOT and other clients, on-time and on-budget.

Abernathy, as the Lead Contractor will self perform both bridge and road construction functions which sustains quality performance and timely decision making. There are ***no conflicts among trades as all trades are performed with Abernathy family and employees.*** Having delivered over \$123M in construction value, this is an efficient and effective team of constructors.

Abernathy's success have been earned through past delivery of selective bridge and roadway projects where the entire family team is focused on quality delivery from project identification to client acceptance. Bobby Abernathy leads his team through project scoping to development of the construction plan of delivery, including cost and schedule development, quality control and testing, and field supervision of crews all the way to project handover and closeout. There is NO passing of responsibility for any activity; the family team agrees to pursue a project to deliver it through construction, assuring project ownership and avoiding any hand-off rancor.

#### **Clark Nexsen (CN) – Lead Designer**

CN is a full service architectural and engineering company founded in Virginia in 1920. With over 425 employees corporate-wide and 250 in Virginia, CN's core transportation practice is targeted to roadways and bridges in support of state DOT's, including VDOT, and municipal clients. CN, working from the firm's headquarters in Virginia Beach, will serve as the Lead Designer and will be responsible for the design QA/QC. Most recently Clark Nexsen was selected by VDOT to design the Route 100 Bridge Replacement over Route 11 and the Norfolk Southern Railroad, East Tevis Street Bridge over I-81 and the Route 60 Main Street Bridge over Smith Creek which were delivered under Design-Build procurement.

For the City of Chesapeake, Clark Nexsen designed the 22nd Street Bridge replacement over the active Norfolk Southern railroad line while maintaining traffic. Clark Nexsen is currently at the advertisement phase for the Wythe Creek Road project connecting Hampton and Poquoson which includes a 1600' long pile supported prestressed bridge with 21 spans which will support a 3-lane ITS controlled roadway.

Enhancing the attributes of the Lead Designer, the Design Build Team has added the following firms to the team:

FIRM	ROLE	EXPERIENCE
<b>Subcontractors</b>		
CES (DBE)	Quality Assurance/QAM	<ul style="list-style-type: none"> <li>Independent DB Quality Assurance for VDOT</li> <li>QAM on 8 VDOT DB projects</li> </ul>
Zannino Engineering	Construction QC	<ul style="list-style-type: none"> <li>AASHTO and USACE accredited laboratory</li> <li>VDOT DB experienced inspectors</li> </ul>
ECS Mid Atlantic	QC Lab	<ul style="list-style-type: none"> <li>Extensive testing experience of VDOT projects</li> <li>AASHTO Materials Reference Lab certified</li> </ul>
<b>Subconsultants</b>		
Bowman	Environmental//Survey/ SUE/ROW/Appraisals	<ul style="list-style-type: none"> <li>DB experience with VDOT projects</li> <li>Project experience with Clark Nexsen in all listed roles</li> </ul>
Schnabel	Geotechnical Engineer- ing	<ul style="list-style-type: none"> <li>Substantial VDOT DB experience</li> <li>Multiple projects with Clark Nexsen</li> </ul>
Accompong (DBE)	MOT/TMP	<ul style="list-style-type: none"> <li>DB and interchange experience</li> <li>Wide ranging MOT/TMP experience</li> </ul>

**3.3.1 Key Personnel**

**Design-Build Project Manager - Bobby J. Abernathy** (Abernathy) has over 48 years of experience with roadway, bridge and utility construction projects. As DBPM, he will be responsible for the overall leadership of the Design Build Team (DBT) for all that occurs on the project site to include design and construction activities; compliance with the Contract Documents; scheduling; quality management and adherence to all permits and regulations. He will work directly with the Design Manager and the Construction Manager to confirm adherence to the contract documents in both the design and construction phases of work and oversee the coordination of these efforts. Mr. Abernathy will be the primary point of contact for the project and is responsible for the overall contract management and ensuring total collaboration between all team members. In his role as President/Owner he has the authority and availability to mobilize necessary manpower to the project site as needed. He will be responsible for managing the entire team and **acts as the point of contact between VDOT, third-party stake holders and the design team.**

**Quality Assurance Manager (QAM) – Bryan Branson, PE, CCM, Assoc. DBIA** (CES) will serve as the single point of contact for all QA services and will perform these duties per the contract documents as an independent operator with his team reporting directly to the Design Build Project Manager, with an indirect reporting line of authority to VDOT. His responsibilities include: (1) independent overall quality assurance (QA) inspections and testing of all materials used and work performed on the project; (2) monitoring of DBT’s quality control (QC) program; and (3) ensuring that all work and materials, testing and sampling are performed in accordance with the contract requirements and the approved for construction plans and specifications. **The QAM reports directly to both the DBPM and VDOT.**

Mr. Branson has experience from the Owner’s perspective as the Consultant Project Manager on the I-64 Segment II Widening DB project and as a construction superintendent on the Midtown/Downtown Tunnel and MLK Extension project. His past responsibilities in delivering construction projects joined with his current experience representing VDOT on an adjacent DB project, allow him to bring an in depth knowledge of both Owner and Constructor perspectives to the QAM position to independently ensure the DBT delivers a quality project in accordance with the Contract Documents.

**Design Manager (DM)** – *Ian Johnston, PE* (Clark Nexsen) brings over 20 years of experience in the transportation engineering industry leading design teams. His experience includes developing transportation engineering design projects, including roadway widenings, intersection improvements, interstate and interchange projects, and sidewalk and multi-use path projects. Mr. Johnston also served as a Design Project Manager (DPM) in both the consultant and government industry sectors, having worked almost 7 years in the VDOT Hampton Roads Project Management Office.

He will lead the design team, **report directly to the DBPM**, coordinate all design activities among the disciplines and establish and oversee the design QA/QC program to confirm compliance with the Contract Documents. As a former VDOT DPM, he is intimately versed in the VDOT/AASHTO design documents. Mr. Johnston was the Hampton Roads District PM on a wetland mitigation Design-Build project as well as DPM for the Midtown/Downtown Tunnel/MLK Extension PPTA project. He currently is the DPM for several VDOT projects, including the Wythe Creek Widening in Poquoson/Hampton. In addition, Ian is the DPM for the 22nd Street Bridge Replacement, a similar project for the City of Chesapeake, and the Route 100 Bridge Replacements in Dublin for the VDOT Salem District.

**Construction Manager (CM)** – *Richard Siford, RLD, ESCCC* (Abernathy) will be on-site full time for the duration of all construction operations and be responsible for the construction process. His responsibilities include: (1) day-to-day management of all on-site construction and project activities; (2) management of the construction process including all quality control (QC) activities to ensure that materials used and work performed meet contract requirements and approved construction plans and specifications; and (4) ensuring that all work performed on-site is performed to meet and exceed all safety, quality and environmental requirements of the project. His responsibilities as CM will be to work directly with QC managers and field managers on project scheduling, constructibility reviews and vendor acquisitions with specific focus on project efficiency and an emphasis on quality, environmental and safety compliance. The **CM reports functionally to the DBPM** and draws support from the QC Manager and Safety Manager.

Mr. Siford has been with Abernathy for over 43 years and has worked closely with the DBPM for all 43 years to deliver road and bridge projects, many of which are VDOT projects which cross railroads and creeks. He has coordinated construction activities with many railroads, including Norfolk Southern, CSX, VRE, and Buckingham Branch. He has also managed projects over creeks/waterways to include Quantico Creek, Occupacia Creek, Cat Point Creek, the north branch of the James River, Boot Swamp, and Nomni Creek.

3.3.1 Key Personnel Resume Forms can be found in the Appendix.

**3.3.2 Organizational Chart** is on the next page. The Design Build Team's (DBT) organizational chart depicts the relationships among the team members, reporting relations—both direct (solid lines) and indirect (dashed lines)—as well as functional areas of responsibility. There is a distinct separation and independent relationship between Construction Quality Control and the Quality Assurance functions and responsibilities. The Construction QC and the Quality Assurance programs each have their own respective inspections and testing laboratories to demonstrate their separation and independence. Abernathy is committed to keeping intact the DBT Organizational Chart identified individuals in order to deliver this project throughout the entire project life-cycle.

The DBT's functional relationships and communications among participants is collaboration and cooperation with a laser focus on delivering a quality product in compliance with all contract documents. Abernathy's Construction Team is led by Richard Siford, who has worked with the DBPM Bobby Abernathy for over 43 years and will report directly to Bobby. Richard is supported in the field by David and Jeffrey Abernathy, the experienced road and bridge sons of the DBPM who both have worked with Bobby for over 25 years. This tight knit construction unit has added Thomas Moore, Jr. who has over 40 years of industry experience as both a VDOT and consultant senior inspector. As such, Thomas supports Abernathy with an insider's knowledge of VDOT requirements and expectations and will support the Construction Team with Traffic/MOT Management, Environmental Inspection and Compliance and Utility Coordination.

Abernathy undertakes a limited number of projects to ensure total commitment to the job and the assigned team stay with the project to completion. This has been demonstrated by the many road and bridge projects successfully delivered to VDOT and many other municipal clients. Project discussions, coordination and problem solving are continuous among the team because of this family ownership of project performance and delivery.

The DBT is organized to integrate design, construction, construction inspection, testing and quality control under one responsible individual, the DBPM, Bobby Abernathy. *As the owner of the company, Bobby has sole authority and responsibility for all decisions and oversight of the DBT performance.*

Clark Nexsen, with Ian Johnston, PE, as the DM, will report to the DBPM and deliver the design documents according to the contract documents. Ian has assembled a lean team with specialists from Schnabel, Bowman and Accompong Engineering which augment the Clark Nexsen engineering disciplines. He will oversee the design discipline leads and subconsultants to develop and deliver timely documents in support of the construction approach and schedule. All formal design coordination is through the DM with indirect reporting/coordination/ communication noted on the Organizational Chart.

The QAM, Bryan Branson, PE, CCM brings his personal field construction and quality assurance and quality control experience to the DBT. He will confirm the results of QC efforts by performing tests and inspection verifications using a separate and independent testing laboratory as identified on the Organizational Chart. He will report directly to the DMPM and document, report and ensure any non-compliant work is corrected to ensure VDOT receives all work components in accordance with the contract documents.

The DBT safety manager, Roy "Lee" Reed brings 30+ of industry safety experience, many of which he earned while rising through the safety ranks to earn the title of the Corporate Safety Manger for Dominion Energy before joining Abernathy. Lee reports directly to the Construction Manger with indirect reporting to the Construction Team.

**Project Stakeholders**

- James City County
- City of Newport News
- Wal-Mart, Haynes, VA
- Peninsula Regional Jail
- Naval Weapons Station

**VDOT  
Hampton Roads District  
Office of  
Communications**



**Design Build  
Project Manager**  
Bobby Abernathy  
*Abernathy*

**Construction  
Manager**  
Richard Siford, RLD,  
ESCCC  
*Abernathy*

**Quality Assurance  
Manager**  
Bryan Branson, PE,  
CCM, Assoc DBIA  
*CES DBE*

**Design Manager**  
Ian Johnston, PE  
*Clark Nexsen*

**Safety Manager**  
Roy "Lee" Reed  
*Abernathy*

**Construction Team**  
Roadway Superintendent  
David Abernathy  
*Abernathy*

**Construction QC**

- QC Manager  
*Zannino Engineering*
- QC Inspectors  
*Zannino Engineering*
- QC Testing Lab  
*Zannino Engineering*

**Quality Assurance**

- QA Inspectors  
*CES DBE*
- QA Lab  
*ECS*

**Design QA/QC**  
David Bradshaw, PE  
*Clark Nexsen*

Design Team	
Structure/ Bridge Engineer <b>Matt Agnes, PE</b> <i>Clark Nexsen</i>	Roadway Engineer <b>John Stuart, PE</b> <i>Clark Nexsen</i>
Drainage/ Hydraulic Engineer <b>Robert Sherman, PE</b> <i>Clark Nexsen</i>	Maintenance of Traffic (TMP) Engineer <b>Conrad Scott, PE</b> <i>Accompong DBE</i>
Signing/ Lighting Engineer <b>Jim Harrington, PE</b> <i>Clark Nexsen</i>	Environmental Manager/ Permits/NEPA <b>Jessica Fleming</b> <i>Bowman</i>
Geotechnical Engineer <b>Evan Morris, PE</b> <i>Schnabel</i>	Utility Engineer <b>Eric Mowry, PE</b> <i>Clark Nexsen</i>
Utility Locating <b>Justin Lilly</b> <i>Bowman</i>	Traffic Engineer/ Modeling <b>Wes Parker, PE, PTOE</b> <i>Clark Nexsen</i>
Surveyor <b>Nick Kougoulis, LS</b> <i>Bowman</i>	Utility/ Right of Way Manager <b>Richard Bennett</b> <i>Bowman</i>
Appraisals <b>Ricky Stuchell</b> <i>Bowman</i>	

**Environmental Agencies**

- USACE
- VDEQ
- VDHR

**Utility Owners**

- Newport News Waterworks
- HRSD
- Dominion, Level3 Cox
- Charter
- Columbia Gas
- JCSA
- VA Natural Gas

**VDOT  
Right of Way Staff**

**LEGEND**

- Key Personnel
- DBE/SWaM
- Direct Reporting
- Indirect Reporting
- Construction
- Design
- 3rd Parties
- Quality Assurance
- Quality Control

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## **3.4 Experience of Offeror's Team**

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**3.4 Experience of Offeror’s Team**

The Abernathy Design Build Team (DBT) was formed to join two firms that value their employees whose individual and collective talents work collaboratively to bring new ideas to the practice of excellence in transportation projects. Each team member has been involved in numerous VDOT as well as selected Design-Build projects.

As the leader of the DBT, Abernathy has selected Clark Nexsen (CN) to be the Lead Designer. Clark Nexsen’s core transportation practice is targeted to roadways and bridges, including bridge design and inspection services. They understand the challenges presented by tight timelines and even tighter budgets, and are focused on partnering with contractors on design solutions that last. Having in-house bridge design and inspection services, CN understands the maintenance aspects of its designs and views minimizing life cycle maintenance costs as a critical design parameter.

The table below illustrates our team’s collective experience on similar projects to the Skiffes Creek Connector:

Project Name	Client	Delivery Mechanism	Bridge Construction over water	Bridge Construction involving RR	Bridge Construction over Roadway	Roadway Construction	Drainage/Stormwater	Intersection Improvements	Utility Design/Relocation	MOT	Bike/Pedestrian Accommodations	Right of Way	Stakeholder Involvement
Rte. 36 Improvements	VDOT	DB				▲	▲	▲	▲	▲	▲		▲
Rte. 60 over Smiths Creek	VDOT	DB	▲			▲	▲	▲		▲	▲		▲
Russell Road	NAVFAC	DB				▲	▲	▲	▲	▲	▲		▲
Rte. 58/258 Connector	VDOT	DBB	▲	▲	▲	▲	▲	▲	▲	▲			▲
Rte. 638 Extension (Atlee Road)	Hanover County	DBB		▲	▲	▲	▲	▲	▲	▲			▲
Wythe Creek Rd. Improvements & Bridge Replacement	VDOT	DBB	▲			▲	▲	▲	▲	▲	▲	▲	▲
22nd Street Bridge Replacement over NS R/R	City of Chesapeake	DBB		▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Rte. 100 Bridge Replacement over NS R/R	VDOT	DBB		▲	▲	▲	▲	▲		▲	▲	▲	▲
Rte. 122 Bridge Replacement over Goose Creek	VDOT	DBB	▲			▲	▲	▲		▲		▲	▲
I-95 Temple Avenue	VDOT	DBB	▲			▲	▲	▲	▲	▲			
CSX/ Buckingham Branch Bridge Replacement over Rte. 340	VDOT	DBB		▲		▲	▲		▲	▲			
Virginia Railway Express Bridge & Approaches at Quantico Creek	VRE	DBB	▲	▲		▲			▲		▲		
East Tevis Street Bridge over I-81	VDOT	DBB			▲	▲	▲	▲		▲	▲		▲
Rte. 637 Bridge Replacement over Occupacia Creek	VDOT	DBB	▲			▲	▲			▲			
Rte. 624 Bridge Replacement over Cat Point Creek	VDOT	DBB	▲			▲	▲	▲		▲			
Rte. 630 Reconstruction & Bridge Replacement over CSX	VDOT	DBB		▲		▲	▲		▲	▲			
Rte. 621 Bridge Replacement over Nomni Creek	VDOT	DBB	▲			▲	▲			▲			
Rte. 205 Bridge Replacement over Mattox Creek	VDOT	DBB	▲			▲	▲	▲	▲	▲	▲		
Rte. 35 Bridge Replacement over Tarrara Creek	VDOT	DBB	▲			▲	▲		▲	▲	▲		
Structure Replacement over MPA30 36 Warwick Stream	CSX R/R	DBB	▲	▲									

**LEAD CONTRACTOR**

Abernathy has constructed numerous road and bridge projects since 1971 for VDOT and other clients. Bridges over water (creeks, swamps, rivers) and railroads have been the firm's specialty since 1949 which is the precursor to the modern-day Abernathy Construction Corp. Abernathy projects have included many of the components found in the Skiffes Creek Connector; bridges, roadway, drainage/stormwater, intersection improvements, and utility relocations. With a close family owned and run corporation, all levels of project delivery are executed by Bobby Abernathy and his 3 sons with long-term internal forces with subcontractors often utilized to achieve DBE goals. This close-knit family-business unit is focused on high quality construction, environmental stewardship, safety, and innovation in delivery of projects; on-budget and often ahead of schedule.

The company fosters a culture of low employee turnover which is illustrated by successive family generations of craftsman that choose to work for Abernathy. This culture of safety and stability in the workforce enables Abernathy to deliver quality projects according to the contract documents and often under budget and ahead of schedule. An indicator of this culture of safety is the company's Experience Modification Rate (EMR) at 0.78 which indicates Abernathy has the "number" to support its claim to a safe workplace.

In addition to the three relevant projects included in the Appendix, the following projects illustrate more of Abernathy's relevant road, bridge and intersection construction experience:

**I-95 Temple Avenue, Colonial Heights, VA:** Lead Contractor for a 2900-foot ramp onto I-95N from Temple Ave, a 120-foot bridge over a wetland and creek, utility relocations and work over a Columbia Gas Line. Heavy traffic, constrained workzone limitations, environmentally sensitive work site over a live stream, adjacent military base traffic, and high public visibility were challenges overcome on this project which was completed ahead of schedule and under budget. The project had no accidents and CQIP scores of 93.2% and 96.3% and was VDOT's 2008 Construction Quality Statewide award winner.

**Route 630 Reconstruction and Bridge Replacement over CSX Railroad in Stafford County, VA:** Lead contractor for VDOT's bid build project that reconstructed .687 miles of Rt.630 in Stafford County. The project included the replacement of a three span bridge over CSX railroad built on a steel H piles foundation. The center span consisted of ninety-two foot long prestressed bulb-T. The bridge was built with minimum impact to CSX's rail operations.

**CSX/ Buckingham Branch Bridge Replacement over Rte. 340 in Waynesboro, VA:** Lead contractor for VDOT's bid build project that replaced CSX/Buckingham Branch's bridge over Rt. 340 and reconstructed .75 miles of Rt. 340 in Waynesboro, VA. Abernathy submitted and VDOT approved a value engineering proposal changing the construction methodology and redesigning the bridge to facilitate project award. As a result of the value engineering proposal Abernathy was able to reduce the planned interruptions to CSX/Buckingham Branch's rail traffic.

**Virginia Railway Express Bridge and Approaches over Quantico Creek in Quantico, VA:** Lead contractor for VRE's new thirty five span, 1700 linear foot bridge and approaches over Quantico Creek in Quantico, VA. The bridge design utilized type III concrete beams and 36 inch steel pipe piles averaging 115' in length. Abernathy was able to access bridge construction by utilizing section barges as a temporary work platform. The approaches were constructed within CSX's right-of-way with minimum impact to rail traffic. The project also required coordination with USMC Quantico base and Dominion's Possum Point facility.

**Route 624 Bridge and Approach Replacement over Cat Point Creek in Richmond County, VA:** Lead contractor for VDOT's bid build project that reconstructed .279 miles of Rt 624. The project included a new 815 linear foot, ten span bridge constructed on twelve and twenty-four inch concrete piles up to ninety-seven feet in length with forty-five inch bulb-T beams. Abernathy was able to access the bridge construction area by utilizing sectional barges as a temporary work platform with minimum wetland impacts.

**LEAD DESIGNER**

Clark Nexsen's Transportation Division include over 40 technical personnel in Virginia who provide expertise in roadway, structures, hydraulics, utilities, traffic engineering and other transportation disciplines. With experience and technical know-how resulting from the completion of similar transportation projects, they are well prepared to meet the technical and schedule requirements of the Skiffes Creek Connector project. To date, Clark Nexsen has **completed more than one hundred (100) Federal and State Design-Build projects, four (4) P3 projects** in Virginia, and prepared more than twenty (20) RFP's for Federal and State clients for design-build projects.

Clark Nexsen has completed numerous roadway and bridge projects with similar design services as required for the Skiffes Creek Connector projects. Projects such as bridge construction, roadway widening on new alignment, intersection improvements (including roundabouts), utility coordination and relocation, public outreach and stakeholder involvement as well as railroad coordination. Through designing these projects for VDOT, local urban cities, towns, and counties, many of which are within the Hampton Roads District boundaries, has led our design team to develop professional and personal relationships with many of the VDOT staff that will likely be engaged on the Skiffes Creek project. It is this level of professional trust and confidence that will significantly contribute to a successful execution of this project.

In addition to the three relevant projects included in the Appendix, the following projects illustrate more of Clark Nexsen's relevant road, bridge and intersection design experience:

**Route 122 over Goose Creek, Bedford, VA:** Clark Nexsen was the Lead Design Firm for this bridge replacement project within a constrained ROW. Geometric improvements at the existing intersection between Route 801 and Route 122 were included since they were identified as insufficient in a 2003 corridor study. The scope of the project included roadway and traffic design, bridge design, traffic data collection, traffic analysis, safety and speed study, hydrology and hydraulic design, storm water management design, signing and pavement marking and environmental permitting sketches. Complex MOT plans were prepared to accommodate staged construction in order to maintain two lanes of traffic at all times.

**Elbow Road Extended, Virginia Beach, VA:** Lead Design Firm for this \$90M, phased 3.1-mile road extension and widening project. The project features include a greenfield 2-lane roadway on new alignment and 1100 foot-long prestressed concrete bridge over the North Landing River for 0.7 miles; widening of a portion of the existing road from 2 to 4 lanes, multi-use path, traffic data collection and analysis, utility extensions, environmental permitting, signal design, stormwater management and drainage design, NEPA documentation, noise barrier design and wetland permitting. Also included was a review of the FEMA watershed and development of a HEC-RAS model to evaluate the impact of the roadway on the Base Flood Elevation and bridges for scour impacts.

**College Drive Roundabout, Suffolk, VA:** Lead Design Firm for a 2-lane roundabout located in the northern region of the City of Suffolk at the intersection of three urban arterial roadways. The new roundabout serves traffic flows to the existing Tidewater Community College campus, a trucking distribution facility and a new 50-acre commercial site development located in the southeast quadrant of the intersection. The project required significant MOT/SOC planning to allow for construction of the roundabout under heavy truck and traffic volumes.

**Route 60 Bridge Replacement over Smith Creek, Clifton Forge, VA:** Clark Nexsen was the Lead Designer for this VDOT Design-Build project to replace this 165 foot long by 53 foot wide bridge over a freshwater creek. Responsibilities included project management, bridge and roadway design, traffic data collection and analysis, traffic signal design, MOT/SOC plans, utility relocation and coordination and sidewalk construction.

3.4.1 Work History Forms

The Work History Forms, Attachments 3.4.1 (a) and (b) are included in the Appendix. The table below is a summary of the similarities of the DBT's relevant projects to the components to the Skiffes Creek Connector:

Project Experience	Bridge	Roadway	Drainage	Embankment/ MSE Wall	Risks		
					Environmental Permitting	Bridge over RR	Utility Conflicts
Route 58/258 Connector	▲	▲	▲			▲	▲
Route 638 Extension (Atlee Road)	▲	▲	▲	▲		▲	▲
Route 36 Improvements		▲	▲				▲
22nd Street Bridge Replacement over NSRR	▲	▲	▲	▲		▲	▲
Wythe Creek Road Improvements and Bridge Replacement	▲	▲	▲	▲	▲		▲
Route 100 Bridge Replacement	▲	▲	▲	▲		▲	



Photo 1: Atlee Intersection



2: Atlee embankment with bridge over RR



Photo 2: Bridge over Mattox Creek



Photo 4: Franklin 58-258 over CSX RR

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## **3.5 Project Risks**

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### 3.5 Project Risks

The Abernathy Team has been actively investigating and evaluating this project since 2018 in anticipation of the RFQ release. The design and construction team members have performed multiple site visits, data searches and pre-RFQ meetings with relevant parties to obtain as much available project information as possible to generate a listing of potential project risks. Following the VDOT release of the RFQ and related technical information, the DBT evaluated these potential risks in light of the RFQ technical information, considered the consequences of each potential risk to the project as they relate to the evaluation criteria and project delivery. Based upon our team's extensive experience delivering similar road and bridge projects over water (swamps/creeks/rivers), over railroads and roadways, and in consideration of the environmental, traffic and utilities within the project footprint, our team has identified the following significant risks to the project:

#### Critical Risk #1 Environmental Permitting

1. **Why Risk is Critical:** The Skiffes Creek Connector Study – Environmental Assessment (EA, VDOT, June 2018) identifies preliminary permanent impacts to 673 linear feet of stream channel and 0.85 acre of palustrine wetlands with the preferred alignment, including a significant crossing of Skiffes Creek and its adjacent wetlands just upstream of the City of Newport News' Skiffes Creek Reservoir. Based on these preliminary impacts, the Project would qualify for coverage under a VWP General Permit WP3 from the Virginia Department of Environmental Quality (DEQ), which is typically about a 3 month permitting process following submission of a Joint Permit Application (JPA), but would not qualify for coverage under the U.S. Army Corps of Engineers (USACE) State Program General Permit (17-SPGP-01) given total permanent impacts exceeding 0.5 acre of waters (wetlands and streams).
2. **Impact of the Risk:** The Project will need an Individual Permit from the USACE, which requires public notice and up to 12 months or more to process. Given the potential time frame to obtain a USACE Individual Permit and the sensitivity of the wetlands and streams in close proximity to or over which the Project will be crossing, Section 404/401 permitting is considered a critical risk to the schedule, design, and ability to secure Permits for the Project.
3. **Mitigation Strategies to address the Risk:** As a first step to manage this risk, our Project Team will conduct a routine wetland delineation and field survey for the Project corridor using the Corps of Engineers' Wetlands Delineation Manual (1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0, 2010) as guides to determine the actual field-verified boundaries of those areas that may be considered jurisdictional wetlands or other waters of the U.S., and those boundaries and classifications shall be field reviewed and confirmed by the USACE through the Jurisdictional Determination (JD) process.



These field-verified and approved boundaries will be incorporated into the base mapping for the Project, and the Project Team will begin to evaluate the proposed road design and potential alternatives to its design to avoid and minimize impacts to wetlands and streams. One area of focus will be on the Skiffes Creek crossing, where its design and the extent and nature of its impacts (permanent vs. temporary) are anticipated to be the determining factor on whether the Project will qualify for a General Permit (17-SPGP-1) or Individual Permit from the USACE. Another area of focus will be the alignment and design around the VDOT facility, where stream restoration activities were recently completed by VDOT along two adjacent side tributaries; efforts will be implemented to avoid these restored stream channels and minimize potential secondary impacts and storm water runoff impacts. Each alternative will then be analyzed by the Project Team for impacts, compensatory mitigation requirements and permitting implications, with the overall goal to develop a design that will minimize impacts and allow the Project to qualify for General Permits from both DEQ and USACE. These alternatives will be presented to and reviewed with VDOT for preliminary feedback on the design.

Once initial designs and alternatives for the Project have been compiled, the Project Team will coordinate a Pre-Application Meeting with VDOT, USACE and DEQ to obtain preliminary feedback on the alternative designs, proposed impacts and permitting implications (General Permit vs. Individual Permit). Overall efforts to reduce impacts to water of the U.S. and wetlands will also be reviewed, including efforts already implemented by VDOT through the NEPA process, including reducing the road section from a 4-lane divided to 2-lane divided, and reducing the design speed from 50 miles per hour (mph) to 35 mph, such that the proposed right-of-way and assumed limits of disturbance have been reduced. By obtaining this preliminary feedback from the agencies, a preferred alternative design can be selected early in the design process, the permit processing time is reduced by understanding the application requirements expected of DEQ and USACE for the Project, the type of Permit (General vs. Individual) that the Project should qualify for coverage under will be confirmed, and potential schedule delays and/or design and permitting delays can be mitigated.

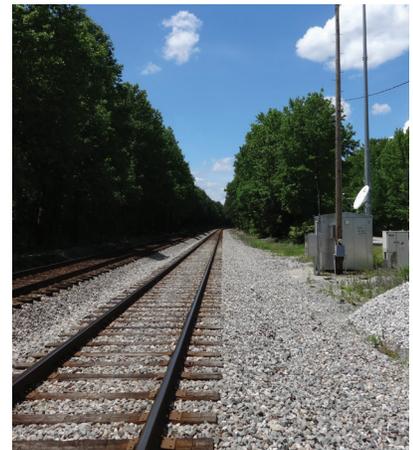
While the Project crosses Skiffes Creek approximately 0.5 miles upstream of the Reservoir's surface water intake, the Skiffes Creek Reservoir is used to store raw water, and actual drinking water is treated and stored at the Newport News City Reservoir. However, our Project Team understands the sensitivity of the Reservoir and the perceived threat to public drinking water. The Project Team will meet with VDOT and the City of Newport News' Department of Public Utilities to present the alternative designs for the Project's crossing of Skiffes Creek and City of Newport News property, and obtain preliminary feedback from the City on the preferred design to minimize impacts to Skiffes Creek, its adjacent wetlands and the downstream Reservoir. As the design of the Project progresses, the Project Team will have subsequent meeting(s) with the City to review the design plans and ensure that the proposed erosion and sediment control plan and stormwater management plan and permanent best management practices (BMPs) meet and exceed State and Local water quality requirements, and ensure the protection of the Reservoir's watershed, and minimization of impacts to Skiffes Creek and its wetlands.

Once the preferred alternative design is further developed, the Project Team will prepare and submit a Joint Permit Application with all necessary impact exhibits, Project narrative and supporting information, documentation of impact avoidance/minimization and alternatives analysis, and a compensatory mitigation plan will be addressed. We will respond to all agency comments and additional information requests in a timely fashion to reduce the permit processing time. As necessary, our Project Team will conduct follow-up meetings with USACE, DEQ and/or VDOT to ensure that agency comments and concerns are addressed, and then coordinate issuance of the Section 404/401 Permits.

4. **Role of VDOT and other Agencies:** Receive and evaluate any VDOT documentation and meeting minutes of pre-SOQ coordination with the permitting agencies. Upon review of such documents, coordinate and collaborate with VDOT to remain consistent with pre-SOQ agency commitments; specifically with the USACE, DEQ and the City of Newport News. Throughout the Section 404/401 permitting process, our Project Team will work closely with VDOT to ensure that all environmental commitments identified in the NEPA documents are fulfilled, that all Federal, State and Local permits and approvals are obtained in a timely fashion and strictly adhered to, and that all required mitigation measures are implemented.

### Critical Risk #2 Design and Construction of Bridge over CSX Railroad

1. **Why Risk is Critical:** The VDOT schedule allows 32 months between the project award and construction completion. The design team cannot control or influence the actions of the CSX Railroad organization. Any delay in obtaining CSX Railroad approval for design and construction of the proposed bridge over the CSX Railroad adjacent to Route 143 will place the completion date in jeopardy.
2. **Impact of the Risk:** The project will require close coordination with the CSX Railroad to meet railroad design clearance, obtain review of design documents, accommodations of a proposed track expansion and coordination for all work in and adjacent to this active rail line and construction of the bridge over the railroad will be critical to the Project being completed on schedule.



Any delay in the pre-construction work, such as obtaining design approvals for the bridge and clearances to work in and adjacent to this active rail line, accommodations of a proposed track expansion, receiving plan approval and executing a railroad agreement would negatively affect the timing of construction activities which could jeopardize the construction schedule and lead to additional costs to the Project and fail to meet the project objectives.

3. **Mitigation Strategies to address the Risk:** Our risk mitigation strategy includes lessons learned from team experience and individual coordination expertise, early coordination with the railroad company and coordination of activities on many similar projects as previously noted.

Experience and Expertise – Richard Bennett will serve as the Team’s Railroad Coordinator for the Project and will be the prime contact for all interactions with the Railroad and any consultants that they may use. Mr. Bennett has more than 50 years’ experience in working on Transportation projects and his expertise includes railroad coordination. He spent 5 years directly coordinating with the various railroad companies, including CSX, for VDOT bridge and grade crossing projects which culminated with obtaining the railroad construction agreement, which is necessary for certification for construction. Mr. Bennett also spent 6 years providing leadership and direction for the VDOT Rail Coordination Group. After joining a consultant firm, Mr. Bennett continued coordination with railroads to include several locally administered bridge projects.

Early and Continuous Coordination - Mr. Bennett and the Design Team will be proactive from the Notice of Award forward, addressing the railroad company’s requirements as well as performing the engineering necessary to advance the design. Critical early coordination will be the validation of the track clearances and the railroad’s plan for future additional facilities.

The Team will need to determine or validate how many additional tracks the railroad may have planned for this location and where they should be located. In determining horizontal clearance, the Team needs to know which side the railroad may need wider clearance for off-track maintenance. In considering vertical clearance, the Team needs to determine if the railroad has any planned maintenance activities such as re-surfacing which will raise the track elevation by a small amount.

In addition to the Bridge crossing, the Route 143 lane widening may longitudinally impact the railroad’s property. Track clearances for this area will also need to be validated so that the preliminary design accommodates the Railroad’s requirement. Railroad companies usually focus on storm drainage and therefore the preliminary plans will need to demonstrate that the design does not impact the drainage of their track ballast.

With the preliminary design available for the Railroad’s review, the coordination will continue with the review and discussions into proposed construction methodology and the potential need for a temporary grade crossing. The discussions will include the need to adjust or relocate any of the railroad’s facilities including communication lines. These discussions and decisions will serve as the basis to start the required construction agreement.

With the railroad’s and VDOT’s comments, both the bridge and roadway plans would be advanced to a pre-final stage with sufficient completion for the railroad to make a pre-approval review. In addition to review comments the railroad company would at this stage prepare the force account estimate to cover the anticipated construction related expenses including the relocation of any communication lines, temporary grade crossing, flagging and any special insurance requirement.

With all review comments being received and resolved, the Team would move forward with the Railroad Agreement providing a draft to the CSX for comments. After addressing any comments, the Railroad agreement would be signed by all parties and the project would be cleared for construction from the Railroad standpoint.

Construction Coordination and Enabling Work – Should the final plan included any railroad work that needs to be accomplished in advance of the road and bridge construction, the Construction Manager will work with the railroad company to make areas available to their crews or contractors to performed that work. This could include preliminary grading of the access road up to the temporary grade crossing. Those construction will also be accounted for in the Project schedule.

With the proactive and continuous coordination of the required activities outlined above, the risk of delays due to the pre-construction activities involving railroad coordination will be mitigated.

- 4. Role of VDOT and other Agencies:** The Design Manager and Railroad Coordinator have the responsibility to coordinate with the CSX Railroad and their experience in such coordination will allow the effort to proceed smoothly. VDOT's role will be limited to the timely review and approval of the designs and plan submissions. Should any unique issues arise with the railroad company the VDOT Railroad Coordination Group in the Right of Way and Utility Division would be consulted to expedite resolution.

### Critical Risk #3 Utility Conflicts

- 1. Why Risk is Critical:** The location of multiple major utilities within the project footprint and particularly in the vicinity of the CSX railroad and Route 143 corridors present clear and present risk to the DB Team. Potential delays to scheduled completion within the allocated time period, added project costs and coordination with utilities that are not party to this DB agreement introduce this potential risk to the DB Team.
- 2. Impact of the Risk:** The presence of the Virginia Natural Gas (VNG) 16" pipeline shown behind the bridge abutment of the bridge spanning the CSX Railroad and Route 143 has the potential to significantly delay the project. VNG will be concerned about stresses on this high-pressure gas main being buried in the fill behind the bridge abutment and will require either a sleeve or relocation outside the abutment. With VNG not being a party to this DB agreement, there is no incentive to cooperate with the DB Team to allow the bridge to be built as shown. This directly impacts the approved alignment, risks possibly the reopening of the NEPA document to add easement acquisition and adds an unknown cost and schedule impact

Further impacts to existing gas facilities could be to the gas main located in the electric transmission easement, which will also be under a new fill embankment. Lastly there is a smaller gas distribution main on the north side of Route 143 that must be factored into design decisions.

Other major utilities include the Newport News Waterworks 39" and 42" water mains, Hampton Roads Sanitation District (HRSD) sewer line and various fiber optics lines along Route 143, crossed by both the proposed bridge and being located in the vicinity of the proposed intersection which also present a risk to the DB Team during construction of the intersection as the Skiffes Creek Connector returns to grade at the new intersection on Route 143.

The impact on the project from these utility conflicts presents a critical risk to introduce potential schedule delays while utilities are relocated and risk opening the NEPA document should corridor adjustments be necessary. Delays in the schedule resulting from coordination and adjustments to these 3rd party utilities that may require either relocation of the utilities, adjustments to the approved conceptual design footprint or work around such utilities as the 16" Virginia Natural Gas line and water and sewer lines present a significant risk to project delivery.

- 3. Mitigation Strategies to address the Risk:** The key to risk mitigation is an effective Utility Relocation Coordination Team (Utility Team). This team is composed of the following four (4) individuals:

**Richard Bennett** of Bowman Consulting will lead the Utility Team. He has more than 50-years' experience in transportation project design, development, utility coordination, design and project construction. For a portion of his 37 years with VDOT he served as VDOT's State Utilities Engineer with responsibilities for the utility relocation program and interactions with utilities' companies.

**David Peterson, PE** is Bowman's senior utility relocation coordinator for water, sewer and electric and telecommunication conduit ductbanks. David recently performed utility coordination services full time on the Transform I-66 outside of the Beltway project.

**Ann Jackson, PE** is a utility relocation coordinator and performs prior rights research and determinations, conflict evaluations and preliminary relocation cost estimates. She recently performed these services on the VDOT Route 29 Vint Hill Road and VDOT Albemarle Bundle projects. Ann also lead the Bowman specialists preparing UT-9 cost responsibility determinations of the more that 700 utility crossing on the I-66 project.

**Rob Eley** is a utility relocations specialist who performs utility conflicts determinations and works directly with the utility representatives during the relocation design phase to coordinate the utility work with the road design. Rob also coordinates the actual utility relocation construction work in the field with the utility's forces or contractors.

Our Utility Team will be proactive from the beginning of the Contract, establishing contacts with the utility companies and in developing a continuous positive working relationship through the design, conflict analysis, utility relocations and construction of the Projects.

The Utility Team will initiate immediate coordination with Virginia Natural Gas, Newport News Waterworks and Hampton Roads Sanitation District. The purpose will be to discuss the potential impacts and offer acceptable alternatives to ensure no utilities are interrupted and accommodations are made and the existing approved project corridor is sustained. Options such as increasing the span of the bridge over the CSX Railroad/Route 143 to move the embankment off the gas and electric line, relocating the line from within the embankment or sleeving the existing lines are options to explore with Virginia Natural Gas. Additionally, for the HRSD and NN waterline, design decisions will be reached in consultation with the affected utilities.

Using this additional information about the potentially affected utility facilities, the Utility Team will work with the Design Engineer and Construction Manager to adjust the overall project schedule to reflect the utility adjustment or relocation construction schedule. This will include the evaluation of potential utility conflicts and possible solutions. The Team will also evaluate the need for test holes to complete the conflict analysis and relocation design. Early interactions between the Design and Utility Teams will allow some conflicts to be avoided and will help to establish utility easements that may be required.

Using the field inspection design plans, the Utility Team will continue the coordination by conducting a Utility Field Inspection (UFI). The Utility Team will conduct the UFI reviewing the utility conflicts and potential areas for relocation. A UFI report and other customary documents will be prepared and distributed. Schedules for the utility companies' submission of easements and plans and estimates (P&E) for the relocations will be established as well as the utility construction work schedule.

4. **Role of VDOT and other Agencies:** The DB Team will request all documents recording the results of past coordination with Virginia Gas and Newport News utilities to understand the parameters of the discussions, commitments made, and any understandings reached. The DB Team will keep the Hampton Roads District informed of team accommodations made to the utility owners and seek support as necessary in reaching an agreement in the best interest of project delivery. Additionally, VDOT will need to perform the normal review and approval of utility relocation plans/estimates and proposed agreements.

The Utility Team will also coordinate closely with Virginia Natural Gas, Hampton Roads Sanitation District and Newport News Waterworks to obtain necessary clearances and plan approvals for work impacting, or in the vicinity of their utilities. Special coordination will be conducted with Newport News Waterworks to ensure construction activities do not endanger the drinking water supply to Newport News while the Abernathy Team is working in the City's Watershed.

No additional efforts will be required of VDOT or other agencies.

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**Attachment 3.1.2**  
**Statement of Qualifications**  
**Checklist and Contents**

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**ATTACHMENT 3.1.2**

**Project: 0060-047-627**

**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.

<b>Statement of Qualifications Component</b>	<b>Form (if any)</b>	<b>RFQ Cross reference</b>	<b>Included within 15-page limit?</b>	<b>SOQ Page Reference</b>
<b>Statement of Qualifications Checklist and Contents</b>	Attachment 3.1.2	Section 3.1.2	no	i-ii
<b>Acknowledgement of RFQ, Revision and/or Addenda</b>	Attachment 2.10 (Form C-78-RFQ)	Section 2.10	no	iv
<b>Letter of Submittal (on Offeror's letterhead)</b>				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	Appx. 3.2.6
Debarment forms	Attachment 3.2.7(a) Attachment 3.2.7(b)	Section 3.2.7	no	Appx. 3.2.7
Offeror's VDOT prequalification evidence	NA	Section 3.2.8	no	Appx. 3.2.8
Evidence of obtaining bonding	NA	Section 3.2.9	no	Appx. 3.2.9

**ATTACHMENT 3.1.2**

**Project: 0060-047-627**

**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15- page limit?	SOQ Page Reference
<b>SCC and DPOR registration documentation (Appendix)</b>	Attachment 3.2.10	Section 3.2.10	no	Appx. 3.2.10
Full size copies of SCC Registration	NA	Section 3.2.10.1	no	Appx. 3.2.10
Full size copies of DPOR Registration (Offices)	NA	Section 3.2.10.2	no	Appx. 3.2.10
Full size copies of DPOR Registration (Key Personnel)	NA	Section 3.2.10.3	no	Appx. 3.2.10
Full size copies of DPOR Registration (Non-APELSCIDLA)	NA	Section 3.2.10.4	no	Appx. 3.2.10
<b>DBE statement within Letter of Submittal</b> confirming Offeror is committed to achieving the required DBE goal	NA	Section 3.2.11	yes	1
<b>Offeror's Team Structure</b>				2-5
Identity of and qualifications of Key Personnel	NA	Section 3.3.1	yes	Appx. 3.3.1
Key Personnel Resume – DB Project Manager	Attachment 3.3.1	Section 3.3.1.1	no	Appx. 3.3.1
Key Personnel Resume – Quality Assurance Manager	Attachment 3.3.1	Section 3.3.1.2	no	Appx. 3.3.1
Key Personnel Resume – Design Manager	Attachment 3.3.1	Section 3.3.1.3	no	Appx. 3.3.1
Key Personnel Resume – Construction Manager	Attachment 3.3.1	Section 3.3.1.4	no	Appx. 3.3.1
Organizational chart	NA	Section 3.3.2	yes	6
Organizational chart narrative	NA	Section 3.3.2	yes	4-5

**ATTACHMENT 3.1.2**

**Project: 0060-047-627**

**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

<b>Statement of Qualifications Component</b>	<b>Form (if any)</b>	<b>RFQ Cross reference</b>	<b>Included within 15- page limit?</b>	<b>SOQ Page Reference</b>
<b>Experience of Offeror's Team</b>				7-10
Lead Contractor Work History Form	Attachment 3.4.1(a)	Section 3.4	no	Appx. 3.4.1
Lead Designer Work History Form	Attachment 3.4.1(b)	Section 3.4	no	Appx. 3.4.1
<b>Project Risk</b>				
Identify and discuss three critical risks for the Project	NA	Section 3.5.1	yes	11-15

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**Attachment 2.10**  
**Form C-78-RFQ**  
**Acknowledgement of RFQ**  
**Revision and/or Addenda**

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**ATTACHMENT 2.10**

**COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF TRANSPORTATION**

RFQ NO. C00100200DB104  
PROJECT NO.: 0060-047-627

**ACKNOWLEDGEMENT OF RFQ, REVISION AND/OR ADDENDA**

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

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

- 1. Cover letter of RFQ – February 27, 2019  
(Date)
- 2. Cover letter of Addendum #1 - April 2, 2019  
(Date)
- 3. Cover letter of Addendum #2 - April 19, 2019  
(Date)

*Bobby J. Abernathy*

\_\_\_\_\_  
SIGNATURE

May 30, 2019  
DATE

Bobby Abernathy  
PRINTED NAME

President  
TITLE

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## **Appendix 3.2.6**

# **Affiliated/Subsidiary Companies**

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## **Appendix 3.2.7**

# **Debarment Forms**

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ATTACHMENT 3.2.7(a)

CERTIFICATION REGARDING DEBARMENT  
PRIMARY COVERED TRANSACTIONS

**Project No.: 0060-047-627**

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

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

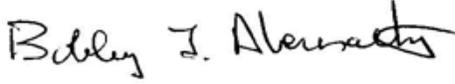
b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under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

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

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

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

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

  
\_\_\_\_\_  
Signature

\_\_\_\_\_  
May 30, 2019  
Date

\_\_\_\_\_  
President  
Title

\_\_\_\_\_  
Abernathy Construction  
Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS

**Project No.: 0060-047-627**

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

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



\_\_\_\_\_  
Signature

\_\_\_\_\_  
May 30, 2019

Date

\_\_\_\_\_  
Principal

Title

\_\_\_\_\_  
Clark Nexsen

Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS

Project No.: 0060-047-627

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

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

  
Signature \_\_\_\_\_

5/3/19  
Date \_\_\_\_\_

President  
Title \_\_\_\_\_

Academy Engineering Group LLC  
Name of Firm \_\_\_\_\_

**ATTACHMENT 3.2.7(b)**

**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

**Project No.: 0060-047-627**

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

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

	4/16/2019	Director of ROW and Utility Coordination
Signature	Date	Title

Bowman Consulting Group, Ltd.  
Name of Firm

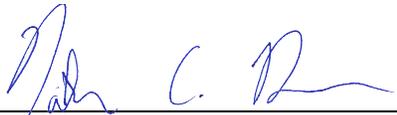
**ATTACHMENT 3.2.7(b)**

**CERTIFICATION REGARDING DEBARMENT**  
**LOWER TIER COVERED TRANSACTIONS**

**Project No.: 0060-047-627**

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

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



Signature

April 19, 2019

Date

Vice President

Title

Schnabel Engineering, LLC

Name of Firm

**ATTACHMENT 3.2.7(b)**

**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

**Project No.: 0060-047-627**

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

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



Signature

April 23, 2019

Date

Principal and Executive Vice-President

Title

CES Consulting LLC

Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS

**Project No.: 0060-047-627**

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

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

 _____ Signature	4/17/19 _____ Date	VP/BRANCH MANAGER _____ Title
ECS MID-ATLANTIC, LLC _____ Name of Firm		

**ATTACHMENT 3.2.7(b)**

**CERTIFICATION REGARDING DEBARMENT**  
**LOWER TIER COVERED TRANSACTIONS**

**Project No.: 0060-047-627**

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

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

*Thomas Zannino*  
\_\_\_\_\_  
Signature

5-28-19  
\_\_\_\_\_  
Date

President  
\_\_\_\_\_  
Title

Zannino Engineering Inc.  
\_\_\_\_\_  
Name of Firm

---

## **Appendix 3.2.8**

# **VDOT Prequalification Evidence**

---



Virginia Department of Transportation

Date Printed: 05/23/2019

**Department's List of Prequalified Vendors  
Includes All Qualified Levels As Of 5/23/2019**

- A -

**Vendor ID:** A003

**Vendor Name:** ABERNATHY CONSTRUCTION CORPORATION

**Prequal Level:** Prequalified

**Prequal Exp:** 01/31/2020

**-- PREQ Address --**

P. O. BOX 1041

GLEN ALLEN, VA 23060-1041

Phone: (804)266-1465

Fax: (804)266-4449

**Work Classes (Listed But Not Limited To)**

003 - MAJOR STRUCTURES

005 - DRAINAGE STRUCTURES

032 - RAILROAD CONSTRUCTION / REPAIR

101 - EXCAVATING

**Bus. Contact:** ABERNATHY, DEBORAH FALLERT

**Email:** DFABERNATHY@ABERNATHYCONSTRUCTION.COM

**-- DBE Information --**

**DBE Type:** N/A

**DBE Contact:** N/A

---

## **Appendix 3.2.9**

# **Evidence of Obtaining Bonding**

---



2108 W Laburnum Avenue, Suite 300 (23227)  
P.O. Box 17370  
Richmond, VA 23226  
Office (804) 678-5000  
Fax (888) 751-3010

March 11, 2019

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

RE: Abernathy Construction Corporation - Bonding Capability

Project: Skiffes Creek Connector  
James City County, VA  
State Project No.: 0060-047-627, P101, R201, C501, B619, B620  
Federal Project No.: STP-5A03(455)  
Contract ID No.: C0100200DB104  
Estimated Project Amount: \$28,000,000

To Whom It May Concern:

Abernathy Construction Corporation has been a valued client of McGriff Insurance Services and Travelers Casualty & Surety Company of America for more than twenty years.

As surety for Abernathy Construction Corporation, Travelers Casualty & Surety Company of America with A.M. Best Rating "A++" and Financial Size Category XV is capable of obtaining 100% Performance Bond and 100% Labor and Materials Payment Bond in the amount of the anticipated cost of construction, and said bonds will cover the project and any warranty periods as provided for in the contract documents on behalf of the contractor, in the event that such firm be the successful bidder and enter into a contract for this project. Abernathy Construction Corporation and we, as surety, must also determine that the contract documents, contract specifications and bond forms are acceptable.

Should you have any questions, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read "CB Pulliam", with a long horizontal flourish extending to the right.

Christopher Brandon Pulliam  
**McGriff Insurance Services, Inc.**  
*Attorney-in-Fact for Travelers Casualty & Surety Company of America*

---

## **Appendix 3.2.10**

# **SCC and DPOR Registration Documentation**

---

## ATTACHMENT 3.2.10

### State Project No. 0060-047-627

#### 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.

<b>SCC &amp; DPOR INFORMATION FOR BUSINESSES (RFQ Sections 3.2.10.1 and 3.2.10.2)</b>							
<b>Business Name</b>	<b>SCC Information (3.2.10.1)</b>			<b>DPOR Information (3.2.10.2)</b>			
	<b>SCC Number</b>	<b>SCC Type of Corporation</b>	<b>SCC Status</b>	<b>DPOR Registered Address</b>	<b>DPOR Registration Type</b>	<b>DPOR Registration Number</b>	<b>DPOR Expiration Date</b>
<b>Abernathy Construction</b>	01315340	Corporation	Active	PO Box 1041 Glen Allen, VA 23060	Contractor	2701011256	12-31-2020
<b>Clark Nexsen</b>	0190175-0	Corporation	Active	4525 Main Street, Ste. 1400, Virginia Beach, VA 23462	ENG	0407006529	12-31-2019
<b>Accompong</b>	S2835215	LLC	Active	9510 Iron Bridge Rd Suite 200 Chesterfield, VA 23832	ENG	0407005442	12-31-2019
<b>Bowman</b>	04481982	Corporation	Active	3951 Westerre Pkwy Suite 150 Richmond, VA 23233	ENG, LS	0411000610	02-29-2020
<b>Bowman</b>	04481982	Corporation	Active	650a Nelms Circle Fredericksburg, VA 22406	ENG, LS	0411000421	02-29-2020
<b>CES</b>	S3416007	LLC	Active	317 Office Square Ln Ste 101a Virginia Beach, VA 23462	ENG	0411001331	02-29-2020
<b>ECS</b>	S1208216	LLC	Active	1643 Merrimac Trl, Ste A Williamsburg, VA 23185	ENG	0411000382	02-29-2020
<b>Schnabel</b>	S0889123	LLC	Active	9800 Jeb Stuart Pkwy. Suite 100 Glen Allen, VA 23059	ENG	0411000322	02-29-2020
<b>Zannino Engineering</b>	04387064	Corporation	Active	9915 Greenwood Rd. Glen Allen, VA 23060	ENG	0407003572	12-31-2019

**ATTACHMENT 3.2.10**

**State Project No. 0060-047-627**

**SCC and DPOR Information**

<b>DPOR INFORMATION FOR INDIVIDUALS (RFQ Sections 3.2.10.3 and 3.2.10.4)</b>						
<b>Business Name</b>	<b>Individual's Name</b>	<b>Office Location Where Professional Services will be Provided (City/State)</b>	<b>Individual's DPOR Address</b>	<b>DPOR Type</b>	<b>DPOR Registration Number</b>	<b>DPOR Expiration Date</b>
Clark Nexsen	Ian Johnston	4525 Main Street Ste. 1400 Virginia Beach, VA 23462	111 Windham Road Norfolk, VA 23505	ENG	0402041863	05-31-2020
CES	Bryan Barnson	317 Office Square Ln Ste 101a Virginia Beach, VA 23462	105 Saint Andrews Dr Suffolk, VA 23435	ENG	0402055847	12-31-2019

The State Corporation Commission will be closed Monday, May 27, 2019 in observance of Memorial Day.

Alert to business entities regarding mailings from VIRGINIA COUNCIL FOR CORPORATIONS or U.S. BUSINESS SERVICES is available from the Bulletin Archive link of th Clerk's Office website.

Home | Site Map | About SCC | Contact SCC | Privacy Policy



SCC eFile > Entity Search > Entity Details

Login | Create an Account



### SCC eFile Business Entity Details

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#### ABERNATHY CONSTRUCTION CORPORATION

##### SCC eFile

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

##### Business Entities

##### UCC or Tax Liens

##### Court Services

##### Additional Services

##### General

SCC ID: 01315340  
 Entity Type: Corporation  
 Jurisdiction of Formation: VA  
 Date of Formation/Registration: 4/15/1971  
 Status: Active  
 Shares Authorized: 500

##### Select an action

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

##### Principal Office

10891 WINFREY RD  
 GLEN ALLEN VA23060

[New Search](#) [Home](#)

##### Registered Agent/Registered Office

DEBORAH ABERNATHY  
 WINFREY RD.  
 P.O. BOX 1041  
 GLEN ALLEN VA 23060  
 HENRICO COUNTY 143  
 Status: Active  
 Effective Date: 3/4/1987

Screen ID: e1000

[Supported Browsers](#)

Need additional information? Contact [sccinfo@scc.virginia.gov](mailto:sccinfo@scc.virginia.gov) Website questions? Contact: [webmaster@scc.virginia.gov](mailto:webmaster@scc.virginia.gov)

[Adobe Acrobat PDF Reader](#) [Microsoft Office Online Applications](#): (Excel, PowerPoint, Word)

Build #: 1.0.0.31267

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON  
12-31-2020

NUMBER  
2701011256

BOARD FOR CONTRACTORS  
CLASS A CONTRACTOR  
\*CLASSIFICATIONS\* H/H



ABERNATHY CONSTRUCTION CORP  
PO BOX 1041  
GLEN ALLEN, VA 23060



*Jay W. DeBoer*  
Jay W. DeBoer, Director

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017

(DETACH HERE)



COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

CLASS A BOARD FOR CONTRACTORS  
CONTRACTOR

\*CLASSIFICATIONS\* H/H

NUMBER: 2701011256 EXPIRES: 12-31-2020

ABERNATHY CONSTRUCTION CORP  
PO BOX 1041  
GLEN ALLEN, VA 23060



(FOLD)

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

DPOR-PC (02/2017)

# Commonwealth OF Virginia



## State Corporation Commission

### *CERTIFICATE OF GOOD STANDING*

*I Certify the Following from the Records of the Commission:*

That Clark Nexsen, Inc. is duly incorporated under the law of the Commonwealth of Virginia;

That the date of its incorporation is November 27, 1978;

That the period of its duration is perpetual; and

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

Nothing more is hereby certified.



*Signed and Sealed at Richmond on this Date:  
January 8, 2018*

*Joel H. Peck*  
\_\_\_\_\_  
*Joel H. Peck, Clerk of the Commission*

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON  
12-31-2019

NUMBER  
0407006529

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

PROFESSIONS: ENG, LA, CID, ARC



CLARK NEXSEN INC  
4525 MAIN ST STE 1400  
VIRGINIA BEACH, VA 23462



*July W. DeBoer*  
July W. DeBoer, Director

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

(DETACH HERE)



COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

BOARD FOR APPLSCIDLA  
BUSINESS ENTITY REGISTRATION  
NUMBER: 0407006529 EXPIRES: 12-31-2019  
PROFESSIONS: ENG, LA, CID, ARC  
CLARK NEXSEN INC  
4525 MAIN ST STE 1400  
VIRGINIA BEACH, VA 23462



(FOLD)

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

DPOR-PC (02/2017)

# Commonwealth of Virginia



## STATE CORPORATION COMMISSION

*Richmond, February 17, 2009*

*This is to certify that the certificate of organization of*

**Accompong Engineering Group, LLC**

*was this day issued and admitted to record in this office and that the said limited liability company is authorized to transact its business subject to all Virginia laws applicable to the company and its business. Effective date: February 17, 2009*



*State Corporation Commission*

*Attest:*

*Joel H. Beck*  
Clerk of the Commission

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

12-31-2019

NUMBER

0407005442

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

PROFESSIONS: ENG



ACCOMPONG ENGINEERING GROUP, LLC  
9510 IRON BRIDGE RD  
SUITE 200  
CHESTERFIELD, VA 23832



*Jay W. DeBoer*  
Jay W. DeBoer, Director

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (05/2015)

(DETACH HERE)



BOARD FOR APESCIDLA  
BUSINESS ENTITY REGISTRATION  
NUMBER: 0407005442 EXPIRES: 12-31-2019  
PROFESSIONS: ENG  
ACCOMPONG ENGINEERING GROUP, LLC  
9510 IRON BRIDGE RD  
SUITE 200  
CHESTERFIELD, VA 23832



(FOLD)

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

DPOR-PC (05/2015)

# Commonwealth of Virginia



## STATE CORPORATION COMMISSION

*Richmond,* June 7, 1995

*This is to Certify that the certificate of incorporation of*

*Bowman Consulting Group, P.C.*

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

*June 7, 1995*



*State Corporation Commission*

*William J. Bridge*  
Clerk of the Commission

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

02-29-2020

NUMBER

0411000610

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

PROFESSIONS: ENG, LS



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



*Jay W. DeBoer*  
Jay W. DeBoer, Director

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

(DETACH HERE)

**DPOR** COMMONWEALTH of VIRGINIA  
Department of Professional and Occupational Regulation

BOARD FOR APELSCIDLA  
BUSINESS ENTITY BRANCH OFFICE REGISTRATION  
NUMBER: 0411000610 EXPIRES: 02-29-2020  
PROFESSIONS: ENG, LS  
BOWMAN CONSULTING GROUP LTD  
3951 WESTERRE PKWY  
SUITE 150  
RICHMOND, VA 23233



(FOLD)

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

DPOR-PC (02/2017)

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

02-29-2020

NUMBER

0411000421

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

PROFESSIONS: LS, ENG



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



*James W. DeBorja*  
James W. DeBorja, Director

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

(DETACH HERE)



COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

BOARD FOR AP/LS/CID/LA  
BUSINESS ENTITY BRANCH OFFICE REGISTRATION  
NUMBER: 0411000421 EXPIRES: 02-29-2020  
PROFESSIONS: LS, ENG  
BOWMAN CONSULTING GROUP LTD  
650A NELMS CIRCLE  
FREDERICKSBURG, VA 22406



(FOLD)

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

DPOR-PC (02/2017)

**COMMONWEALTH OF VIRGINIA  
STATE CORPORATION COMMISSION**

AT RICHMOND, OCTOBER 26, 2010

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

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

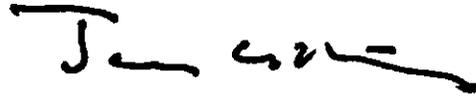
to comply with the requirements of law, and confirms payment of all required fees. Therefore, it  
is ORDERED that this

**CERTIFICATE OF AMENDMENT**

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

STATE CORPORATION COMMISSION

By

A handwritten signature in black ink, appearing to read "James C. Dimitri", written over a horizontal line.

James C. Dimitri  
Commissioner

# Commonwealth of Virginia



## STATE CORPORATION COMMISSION

*Richmond, October 14, 2010*

*This is to certify that the certificate of organization of*

**Construction Engineering & Scheduling Consulting  
Engineers, PLC**

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



*State Corporation Commission  
Attest:*

*Joel H. Beck*  
Clerk of the Commission

COMMONWEALTH of VIRGINIA

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

EXPIRES ON

02-29-2020

NUMBER

0411001331

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

PROFESSIONS: ENG



CES CONSULTING LLC  
317 OFFICE SQUARE LN STE 101A  
VIRGINIA BEACH, VA 23462



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

*July W. DeBoer*  
Director

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

(DETACH HERE)



COMMONWEALTH of VIRGINIA  
Department of Professional and Occupational Regulation

BOARD FOR APESCIDLA  
BUSINESS ENTITY BRANCH OFFICE REGISTRATION  
NUMBER: 0411001331 EXPIRES: 02-29-2020  
PROFESSIONS: ENG  
CES CONSULTING LLC  
317 OFFICE SQUARE LN STE 101A  
VIRGINIA BEACH, VA 23462



(FOLD)

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

DPOR-PC (02/2017)

# Commonwealth of Virginia



## STATE CORPORATION COMMISSION

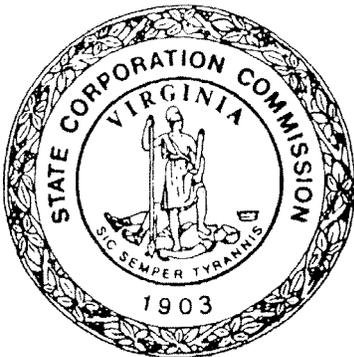
*Richmond, April 16, 2004*

*This is to certify that the certificate of organization of*

**Engineering Consulting Services - Mid-Atlantic,  
LLC**

SCC ID: S1208216

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



*State Corporation Commission*

*Attest:*

*Joel H. Beck*  
Clerk of the Commission

COMMONWEALTH OF VIRGINIA  
STATE CORPORATION COMMISSION

AT RICHMOND, AUGUST 5, 2004

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

ECS - Mid-Atlantic, LLC  
(formerly known as Engineering Consulting Services - Mid-Atlantic, LLC)

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

CERTIFICATE OF AMENDMENT

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

STATE CORPORATION COMMISSION

By

A handwritten signature in black ink that reads "Mark L. Christie". The signature is written in a cursive style with a large initial "M".

Commissioner

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON  
02-29-2020

NUMBER  
0411000382

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

PROFESSIONS: ENG



ECS-MID-ATLANTIC LLC  
1643 MERRIMAC TRL STE A  
WILLIAMSBURG, VA 23185



*Jay W. DeBoer*  
Jay W. DeBoer, Director

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

(DETACH HERE)



COMMONWEALTH of VIRGINIA  
Department of Professional and Occupational Regulation

BOARD FOR APPLSCIDLA  
BUSINESS ENTITY BRANCH OFFICE REGISTRATION  
NUMBER: 0411000382 EXPIRES: 02-29-2020  
PROFESSIONS: ENG  
ECS-MID-ATLANTIC LLC  
1643 MERRIMAC TRL STE A  
WILLIAMSBURG, VA 23185



(FOLD)

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

DPOR-PC (02/2017)

# SCC Information

**SCC** Commonwealth of Virginia  
State Corporation Commission

Home | Site Map | About SCC | Contact SCC | Privacy Policy

SCC eFile > Entity Search > Entity Details

SCC eFile  
FAST. SIMPLE. SECURE.

**Schnabel Engineering, LLC**

**General**

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

**Principal Office**

9800 JEB STUART PARKWAY  
SUITE 200  
GLEN ALLEN VA23059

**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

**Select an action**

- [File a registered agent change](#)
- [File a registered office address change](#)
- [Rejoin as registered agent](#)
- [File a principal office address change](#)
- [Pay annual registration fee](#)
- [Order a certificate of fact of existence](#)
- [Submit a PDF for processing \(What can I submit?\)](#)
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SCC eFile Home Page  
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Business Entity Search  
Certificate Verification  
FAQ  
Contact Us  
Give Us Feedback

Business Entities  
UCC or Tax Liens  
Court Services  
Additional Services

# Commonwealth OF Virginia



## State Corporation Commission

### *CERTIFICATE OF FACT*

*I Certify the Following from the Records of the Commission:*

That Schnabel Engineering, LLC is duly organized as a limited liability company under the law of the Commonwealth of Virginia;

That the date of its organization is December 19, 2002; and

That the limited liability company is in existence in the Commonwealth of Virginia as of the date set forth below.

Nothing more is hereby certified.

*Signed and Sealed at Richmond on this Date:  
August 3, 2016*



*Joel H. Peck*  
\_\_\_\_\_  
*Joel H. Peck, Clerk of the Commission*

# COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

02-29-2020

NUMBER

0411000322

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

PROFESSIONS: ENG



SCHNABEL ENGINEERING, LLC  
9800 JEB STUART PKWY STE 100  
GLEN ALLEN, VA 23059



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

*Jay W. DeBoer*  
Jay W. DeBoer, Director

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

(DETACH HERE)



COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

BOARD FOR APESCIDLA  
BUSINESS ENTITY BRANCH OFFICE REGISTRATION  
NUMBER: 0411000322 EXPIRES: 02-29-2020  
PROFESSIONS: ENG  
SCHNABEL ENGINEERING, LLC  
9800 JEB STUART PKWY STE 100  
GLEN ALLEN, VA 23059



(FOLD)

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

DPOR-PC (02/2017)

## LICENSE PRIVILEGES AND INSTRUCTIONS

This license, certificate, or registration is issued to the individual or business named on the front of this document and is **NOT TRANSFERABLE**. Notify the Board of changes to name (individual, business, and/or trade), mailing address, or location.

The privileges of this license, certificate, or registration are hereby granted to the individual or business to operate in accordance with the terms of the license, certificate, or registration herein designated and the applicable statutes of the Commonwealth of Virginia and the regulations of the Board.

The privileges conferred by this license, certificate, or registration shall continue until the expiration date. However, the license, certificate, or registration may be suspended or revoked prior to expiration.

Information about our agency, boards, and programs can be found at <http://www.dpor.virginia.gov>. Any questions relative to the issuance, privileges and maintenance of your license, certificate, or registration should be addressed to the Board.

**THIS DOCUMENT AND POCKET CARD CONTAIN SECURITY FEATURES. ALTERATION OF THIS DOCUMENT OR A POCKET CARD, USE AFTER EXPIRATION, OR USE BY ANOTHER INDIVIDUAL OR BUSINESS MAY RESULT IN CRIMINAL PROSECUTION UNDER THE CODE OF VIRGINIA.**

**THIS DOCUMENT AND POCKET CARD  
CONTAIN SECURITY CARD FEATURES.  
ALTERATION OF THIS DOCUMENT  
OR POCKET CARD, USE AFTER  
EXPIRATION, OR USE BY ANOTHER  
INDIVIDUAL OR BUSINESS MAY  
RESULT IN CRIMINAL  
PROSECUTION UNDER THE  
CODE OF VIRGINIA.**

The State Corporation Commission will be closed Monday, May 27, 2019 in observance of Memorial Day.

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 Jurisdiction of Formation: VA  
 Date of Formation/Registration: 12/22/1994  
 Status: Active  
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 GLEN ALLEN VA23060

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 4870 SADLER ROAD  
 SUITE 300  
 GLEN ALLEN VA 23060  
 HENRICO COUNTY 143  
 Status: Active  
 Effective Date: 10/7/2015

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<b>Name</b>	ZANNINO ENGINEERING INC
<b>License Number</b>	0407003572
<b>License Description</b>	Business Entity Registration
<b>Firm Type</b>	Corporation
<b>Rank</b>	Business Entity
<b>Address</b>	9915 GREENWOOD RD, GLEN ALLEN, VA 23060
<b>Initial Certification Date</b>	1996-11-12
<b>Expiration Date</b>	2019-12-31

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The license information in this application was last updated at Fri May 24 02:50:19 EDT.

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COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

05-31-2020

NUMBER

0402041863

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



IAN D JOHNSTON  
111 WINDHAM ROAD  
NORFOLK, VA 23505



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

*James W. DeBoer*  
James W. DeBoer, Director

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

COMMONWEALTH of VIRGINIA

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

EXPIRES ON  
12-31-2019

NUMBER  
0402055847

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



BRYAN SCOTT BARNSON  
105 SAINT ANDREWS DR  
SUFFOLK, VA 23435



*Jay W. DeBoer*  
Jay W. DeBoer, Director

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)  
(DETACH HERE)



BOARD FOR APESCIDLA  
PROFESSIONAL ENGINEER LICENSE  
NUMBER: 0402055847 EXPIRES: 12-31-2019

BRYAN SCOTT BARNSON  
105 SAINT ANDREWS DR  
SUFFOLK, VA 23435



(FOLD)

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

DPOR-PC (02/2017)

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## **Appendix 3.3.1**

# **Key Personnel Resumes**

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## ATTACHMENT 3.3.1

### KEY PERSONNEL RESUME FORM

<b>Brief Resume of Key Personnel anticipated for the Project.</b>
a. Name & Title: <b>Bobby J. Abernathy, Owner/President Abernathy Construction Corporation</b>
b. Project Assignment: <b>Design Build Project Manager</b>
c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time): <b>Abernathy Construction Corporation - Full Time.</b>
d. Employment History: With this Firm <b>48</b> Years With Other Firms <b>11</b> 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): <b>Abernathy Construction Corporation, Owner/President, 1971 - Present</b>  Bobby provides personal oversight and direction throughout all stages of the design build life cycle, producing high-quality outcomes on construction projects. In this role since 1971, Bobby has grown Abernathy Construction from a \$500K company with 12 employees to a 40-person firm with annual revenue up to \$14M. As a sole proprietor, he excels in management and leadership of people, equipment and project delivery. Originally a bridge builder, Bobby expanded the firm to include roadway construction in the mid 1980's; integrating both road and bridge construction into one company which self-performs all civil, roadway, bridge and structural construction. He is responsible for both day-to-day operations and oversees all activities related to meeting the schedule and adhering to the budget, managing change orders, and overseeing contract administration. Additional responsibilities include preparing proposals, developing subcontractor relationships and contracts, resolving claims or disputes, determining project feasibility, assigning work and finalizing document controls-all in support of roadway, bridges and utility construction projects. Bobby has extensive experience working with railroad companies, particularly CSX on two VRE projects, and has worked directly for CSX, providing him with intimate, firsthand knowledge of CSX procedures. Working closely with all stakeholders, owner's representatives and design staff, Bobby ensures effective communication for the entire team. His keen eye for safe, alternative, and cost saving solutions provides added value for this family owned and administered company. <ul style="list-style-type: none"><li>+ Route 36 Improvement Project, Design Build PM, 2010-2012</li><li>+ Route 638 Extension (Atlee Road), Senior PM, 2017-2018</li><li>+ 58/258 Connector, Isle of Wight County, VDOT, Senior PM, 2010-2012</li><li>+ Bridge Replacement &amp; Approaches Caroline County, VDOT, Senior PM, 2003-2003</li><li>+ Railroad Bridge Over Quantico Creek, VRE, Senior PM, 2004-2007</li><li>+ Interchange Improvements North Bound on Ramp, City of Colonial Heights, VDOT, Senior PM, 2007-2008</li><li>+ .279 Mi Bridge &amp; Approaches Over Cat Point Creek, Richmond, VDOT, Senior PM, 2007-2008</li><li>+ Construction of Pedestrian Walkways for Two Commonwealth Railroad Bridges, Suffolk, CSXT, Senior PM, 2007-2008</li><li>+ Install Precast Concrete Box Culvert and Remove Existing Steel Str Mp A30 36 Crossing Warwick Stream Near Reams, CSX, Senior PM, 2007-2007</li><li>+ Approach and Bridge Over Garnett's Creek King and Queen, VDOT, Senior PM, 2009-2010</li><li>+ 630 Bridge Over CSX RR (Str#6040), Stafford, VDOT, Senior PM, 2010-2011</li><li>+ Rt.156 Bridge Replacement Over Western Run, Henrico, VDOT, Senior PM, 2011-2011</li><li>+ Rt.1385 Emergency Box Culvert Replacement, Spotsylvania, VDOT, Senior PM, 2011-2012</li><li>+ Rt.604 Bridge Replacement at Swift Creek, Chesterfield, VDOT, Senior PM, 2012-2012</li><li>+ Bridge Replacement Over Herring Creek, King William County, VDOT, Senior PM, 2013-2013</li><li>+ Bridge Replacement Over Boot Swamp, Caroline County, VDOT, Senior PM, 2013-2013</li><li>+ Construction of Third Track Between Crossroads and Fredericksburg, Spotsylvania, VRE, Senior PM, 2013-2014</li><li>+ .104 Mi Replace Approach &amp; Bridge Over Nomini Creek, Westmoreland County, VDOT, Senior PM, 2013-2014</li><li>+ Bridge Replacement Burkes Mill Pond, Gloucester County, VDOT, Senior PM, 2014-2015</li><li>+ Bridge Replacement Rt.650 Over Tuckahoe Creek, Goochland, VDOT, Senior PM, 2015-2015</li><li>+ Replace Bridges Over Mill Swamp &amp; Over Stalling Creek, Isle of Wight County, VDOT, Senior PM, 2016-2017</li><li>+ Bridge Rt.35 (Main St/Meherrin Rd) Over Tarrara Creek, Southampton County, VDOT, Senior PM, 2016-2017</li></ul>

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

**University of Richmond (Richmond, VA) BA /1966-1968 / Physics**

**Randolph Macon College (Ashland, VA) BA / 1968-1971 / Physics**

**Various accredited coursework in computer education, safety and CPM Scheduling**

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

**NCCC0 Certified Operator / # 1508117076 Expires 2020**

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

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

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

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

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

**1) I-95 Temple Avenue, City of Colonial Heights, VA**

**Abernathy Construction Corporation, Role: Senior Project Manager, March 2007-July 2008**

Bobby was responsible for complete project life cycle from estimating through to construction completion which entailed quality and safety programs, pre-project investigation, company resource allocation, and adherence to the schedule and budget. Project included a ramp onto I-95N from Temple Ave, a 120-foot bridge over a wetland and Creek, utility relocations and work over a Columbia Gas Line. Partnered with the City of Colonial Heights, state police, local law enforcement, fire department & utilities for lane closures, early risk identification by studying and researching plans during bid stage and prior to pre-construction. Bobby coordinated with Columbia Gas to provide access to the gas line during project construction. Temporary traffic shifts on Temple Ave were necessary. This project was completed early, under budget, and was named **VDOT's 2008 Construction Quality Statewide award winner**.

**Relevance:** This project had work over an active Columbia Gas line as well as a Force Main. Project had 20-foot-tall abutments and 120' long bulb tee bridge beams spanning the creek. Significant fill due to grade differentials, clearing of forested land and fill for the roadway.

**Innovation:** Installed a cofferdam to allow Columbia Gas access to their line while project was under construction.

**2) Route 36 Improvement Project, City of Hopewell and Prince George County, VA**

**Abernathy Construction Corporation, Role: Design Build Project Manager, July 2010-December 2012**

As the DB PM, Bobby was responsible for overseeing the daily operations of the Route 36 and Route 144 intersection improvements, ensuring quality control/VDOT review process, right of way process, adherence to schedule, and design and construction safety, as well as supervising and assisting with construction. He utilized a strong understanding of VDOT procedures and policy for approvals and early release for construction. This project required a realignment of Temple Avenue to match the Ft Lee military reservation gate. It included roadway construction, utility relocation, right of way acquisition, asphalt pavement, pavement markings, traffic signals and signs, MOT, environmental permits, E&S controls and stormwater management.

**Relevance:** Roadway project with intersection improvements on a heavily traveled primary route. Mitigated utility and drainage impacts while sustaining traffic while intersection improvements were constructed.

**Innovation:** Improved safety by altering the existing roadway geometrics at EB Rte 144 with Rte. 36 to provide a 50 mph design speed vs the RFP specified 40 mph design speed. Reduced impacts to utilities and reduced cost of drainage improvements by modifying pavement cross slopes.

**3) CSX/Buckingham Branch RR Bridge Replacement, Waynesboro, VA**

**Abernathy Construction Corporation, Role: Senior Project Manager 2008-2011**

Bobby oversaw the daily operations of the railroad over a bridge project. Abernathy was initially selected as the low bidder for the project, but the bid exceeded allowable funds. Bobby created a value engineering proposal in order to bring the project to budget and be awarded. Project included a new RR bridge over Rte 340, widening route 340, new abutments to increase span length due to the road widening, intersection improvement, curb and gutter and sidewalk construction. Additionally, he coordinated with Buckingham Branch Railroad to reduce the originally planned railroad curfews and minimize interruptions to rail traffic.

**Relevance:** Bridge construction over a RR, coordination with the RR and widening of Route 340.

**Innovation:** Reduce the number of RR shutdowns by 2/3, reduced number of jump spans during construction and brought the project within awardable limits and shared savings with VDOT. Constructed the complete superstructure on the ground adjacent to the RR and lifted the bridge into place. The existing bridge was demolished, and the new superstructure was lifted in place in one continuous 24 curfew.

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

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. **Not applicable for this position.**

## ATTACHMENT 3.3.1

### KEY PERSONNEL RESUME FORM

<b>Brief Resume of Key Personnel anticipated for the Project.</b>
a. Name & Title: <b>Bryan Barnson, P.E., CCM, DBIA - Construction Manager/Design Project Manager</b>
b. Project Assignment: <b>Quality Assurance Manager</b>
c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time): <b>CES Consulting LLC (Full Time)</b>
d. Employment History: With this Firm <b>4</b> Years With Other Firms <b>4</b> 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): <b>CES Consulting LLC</b> , Construction Manager/Design Project Manager, 2015-Present In his time with CES Consulting, Bryan has served as the VDOT Construction Manager on the I-64 Segment II Widening Design-Build Project, as well as serving as a VDOT Project Manager for the Hampton Roads District Structure and Bridge Office. While serving in these roles, Bryan developed extensive experience managing key aspects of VDOT design-bid-build and design-build projects from the Preliminary Engineering stage through Construction. He has been able to tackle complex issues through each phase of construction having had experience managing both the design and construction side of projects. Examples of typical work items Bryan manages include project submittal review as an owner (VDOT) representative to include coordination with VDOT Hampton Roads District disciplines (Structure & Bridge, Materials, Traffic Engineering, Environmental), Quality Assurance (QA) plan development for unique roadway items (CCPRM/FDR), Coordination/scheduling of office engineers/inspection staff, review of project documentation ensuring conformance with the minimum requirements for VDOT Design Build projects, coordination of IA/VST inspections/testing, review of complex MOT implementations, coordination of MOT/Work activities with localities/stakeholders, review and processing of design build pay applications, and facilitating VDOT project environmental inspections. Projects managed include: <ul style="list-style-type: none"><li>• I-64 Widening Segment II Design Build Project, UPC 106665 (\$138M) - 11/2016 to Present - IA CM</li><li>• 64/664 Interchange Bridge Deck Epoxy Overlays, UPC 107986 (\$1.4M) - 04/2015 to 11/2017 - Design PM</li><li>• 2016 HR District Wide Bridge Painting, UPC 106868 (\$1.1M) - 04/2015 to 11/2017 - Design PM</li><li>• HR District Wide Bridge Washing, UPC 107940 (\$160K) - 04/2015 to 11/2017 - Design PM</li><li>• HR District Wide Bridge Maintenance, UPC 107420 (\$12M) - 04/2015 to 11/2017 - Design PM</li><li>• Rt. 629 Over Fountaine Creek Bridge Reconstruction - 03/2016 to 08/2016 - Design PM</li><li>• Rt. 651 Over Moore's Branch Bridge Reconstruction - 03/2016 to 09/2016 - Design PM</li><li>• Rt. 621 Over Mills Swamp Bridge Reconstruction - 07/2015 to 12/2015 - Design PM</li></ul> <b>Skanska USA Civil Southeast, Inc.</b> , Project Engineer/Superintendent, 2011-2015 While employed with Skanska, Bryan progressively garnered boots on the ground experience managing large scale Design-Build, and Design Bid-Build heavy civil construction sites. As both a Project Engineer and Superintendent, Bryan was tasked with managing Quality, Safety, and Environmental risks. In these roles, he has gained exposure in a leadership capacity in activities including pile driving, concrete placement, formwork design, crane lifting and rigging, quality control/assurance testing, and environmental risk mitigation. Projects managed include: <ul style="list-style-type: none"><li>• NNSY Pier 5 Replacement Project, NAVFAC (\$164M) - 06/2011 to 03/2013 - Project Engineer</li><li>• New Midtown Tunnel Project, VDOT/ERC (\$1.8B) - 03/2013 to 04/2015 - Supt.</li></ul>
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: <b>Virginia Military Institute, Lexington, Virginia / BS / 2011 / Civil Engineering</b>
f. Active Registration: Year First Registered/ Discipline/VA Registration #: <b>2017 / Professional Engineer / Virginia Registration #55847</b> <b>2016 / Professional Engineer / Maryland Registration #50258</b> <b>2016 / Certified Construction Manager (CMAA)</b> <b>2019 / DBIA</b>
g. Document the extent and depth of your experience and qualifications relevant to the Project. <ol style="list-style-type: none"><li>1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i></li><li>2. <i>Note whether experience is with current firm or with other firm.</i></li><li>3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i></li></ol> <b>(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.)</b> <ol style="list-style-type: none"><li>1) <b>VDOT I-64 Segment II Widening Design Build Project - James City County, York County, City of Newport News, VA</b> <b>CES Consulting, Inc, Consultant Construction Manager (Nov 2016 – Present)</b> Roles and Responsibilities - Bryan has been vital to the successful project delivery for the \$138M I-64 Widening Segment II design-build project serving as the consultant VDOT Construction Manager. This project (located just outside the proposed Skiffes Creek Connector</li></ol>

limits) extends the 3-lane section of I-64 from roughly mile marker 248 to mile marker 241 of which includes the addition of 12' wide travel lanes and 12' wide shoulder lanes within the existing median space, and the repair and widening of 9 existing bridges. In his role, Bryan has taken a key leadership position within the VDOT team structure, managing all facets of the project including quality, safety, environmental, project/document controls., and public relations

Similar to the requirements of the Quality Assurance Manager role, Bryan is actively managing every aspect related to Quality for this design build project. This includes responsibilities such as:

- Coordinating and scheduling all Independent Assurance (IA) inspection and testing resources
- Maintaining VDOT's owner frequency of testing logs/testing documentation
- Coordinating with VDOT disciplines (Hampton Roads Materials/Elko) for IA/VST testing
- Reviewing all Design Build Quality Control/Quality Assurance testing and inspection frequencies for compliance with the minimum requirements for VDOT Design Build projects
- Acting as project Quality Assurance lead for CCPRM and FDR operations on the project to include development of VDOT Quality Assurance plan, facilitating Preparatory Inspection Meetings, maintaining all deficiency tracking/Non-compliance reporting, and implementing testing/inspection FOT
- Responsible for coordination with QAM on tracking and VDOT resolution of Non-compliance reports
- Responsible for monthly review of QA/QC testing, inspection documentation, and material book to ensure compliance with the VDOT design build minimum requirements, as it relates to pay application review/approval.
- Construction submittal review and approval authority to include appropriate coordination and review/comment resolutions with Hampton District resources (TE, S&B, Materials etc.)
- Responsible for approval of all lane closures and LCAM coordination as well as verification of Plan/WAPM compliance for unique phased TMP implementations
- Facilitating all VDOT bridge repair/widening inspections for acceptance.

In addition, Bryan is also serving as a key asset to VDOT in maintaining environmental compliance for this project with highly sensitive wetlands/streams and property owners. Typical environmental/permit compliance responsibilities include:

- Coordinating VDOT project ECI inspections (Direct report to CM)
- Reviewing and performing project C-107 processes to ensure permit compliance is maintained
- Reviewing/responding to Hampton Roads District NPDES and Water Quality inspection reports

**Relevance:** VDOT Design-Build project, quality management, record keeping and document review on a project with road, bridge, and environmental compliance. Similar to the Skiff's Creek Connector, this design build project involved a large amount of bridge widening /construction work, work within the skiff's creek reservoir footprint, and implementation of complex MOT patterns in the James City County, York County, and City of Newport News.

**Innovation:** Largest scale CCPRM project to be delivered by VDOT to date, of which Bryan served as QA lead. In addition this project entailed significant MOT phasing on one of Hampton Roads' busiest interstate corridors.

### **2) New Midtown Tunnel- Elizabeth River Tunnel - Portsmouth/Norfolk, VA**

#### **Skanska Civil Southeast, Superintendent Tunnel Rehabilitations (EB & WB) (Mar 2013 – Apr 2015)**

Roles and Responsibilities - As a superintendent on one of the largest PPTA projects in the state of Virginia Bryan was exposed to every aspect of a design build/PPTA project. Specifically, Bryan managed all field operations related to the rehabilitation of the two existing downtown tunnels, to include the installation of 200k sf of Promat fireproofing, complete electrical rehab (Total elec. Rehab value: \$90m), installation of Jet Fan ventilation systems, concrete spall/delamination repairs, and removal of suspended concrete panel ceiling in the EB Downtown Tunnel. Bryan was also responsible for coordination of quality control testing and inspection to include maintenance of quality control testing logs, facilitating preparatory inspection meetings, as well as managing MOT deployment, maintenance, and pickup during nightly lane/tunnel closures.

**Relevance:** VDOT P3/DB project, quality control testing and inspection and documentation.

**Innovation:** State-of-the-art ITS infrastructure installation, complex MOT implementation, and Hampton Roads' largest P3 project.

### **3) Pier 5 Replacement Project (NAVFAC) – NNSY Portsmouth, VA**

#### **Skanska Civil Southeast, Project Engineer (Jun 2011 – Mar 2013)**

Roles and Responsibilities - Bryan provided field engineering support on the \$164M Pier 5 replacement project. This project entailed an extensive amount of pile driving, concrete, and demolition work. Bryan's responsibilities included Developing detailed work plans and Activity Hazard Analysis (AHAs) for all work activities involved with Pier 4 and Pier 5 demolition, of which included coordination of all quality testing and inspections. His boots on the ground experience entailed managing concrete pours ranging from 30-200cy, engineering formwork plans for utility trenches, and performing/ maintaining pile driving logs. Bryan also developed and maintained the project turbidity monitoring plan during dredging operations of existing Pier 4 and Pier 5, and was responsible for quality assurance reporting of all dredge operations to include coordination of 3-D side scan sonar and manual sounding.

**Relevance:** Quality assurance reporting and quality testing and inspections.

**Innovation:** BIM-Schedule integration, complex shoring/demolition sequencing, and modern dredging/sounding technology

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

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. **Not applicable for this position.**

## ATTACHMENT 3.3.1

### KEY PERSONNEL RESUME FORM

<b>Brief Resume of Key Personnel anticipated for the Project.</b>
a. Name & Title: <b>Ian Johnston, PE, Project Manager</b>
b. Project Assignment: <b>Design Manager</b>
c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time): <b>Clark Nexsen, Inc. – Full Time</b>
d. Employment History: With this Firm <u>10</u> Years With Other Firms <u>10</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): <b>Clark Nexsen, Project Manager (2011-present):</b> Responsible for management of transportation projects for state and local government clients. Project types managed include roadway improvement projects, new bridge and bridge replacement projects, intersection improvements including roundabouts, and new signal/signal upgrade projects, and drainage improvements. Direct responsibilities include oversight of project scope, schedules, and budgets, and ensuring that both in-house and sub-consultant design teams are providing project deliverables in accordance with established VDOT, AASHTO and relevant industry standards, schedule and quality requirements. Responsible for financial status and reporting of projects to management team. Primary point of contact with the client and responsible for ensuring that all activities and deliverables are to their satisfaction and that quality assurance and quality control measures are implemented and followed. Activities include running and facilitating project meetings, planning and implementing change management actions, and leading and motivating design and project staff. <b>VDOT Hampton Roads District PMO, Design Project Manager (2005-2011):</b> Responsible for the management of preliminary engineering projects for the Hampton Roads District of VDOT. Responsible for the project scope, schedules, and budgets, and delivering projects in accordance with the VDOT Dashboard guidelines. Projects managed were primarily consultant designs, and therefore was responsible for scoping and negotiating the consultant contracts, overseeing the fiscal control of the contracts, and ensuring payment in accordance with the Prompt Payment Act. Some elements of design projects were in-house designs, and therefore was responsible for coordinating with internal staff and section managers for successful delivery. Responsible for maintaining and updating project information and budgets within VDOT's Integrated Project Manager (iPM), Six Year Improvement Program (SYIP), and Project Cost Estimating System (PCES) databases. As project leader, responsible for coordinating and communicating info related to assigned projects with representatives from the Federal Highway Administration, local governments and the Metropolitan Planning Organization, as well as the District and Central Offices. Responsible for making presentations to citizens, stakeholders, and local authorities. Upon successful delivery of design projects to construction, responsible for coordinating any design changes or revisions because of changed conditions or errors and omissions. Served as a District Project Manager on a wetland mitigation Design-Build project and the Midtown Tunnel/Martin Luther King Extension PPTA project. <b>Clark Nexsen, Senior Roadway/Civil Engineer (2002-2005):</b> Roadway/Civil Engineer responsible for the design of state and local government transportation and public works improvement projects, as well as Federal/Department of Defense design projects. Responsible for design projects from preliminary design to final construction documents, including development of plans, estimates, and specifications. Performed designs using Microstation and AutoCad design software. Responsible for overseeing design work of junior staff and providing quality control reviews. Activities also included coordinating designs with project manager, other internal design sections, sub-consultants, and client technical staff. Developed fee estimates in support of cost proposal submissions to clients. Attended construction progress meetings and coordinated construction services on projects, including reviewing shop drawings, responding to RFI's, and performing plan revisions. Supported business development initiatives by firm's project managers. Worked primarily on the VDOT Route 1 widening in Richmond, and Elbow Road and Seaboard Road for the City of Virginia Beach. Was lead designer on a roadway relocation project for the DoD in Key West, FL.
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: <b>Rochester Institute of Technology, NY/ B.S. /1998/Civil Engineering Technology</b> <b>SUNY Alfred, NY/A.A.S./1994/Construction Engineering Technology</b>
f. Active Registration: Year First Registered/ Discipline/VA Registration #: <b>Professional Engineer / Civil / 2004 / Virginia # 0402041863</b>
g. Document the extent and depth of your experience and qualifications relevant to the Project. <ol style="list-style-type: none"><li>1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i></li><li>2. <i>Note whether experience is with current firm or with other firm.</i></li><li>3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i></li></ol>

**(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.)**

**1) Route 100 Bridge Replacements (0100-077-744), Pulaski County, VA**

**Clark Nexsen, Design Manager, (Mar 2013-Aug 2018)**

Roles and Responsibilities - Mr. Johnston is the Design Project Manager for these Salem District bridge replacement projects. The projects include replacing the existing two-lane bridges on northbound Route 100 that cross over the Norfolk Southern Railroad (NSRR) and Route 11, located in the Town of Dublin. The existing NSRR bridge is a four-span steel beam bridge that was constructed in 1952 and is being replaced with a single span 150' steel plate girder superstructure on MSE wall abutments. The existing Route 11 Bridge is a two-span concrete T-beam bridge that was constructed in 1950 and is being replaced with a two-span voided slab superstructure. Both bridge structures are located within the Route 100/Route 11 interchange, and additional operational/safety improvements at the interchange are being included with the project. The existing ramp from Route 100 to northbound Route 11 is being removed due to a poor sight distance/sight triangle at the convergence of the roadways. Northbound Route 11 traffic will be rerouted to the existing ramp southbound Route 100 to southbound Route 11 ramp, where a new spur ramp will be constructed to allow for a perpendicular tie-in with Route 11, which addressed the poor sight distance issue. The project is currently under construction and is planned to be complete by June of 2020. The total combined PE, RW, and CN cost for the project is \$7.2 million.

**Relevance:** New bridge over NSRR plus a new bridge over a Primary Route, tall MSE wall abutment, interchange improvements, extensive RR coordination, bridge design considered future rail line expansion

**Innovation:** Reconfigured the existing Rte 11 interchange to improve deficient sight distance by closing the ramp from NB Rte 100 to NB Rte 11 and replace with a spur off SB Rte 100 to SB Rte 11 to create a new T intersection at Rte 11.

**2) 22nd Street Bridge Replacement, Chesapeake, VA**

**Clark Nexsen, Design Manager, (July 2014-Aug 2018)**

Roles and Responsibilities - Mr. Johnston is the Design Project Manager for this City of Chesapeake bridge replacement project located in South Norfolk, Virginia. The project included replacing the existing 15-span, 878' concrete T-beam structure with a new 4-span, 494' continuous steel plate girder bridge on new location. The new bridge is being relocated to tie-directly into Poindexter Street on the south end of the project and cross the Norfolk Southern Railroad tracks approximately 100' to the southeast of the existing bridge structure. The relocated roadway will tie-in to the existing Berkley Avenue/Wilson Road intersection at the northern end of the project. The new design includes a 114' straddle bent that allows for the new super structure to cross the three existing NSRR railroad tracks and a proposed future track. The project included significant coordination with various project stakeholders, including the residents of South Norfolk, the business community, and the NSRR. The segment of NSRR track that the bridge crosses is a major line that feeds into downtown Norfolk for the Amtrak connection as well as Lambert's Point Yard, which is a major east coast coal transport hub. In development of the project, Clark Nexsen coordinated at every milestone submittal with NSRR's review engineers in Atlanta and Raleigh. Other aspects of the project included roadway and signal design, storm drainage, lighting, landscaping, development of acquisition plats, and franchise utility coordination. The project is currently under construction and is planned to be complete by June of 2020. The total combined PE, RW, and CN cost for the project is \$18.4 million.

**Relevance:** New bridge over RR, intersection improvements with signal, extensive and close RR coordination

**Innovation:** To improve sight distance and eliminate excessive left & right turns to access the new bridge, the Poindexter/ Liberty/22<sup>nd</sup> St intersections were realigned, creating a more intuitive traffic pattern between S. Norfolk and Berkley.

**3) Wythe Creek Road Improvements, Hampton and Poquoson, VA**

**Clark Nexsen, Design Manager, (Mar 2013-Current)**

Roles and Responsibilities Mr. Johnston is the Design Project Manager for this 1.6-mile roadway improvement project that crosses from the City of Hampton into Poquoson. The project includes a new 20-span, 1600' prestressed concrete bulb T superstructure bridge on pile bents. One of the primary purposes of the project is to raise the existing causeway elevation as it frequently floods during storm and high wind events. Since Wythe Creek Road is only one of two ways in and out of Poquoson, it is a significant safety concern during hurricane season, and therefore a high priority for the City. The project is also widening the existing 2-lane roadway to a 3-lane roadway with a center reversible lane. With the majority of traffic on the roadway traveling south in the AM and north in the PM, the center lane will be directed/signaled for the primary directional movement. In the off peak hours the center lane will operate as a two-way left turn lane. Given the innovative design approach to the project, Clark Nexsen worked with VDOT and both Hampton and Poquoson City Council's in support of the design approval process. The project included roadway, stormwater management design, signals, ITS, lighting, utility, and structural/bridge design. The project is scheduled for advertisement in September of 2019. The total combined PE, RW, and CN cost for the project is \$49.6 million.

**Relevance:** Innovative solution to maintain VDOT budget and reduce ROW impacts, intersection improvement with new signal, new bridge over environmentally sensitive area

**Innovation:** Reused/overlay existing pavement vs tear out and replace to eliminate exposure of subgrade which triggers an increase in WQ treatment requirements to keep total nutrient credits under 10# of phosphorous permitting purchase of nutrient credits per VDOT policy addressing Poquoson's concern over increased SW basins and esthetic impacts.

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. **Not applicable for this position.**

## ATTACHMENT 3.3.1

### KEY PERSONNEL RESUME FORM

<b>Brief Resume of Key Personnel anticipated for the Project.</b>
a. Name & Title: <b>Richard J. Siford, RLD, ESCCC, Senior Project Manager, Abernathy Construction Corporation</b>
b. Project Assignment: <b>Construction Manager</b>
c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time): <b>Abernathy Construction Corporation - Full Time.</b>
d. Employment History: With this Firm <b>43</b> Years With Other Firms <b>0</b> 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): <b>Abernathy Construction Corporation, Senior Project Manager &amp; Construction Manager, 1994-February 2019.</b> Richard is responsible for the coordination and management of staffing projects, documenting the job progress, ensuring quality construction, mentoring, schedule development, schedule adherence, resource allocation, OSHA compliance, environmental sanctioning compliance and coordination with subs. He coordinates with VDOT and local jurisdictions to in meeting project goals and objectives while constructing the project in accordance with the contract documents. Working closely with Bobby Abernathy for over 40 years, he has delivered on each project, including bridge, roadway and utility projects such as: <ul style="list-style-type: none"><li>+ 58/258 Connector, Isle of Wight County, VDOT, PM/CM, 2010-2012</li><li>+ Bridge Replacement &amp; Approaches Caroline County, VDOT, PM/CM, 2003-2003</li><li>+ Repair Scour Damage, Lancaster County, VDOT, PM/CM, 2003-2003</li><li>+ Railroad Bridge Over Quantico Creek, VRE, PM/CM, 2004-2007</li><li>+ 1.355 Mi Grade Drain Asp Pave Wetland Mitigation &amp; Box Culverts (2), Lancaster, VDOT, PM/CM, 2004-2006</li><li>+ 1.63 Km Grade Drain Asp Pave &amp; New Bridge Over Occupacia Creek Essex, VDOT, PM/CM, 2006-2007</li><li>+ Chancellor Road Refuse Collection Retaining Wall, Spotsylvania County, PM/CM, 2006-2007</li><li>+ Interchange Improvements North Bound on Ramp, City of Colonial Heights, VDOT, PM/CM, 2007-2008</li><li>+ .279 Mi Bridge &amp; Approaches Over Cat Point Creek, Richmond, VDOT, PM/CM, 2007-2008</li><li>+ Construction of Pedestrian Walkways for Two Commonwealth Railroad Bridges, Suffolk, CSXT, PM/CM, 2007-2008</li><li>+ Install Precast Concrete Box Culvert and Remove Existing Steel Str Mp A30 36 Crossing Warwick Stream Near Reams, CSXT, PM/CM, 2007-2007</li><li>+ Structural Steel Repairs on NBL Rt.95 Over Rt.17, Sbl Rt.95 Over Rt.17, Cd Road Over Rt.17, Stafford, VDOT, PM/CM, 2008-2009</li><li>+ .215 Km Grade Drain Asp Pave Utilities Incidentals RR Bridge, Waynesboro, VDOT, PM/CM, 2008-2011</li><li>+ Approach and Bridge Over Garnett's Creek King and Queen, VDOT, PM/CM, 2009-2010</li><li>+ 630 Bridge Over CSX RR (Str#6040), Stafford, VDOT, PM/CM, 2010-2011</li><li>+ Rt.63 Improvements, City of Hopewell/Prince George, VDOT, PM/CM, 2010-2012</li><li>+ Rt.644 Approach and Bridge Replacement Over Northeast Creek, Louisa, VDOT, PM/CM, 2011-2011</li><li>+ Rt.156 Bridge Replacement Over Western Run, Henrico, VDOT, PM/CM, 2011-2011</li><li>+ Rt.604 Bridge Replacement at Swift Creek, Chesterfield, VDOT, PM/CM, 2012-2012</li><li>+ Bridge Replacement Over Herring Creek, King William County, VDOT, PM/CM, 2013-2013</li><li>+ Bridge Replacement Over Boot Swamp, Caroline County, VDOT, PM/CM, 2013-2013</li><li>+ Construction of Third Track Between Crossroads and Fredericksburg, Spotsylvania, VRE, PM/CM, 2013-2014</li><li>+ .104 Mi Replace Approach &amp; Bridge Over Nomini Creek, Westmoreland County, VDOT, PM/CM, 2013-2014</li><li>+ .214 Mi Grade, Drain, Asp Pave, Utilities &amp; Bridge, Westmoreland County, VDOT, PM/CM, 2014-2016</li><li>+ Bridge Replacement Burkes Mill Pond, Gloucester County, VDOT, PM/CM, 2014-2015</li><li>+ Replace Bridges Over Mill Swamp &amp; Over Stalling Creek, Isle of Wight County, VDOT, PM/CM, 2016-2017</li><li>+ Bridge Rt.35 (Main St/Meherrin Rd) Over Tarrara Creek, Southampton County, VDOT, PM/CM, 2016-2017</li><li>+ Emergency Culvert Replacement of Rt.201 Over Bush Mill Creek, Northumberland County, VDOT, PM/CM, 2018-2019</li><li>+ Emergency Culvert Replacement of Rt.642 Over Knights Run, Northumberland County, VDOT, PM/CM, 2018-2019</li></ul>

e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: **University of Richmond,1965-1968, VCU, J. S. Reynolds**

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

**Certification-VA DCR Responsible Land Disturber/ #32547**

**Certification-VA Division of Mineral Mining (DMM) provides a Mineral Miner/#3 0016354 Certification-VDOT Erosion and Sediment Control Contractor/ #3589C , OSHA 30 Certified, 2015**

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

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

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

**1) RT 638 Extension (Atlee Rd), Hanover Co., VA**

**Abernathy Construction, Role: PM, April 2017-December 2018**

Richard ensured full integration of design and construction through the leadership of all management and oversight meetings. He handled the sub-contract administration, DBE management, quality control, safety and environment compliance. The project extended (greenfield) Atlee Road to connect with Atlee Station Road. Included a 137 foot long single span bridge over the Buckingham Branch Railroad with modifications to Cool Springs and Atlee Station Roads; new tunnel through the bridge fill, curb and gutter improvements, drainage improvements traffic signalization and accommodations for pedestrians and bicycles. Richard handled significant utility coordination, including water and sewer. He provided solutions to addressing high moisture content soils in a low level wet environment Monitored job budget, job cost and all facets of the project to ensure that all scheduled work activities were met, quality was built into the project work items and that any issues were immediately addressed and resolved with Hanover Co and VDOT personnel on the job.

**Relevance:** Bridge over a Railroad, intersection improvements, new road on new alignment, pedestrian and bicycle accommodations, drainage and traffic signalization.

**Innovation:** Revised drainage design to allow Cool Springs Road to be constructed under traffic which avoided an expected 4-week detour. Additionally, proposed and implemented a shoo-fly/traffic shift off Atlee Station Road to allow for road and bridge construction to proceed simultaneously which reduced overall construction duration by 13 weeks.

**2) I-95 Temple Ave, City of Colonial Heights, VA**

**Abernathy Construction Corporation, Role: PM, March 2007-July 2008**

Richard ensured that scheduled work was coordinated and performed on time in accordance with the contract documents and met the project schedule. He interpreted plan sheets, worked with subcontractors and met schedule milestones, monitored job budget and job cost, complied with safety measures and validated that the contract specifications were met in a quality manner. Richard developed the project cost estimate (bid) for the project and worked closely with Bobby Abernathy to identify risks early by studying and researching plans during bid stage and prior to pre-construction. Project included a ramp onto I-95N from Temple Ave, a 120-foot bridge over a wetland and Creek, utility relocations (force main and water line) and work over a Columbia Gas Line. The project was completed early and under budget.

**Relevance:** Bridge over a creek with tall (20') abutments, roadwork, utility relocations (water, sewer and gas), MOT, drainage.

**Innovation:** Planned and implemented means and methods for structural beam erection. Developed idea to construct a cofferdam to isolate the Columbia gas line for owner access during construction.

**3) Virginia Railway Express Bridge and Approaches at Quantico Creek, Quantico, VA**

**Abernathy Construction Corporation, Role: Senior Project Manager, May 2004-November 2007**

Senior project manager responsible for subcontract administration, DBE management, quality control, safety and environmental compliance, scheduling, material controls, daily supervision and field layout. Richard ensured scheduled work was coordinated and performed on time in accordance with the project schedule. He interpreted plan sheets, worked with subcontractors to meet schedule and he coordinated construction activities with VRE, CSX, Dominion Energy's Possum Point facility, and USMC Quantico base. He monitored job budget and job costs, complied with safety measures and ascertained that the contract specifications were met, delivering a quality product.

**Relevance:** Project required coordination for work within/along CSX right-of-way. The new 1700lf type III concrete beam bridge spanned a creek/waterway crossing on a new alignment and was supported on 36 in steel pipe piles averaging 115' in length.

**Innovation:** Coordinating of scheduling with bridge construction, roadbed construction and rail construction to avoid planned train stoppage/main line rail outages.

\* 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. **Chandlers Mill Dam Rehabilitation, Dept of Game & Inland Fisheries, CM, Completion in Fall, 2019**

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## **Appendix 3.4.1**

# **Work History Forms**

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**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: <b>58/258 Connector VDOT Project# 0058-046-E05,C504,B621,B622,B623,B624,D625,D626</b> Location: <b>Isle of Wight Co, VA</b>	Name: <b>Unknown</b>	Name of Client/ Owner: <b>VDOT</b> Phone: <b>757.556.2403</b> Project Manager: <b>J.E. Lomax, II</b> Phone: <b>757.494.2447</b> Email: <b>joe.lomax@vdot.virginia.gov</b>	<b>06/2003</b>	<b>06/2003</b>	<b>\$9,772</b>	<b>\$10,289</b>	<b>\$10,289</b>

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

**PROJECT NARRATIVE:** This project constructed approximately one mile of a new 2-lane Primary Route (258) connector road from the intersection with Great Mill Highway to Carver Road. Two new intersections were constructed as was 4 new bridges: one over an existing highway, one over a railroad, and two over creeks/wetlands. Two bridges were steel beam construction of 184' and 197' (over the Norfolk Southern RR) respectively. Two bridges were multi-span Type II precast concrete beams of 328' and 512' in length. All structures were supported on concrete piling. A cast-in-place box culvert and a concrete pipe culvert were needed to maintain drainage features while constructing the roadway. Approximately 295,000 cy of borrow material, 3,900 cubic yards of concrete and 635,000 pounds of resteel were incorporated into the project. Of note was that the original project design documents did not provide access to two bridge sites. Abernathy constructed a temporary riprap causeway combined with sectional barges to access the site for bridge construction over Beaverdam Swamp.

**PROJECT SCOPE:**

- Greenfield road construction
- Construct 4 bridges: steel and precast concrete
- Pile driving
- Construct box culvert
- Intersection construction
- Environmental permitting
- Drainage and E&SC



**EVIDENCE OF GOOD PERFORMANCE**

- Decks were poured in a manner to reduce the construction joints at the closures over the piers for continuous spans eliminating joints and possible corrosion due to water seepage on to the bearings
- A large diversion channel for the construction of the box culvert was maintained through the fall tropical storm season
- At the quad, elliptical pipe line utilized 57's wrapped in geotextile capped with topsoil and ec2 to prevent erosion
- Adjusted the tie-in at Rte.260 (southern end of project) for a smoother traffic flow. Adjusted from a multiple phase traffic tie-in as planned to a single phase
- Utilized a newer hydroseeding mulch to help prevent erosion of the high fill slope
- The Bridge piers were constructed and center span steel was set prior to the abutments being built due to the approach fills requiring surcharge being placed for the bridge over Lee's Mill Road
- The 25 acre borrow pit site was stripped of topsoil in one weekend and the environmental controls maintained through the duration of the borrow operations to yield up to 3,000 cubic yards of material per day

**RELEVANCE TO SKIFFES CREEK :**

- Greenfield construction of a 2-lane road
- Construct a 2-lane Bridge over creek/swamp
- Construct a 2-lane Bridge over railroad
- Construct a 2-lane Bridge over existing road
- Pile driving
- Fill operations
  - Environmental permitting
  - Materials yard (Vulcan) adjacent to the project
  - Clearing of forested land

**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: <b>Route 36 Improvements, Project #(FO)0036-0274-709,P101,R201,C501</b> Location: <b>Hopewell &amp; Prince George County, VA</b>	Name: <b>Rinker Design Associates, P.C.</b>	Name of Client/ Owner: <b>VDOT</b> Phone: <b>804.524.7008</b> Project Manager: <b>Shane Mann, PE</b> Phone: <b>804.720.4229</b> Email: <b>shane.mann@vdot.virginia.gov</b>	<b>11/12/2012</b> <b>REV 01/18/2013</b>	<b>01/04/2013</b>	<b>\$8,224</b>	<b>\$8,224</b> <b>REV via Work Order</b> <b>\$8,886</b>	<b>\$8,886</b>

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

**PROJECT NARRATIVE:** This Design-Build project encompassed intersection improvements at Route 36 (Oaklawn Avenue) and Route 144 (Temple Avenue). The project improved traffic flow at the Sisisky Gate entrance into the Fort Lee Military Base by relocating the existing intersection of Routes 36 and 144 away from the Fort Lee entrance. Temple Avenue comes to a dead end so the road was realigned to match the Sisisky gate. The project had 300 LF of new road alignment and 5,000 LF of road realignment. There were significant construction drainage challenges due to the increase of impervious pavement and volume of water to convey during construction. The solution was to add a 2-barrel elliptical pipe culvert to replace a small box culvert to handle the flows. Abernathy developed a public relation plan which was implemented throughout the project to ensure close coordination with the US Army and Civilian representatives from Fort Lee, the City of Hopewell, and the surrounding businesses. This allowed for sufficient time for the interested parties to make plans to adjust for upcoming work tasks that might impact access or traffic flow. Challenges included heavy traffic, excessive drainage flows, and high public visibility. The project construction was completed ahead of schedule.

- PROJECT SCOPE:**
- Roadway construction and asphalt pavement
  - Utility relocation
  - Right of way acquisitions
  - Pavement markings
  - Traffic signals and signs
  - Maintenance of traffic plans and implementation
  - Environmental permits
  - E&S controls
  - Storm water management plans
  - Quality Control and quality assurance



- EVIDENCE OF GOOD PERFORMANCE**
- Project was completed and open to traffic ahead of schedule
  - Improved safety by altering the existing roadway geometrics at the eastbound Rte. 144 connection with Rte. 36 to provide 50 mph design speed instead of the RFP design speed of 40 mph.
  - Reduced overall impervious footprint by utilizing the existing route 144 westbound pavement where possible
  - Added a parallel storm drain system to increase the capacity through the intersection.
  - Identified existing pavement failure and submitted repair process to VDOT and FHWA, which included using a Fibermat material over two lanes for 5,000 feet each which was approved as a work order
  - Developed and implemented comprehensive MOT to safely construct the new pavement widening and alignment under heavy base traffic.

- RELEVANCE TO SKIFFES CREEK :**
- Design Build
  - New Road Alignment
  - Reduced impacts to utilities and reduced cost of drainage by modifying pavement cross slopes.
  - Intersection on a Primary route
  - Construct a signalize intersection
  - Coordination with Stakeholders
  - Utility Relocations

**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: <b>Route 638 Extension (Atlee Road)</b> <b>0638-042, UPC #98326</b>  Location: <b>Hanover County, VA</b>	Name: <b>Timmons Group</b> <b>Richmond, Virginia</b>	Name of Client/ Owner: <b>Hanover County, VA</b> Phone: <b>804-786-2801</b> Project Manager: <b>Randy Hardman</b> Phone: <b>804-365-6376</b> Email: <b>wrhardman@hanovercounty.gov</b>	<b>09/2018</b>	<b>10/2018</b>	<b>\$14,559</b>	<b>\$15,028</b>	<b>\$11,814</b>

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

**PROJECT NARRATIVE:** The project encompassed improvements to Atlee Road, Atlee Station Road and Cool Springs Road. Roadwork extended Atlee Road (greenfield construction) to connect with Atlee Station Road. This required a new 137 foot long single span bridge over the Buckingham Branch Railroad and modifications to Cool Springs Road and Atlee Station Road. As part of the new Atlee Road extension, a tunnel through the bridge fill was required for accommodations pedestrians and bicycles. Due to the site configuration, significant earthwork (fill operations) was required. The project included curb and gutter improvements, drainage improvements, additional signage for safety, and traffic signalization at an intersection. A large MSE wall was also part of the construction as was utility coordination for both existing water and sewer lines as well as tie-in.

**PROJECT SCOPE:**

- Construct a 137' long single span structural steel bridge over a railroad
- Greenfield two-lane road construction
- MSE Abutment
- Maintenance of Traffic
- Drainage and Stormwater Management
- Utility coordination and construction



**EVIDENCE OF GOOD PERFORMANCE**

- Original plans included 280,000 cubic yards of borrow material. Due to wet conditions, No. 10 screening rock dust was used to expedite the job's progress to overcome fill placement issues created by exceptional amounts of annual rainfall
- Original plans called for traffic to be placed on the bridge, then for wall #1 to be constructed. Abernathy Construction proposed a "shoo-fly/traffic shift" off Atlee Station Road to be constructed simultaneously with bridge construction. This resulted in a reduced construction time by 13 weeks
- The new sewer line required a tie in along Atlee Station to the existing 12" force main. Abernathy used tapping sleeves and valve connection to permit a switch of the sanitary sewer from the existing lines to the newly constructed line with no interruption of sewer service. The advertised plans called for pump and hold with tanker trucks. This could have overrun pump station with sewage, resulting in a damaged system. The Abernathy plan eliminated this risk
- Partnered with Hanover Co., State Police, local law enforcement, fire department & utilities for lane closures, signal lighting & traffic controls
- Abernathy proposed drainage revisions of Cool Springs Road which allowed Cool Springs Road to be constructed under traffic, alleviating a 4-week detour of traffic

**RELEVANCE TO SKIFFES CREEK**

- Coordinated with Hanover County and Buckingham Branch Railroad during the construction of 137' long single-span bridge over Buckingham Branch Railroad
- Work in vicinity of existing sewer line
- MSE wall construction
- Intersection tie in
- Greenfield road (2-lane) construction
- Significant fill along road/bridge alignment
- Earthwork in wet conditions
- Coordination with stakeholders

**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: <b>22<sup>nd</sup> Street Bridge Replacement over N&amp;S RR</b>  Location: <b>City of Chesapeake, VA</b>	Name: <b>Corman Construction</b>	Name of Client: <b>Department of Public Works, City of Chesapeake</b> Phone: <b>757.382.6319</b> Project Manager: <b>Scott Frechem, PE</b> Phone: <b>757.382.6319</b> Email: <b>sfrechem@cityofchesapeake.net</b>	<b>9/2018</b>	<b>6/2020 (Est.)</b>	<b>\$13,141</b>	<b>\$13,141 (Est)</b>	<b>\$1,600</b>

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

**PROJECT NARRATIVE** Clark Nexsen was the prime consultant and lead designer on the replacement of the 22<sup>nd</sup> Street overpass bridge over the Norfolk Southern Railroad in the City of Chesapeake, Virginia. The existing bridge was constructed in 1937 and consisted of a 794' long, fifteen span reinforced concrete T-beam superstructure supported on reinforced concrete abutments and frame piers on timber piles. Responsibilities included roadway design, bridge structural design, traffic engineering design, as well as management of subconsultants performing geotechnical investigation and hydraulic design and stormwater management (SWM) analysis. Bridge structural design included development of alternative schemes for complete bridge replacement, full design of the curved steel multi-girder superstructure, steel straddle girder pier cap, hammerhead piers, and Virginia Alternate abutments. Roadway and traffic engineering design included approach roadway modifications and intersection improvements.

**DESIGN OPTIMIZATION** Clark Nexsen considered several different alternatives featuring variable roadway alignments and structure lengths. For each alternative, built-up approach embankments and MSE walls reduced the overall structure length with respect to the existing bridge. The recommended alternative, a four span (111'-134'-134'-111') continuous curved steel girder superstructure supported on Virginia Alternate abutments and hammerhead piers, utilized 35' tall MSE walls to provide considerable reduction in overall structure length while reducing the number of required substructure units. Due to restrictions imposed by horizontal and vertical clearance requirements and the highly skewed geometry of the existing and "future" railroad tracks located beneath the structure, the layout featured a 116' long integral steel straddle girder pier cap across the railroad tracks, which enabled a simplified radial substructure layout.

**CONSTRUCTABILITY CONSIDERATIONS** This project required close coordination with the railroad throughout the design process, due to the proximity of the active railroad tracks and the feasibility of placing the steel girders and straddle bent without interruption of the main line. Inclusion of two splices in the design of the steel straddle girder pier cap, with each splice located on either side of the existing railroad tracks, permits construction of the straddle girder while minimizing impact on railroad activity. Another difficulty involved the right-of-way access required for construction. Clark Nexsen played a prominent role in facilitating negotiation with adjacent property owners to ensure the appropriate right-of-way / easements were obtained to provide adequate access for construction equipment, staging, and superstructure assembly. As part of the stakeholder coordination process, the design team along with city staff took the project to a Citizen Information Meeting in February of 2015 and a Public Hearing in December of 2015. The public meetings were important in terms of seeking input on the proposed alignments and also to communicate the intended project schedule.

**CHALLENGES OVERCOME**

One challenging aspect of this project involved the geometric constraints imposed by the presence of existing and "future" railroad tracks located beneath the proposed structure. Roadway alignments and bridge alternatives were evaluated to meet all present and future horizontal and vertical clearance requirements while minimizing required substructure units. One particular challenge on the project was developing a horizontal and vertical alignment that met the city's objective of realigning 22<sup>nd</sup> Street with Poindexter Street, while having enough distance to clear the Norfolk Southern Railroad's current and future proposed tracks vertically. The selected alternative featured an integral steel straddle girder in order to address these concerns. In order to eliminate details susceptible to cracking, special attention was given to the design of the connection details between longitudinal girders and non-redundant steel straddle girder.



**RELEVANCE TO SKIFFES CREEK** Since the 22<sup>nd</sup> Street bridge spans an active railroad line, close coordination with the railroad throughout the design process was critical. Project must address concerns related to maintenance of adequate clearance and minimizing impact during construction as well as accommodations for future trade expansion. The project also had a road intersection improvement.

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• Overall Project Management</li> <li>• Bridge Design</li> <li>• Roadway Design</li> <li>• Intersection Improvements</li> <li>• Field Survey</li> <li>• Environmental Permitting</li> <li>• Geotechnical Investigations</li> <li>• Traffic Engineering Design                     <ul style="list-style-type: none"> <li>✓ Traffic Data Collection and</li> <li>✓ Pavement Marking, Signage and Signal Plans</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Hydraulic Design (SWM Analysis)</li> <li>• Spanning Existing Railroad                     <ul style="list-style-type: none"> <li>✓ Accommodate Future Track Expansion</li> </ul> </li> <li>• Right-of-Way Acquisition</li> <li>• Public Involvement/ Communication</li> <li>• Quality Assurance/ Quality Control</li> <li>• Construction Cost Estimating</li> <li>• Construction Administration</li> </ul> |
|--|---|

**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: <b>Route 100 Bridge Replacements</b>  Location: <b>Dublin, VA</b>	Name: <b>Crossroads Bridge, Inc.</b>	Name of Client: <b>VDOT Salem District</b> Phone: <b>540.375.3575</b> Project Manager: <b>Bryan Smith, PE</b> Phone: <b>540.375.3575</b> Email: <a href="mailto:BryanD.Smith@vdot.virginia.gov">BryanD.Smith@vdot.virginia.gov</a>	<b>7/2018</b>	<b>6/2020 (Est.)</b>	<b>\$4,321</b>	<b>\$4,321 (Est.)</b>	<b>\$700</b>

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

**PROJECT NARRATIVE** Clark Nexsen was the prime consultant and lead designer on the replacement and rehabilitation of two structures located on Route 100 in Dublin, Virginia. Responsibilities included roadway design, bridge structural design, and traffic engineering design, as well as management of subconsultants performing geotechnical investigation and hydraulic design, including stormwater management (SWM) analysis.

**DESIGN OPTIMIZATION**

- **Route 100 (NBL) Bridge Replacement over Norfolk Southern (NS) Railroad and Peppers Ferry Road:** Six different superstructure alternatives for the replacement of the existing 200' long, four span prestressed concrete bridge were considered. Superstructure alternatives ranged from single span to three span multi-girder bridges, while substructure alternatives ranged from a conventional abutment with integral backwall to integral abutment with MSE walls. Based on life cycle cost and constructability analyses, a 150' long, single span scheme consisting of a steel multi-girder superstructure with integral abutments and MSE walls was selected. The shorter span length allowed the bridge to remain on a tangent to the proposed curved roadway alignment with only one corner of the deck flared to accommodate the curve, which permitted a simplified framing plan utilizing straight girders and thus reduced cost and required construction time.
- **Route 100 (NBL & SBL) Bridge Replacement/Rehabilitation over Route 11:** In order to determine the most economical alternative, Clark Nexsen performed a rehabilitation/ replacement study on these twin overpass structures, each 95' long supported on cantilever concrete abutments and a frame pier. Based upon life cycle cost and constructability analyses, a two-span scheme consisting of a superstructure replacement in combination with rehabilitating the existing pier and abutments was recommended. This maximized the value of the limited maintenance funding available, while remaining within the allowable budget. The replacement superstructure consists of prestressed voided slabs composite with a 7.5" thick concrete topping.

**CONSTRUCTABILITY AND MAINTENANCE OF TRAFFIC CONSIDERATIONS** One concern regarding the constructability of the Route 100 over Route 11 bridge involved the close proximity of the adjacent southbound structure, and the need to preserve the structural integrity of the adjacent bridge as well as the existing substructure units throughout demolition and construction. An evaluation of the existing substructure was performed to determine its capacity with respect to the proposed superstructure and loading. Although the adjacent structure will remain open to traffic throughout construction, two staged construction for the superstructure replacement will be implemented to maintain one lane of traffic in each direction as well as access to NBL Route 11 ramp, while eliminating the need for a detour.



*Bridge over Route 100*

**CONSTRUCTABILITY AND MAINTENANCE OF TRAFFIC CONSIDERATIONS**

One challenging aspect of the Route 100 over NS Railroad and Peppers Ferry Road bridge replacement involved the feasibility of the 35' high MSE wall at the abutments, which required close coordination with geotechnical subconsultants to perform a slope stability analysis and select an appropriate backfill material to meet bearing capacity requirements. The existing soft soils at the proposed abutment location required us to minimize the weight of the MSE walls to reduce bearing pressure; thus, lightweight aggregate, locally sourced and less expensive, was selected as a backfill material.

**RELEVANCE TO SKIFFES CREEK** The Route 100 Bridge over the NS Railroad required close coordination with the railroad throughout the design process to address concerns related to maintenance of adequate clearance and minimizing impact on the active railroad tracks during construction, while remaining on schedule. The bridge over Route 11 required constructability analysis to permit construction while maintaining through traffic on Route 11, very similar to bridging Route 143 at Skiffes Creek.

- |  |                                       |
|--|---------------------------------------|
| • Overall Project Management                 | • Hydraulic Design (SWM Analysis)     |
| • Bridge Design                              | • Railroad Coordination               |
| • Roadway Design                             | • Public Involvement / Communication  |
| • Spanning Existing Railroad                 | • Quality Assurance / Quality Control |
| • Spanning Existing Primary Route            | • Environmental Permitting            |
| • Field Survey                               | • Geotechnical Investigations         |
| • Traffic Engineering Design                 | • Construction Cost Estimating        |
| ✓ Traffic Data Collection and Analysis       | • Construction Administration         |
| ✓ Pavement Marking, Signage and Signal Plans |                                       |
| ✓ Staged Construction                        |                                       |

**KEYS TO SUCCESSFUL PROJECT DELIVERY**

Continuous coordination with VDOT representatives and geotechnical engineers to design the MSE walls at abutments.

**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: <b>Wythe Creek Road</b>  Location: <b>Poquoson /Hampton, VA</b>	Name: <b>Project bid opening August, 2020</b>	Name of Client: <b>VDOT Hampton Roads District</b> Phone: <b>757.956.3000</b> Project Manager: <b>Kenneth Wynne, PE</b> Phone: <b>757.956.3267</b> Email: <b>kenneth.wynne@vdot.virginia.gov</b>	<b>12/2019 (Est)</b>	<b>12/2022 (Est)</b>	<b>\$38,200</b>	<b>\$38,200 (Est)</b>	<b>\$2,122</b>

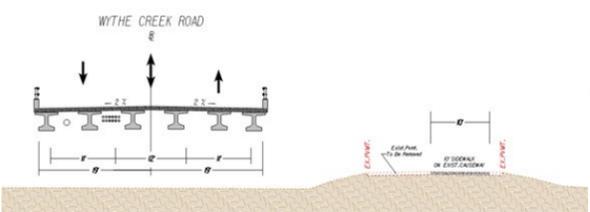
h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant. The Work History Form shall include only one singular project.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

**PROJECT NARRATIVE:** Wythe Creek Road serves as the primary north-south connector between the City of Poquoson and the business and public/government facilities located in the City of Hampton, including major employer NASA Langley. In the morning peak hour traffic primarily flows in the southward direction from Poquoson into Hampton, and then reverses in the afternoon. During storm events such as Nor'easters and episodes of high westerly winds, the existing causeway at Brick Kiln Creek floods over, making the roadway impassible. During these events, traffic has to divert westward along Victory Boulevard, and access NASA Langley via Magruder Boulevard. With Victory Boulevard being the only viable route into and out of Poquoson during storm events, this creates a significant safety concern for emergency evacuations such as may be required for major hurricanes. The proposed infrastructure improvements associated with the Wythe Creek Road project include raising the existing causeway via the construction of a new 1600' long bridge. The new bridge will span the entire length of the existing causeway/marsh area, and the existing causeway will be converted to a shared bicycle/pedestrian walkway.



*Flooding of Existing Causeway*

**DESIGN OPTIMIZATION** In addition to the proposed new bridge structure, the existing two lane roadway is being widened to add capacity for future traffic growth. The project was originally scoped to be widened from two to four lanes; however after the development of the estimate at the preliminary field inspection stage it was determined that the project was \$10 million over budget. The primary reason for the cost increase was related to the ground improvements required to bridge the very poor and compressible soils through the causeway/marsh area. The initial scope included raising the existing causeway; however it did not include any required costs for the piles or stone modulus columns to support the new causeway embankments. After finalization of the preliminary estimate, Clark Nexsen initiated a value engineering study to look for ways to cut costs. Given the peak directional flow of the roadway in the AM and PM peak hours, it was determined that a 3 lane reversible roadway would meet the future roadway capacity needs. The center lane would be set for the southbound movement in the mornings, the northbound movement in the afternoon, and would operate as a two-way left turn lane in the off-peak hours. The lane direction would communicate to traffic via the use of overhead lane control signals. By switching to a 3 lane roadway, the project was able to eliminate 4 total takes, and a full travel lane width of pavement and bridge deck. Additionally, the decision was made to reuse the existing causeway for the sidewalk/shared-use path instead of placing it on the new bridge, thereby saving even more project cost. By making these design modifications Clark Nexsen was able to bring the project back within budget.



*New Bridge Section Adjacent to Causeway*

**CONSTRUCTABILITY AND MAINTENANCE OF TRAFFIC CONSIDERATIONS**  
With two lanes of traffic being required to be open at all times during construction and with significant public utility and storm drainage installations, significant effort was required to develop a maintenance of traffic and sequence of construction plan that allowed for safe and efficient contractor operations, while maintaining traffic. Clark Nexsen developed a three-phase MOT plan, with Phase I focused on constructing the west side of the improvements including the new bridge and primary outfalls, Phase II constructing the eastern side of the roadway, and Phase III being primarily the final paving operations.

**RELEVANCE TO SKIFFES CREEK** Similar to the Skiffes Creek Improvement project, the Wythe Creek Road improvements includes a large scale bridge structure spanning wetlands and potentially poor soils. Clark Nexsen and our geotechnical sub-consultant evaluated a series of ground improvement options to cross the soft soils through the causeway area, including undercutting, pile supported embankments, controlled modulus columns, and a new bridge structure. Consideration were made for constructability, schedule, and cost. Additionally the intersection Carys Chapel Road was raised out of the flood zone and signalized.

- Overall Project/ Design Management
- Bridge Design
- Roadway Design
- Bicycle/ Pedestrian Path
- Intersection Improvements
- Field Survey
- Environmental Permitting
- Geotechnical Investigations
- Traffic Engineering Design
  - ✓ Traffic Data Collection and Analysis
  - ✓ Pavement Marking, Signage Plans
- Hydraulic Design (SWM Analysis)
- Right-of-Way Acquisition
- Public Involvement/ Communication
- Quality Assurance/ Quality Control
- Construction Cost Estimating
- Construction Administration

**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: <b>Route 36 Improvements, Project #(FO)0036-0274-709,P101,R201,C501</b> Location: <b>Hopewell &amp; Prince George County, VA</b>	Name: <b>Rinker Design Associates, P.C.</b>	Name of Client/ Owner: <b>VDOT</b> Phone: <b>804.524.7008</b> Project Manager: <b>Shane Mann, PE</b> Phone: <b>804.720.4229</b> Email: <b>shane.mann@vdot.virginia.gov</b>	<b>11/12/2012</b> <b>REV 01/18/2013</b>	<b>01/04/2013</b>	<b>\$8,224</b>	<b>\$8,224</b> <b>REV via Work Order</b> <b>\$8,886</b>	<b>\$8,886</b>

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

**PROJECT NARRATIVE:** This Design-Build project encompassed intersection improvements at Route 36 (Oaklawn Avenue) and Route 144 (Temple Avenue). The project improved traffic flow at the Sisisky Gate entrance into the Fort Lee Military Base by relocating the existing intersection of Routes 36 and 144 away from the Fort Lee entrance. Temple Avenue comes to a dead end so the road was realigned to match the Sisisky gate. The project had 300 LF of new road alignment and 5,000 LF of road realignment. There were significant construction drainage challenges due to the increase of impervious pavement and volume of water to convey during construction. The solution was to add a 2-barrel elliptical pipe culvert to replace a small box culvert to handle the flows. Abernathy developed a public relation plan which was implemented throughout the project to ensure close coordination with the US Army and Civilian representatives from Fort Lee, the City of Hopewell, and the surrounding businesses. This allowed for sufficient time for the interested parties to make plans to adjust for upcoming work tasks that might impact access or traffic flow. Challenges included heavy traffic, excessive drainage flows, and high public visibility. The project construction was completed ahead of schedule.

- PROJECT SCOPE:**
- Roadway construction and asphalt pavement
  - Utility relocation
  - Right of way acquisitions
  - Pavement markings
  - Traffic signals and signs
  - Maintenance of traffic plans and implementation
  - Environmental permits
  - E&S controls
  - Storm water management plans
  - Quality Control and quality assurance



- EVIDENCE OF GOOD PERFORMANCE**
- Project was completed and open to traffic ahead of schedule
  - Improved safety by altering the existing roadway geometrics at the eastbound Rte. 144 connection with Rte. 36 to provide 50 mph design speed instead of the RFP design speed of 40 mph.
  - Reduced overall impervious footprint by utilizing the existing route 144 westbound pavement where possible
  - Added a parallel storm drain system to increase the capacity through the intersection.
  - Identified existing pavement failure and submitted repair process to VDOT and FHWA, which included using a Fibermat material over two lanes for 5,000 feet each which was approved as a work order
  - Developed and implemented comprehensive MOT to safely construct the new pavement widening and alignment under heavy base traffic.

- RELEVANCE TO SKIFFES CREEK :**
- Design Build
  - New Road Alignment
  - Reduced impacts to utilities and reduced cost of drainage by modifying pavement cross slopes.
  - Intersection on a Primary route
  - Construct a signalize intersection
  - Coordination with Stakeholders
  - Utility Relocations

**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: <b>Route 638 Extension (Atlee Road)</b> <b>0638-042, UPC #98326</b>  Location: <b>Hanover County, VA</b>	Name: <b>Timmons Group</b> <b>Richmond, Virginia</b>	Name of Client/ Owner: <b>Hanover County, VA</b> Phone: <b>804-786-2801</b> Project Manager: <b>Randy Hardman</b> Phone: <b>804-365-6376</b> Email: <b>wrhardman@hanovercounty.gov</b>	<b>09/2018</b>	<b>10/2018</b>	<b>\$14,559</b>	<b>\$15,028</b>	<b>\$11,814</b>

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

**PROJECT NARRATIVE:** The project encompassed improvements to Atlee Road, Atlee Station Road and Cool Springs Road. Roadwork extended Atlee Road (greenfield construction) to connect with Atlee Station Road. This required a new 137 foot long single span bridge over the Buckingham Branch Railroad and modifications to Cool Springs Road and Atlee Station Road. As part of the new Atlee Road extension, a tunnel through the bridge fill was required for accommodations pedestrians and bicycles. Due to the site configuration, significant earthwork (fill operations) was required. The project included curb and gutter improvements, drainage improvements, additional signage for safety, and traffic signalization at an intersection. A large MSE wall was also part of the construction as was utility coordination for both existing water and sewer lines as well as tie-in.

**PROJECT SCOPE:**

- Construct a 137' long single span structural steel bridge over a railroad
- Greenfield two-lane road construction
- MSE Abutment
- Maintenance of Traffic
- Drainage and Stormwater Management
- Utility coordination and construction



**EVIDENCE OF GOOD PERFORMANCE**

- Original plans included 280,000 cubic yards of borrow material. Due to wet conditions, No. 10 screening rock dust was used to expedite the job's progress to overcome fill placement issues created by exceptional amounts of annual rainfall
- Original plans called for traffic to be placed on the bridge, then for wall #1 to be constructed. Abernathy Construction proposed a "shoo-fly/traffic shift" off Atlee Station Road to be constructed simultaneously with bridge construction. This resulted in a reduced construction time by 13 weeks
- The new sewer line required a tie in along Atlee Station to the existing 12" force main. Abernathy used tapping sleeves and valve connection to permit a switch of the sanitary sewer from the existing lines to the newly constructed line with no interruption of sewer service. The advertised plans called for pump and hold with tanker trucks. This could have overrun pump station with sewage, resulting in a damaged system. The Abernathy plan eliminated this risk
- Partnered with Hanover Co., State Police, local law enforcement, fire department & utilities for lane closures, signal lighting & traffic controls
- Abernathy proposed drainage revisions of Cool Springs Road which allowed Cool Springs Road to be constructed under traffic, alleviating a 4-week detour of traffic

**RELEVANCE TO SKIFFES CREEK**

- Coordinated with Hanover County and Buckingham Branch Railroad during the construction of 137' long single-span bridge over Buckingham Branch Railroad
- Work in vicinity of existing sewer line
- MSE wall construction
- Intersection tie in
- Greenfield road (2-lane) construction
- Significant fill along road/bridge alignment
- Earthwork in wet conditions
- Coordination with stakeholders

**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: <b>22<sup>nd</sup> Street Bridge Replacement over N&amp;S RR</b>  Location: <b>City of Chesapeake, VA</b>	Name: <b>Corman Construction</b>	Name of Client: <b>Department of Public Works, City of Chesapeake</b> Phone: <b>757.382.6319</b> Project Manager: <b>Scott Frechem, PE</b> Phone: <b>757.382.6319</b> Email: <b>sfrechem@cityofchesapeake.net</b>	<b>9/2018</b>	<b>6/2020 (Est.)</b>	<b>\$13,141</b>	<b>\$13,141 (Est)</b>	<b>\$1,600</b>

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

**PROJECT NARRATIVE** Clark Nexsen was the prime consultant and lead designer on the replacement of the 22<sup>nd</sup> Street overpass bridge over the Norfolk Southern Railroad in the City of Chesapeake, Virginia. The existing bridge was constructed in 1937 and consisted of a 794' long, fifteen span reinforced concrete T-beam superstructure supported on reinforced concrete abutments and frame piers on timber piles. Responsibilities included roadway design, bridge structural design, traffic engineering design, as well as management of subconsultants performing geotechnical investigation and hydraulic design and stormwater management (SWM) analysis. Bridge structural design included development of alternative schemes for complete bridge replacement, full design of the curved steel multi-girder superstructure, steel straddle girder pier cap, hammerhead piers, and Virginia Alternate abutments. Roadway and traffic engineering design included approach roadway modifications and intersection improvements.

**DESIGN OPTIMIZATION** Clark Nexsen considered several different alternatives featuring variable roadway alignments and structure lengths. For each alternative, built-up approach embankments and MSE walls reduced the overall structure length with respect to the existing bridge. The recommended alternative, a four span (111'-134'-134'-111') continuous curved steel girder superstructure supported on Virginia Alternate abutments and hammerhead piers, utilized 35' tall MSE walls to provide considerable reduction in overall structure length while reducing the number of required substructure units. Due to restrictions imposed by horizontal and vertical clearance requirements and the highly skewed geometry of the existing and "future" railroad tracks located beneath the structure, the layout featured a 116' long integral steel straddle girder pier cap across the railroad tracks, which enabled a simplified radial substructure layout.

**CONSTRUCTABILITY CONSIDERATIONS** This project required close coordination with the railroad throughout the design process, due to the proximity of the active railroad tracks and the feasibility of placing the steel girders and straddle bent without interruption of the main line. Inclusion of two splices in the design of the steel straddle girder pier cap, with each splice located on either side of the existing railroad tracks, permits construction of the straddle girder while minimizing impact on railroad activity. Another difficulty involved the right-of-way access required for construction. Clark Nexsen played a prominent role in facilitating negotiation with adjacent property owners to ensure the appropriate right-of-way / easements were obtained to provide adequate access for construction equipment, staging, and superstructure assembly. As part of the stakeholder coordination process, the design team along with city staff took the project to a Citizen Information Meeting in February of 2015 and a Public Hearing in December of 2015. The public meetings were important in terms of seeking input on the proposed alignments and also to communicate the intended project schedule.

**CHALLENGES OVERCOME**

One challenging aspect of this project involved the geometric constraints imposed by the presence of existing and "future" railroad tracks located beneath the proposed structure. Roadway alignments and bridge alternatives were evaluated to meet all present and future horizontal and vertical clearance requirements while minimizing required substructure units. One particular challenge on the project was developing a horizontal and vertical alignment that met the city's objective of realigning 22<sup>nd</sup> Street with Poindexter Street, while having enough distance to clear the Norfolk Southern Railroad's current and future proposed tracks vertically. The selected alternative featured an integral steel straddle girder in order to address these concerns. In order to eliminate details susceptible to cracking, special attention was given to the design of the connection details between longitudinal girders and non-redundant steel straddle girder.



**RELEVANCE TO SKIFFES CREEK** Since the 22<sup>nd</sup> Street bridge spans an active railroad line, close coordination with the railroad throughout the design process was critical. Project must address concerns related to maintenance of adequate clearance and minimizing impact during construction as well as accommodations for future trade expansion. The project also had a road intersection improvement.

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| <ul style="list-style-type: none"> <li>• Overall Project Management</li> <li>• Bridge Design</li> <li>• Roadway Design</li> <li>• Intersection Improvements</li> <li>• Field Survey</li> <li>• Environmental Permitting</li> <li>• Geotechnical Investigations</li> <li>• Traffic Engineering Design                             <ul style="list-style-type: none"> <li>✓ Traffic Data Collection and</li> <li>✓ Pavement Marking, Signage and Signal Plans</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Hydraulic Design (SWM Analysis)</li> <li>• Spanning Existing Railroad                             <ul style="list-style-type: none"> <li>✓ Accommodate Future Track Expansion</li> </ul> </li> <li>• Right-of-Way Acquisition</li> <li>• Public Involvement/ Communication</li> <li>• Quality Assurance/ Quality Control</li> <li>• Construction Cost Estimating</li> <li>• Construction Administration</li> </ul> |
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**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: <b>Route 100 Bridge Replacements</b>  Location: <b>Dublin, VA</b>	Name: <b>Crossroads Bridge, Inc.</b>	Name of Client: <b>VDOT Salem District</b> Phone: <b>540.375.3575</b> Project Manager: <b>Bryan Smith, PE</b> Phone: <b>540.375.3575</b> Email: <a href="mailto:BryanD.Smith@vdot.virginia.gov">BryanD.Smith@vdot.virginia.gov</a>	<b>7/2018</b>	<b>6/2020 (Est.)</b>	<b>\$4,321</b>	<b>\$4,321 (Est.)</b>	<b>\$700</b>

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

**PROJECT NARRATIVE** Clark Nexsen was the prime consultant and lead designer on the replacement and rehabilitation of two structures located on Route 100 in Dublin, Virginia. Responsibilities included roadway design, bridge structural design, and traffic engineering design, as well as management of subconsultants performing geotechnical investigation and hydraulic design, including stormwater management (SWM) analysis.

**DESIGN OPTIMIZATION**

- **Route 100 (NBL) Bridge Replacement over Norfolk Southern (NS) Railroad and Peppers Ferry Road:** Six different superstructure alternatives for the replacement of the existing 200' long, four span prestressed concrete bridge were considered. Superstructure alternatives ranged from single span to three span multi-girder bridges, while substructure alternatives ranged from a conventional abutment with integral backwall to integral abutment with MSE walls. Based on life cycle cost and constructability analyses, a 150' long, single span scheme consisting of a steel multi-girder superstructure with integral abutments and MSE walls was selected. The shorter span length allowed the bridge to remain on a tangent to the proposed curved roadway alignment with only one corner of the deck flared to accommodate the curve, which permitted a simplified framing plan utilizing straight girders and thus reduced cost and required construction time.
- **Route 100 (NBL & SBL) Bridge Replacement/Rehabilitation over Route 11:** In order to determine the most economical alternative, Clark Nexsen performed a rehabilitation/ replacement study on these twin overpass structures, each 95' long supported on cantilever concrete abutments and a frame pier. Based upon life cycle cost and constructability analyses, a two-span scheme consisting of a superstructure replacement in combination with rehabilitating the existing pier and abutments was recommended. This maximized the value of the limited maintenance funding available, while remaining within the allowable budget. The replacement superstructure consists of prestressed voided slabs composite with a 7.5" thick concrete topping.

**CONSTRUCTABILITY AND MAINTENANCE OF TRAFFIC CONSIDERATIONS** One concern regarding the constructability of the Route 100 over Route 11 bridge involved the close proximity of the adjacent southbound structure, and the need to preserve the structural integrity of the adjacent bridge as well as the existing substructure units throughout demolition and construction. An evaluation of the existing substructure was performed to determine its capacity with respect to the proposed superstructure and loading. Although the adjacent structure will remain open to traffic throughout construction, two staged construction for the superstructure replacement will be implemented to maintain one lane of traffic in each direction as well as access to NBL Route 11 ramp, while eliminating the need for a detour.



*Bridge over Route 100*

**CONSTRUCTABILITY AND MAINTENANCE OF TRAFFIC CONSIDERATIONS**

One challenging aspect of the Route 100 over NS Railroad and Peppers Ferry Road bridge replacement involved the feasibility of the 35' high MSE wall at the abutments, which required close coordination with geotechnical subconsultants to perform a slope stability analysis and select an appropriate backfill material to meet bearing capacity requirements. The existing soft soils at the proposed abutment location required us to minimize the weight of the MSE walls to reduce bearing pressure; thus, lightweight aggregate, locally sourced and less expensive, was selected as a backfill material.

**RELEVANCE TO SKIFFES CREEK** The Route 100 Bridge over the NS Railroad required close coordination with the railroad throughout the design process to address concerns related to maintenance of adequate clearance and minimizing impact on the active railroad tracks during construction, while remaining on schedule. The bridge over Route 11 required constructability analysis to permit construction while maintaining through traffic on Route 11, very similar to bridging Route 143 at Skiffes Creek.

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|--|---------------------------------------|
| • Overall Project Management                 | • Hydraulic Design (SWM Analysis)     |
| • Bridge Design                              | • Railroad Coordination               |
| • Roadway Design                             | • Public Involvement / Communication  |
| • Spanning Existing Railroad                 | • Quality Assurance / Quality Control |
| • Spanning Existing Primary Route            | • Environmental Permitting            |
| • Field Survey                               | • Geotechnical Investigations         |
| • Traffic Engineering Design                 | • Construction Cost Estimating        |
| ✓ Traffic Data Collection and Analysis       | • Construction Administration         |
| ✓ Pavement Marking, Signage and Signal Plans |                                       |
| ✓ Staged Construction                        |                                       |

**KEYS TO SUCCESSFUL PROJECT DELIVERY**

Continuous coordination with VDOT representatives and geotechnical engineers to design the MSE walls at abutments.

**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: <b>Wythe Creek Road</b>  Location: <b>Poquoson /Hampton, VA</b>	Name: <b>Project bid opening August, 2020</b>	Name of Client: <b>VDOT Hampton Roads District</b> Phone: <b>757.956.3000</b> Project Manager: <b>Kenneth Wynne, PE</b> Phone: <b>757.956.3267</b> Email: <b>kenneth.wynne@vdot.virginia.gov</b>	<b>12/2019 (Est)</b>	<b>12/2022 (Est)</b>	<b>\$38,200</b>	<b>\$38,200 (Est)</b>	<b>\$2,122</b>

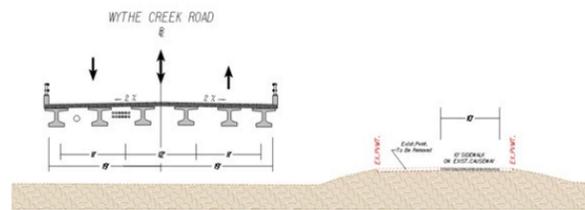
h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant. The Work History Form shall include only one singular project.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

**PROJECT NARRATIVE:** Wythe Creek Road serves as the primary north-south connector between the City of Poquoson and the business and public/government facilities located in the City of Hampton, including major employer NASA Langley. In the morning peak hour traffic primarily flows in the southward direction from Poquoson into Hampton, and then reverses in the afternoon. During storm events such as Nor'easters and episodes of high westerly winds, the existing causeway at Brick Kiln Creek floods over, making the roadway impassible. During these events, traffic has to divert westward along Victory Boulevard, and access NASA Langley via Magruder Boulevard. With Victory Boulevard being the only viable route into and out of Poquoson during storm events, this creates a significant safety concern for emergency evacuations such as may be required for major hurricanes. The proposed infrastructure improvements associated with the Wythe Creek Road project include raising the existing causeway via the construction of a new 1600' long bridge. The new bridge will span the entire length of the existing causeway/marsh area, and the existing causeway will be converted to a shared bicycle/pedestrian walkway.



*Flooding of Existing Causeway*

**DESIGN OPTIMIZATION** In addition to the proposed new bridge structure, the existing two lane roadway is being widened to add capacity for future traffic growth. The project was originally scoped to be widened from two to four lanes; however after the development of the estimate at the preliminary field inspection stage it was determined that the project was \$10 million over budget. The primary reason for the cost increase was related to the ground improvements required to bridge the very poor and compressible soils through the causeway/marsh area. The initial scope included raising the existing causeway; however it did not include any required costs for the piles or stone modulus columns to support the new causeway embankments. After finalization of the preliminary estimate, Clark Nexsen initiated a value engineering study to look for ways to cut costs. Given the peak directional flow of the roadway in the AM and PM peak hours, it was determined that a 3 lane reversible roadway would meet the future roadway capacity needs. The center lane would be set for the southbound movement in the mornings, the northbound movement in the afternoon, and would operate as a two-way left turn lane in the off-peak hours. The lane direction would communicate to traffic via the use of overhead lane control signals. By switching to a 3 lane roadway, the project was able to eliminate 4 total takes, and a full travel lane width of pavement and bridge deck. Additionally, the decision was made to reuse the existing causeway for the sidewalk/shared-use path instead of placing it on the new bridge, thereby saving even more project cost. By making these design modifications Clark Nexsen was able to bring the project back within budget.



*New Bridge Section Adjacent to Causeway*

**CONSTRUCTABILITY AND MAINTENANCE OF TRAFFIC CONSIDERATIONS**

With two lanes of traffic being required to be open at all times during construction and with significant public utility and storm drainage installations, significant effort was required to develop a maintenance of traffic and sequence of construction plan that allowed for safe and efficient contractor operations, while maintaining traffic. Clark Nexsen developed a three-phase MOT plan, with Phase I focused on constructing the west side of the improvements including the new bridge and primary outfalls, Phase II constructing the eastern side of the roadway, and Phase III being primarily the final paving operations.

**RELEVANCE TO SKIFFES CREEK** Similar to the Skiffes Creek Improvement project, the Wythe Creek Road improvements includes a large scale bridge structure spanning wetlands and potentially poor soils. Clark Nexsen and our geotechnical sub-consultant evaluated a series of ground improvement options to cross the soft soils through the causeway area, including undercutting, pile supported embankments, controlled modulus columns, and a new bridge structure. Consideration were made for constructability, schedule, and cost. Additionally the intersection Carys Chapel Road was raised out of the flood zone and signalized.

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| <ul style="list-style-type: none"> <li>• Overall Project/ Design Management</li> <li>• Bridge Design</li> <li>• Roadway Design</li> <li>• Bicycle/ Pedestrian Path</li> <li>• Intersection Improvements</li> <li>• Field Survey</li> <li>• Environmental Permitting</li> <li>• Geotechnical Investigations</li> <li>• Traffic Engineering Design                             <ul style="list-style-type: none"> <li>✓ Traffic Data Collection and Analysis</li> <li>✓ Pavement Marking, Signage Plans</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Hydraulic Design (SWM Analysis)</li> <li>• Right-of-Way Acquisition</li> <li>• Public Involvement/ Communication</li> <li>• Quality Assurance/ Quality Control</li> <li>• Construction Cost Estimating</li> <li>• Construction Administration</li> </ul> |
|--|---|

**Abernathy Construction Corporation**

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