



STATEMENT OF QUALIFICATIONS

OCTOBER 13, 2016



DESIGN-BUILD PROJECT FOR
**I-64 SOUTHSIDE WIDENING
AND HIGH RISE BRIDGE**
PHASE 1

STATE PROJECT NO.
0064-131-811, P101, R201,
C501, B662-B669, D637, D638

FEDERAL PROJECT NO.
NHPP-064-3 (488)

CONTRACT ID NO.
C00106692DB93

LME Constructors





October 13, 2016

Mr. Jeffery A. Roby, P.E., DBIA
Alternate Project Delivery Office
Virginia Department of Transportation
1401 East Broad Street
Richmond, Virginia 23219

RE: Design-Build Project for I-64 Southside Widening and High Rise Bridge, Phase I
State Project No.: 0064-131-811, P101, R201, C501, B662-B669, D637, D638
Federal Project No.: NHPP-064-3(488)
Contract ID Number: C00106692DB93

Dear Mr. Roby:

LME Constructors (LME) is comprised of **The Lane Construction Corporation (LANE)**, **McLean Contracting Company (McLean)**, and **E.V. Williams, Inc. (EVW)** and is pleased to present this Statement of Qualifications for the above referenced project to the Virginia Department of Transportation (VDOT).

LANE will serve as the Managing Joint Venture (JV) Partner and is nationally ranked as the #1 Highway Contractor by *Engineering News-Record (ENR)* and specializes in high quality roadway and bridge construction. McLean is a heavy civil contractor that specializes in marine and land-based bridge structures having constructed over 75 bridges east of the I-95 corridor in Virginia (including 20 marine and 33 land-based bridges in the Hampton Roads area). EVW has been a dominant force in road construction in the Hampton Roads area for over 75 years. As a team we have the ability to self-perform nearly every aspect of this project from bridges to pavement to electrical to signage.

LME Constructors is the Offeror and will be the overall authority on the project as well as the Lead Contractor. We have teamed with **STV Incorporated dba STV Group Incorporated (STV)** as the Lead Designer. LANE and STV have a long history of teaming together and have delivered 13 D-B projects totaling nearly \$850 million. Together, the LME Team provides VDOT with a reputable team that has completed projects of this size and scope on time and on budget as evidenced in our collective project experiences.

LME and STV, in conjunction with Johnson, Mirmiran, and Thompson, Inc. (JMT) and other additional hand-selected design and construction specialty firms, are experienced with VDOT processes and procedures and will provide design and construction for the I-64 Southside Widening and High Rise Bridge, Phase I project. We are confident in our team structure and experience, and have elaborated on our distinctive qualifications in the subsequent sections. The LME Team has assembled a cohesive team of committed personnel, who have worked together successfully to deliver projects with similar requirements, safety, and schedule demands.

3.2.2 Offeror's Point of Contact Information: Mr. Robert E. Watt is the point of contact and authorized representative for the LME Team for all matters associated with this qualifications submittal.

Robert E. Watt, Pursuit Manager
The Lane Construction Corporation
14500 Avion Parkway, Suite 200
Chantilly, VA 20151
Tel: (703) 222-5670 Fax: (703) 222-5960
Email: REWatt@laneconstruct.com

3.2.3 Offeror's Principal Officer Information: Mr. Joseph P. Lark is the principal officer of LME Constructors.

Joseph P. Lark, Senior Vice President
The Lane Construction Corporation
14500 Avion Parkway, Suite 200
Chantilly, VA 20151
Tel: (703) 222-5670 Fax: (703) 222-5960
Email: JPLark@laneconstruct.com

3.2.4 Offeror's Corporate Structure: The Offeror for this submission is LME Constructors, structured as a joint venture. The Lane Construction Corporation, McLean Contracting Company, and E.V. Williams, Inc. (the joint venture partners) will share financial responsibility for the Project, have no known liability limitations, and will be jointly and severally liable for the performance of the work required for the Project. The joint venture will provide a single 100% performance bond and a single 100% payment bond.

3.2.5 Identity of Lead Contractor and Lead Designer: The full legal name of the Offeror is: LME Constructors. LME will serve as the prime/general contractor responsible for overall construction of the project and will serve as the legal entity who will execute the contract with VDOT. The full legal name of the Lead Designer is: STV Incorporated dba STV Group Incorporated (STV). STV will serve as the lead design firm responsible for the overall design of this Project under contract to LME.

3.2.6 Affiliated/Subsidiary Companies: A complete list of our respective companies' affiliates and subsidiary companies may be found in the Appendix.

3.2.7 Debarment Forms: Certifications for Debarment for both Primary and Lower Tier Covered Transactions have been completed and executed for the Offeror and all subconsultants, subcontractors, and other entities identified as members of the LME Team and can be found in the Appendix.

3.2.8 Offeror's VDOT Prequalification Evidence: A Joint Venture Bidding Agreement was submitted and approved by VDOT on September 19, 2016. The prequalification number for this Joint Venture is: **JV077**. The respective prequalification numbers for our respective firms are: LANE (L002), McLean (M047), and EVW (W488). Evidence of such is provided in the Appendix.

3.2.9 Letter of Surety: A single surety letter from the bonding companies is included in the Appendix, confirming their willingness to provide any and all bonds for this Project on behalf of the joint venture.

3.2.10 Professional Services Evidence: The matrix in the Appendix delineates the respective state registrations and licensures of the LME Team. The Offeror and all team members are eligible at the time of the SOQ submittal, under the law and relevant regulations, to offer and to provide any services proposed or related to the project. Respective copies of licenses can be found in the Appendix.

3.2.11 DBE Statement: The LME Team supports the Disadvantaged Business Enterprise (DBE) program and is committed to meeting the 8% goal for the design and construction of this project utilizing Virginia certified DBE companies.

As evidenced by our proven performance, our Team will deliver this project safely, on time, and within budget. We appreciate the opportunity to present our qualifications and look forward to working with VDOT on this important project.

Respectfully submitted,



Robert E. Watt
Authorized Representative
LME Constructors



3.3 Offeror's Team Structure

3.3 | OFFEROR'S TEAM STRUCTURE

LME Constructors (LME), comprised of LANE, McLean, and EVW, will serve as the Lead Contractor of the Design-Build (D-B) team for the I-64 Southside High Rise Bridge Phase I (I-64 High Rise Bridge) project and will be responsible for managing the project, supervising construction, and self-performing the major work elements. All three firms have main or regional offices and yards in the Hampton Roads area, allowing our Team to best serve the needs of this Project and the local community.

LANE The Lane Construction Corporation (LANE) will serve as Managing Partner of the joint venture. LANE was named the 2015 Top Contractor by *ENR Mid-Atlantic* and the #1 Top Highway Contractor by *ENR*. Our proven heavy civil experience in bridge and roadway construction and more than 70 D-B projects ranging in scope and value from \$13M to \$2.4B demonstrates LANE's ability to tackle the region's most challenging infrastructure project.

 **McLean Contracting Company (McLean)**, a Member of the joint venture, is one of the leading heavy civil and marine contractors in the Mid-Atlantic Region. McLean has regional offices and construction yards in Chesapeake, VA and Baltimore, MD. These impressive yards encompass a total of 40 acres with 2,000 feet of deep water bulkhead that supply access to both the Chesapeake Bay and the Elizabeth River, which are part of the Intracoastal Waterway System. Both yards are equipped with mechanic shops as well as machine shops and steel fabrication facilities. McLean has the unique ability to self-perform a wide variety of work on both marine and land-based bridge projects, segmental and movable bridge projects, and all facets of marine construction. These include all types of pier and bulkhead construction, dredging, heavy lift, marine demolition and salvage projects. McLean has worked on a majority of the major river crossing bridges in the area.

 **E.V. Williams, Inc. (EVW)**, is a Member of the joint venture and is a full-service prime contractor specializing in heavy highway construction with extensive experience on VDOT road and bridge construction work in the Hampton Roads area. EVW was awarded the American Council of Engineering Companies – 2010 Engineering Excellence Honor Award for I-64/Battlefield Boulevard project in Chesapeake, VA. In 2015 EVW received the Prime Contractor of the Year award from the Virginia Department of Transportation and the Transportation DBE Advisory Committee *“For Excellence in Performance on VDOT Contracts and Its Commitment to Building Relationships with DBE Firms.”*

LME brings over 300 years of combined experience and has the right approach to successfully deliver this project for the community, VDOT, and other stakeholders. LME's approach to organizing the joint venture is to fully integrate employees of the three companies across the project, while relying on each company's individual strengths and specialties. Unlike some teams, LME has the experience and local resources to self-perform all aspects of the bridges, roadway, paving, retaining walls, sound barrier walls, signage, electrical, drainage, utilities and layout. We have a proven track record of constructing this type of work and successfully working together.

LME, a fully-integrated team of local companies and resources, was successful on numerous large complex projects in Hampton Roads including the I-64/Battlefield Boulevard project (EVW and McLean); Dominion Boulevard Bridge (EVW, McLean, and LANE); and South Norfolk Jordan Bridge project (LANE and McLean).

 **STV Incorporated dba STV Group Incorporated (STV)**, Lead Designer, will provide overall project management for all design activities. STV has completed 35 D-B projects in the Mid-Atlantic/Southeast region, including the \$45M VDOT I-581/Valley View Boulevard Interchange project, as well as the \$95M NCDOT I-485/I-85 Turbine Interchange and \$85M NCDOT I-485 Widening projects, **all three constructed by LANE**. For over a half-century, STV has provided a full range of transportation design services for major highway bridges, having designed 40 highway-waterway crossings in excess of 1,000 feet long. STV offers three offices in the Virginia, located in Virginia Beach; Richmond; and Fairfax; employing 275 professionals in the Mid-Atlantic/Southeast region and more than 1,800 professionals nationally. Having supported VDOT on a continual basis since 1985, the firm brings the depth and breadth of knowledge, resources,

services, and experience needed to support this project. This includes expertise in highway bridge design, environmental services, hydraulics and scour countermeasure design, multidisciplinary engineering services, roadway planning and design, stormwater management and modeling, temporary structures, traffic management and traffic/ITS engineering, utility design/coordination, and value engineering. STV is ranked 13th in ENR’s Top 25 in Bridges. STV’s portfolio of projects includes fixed and movable bridges over navigable waterways, long-span and complex structures, horizontally curved steel structures, post-tensioned structures, and structures with integral pier caps, straddle bents, and integral straddle bents.

Design Subconsultants



Johnson, Mirmiran, and Thompson, Inc. (JMT) a Major Design Subconsultant will lead the roadway and drainage design, environmental/permitting services, utility coordination, and ROW acquisition efforts. JMT will also support the bridge design efforts for the numerous bridge widenings. JMT has a documented reputation for developing innovative solutions for projects that save time, reduce cost, and deliver the best value to the owner. Founded in 1971, JMT is an employee-owned A/E firm offering a full array of consulting and technology services for transportation infrastructure projects throughout the U.S. and is ranked #4 Top Design Firm in the Mid-Atlantic; and nationally ranked #67 in Top 500 Design Firms and #11 in Highway Design Firms by ENR. JMT has been committed to serving Virginia for nearly 30 years through offices located in Virginia Beach, Richmond, and Herndon.

STV and JMT have a long history of teaming together on important structural and roadway projects. For example, the firms worked together on the Cape May Interchanges 9, 10, and 11 for the New Jersey Turnpike Authority, as well as the Garden State Parkway Widening from Milepost 63 to Milepost 80. Additional experience working together includes I-78 bridge parapet upgrade and approach roadway improvements for the Delaware River Joint Toll Bridge Commission, as well as NBIS bridge inspections for state-owned structures.

Additionally, under subcontract to STV are the following additional, highly qualified subconsultants:

- ECS Mid-Atlantic, LLC (Geotechnical Engineering)
- Precision Measurements, Inc.* for (Surveying)
- Hassan Water Resources, PLC* (2-D Tidal/Hydraulics/Scour)
- Harris Miller Miller & Hanson, Inc.* (Noise Analysis)
- Alvi Associates, Inc.* (Structural Engineering)

Construction Subcontractors

Additionally under subcontract to LME are the following highly qualified subcontractors:

- NXL Construction Services* (Quality Assurance)
- Froehling & Robertson, Inc. (AMRL QA Lab)
- GET Solutions, Inc.* (AMRL Certified QC Lab)
- Polizos & Company* (Public Information/Relations)
- Other Specialty Subcontractors (Rebar, Parapet Wall, Trucking, etc.)

** represents DBE and/or SWaM firm*

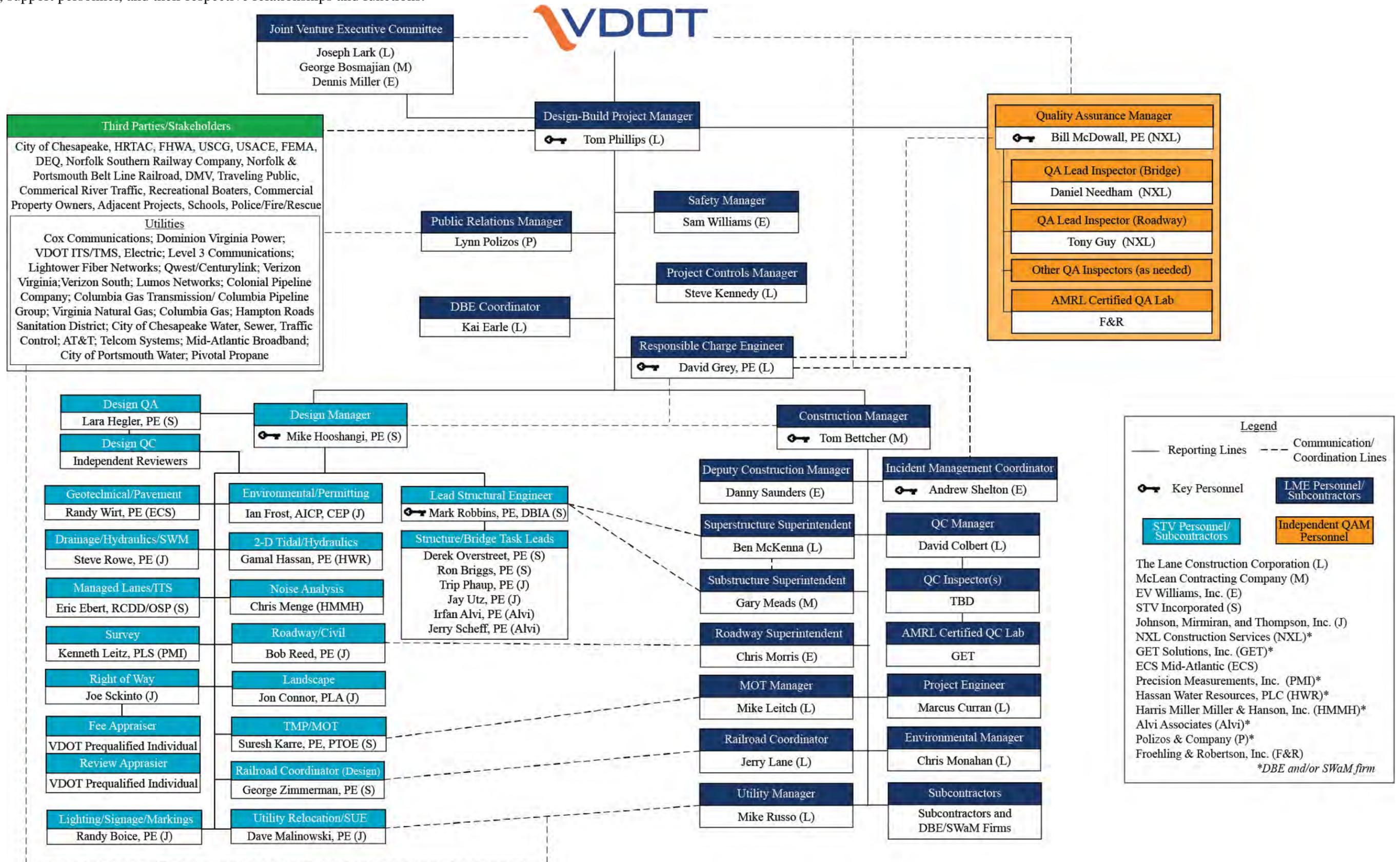
3.3.1 Qualifications of Key Personnel

All of the proposed Key Personnel have noteworthy experience on transportation projects similar to the roles they will serve on the I-64 High Rise Bridge project and will remain intact throughout the duration of procurement and construction. Information regarding their experience can be found in Attachment 3.3.1 of the Appendix.

Name	Position	Company
Tom Phillips	Design-Build Project Manager	LANE
David Grey, PE	Responsible Charge Engineer	LANE
Bill McDowall, PE, DBIA	Quality Assurance Manager	NXL
Mike Hooshangi, PE	Design Manager	STV
Tom Bettcher	Construction Manager	McLean
Mark Robbins, PE	Lead Structural Engineer	STV
Andrew Shelton	Incident Management Coordinator	EVW

3.3.2 Organizational Chart

The LME Team organization has a straight-forward chain of command, with individual tasks, responsibilities, and functional relationships clearly identified. The following Organizational Chart depicts VDOT, third party stakeholders, key personnel, support personnel, and their respective relationships and functions.



Reporting Relationships of Key Personnel

Design-Build Project Manager (DBPM), Mr. Tom Phillips (LANE) will report to VDOT and serve as VDOT's central point of contact. Mr. Phillips will also report to the JV Executive Committee. He will establish an effective, fully-integrated organizational structure for the project including delegating appropriate resources to ensure successful completion of the scope of work and all assigned tasks. He will promote and facilitate communication among team members, VDOT and adjacent projects, monitor design efforts to proactively eliminate potential constructability issues prior to breaking ground, and delegate resources to deliver the project on time. It will be his responsibility to work with the LME Team to ensure that the design complies with the technical requirements for the I-64 High Rise Bridge project. Mr. Phillips management from design through construction will include extensive team interaction including both design and construction meetings. Additionally, he is responsible for construction quality management, contract administration, and coordination of public outreach and public meetings. Further, he will establish and maintain an effective process control system according to established requirements, monitor compliance with the Project's environmental and safety requirements, ensure DBE and incident management compliance as well as meeting the project schedule.

Added Value: Mr. Phillips has managed large, complex D-B projects both nationally and internationally. His diverse project background coupled with his extensive project management experience will be an incredible asset to the LME Team and to VDOT.

Responsible Charge Engineer (RCE), Mr. David Grey, PE (LANE) will report to the DBPM, communicate regularly with VDOT, the Design Manager (DM), Construction Manager (CM), Quality Assurance Manager (QAM), and Incident Management Coordinator (IMC) and has the necessary expertise and experience required to supervise and exercise a degree of control for design and construction. He will have supervisory direction and control authority in making and approving engineering decisions during construction. Mr. Grey will be fully integrated among the project team and will accept full professional responsibility for engineering decisions relating to the final product. Mr. Grey will answer questions/inquiries relevant to engineering decisions relating to design and/or construction and has authority to shut down the project if warranted. Mr. Grey is knowledgeable and proficient in the areas of design and construction of major bridge structures over active navigable channels. He is a licensed Professional Engineer in the Commonwealth of Virginia.

Added Value: Mr. Grey has been instrumental to LANE's D-B success throughout North America. His hands-on D-B experience includes serving as Project Manager on over \$550M in alternative delivery, best value contracts and he has worked with STV on six D-B projects, including the I-85 over Yadkin River bridge project (*included in Work Histories*). Mr. Grey has also served in various other capacities on over \$3B worth of alternative delivery projects for LANE.

Quality Assurance Manager (QAM), Mr. Bill McDowall (NXL) will report directly to the DBPM on all quality issues and will be on-site full-time during the duration of construction operations. Any item of work failing to meet minimum standards will be rejected and corrected immediately. Construction personnel have no authority over QA inspection staff. Mr. McDowall will keep VDOT and the RCE informed on the status of quality of construction and issues/resolutions/solutions through weekly reports and progress meetings. As QAM, Mr. McDowall will hold the authority to shut down the Project if quality issues warrant. **QA Lead Inspectors, Mr. Daniel Needham (Bridge Elements) and Mr. Tony Guy (Roadway Elements),** will report directly to the QAM, and will be assigned to the project on a full-time basis for the duration of construction operations. Froehling & Robertson, Inc., the independent AMRL Certified QA lab, will report to Mr. McDowall.

Added Value: Mr. McDowall has over 30 years of experience in construction and quality management and inspection for complex infrastructure projects. He has been accountable for the on-time, on-budget delivery of approximately 130 roadway and bridge construction projects in the Commonwealth. His QA management and testing experience includes major D-B projects in Hampton Roads, specifically, the Middle Ground Boulevard Extension in Newport News.

Design Manager (DM), Mr. Mike Hooshangi, PE (STV) will report directly to the DBPM and will communicate regularly with the RCE and the CM. Mr. Hooshangi, a licensed Professional Engineer in the

Commonwealth of Virginia, will make sure the overall Project design is completed in accordance with the requirements of the Contract Documents. All design, ROW, and permitting disciplines report directly to Mr. Hooshangi. He will provide VDOT with design plans, reports and other design documents for review and approval. Mr. Hooshangi is also responsible for establishing and overseeing the design QA/QC program for the Project which will be performed by qualified, independent staff.

☑ Added Value: Mr. Hooshangi has more than 36 years of experience designing and managing transportation infrastructure projects in Virginia. He served as the roadway design lead for the \$375M 11th Street corridor D-B project (*included in Work Histories*) for the replacement of two existing bridges across the Anacostia River, as well as the Design Manager on LANE's \$45M I-581/Valley View Boulevard Interchange D-B project.

Construction Manager (CM), Mr. Tom Bettcher (McLean) will report directly to the DBPM and will be on-site full-time for the duration of construction operations. He will communicate regularly with the RCE and the DM. His daily duties include: safety, coordination of all project personnel and construction activities including subcontractors, and execution of the construction QC program. He holds ultimate responsibility for managing the construction schedule with his staff engineers and coordinating regularly with adjacent projects underway. He will coordinate meetings with the Deputy CM and the QC Manager to discuss all ongoing construction activities. He will also review all construction QC reports and laboratory test results. Mr. Bettcher is currently working on the Lesner Bridge Replacement project in Virginia Beach, VA and will be available prior to the start of construction of the I-64 High Rise Bridge project. Mr. Bettcher currently holds a DEQ RLD Certification and a VDOT ESCCC, as required.

☑ Added Value: Mr. Bettcher has served as a CM/Project Superintendent on three prominent bridge projects in the Hampton Roads area: the Lesner Bridge Replacement project (over navigable waterway) in Virginia Beach, and the Norfolk Southern Railway Bridge Replacement at M.P. V-2.8 over the Eastern Branch of the Elizabeth River in Norfolk (over navigable waterway), and the I-64/Battlefield Boulevard project in Chesapeake (*included in Work Histories*). He is extremely familiar with the local conditions and his extensive bridge construction experience will be critical on this Project.

Lead Structural Engineer, Mr. Mark Robbins, PE (STV) will report directly to the DM. He will be responsible for the structural design of all bridges, structures, bridge fender system, retaining walls, and miscellaneous structures. Mr. Robbins will review designs and verify and modify designs, if necessary, based on field conditions and construction activities related to dismantling and removing portions of existing structures, installing foundation structures and handling and erecting bridge beams/girders. Mr. Robbins is a licensed Professional Engineer in the Commonwealth of Virginia.

☑ Added Value: Mr. Robbins has 29 years of experience managing complex bridge and roadway design projects. He has particular expertise in D-B projects for a variety of bridge types. Mr. Robbins has experience designing major bridge structures over active navigable channels similar to the I-64 High Rise Bridge project. This includes his work on the Virginia Dare Bridge over the Croatan Sound in Manteo, NC. The 5.2-mile-long, 4-lane Virginia Dare Bridge is the longest highway structure in NC, and features a post-tensioned, prestressed concrete I-girder channel span unit with a main span of 224 feet. The bridge rises to 65 feet at its apex and is supported by 88 concrete columns and more than 2,000 piles, which extend nearly 100 feet below the water.

Incident Management Coordinator, Mr. Andrew Shelton (EVW) will report directly to the CM and will be on-site full-time for the duration of construction operations. He will be responsible for responding to all incidents within the project limits and serve as VDOT's IMC applying National Incident Management System (NIMS) principles and practices. Mr. Shelton will be charged with focusing on the restoration of traffic operations within the Project limits by managing all incidents and communicating directly with the Transportation Operation Center (TOC) while at the scene. Mr. Shelton will be the key point of contact for issues arising relative to incident management. This includes receiving, logging, classifying, troubleshooting, assigning, tracking, and reporting all incidents. The IMC will also be provided a dedicated IMC vehicle stocked with essential equipment for responding to incidents within the project limits. He has completed the following classes: FHWA SHRP2 "TIM" Responder Training; FEMA ICS/NIMS 100, 200 & 700; and FEMA/VDEM Hazardous Materials Awareness.

☑ Added Value: Mr. Shelton has experience working in the Hampton Roads area and understands that quick incident responses in the area are critical to keeping the traveling public moving.

Narrative of other Functional Relationships

The LME Team functions as one unified and integrated team. The Project will be staffed with sufficient resources to address all project demands and requirements and will function as a stand-alone organization with common goals and direct accountability to the Project. Operating with this stand-alone capability will minimize the need for constant reach-back for support and resources from home offices. Primary project management leadership lies with the DBPM. His direct reports include the DM, Project Controls Manager, QAM, Safety Manager, CM, RCE, DBE Coordinator and PR Consultant. All key Project tasks, responsibilities and duties are managed through this leadership group operating under a project execution plan that is based on proven procedures and processes in which clear roles and responsibilities are defined.

The LME Team ascribes to the DBIA paradigm that “integrated development of the design and construction program is the cornerstone of D-B delivery and this methodology optimizes opportunities for collective excellence.” Put into practice, our design team will interface with our construction team and vice versa throughout the life of the contract. The LME Team’s extensive D-B experience has shown that regularly scheduled discipline coordination meetings throughout project execution are critical to ensuring a successful project. These focused meetings, which are led by the RCE and coordinated through the DBPM, serve as a conduit for disseminating project-critical information and is the central point of decision-making and communication among all involved in the Project. These regular, open forums of discussion among team members (both design and construction) and VDOT to address respective Project elements serve to clearly define Project criteria, ensure VDOT’s intentions are being met, address corridor-wide safety and constructability issues, and provide consistency in design before becoming schedule-critical. Through this approach, we create strong relationships that set the foundation to interact and partner with VDOT and third-party stakeholders, streamline reviews, eliminate potential construction field issues, and deliver the Project safely, as early as possible.

Design Team Integration

The Design Team will be led by DM Mike Hooshangi, PE who provides single-point responsibility for all design disciplines with several lead engineers reporting to him. The DM will also develop and oversee the Design QA/QC program for the Project. STV will manage the design efforts for all aspects of the Project and will provide technical oversight and support for all ancillary design tasks. JMT, a Major Design Subconsultant, will lead the roadway and drainage design, bridge widenings, environmental/permitting services, utility coordination, and ROW acquisition efforts. Together, STV and JMT bring in-house expertise in the areas of roadway, structural, ITS, traffic engineering and lighting design, ROW acquisition, and utilities design. Maintaining these in-house

What Sets LME Apart?

Unmatched Local Presence/Teaming Experience

- ▶ Operating in Hampton Roads for over 70 years
- ▶ Completed over \$8B worth of projects in the region
- ▶ Team members have worked together on over 40 projects
- ▶ Over 800 local construction personnel and over 300 local design personnel
- ▶ Construction yard less than 3 miles from Project site

Technical Expertise

- ▶ Experience driving all types of concrete and steel piles
- ▶ Design of 40 highway-waterway crossings in excess of 1,000ft long
- ▶ Local dredging experience with both contaminated and non-contaminated materials
- ▶ Experience designing and constructing all types of substructure and superstructure bridge elements
- ▶ Provided sub-surface utility designation and mapping services for VDOT during a previous phase of the Project

Ability to Self-Perform

- ▶ 40 pile driving hammers, featuring a Bruce 30-15, the largest hydraulic impact hammer in the region
- ▶ Design staff include in-house commercial divers with expertise in underwater surveys, inspections, and repairs
- ▶ Local, specialized heavy lift barge-mounted floating cranes for heavy pile driving and erection
- ▶ Over 1,200-lf of crane trestle for use in the transition areas between in-water and land work

areas of expertise enables the DM to efficiently direct and manage the design effort. Our geotechnical engineer, ECS, will also be integrated within the Design Team. Essential geotechnical recommendations for design such as pavements, new embankment fills, and bridge foundations, will be based on long-term performance and risk.

Given the magnitude of bridge work required for the design effort, our Lead Structural Engineer will have the support of six (6) bridge/structures task leaders, as follows:

- ▶ The main river crossing and the complete replacement of the Great Bridge Blvd. structure, will be led by Ron Briggs, PE and Derek Overstreet, PE with six (6) engineers/CADD technicians supporting them
- ▶ The bridge design for the numerous bridge widenings, will be led by Trip Phaup, PE and Jay Utz, PE with four (4) engineers/CADD technicians supporting them
- ▶ Miscellaneous structural assignments such as the fender system, culvert extensions, retaining walls, tide gate, and other ancillary structures, will be led by Irfan Alvi, PE and Jerry Scheff, PE.

Construction Team Integration

Given the complexity, cost, and importance of the I-64 High Rise Bridge project, the DBPM will be supported by a full-time Project Controls Manager (PCM). The PCM will establish project control processes to monitor the work and identify whether the work is proceeding according to plan and schedule. The PCM will also develop and maintain a risk register for the Project and support the DBPM in monitoring and controlling project risks. The Safety Manager leads a team of safety personnel covering all areas of the site to verify that work is conducted in compliance with the approved health and safety plan, supporting a zero accident goal for the Project. Our CM was chosen for his vast navigable water bridge experience will lead the overall construction effort and is supported by our Deputy CM who has extensive roadway experience. The CM will also oversee the construction QC, IMC, Project Engineer, and a team of Superintendents and Managers chosen to add expertise to critical elements of the Project. The QAM, from an independent quality firm, manages quality activities and is supported by two full-time QA Lead Inspectors plus other QA inspectors, technicians, and an independent laboratory. The DBE Coordinator is responsible for the implementation of the DBE program and ensuring the 8% DBE goal is met.

QA/QC Program

The LME Team believes quality in both design and construction is a hallmark of our collective experience and is a critical element of every action taken by the team to deliver important infrastructure projects safely and on-time.

Design QA/QC: STV's design QA/QC plan will address procedures and responsibilities to verify that project design standards are met, reviews are performed, and approvals are received. Each of the design disciplines will have a dedicated design checker (e.g., QC) who is a registered professional in the Commonwealth of Virginia. It is the Design QA Manager's responsibility to perform independent QA, thereby confirming that the QC was performed according to standard.

Construction QC: LME is responsible for the QC during construction where it begins at the working level with LME's QC inspectors. Management and leadership is provided by the Construction QC Manager and ultimately with Tom Phillips as the DBPM. All work will be in accordance with the requirements of the RFP and VDOT's Minimum Requirements for Quality Assurance and Quality Control on Design-Build and Public-Private Transportation Act Projects. Our QC personnel for this Project will possess and maintain current VDOT certifications. This proven and strong QC program is self-contained with respect to operations, management, and documentation thus requiring minimal oversight by VDOT's resources.

Construction QA: Led by Quality Assurance Manager (QAM), Bill McDowall (NXL), the Quality Assurance program operates independently from the construction QC program and has oversight/ verification responsibilities for all QC testing and monitoring activities. The QAM provides confirmation that all RFP requirements, specifications, and special provisions are being met or exceeded. The independent role of the QAM provides direct information to the DBPM and VDOT outside of the Construction QC chain of command. Additionally, the QA operation will monitor and audit QC procedures and activities to verify proper performance. A high level of authority is given the QAM and his two QA Inspectors to see that the Construction QA function does its job and as such minimizes the requirement of resources and involvement by VDOT. The QAM is authorized to stop any and all work on this Project if quality measures and controls are not being properly maintained.

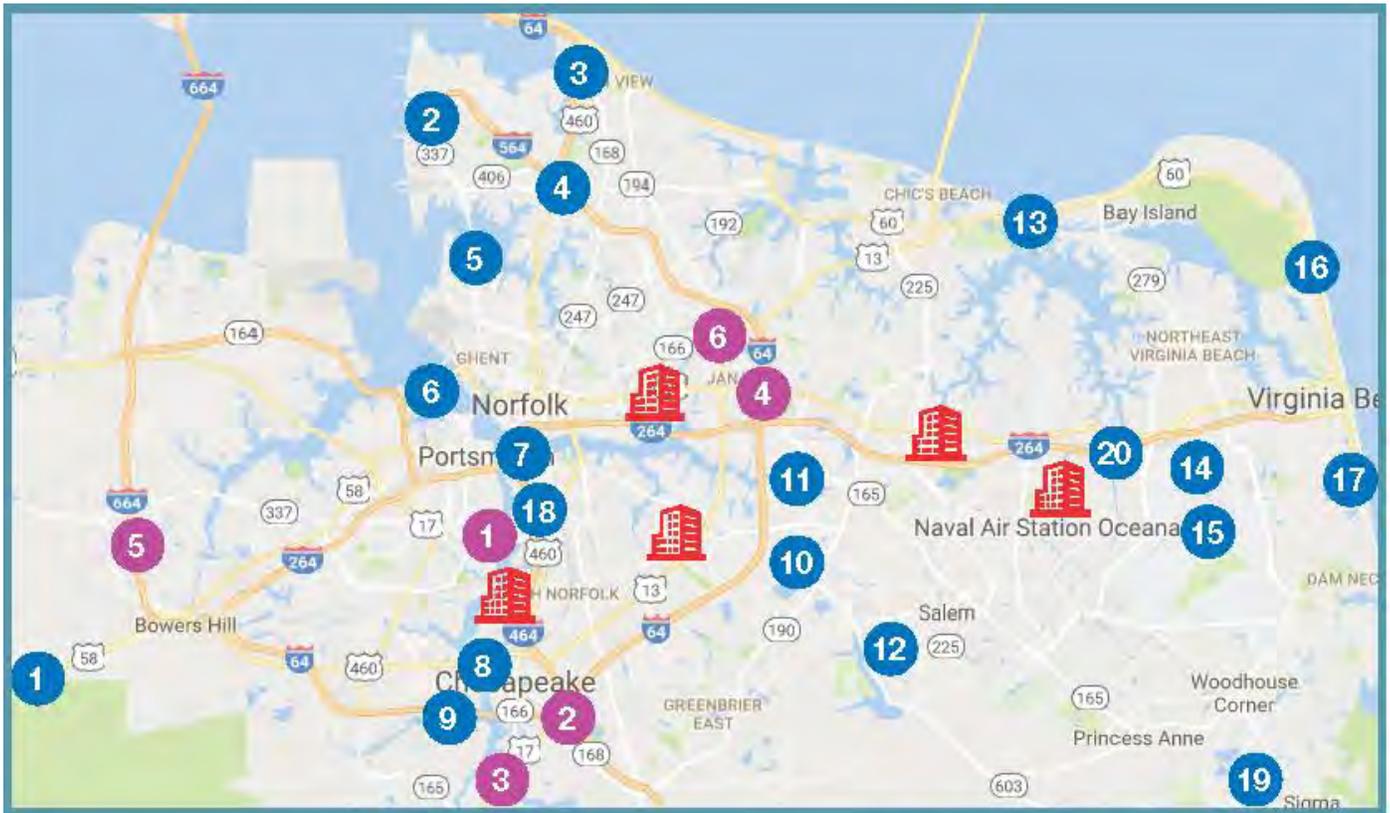


3.4 | EXPERIENCE OF OFFEROR'S TEAM

The LME Team was carefully assembled to bring together the top designers and constructors in the Mid-Atlantic, with tremendous resources and relevant experience with (a) VDOT projects, (b) D-B, (c) similar type work, and (d) one another. Each firm has earned industry-wide recognition for success in controlling, managing, and executing similar D-B projects. The blend of similar projects that these firms have worked on, and are working on in the region, confirms our qualifications to successfully deliver all elements of this Project.

Experience Working in Hampton Roads

Collectively, we have designed, built, and maintained some of Virginia's most important infrastructure and have participated in the delivery of over \$8B in regional projects including major projects in the vicinity of I-64 High Rise Bridge project. Every LME Team member has worked in the Hampton Roads area. The map below depicts some of the relevant projects Team members have worked on and office locations of all five major Team members.



● Individual Firm Projects

- 1 Route 58 at Route 10 Ramp
- 2 Hampton Boulevard Grade Separation
- 3 I-64 Pavement Rehabilitation
- 4 I-564 Flyover
- 5 Lafayette River Bridge
- 6 Elizabeth River Crossing
- 7 Berkley Bridge Grid Deck Replacement and Fender System Repairs
- 8 Gilmerton Bridge Dolphins and Multiple Repair Projects
- 9 High Rise Bridge Tail Locks and Bearing Replacements
- 10 I-64 Twin Bridges

- 11 Centerville Turnpike
- 12 Lynnhaven Parkway
- 13 Lesner Bridge Replacement
- 14 Oceana SWM
- 15 Oceana Runway Rehabilitation
- 16 61st Street Ocean Outfall
- 17 Bridge over Rudee Inlet
- 18 I-464 Bridge over N&P Beltline
- 19 Pungo Ferry Bridge
- 20 I-264 Pavement Rehabilitation

● Collective Projects

- 1 South Norfolk Jordan Bridge
- 2 I-64/Battlefield Boulevard
- 3 Dominion Boulevard Improvements
- 4 I-64/I-264 Pavement Rehabilitation
- 5 I-664 at Bower's Hill
- 6 Military Highway CFI

 Team Member Offices

Experience Working Together

LANE and STV have a 27-year history of successfully delivering award-winning projects throughout the southeast from Washington, D.C. to Florida. Together LANE and STV have partnered on 13 D-B projects (worth nearly \$850M) and regularly deliver early and under budget. LANE and JMT developed a working relationship over a decade ago and have personnel that have worked together on a number of projects. JMT is currently the Lead Designer on LANE’s \$220M Port Access Road D-B project in Charleston, SC.

McLean and EVW have worked in the Hampton Roads area together for over 40 years. Some of the major projects that they have worked on together (not included on the map on the previous page) include I-664 over Jefferson Avenue, I-64/Mercury Boulevard Interchange, and I-64/I-664 Interchange at the Hampton Coliseum.

STV and JMT have a long history of teaming together on important structural and roadway projects. For example, the firms worked together on the Cape May Interchanges 9, 10, and 11 for the New Jersey Turnpike Authority, as well as the Garden State Parkway Widening from Milepost 63 to Milepost 80. Additional experience working together includes I-78 bridge parapet upgrade and approach roadway improvements for the Delaware River Joint Toll Bridge Commission, as well as NBIS bridge inspections for state-owned structures.

JMT has provided subsurface utility designating services to EVW on numerous projects in the Hampton Roads area including: Chesapeake City Park; Dominion Virginia Power; NIT CBP and Interchange Improvements; NIT North Container Lot Expansion; Oceana Dam Neck Annex; and PMT Stabilization Project.

McLean was a CJV partner for the \$210M I-95/I-695 (Section 100) Interchange in Baltimore County, MD. JMT led the planning, design, and construction management/inspection services for the fast-track mega project and STV served as the Owner’s representative. JMT also worked with McLean under an on-call CM Services contract with the Maryland Port Administration.

3.4.1 Work History Forms

The table below is comprised of the eight (8) Work Histories that our Team is submitting and demonstrates the relevant features that each project shares with the I-64 High Rise Bridge project.

	Design-Build	Other Team Members Involved	Innovative Design and/or Construction	Limiting Impacts to Traveling Public	Bridge/Structures over Navigable Channel	Exceeded DBE Program Commitments	Extensive MOT	Coordination with VDOT	Heavily Traveled Corridor	Stakeholder/Public Involvement	Interstate Widening	Poor Geotechnical Conditions	Complex Utilities
I-495 Express Lanes	●	●	●	●		●	●	●	●	●	●	●	●
I-64/Battlefield Boulevard		●	●	●		●	●	●	●	●	●		●
Dominion Boulevard and Bridge		●	●	●	●	●	●	●	●	●		●	●
I-485/I-85 Turbine Interchange	●	●	●	●		●	●		●	●	●		●
South Norfolk Jordan Bridge	●	●	●	●	●			●		●		●	
I-85/Yadkin River	●	●	●	●		●	●		●	●	●		●
Fantasy Harbour			●	●	●	●			●	●		●	
11th Street Corridor Bridges	●	●	●	●	●	●	●		●	●	●	●	●

The projects listed above exemplify the key elements of the I-64 High Rise Bridge project, including innovation, complexity, and strategies for limiting impacts to the traveling public/extensive MOT.

Work History Forms (Attachments 3.4.1(a), (c), and (d)) as required for LME (Lead Contractor), STV (Lead Designer), and JMT (Subconsultant) are included in the Appendix.



3.5 | SAFETY

The Lead Contractor Safety Qualifications Forms (Attachment 3.5) for LANE, McLean, and EVW are located in the Appendix.



3.6 | PROJECT RISKS

The I-64 High Rise Bridge project is one of nine Priority Projects identified and funded by the Hampton Roads Transportation Accountability Commission (HRTAC) that are expected to provide the greatest impact on reducing congestion for the greatest number of citizens. Given the complexity, cost, and importance of the I-64 High Rise Bridge project to the Hampton Roads area, project risks must be identified and properly assessed and managed in order to successfully deliver the Project on time and within budget. Our DBPM will be supported by a full-time PCM who will develop and maintain a risk register for the Project and support the DBPM in monitoring and controlling project risks. The LME Team recognizes that VDOT has already taken a very proactive approach to identifying, accessing, and mitigating project risks such as completing numerous environmental and geotechnical investigations and studies within the Project corridor, initiating the relocation of the Dominion Power transmission line tower that will be in conflict with the new High Rise Bridge (to be relocated in advance of the start of construction), beginning advance coordination with the U.S. Coast Guard, and beginning advance coordination with Norfolk Southern Railway and the Norfolk & Portsmouth Belt Line Railroad (railroad agreements to be executed in advance of the award of the Project).

The LME Team has carefully considered the key elements of work for the I-64 High Rise Bridge project to determine the three most relevant and critical Project Risks for our Team to mitigate for the success of this Project. In making our assessment, we considered numerous potential risks which could have a major impact on the Project if not properly assessed and mitigated. Some of the critical risks that our team considered included the compatibility/coordination of the civil infrastructure for the future managed lanes, the condition and extent of repairs that will be required on the existing mainline pavements, material shortages due to other mega projects in the region, and environmental and regulatory compliance. We have concluded **Construction Ingress/Egress to the Median Work Zone**, **Variable Soil Conditions**, and **Incident Response Management** are the three most critical risks to be mitigated for the success of this Project.

RISK NO. 1 – CONSTRUCTION INGRESS/EGRESS TO THE MEDIAN WORK ZONE

Risk Identification: Construction ingress/egress to the median work zone is one of the most dangerous risks on this Project. The introduction of construction traffic to an operating interstate corridor creates the risk of increased congestion and more distracted drivers as motorists tend to observe new construction activity, signage, and MOT devices in the corridor. Rapid slowing of traffic as large heavily loaded trucks slowly access work zones at ingress locations (or slowly accelerate when leaving the work zone egress locations) also causes delays. Due to the limited number of water crossings in the Hampton Roads area there are few options for the motoring public to alter their driving habits or routes. Selecting an alternate route could have a substantial impact on commute time/cost as alternatives often include tolls or risk of delays caused by bridge openings. For these reasons it is anticipated that most motorists will not change their routes and thus will be further frustrated by increased travel time resulting from the construction of this Project. The combination of increased commute time, additional distractions to driving caused by construction activity and rapid deceleration of traffic caused by 60,000 to 75,000 lb. Gross Vehicle Weight (GVW) trucks decelerating to access the construction area and accelerating when leaving the construction area will result in a greater risk of all types of crashes and especially rear end crashes.

Why the Construction Ingress/Egress to the Median Work Zone Risk is Critical and Impacts to the Project:

- ▶ We estimate that *40,000-50,000 construction trucks* will be entering and leaving the median to construct this Project. These trucks will require a substantial distance to decelerate and enter construction areas as well as substantial distance to accelerate as they leave the construction zones. These deceleration and acceleration distances will occur in the left lane of traffic of an interstate. Drivers do not typically anticipate left lane interstate traffic to be impeded in this manner. This increases the likelihood of rear-end and side collisions as traffic switches lanes to avoid slowing or stopped traffic in the left lane.

- ▶ Ingress locations will require attenuators to protect the motoring public from hitting the blunt end of the temporary median barrier dividing the motoring public from the work area. While hitting an attenuator is preferred to hitting the blunt end of a stationary object, the resultant crashes often causes extensive property damage and can include severe injuries or even death.
- ▶ Shifting traffic patterns during phased construction often introduce alignment shifts. Confusion or tentative driving when these traffic shifts are introduced in conjunction with the construction traffic can result in additional incidents.
- ▶ Traffic slowed by construction traffic, crashes or other reasons may impact the time required for first responders to arrive on scene. This is exacerbated by the very narrow shoulders on the existing High Rise Bridge which can preclude emergency vehicles from using the shoulder to advance past stopped or slow moving traffic.

Listed below are specific reasons how construction ingress/egress to the median can impact the Project:

- ▶ Rear end, sideswipe or any other type of traffic crashes have the potential to bring the flow of traffic to a complete stop, which impacts – among other things – the progression of work. There is a collateral risk of poor public perception if these incidents occur regularly.
- ▶ The narrowing of existing outside shoulder widths to accommodate the median construction poses a safety risk to motorists involved in crashes or breakdowns as well as incident responders and first responders. Any compromise to safety for these people will seriously impact the Project.
- ▶ Any delays to first responders can result in fatalities as well as negative public relations.
- ▶ Slow or stopped traffic inhibits the ability to get workers, equipment and material to the Project. This can impact the Project schedule and cost significantly.

Risk Mitigation Strategy: The LME Team, together with our Lead Designer STV (with support from JMT) has already begun to carefully consider the impacts of this risk on the Project objectives. First and foremost, a carefully devised Transportation Management Plan (TMP) with well-defined traffic control devices and proper oversight will be necessary in order to minimize this critical risk. Our Team will incorporate our vast experience from similar interstate widening projects, incorporating “lessons learned” and successfully proven traffic systems to facilitate safe, effective transportation management through ALL phases of construction. Some of our proposed mitigation strategies include the following:

Locate Ingress/Egress Points off of the Interstate – LME Team members have successfully used this strategy on other projects to minimize impacts to the motoring public, resulting in award-winning innovations. Our Team has identified and will implement innovative ingress/egress points that keep the vast majority of construction traffic from entering/exiting the work zone from I-64. For example, the I-64/Military Highway Interchange will provide median access from Yadkin Road to the western limits of the Project. Because the median is wide at and Military Highway is at approximately the same grade as the interstate median at this location, it lends itself well to this type of ingress/egress. We are also exploring George Washington Highway as an access for the median work from the railroad



Innovative Construction Techniques. A LANE/STV innovative idea involved constructing a median access ramp from a low volume overpass structure to provide construction vehicle access that was SAFELY SEPARATED from highway traffic.

tracks adjacent to Yadkin Road, to the west abutment of the High Rise Bridge. This location would require a temporary ramp to be constructed from George Washington Highway down to the I-64 median. Another potential access would be from the existing Great Bridge Blvd. overpass directly into the median. Our Team will also use our fleet of barges and tugs to deliver as much material to the job as possible, further eliminating construction traffic from the interstate. We will accomplish all of this without directing traffic through residential areas.

Carefully Planned Work Zones and Access Points – We realize there will still be a need for a small number of access points into the median from the interstate. These will be carefully-designed, highly visible, and located away from curved roadway segments. We will phase this work and construct the added lane such that the new

lane can be used for deceleration and acceleration as opposed to the left lane of traffic where possible. Additionally, we will use the added pavement to taper the beginning end of temporary barrier runs to increase the distance that attenuators are located away from traffic. We recognize this may require resetting of the attenuator and some temporary barrier at these ingress/egress locations but have found on past projects the added safety benefit is worth the added cost. Where work occurs on the outside of the interstate (sound walls, sign foundations, etc.) we will schedule that work to begin only after the new lane is constructed in the median and traffic is shifted onto the new lane. Then, the existing outside lane may be used for ingress/egress to the outside without inhibiting two free flowing lanes.

Constructability Review (TMP-based) – Prior to finalizing our design and plans, our Team will conduct a constructability review that is solely dedicated to traffic safety during construction. Examples of design/plan features that might be scrutinized during this review include locating construction ingress/egress at points where they are most visible to the traveling public, locations of crossovers, ways to minimize traffic phasing shifts, providing safe separation from work zones, and promoting a design that is sensitive to potentially inattentive drivers. We will also minimize on-road truck hauling to the extent practical, and will give consideration to waterborne and nighttime delivery of construction products as much as is practicable.

Optimization of Traffic Phasing – Our Team has proven experience at optimizing traffic phasing. We understand that changes in traffic patterns promote the potential for crashes, and we will look especially hard at ways to minimize lane shifts and/or locate crossovers at points where high visibility is most prevalent. We realize construction of the new High Rise Bridge will be on the scheduled critical path during the Project; as a result, traffic capacity will be constrained onto the existing bridge throughout most of the construction phases. However, our phasing plan will concentrate on opening the added traffic capacity west of the bridge as early in the project as possible; roadway widening would begin at the western Project limits and proceed eastward. Phasing in this manner will allow EB I-64 west of the bridge to open new lanes as segments are completed and maintain three lanes to the western limit of the Project with no further “pinch points”. We will complete WB I-64 widening from west to east maximizing the extent of usable new capacity as the Project progresses. This phasing will improve safety as well as enhance the public perception of the Project.

Safety Training – Our construction forces receive certified in-house training on proper techniques to maintain a safe work zone, starting with personal awareness of the safety hazards posed by mixing highway and construction traffic. Weekly safety meetings will be a requirement for all construction staff.

Public Awareness/Incident Management Plan– Our TMP will give careful consideration to advance warning signage, and our TMP supervisor will regularly patrol the Project corridor to see that traffic devices are highly visible and properly functioning, especially at any access points. Remote programmed Portable Changeable Message Signs (PCMS boards) will be used. This will allow remote changes to the PCMS boards to be quickly changed to notify the motoring public of traffic ahead. If approved, we would provide Transportation Operations Center (TOC) the ability to remotely change the Project PCMS boards to augment the existing stationary changeable message signs in the vicinity of the Project. The LME Team will work with VDOT and the City of Chesapeake during construction to provide public notification through the 511 Virginia service, variable message signs in the Hampton Roads area, VDOT website updates, public meetings, and outreach events.

Role of VDOT and other Agencies: Due to the high profile of this Project, we anticipate VDOT and the City of Chesapeake will take an active role in providing public outreach to local media during critical operations as well as coordination with other local major projects. VDOT and the City of Chesapeake will play key roles in gathering real time traffic data and communicating this information to motorists in advance of the work zone. The LME Team will work with VDOT during development of the TMP document to identify construction access points. Our Team will request a timely review, comment, and approval on our submittals. The Virginia State Police’s role in the Project primarily involves the diligent enforcement of traffic laws during construction.

The I-495 Express Lanes team received the VDOT and Megaprojects, Commonwealth of Virginia Award of Excellence, Integrated Communications award for their continuous efforts to ensure the public was involved and informed throughout the duration of the project.

RISK NO. 2 – VARIABLE SOIL CONDITIONS

Risk Identification: The LME Team has reviewed existing geologic data and information for this site, geological mapping, and the *Geotechnical Data Report* (GDR) that was produced by our geotechnical engineer, ECS Mid-Atlantic, LLC, and provided by VDOT with the RFQ for this Project. Based on our review of this information and our experience with transportation and other projects in the vicinity of the I-64 High Rise Bridge project, we have identified that the subsurface soil conditions within the corridor of this Project are some of the most inconsistent and variable soil conditions found in the Region. As such, establishing an acceptable subgrade to support pavements can be a challenge as variable conditions are encountered. This is because certain conditions require different equipment, techniques, stabilizing agents and/or handling/treatment methods. **The LME Team has identified that the variable soil conditions within the Project limits to be a significant project risk as nearly 7.3 miles of interstate median widening work are at risk.**

Within the Project limits, the Yorktown Formation is found at elevations ranging between -10 feet on the west end to -60 feet on the east end. The Yorktown Formation is overlain by alluvial sediments (approximately elevation +20 feet to 0 feet) that extend to just below the ground surface in some areas, to relatively deep depths below the bottom of near-surface fill in other portions of the Project corridor. The composition of the alluvium is highly variable and consists predominantly of silt, clay, and sand mixtures.

Based on the information contained in the GDR, and our Team’s firsthand knowledge of the subsurface conditions, the alluvium is primarily coarse-grained and typically classifies as loose to medium dense Poorly Graded Sand (SP), Silty Sand (SM), and Clayey Sand (SC). Adding inconsistency, however, are borings in the vicinity of the US-13, US-17, and I-464 interchanges where the alluvial sediments include fine-grained soils that classify as high plasticity Fat Clay (CH), low plasticity Lean Clay (CL), and Silt (ML). Additionally, seventeen soil borings encountered Peat layers in the alluvial stratum up to fifteen-feet thick (15BI-24), and one location exhibited two five-foot-thick Peat layers (15BI-23). Of particular note and concern is that even though Peat was not found in all borings, Peat was encountered in soil borings as far west as the Military Highway Interchange and as far east as the I-464 Interchange. Finally, one boring in the vicinity of the Military Highway Interchange and two borings in the vicinity of the I-464 Interchange indicated “voids” near the bottom of the alluvium. Placement of fills over such areas present settlement risks as well as potential slope stability issues. Additionally, the proposed widening crosses areas where a shallow groundwater table may be encountered. **The soil borings represent significant quantities of variable soil conditions throughout the Project limits as well as unsuitable soils which cannot be quantified. These “variable” conditions have the high potential to affect the Project schedule and cost negatively.**

Why the Inconsistent Soil Conditions Risk is Critical and the Potential Impacts to the Project: The subsurface conditions identified above can impact the Project in different manners as described below:

- ▶ *Soft and/or Compressible Soils at Depth* – The risks to the Project caused by soft and/or compressible soils are schedule impacts and potential long-term settlements. Excessive settlements could occur along new embankments and bridge approaches. For deep, soft, soil deposits, long-term settlements must be accounted for and planned for, and may necessitate the use of staged construction and/or ground improvement alternatives to accelerate settlement rates.
- ▶ *Unsuitable Subgrade Soils* – The risks to the Project for unsuitable subgrade soils are schedule, maintenance of traffic, and pavement degradation. These areas should be addressed to support median widening before the placement of new structural fills. Proactive identification of these areas during design will reduce potential schedule impacts during construction.

Risk Mitigation Strategy: Our experience has shown that the risk associated with variable soil conditions to the D-B Team as well as the Owner, are best mitigated by selecting an experienced and local geotechnical engineering firm, executing a well-planned field exploration and laboratory testing program, integrating our geotechnical engineer within the design team to select the right engineering solutions for the varying soil conditions, and making our geotechnical engineer an integral member of the construction team.

Experienced and Local Geotechnical Engineering Firm – LME has teamed with ECS, which is one of the most respected geotechnical firms in the Hampton Roads area. ECS was brought to the team due to their long history with all design and construction firms on the LME Team and their long-standing project experience with VDOT. ECS has also completed significant geotechnical field and laboratory testing for VDOT within the area, including the GDR for this Project for VDOT. There is no other firm more knowledgeable in the project requirements to assist in mitigating the geotechnical risk associated with the variable soil conditions that exist within the Project limits. ECS has a local office, including an AMRL accredited laboratory, and an extensive knowledge of the geology of the Hampton Roads area and the best practices to manage the risks inherent to this Project.

ECS recently completed significant geotechnical field and laboratory testing in the Project area and their familiarity and knowledge of the local conditions will be an incredible asset in mitigating the variable soil conditions.

Executing a Well-Planned Field Exploration and Laboratory Testing Program – Our Team understands the importance of identifying and mitigating the geotechnical risk associated with variable soil conditions through a well-planned geotechnical investigation and laboratory testing program. Additional sampling of subsurface soils and pavement coring will be performed to further delineate areas of concern such as: potential subgrade problem areas in proposed pavement areas, deep soft soil strata, areas with excessive moisture content or poor drainage, excessive organic materials, and problem areas at proposed structure locations. This will allow our Team to develop appropriate mitigation strategies for the risk associated with the variable soil conditions by confirming the extent of potential impacts and selecting appropriate design and remediation strategies. This, in turn will increase safety during construction and reduce cost and schedule impacts. Some of our proposed mitigation strategies include the following:

- ▶ **Soft and/or Compressible Soils at Depth** – Identification and delineation of these layers throughout the Project limits will be performed in the earliest phase of the geotechnical exploration program. As the exploration program progresses, characterization of these layers through laboratory testing to evaluate the index properties, strength, and compressibility parameters will be performed. In addition, in-situ testing can be used (CPTu, DMT, etc.) to supplement the required Standard Penetration Test (SPT) borings. The design team can then provide anticipated occurrence of these soil types and design for the time-based settlement that would result. A matrix of the station ranges, estimated depth ranges, and remediation alternatives will be prepared and included in the final Geotechnical Engineering Report (GER). For near-surface soils, in-situ remediation is typically expected as described previously. For deeper deposits of soft soils a variety of ground improvement alternatives will be considered to reduce the schedule risk and to reduce long-term consolidation and secondary compression effects. These alternatives typically include wick drains, staged filling, intermediate foundation types such as aggregate piers, and in-situ reinforcement techniques.
- ▶ **Unsuitable Near Surface/Subgrade Soils** – Unsuitable subgrade soils are identified as those that are wet, soft/loose, and/or exhibit high-plasticity. Unsuitable subgrade soils will be identified and delineated early in the geotechnical exploration program. Our Team will proactively identify these zones by station range and depth and will additionally identify proposed treatment methods. A thorough review of the data provided in the GDR will be performed and incorporated alongside new soil borings and laboratory data to better define unsuitable subgrade soil zones. Unsuitable soil locations and remediation alternatives will be provided in a matrix for the Team. Typical treatment methods include in-situ stabilization via lime or cement, over-excavation and replacement, and/or the use of stabilization geotextiles.

Integrating Our Geotechnical Engineer within the Design Team – Our geotechnical engineer, ECS, will be integrated within the Design Team. Essential recommendations for design will be based on long-term performance and risk. Locations where unsuitable soils are present will be delineated on the Project drawings and a Soils Remediation Plan will be developed prior to construction. The plan may include such mitigation strategies as undercut/replacement, drying/scarification, and lime or cement stabilization. Other potential mitigation strategies that may be utilized by LME, particularly for deeper soft soil strata, include; surcharging embankment fills, use of wick drains, utilizing light weight fill material or use of stabilization geosynthetics. Critical design elements that are affected by these major geotechnical risks include:

- Pavements and new embankment fills
- Retaining walls/sound walls
- Bridge approaches
- Cut and fill slopes
- Protection of existing structures and slopes
- Culverts, drainage structures, and stormwater management ponds

Making Our Geotechnical Engineer an Integral Member of the Construction Team – *During construction, our geotechnical engineer will be an integral member of the construction team and assist LME in developing an excavation and earthwork management plan.* Our geotechnical engineer will visit the site to review earthwork and foundation operations and verify that the work is being completed consistent with the geotechnical recommendations and modify the recommendations, if needed, based on conditions encountered.

As evidenced in the list below, the LME Team has extensive and relevant local experience successfully designing and constructing major infrastructure projects in variable poor soil/high water table conditions similar to what is anticipated for this Project from our review of the GDR.

- ▶ *Dominion Boulevard Project, Chesapeake, VA:* The weakest of the deeper soils were mitigated by pile-supported embankments which consisted of driving 61,000 LF of 12” prestressed concrete piles on a 5.5 ft. to 10.5 ft. grid pattern with 4’ X 4’ square pile caps. A load transfer platform consisting of VDOT Select Material Type 1 and two layers of high strength geogrid was then constructed over the piles prior to placing the embankment fill.
 - Areas of substandard surface soils were handled by standard undercut and replacement of 37,000 CY of material being removed and replaced.
 - Additional subgrade stabilization was achieved by installing 44,000 SY of geotextile fabric.
- ▶ *Birdneck Road Project, Virginia Beach, VA:* Contract included geotextile fabric over lime stabilized subgrade.



Geotechnical Mitigation. Dominion Boulevard’s less severe deeper soils were handled by installing 4,400,000 LF of PV (wick) drains and associated drainage layers. Temporary surcharges were installed to accelerate settlement in these areas.

Due to differing soil conditions it was determined that cement was needed as opposed to lime for portions of the subgrade stabilization. Although VDOT has a specification for lime stabilization and soil cement it was determined there was no specification for cement stabilized subgrade. EVW worked with the VDOT District Construction Engineer to develop a specification for cement stabilization of subgrade material that could be used on that project as well as for other projects in the Hampton Roads District.

Role of VDOT and other Agencies: The LME Team has successfully managed similar risks through proactive geotechnical planning. The proposed geotechnical exploration locations, types, and associated laboratory testing program is shared amongst the Team, including VDOT representatives, prior to commencement of field activities. This advance submission allows for review comments and suggestions to be incorporated into the program without affecting the design schedule. Our Team will inform and coordinate with VDOT where challenging subsurface conditions are identified during the design phase and share our planned solutions. Beyond this level of involvement, we do not anticipate VDOT/others to take a role in identifying and mitigating the geotechnical risks identified herein.

RISK NO. 3 – INCIDENT RESPONSE MANAGEMENT

Risk Identification: The footprint of this Project consists of a notoriously overstressed I-64 interstate system which along with the High Rise Bridge presents daily commuters, commerce, and tourists a challenge to navigate. I-64 is one of the busiest roadways in the Hampton Roads area of Virginia, carrying over 85,000 vehicles per day in the vicinity of the High Rise Bridge. Within the Commonwealth, I-64 stretches 300 miles from the West Virginia state line to its terminus in Chesapeake, VA, and was designated as a Corridor of Strategic Significance (CoSS) in Virginia’s *Multimodal Long Range Transportation Policy Plan*, as well as a

recommended corridor in the newly designated *National Freight Network*. I-64 is also a designated evacuation route in the event of a storm event along the coastline of southeastern Virginia and northeastern North Carolina.

Given the critical nature of this interstate (serving 1.7 million local residents, numerous tourist destinations, major cargo ports and serving as the East Coast epicenter of military activity), it is vitally important that the safe, efficient movement of traffic be maintained at all times. It will be essential to institute and carry out an Incident Response Plan that effectively and quickly responds to incidents such as:

- Traffic crashes
- Disabled vehicles
- Vehicle/cargo fires
- Significant damage to transportation infrastructures (bridges, overhead signs, etc.)
- Major storm events (hurricanes/nor'easters)
- Bridge openings lasting longer than 1 hour
- Spills (cargo, debris, hazardous material)
- Work-related incidents
- Transport of super loads through work zone

The existing four-lane corridor is vital to the local economy as the only other east-west corridors in the vicinity of the Project are the Downtown and Midtown tunnels or local city streets. The combination of these high traffic volumes and travel speeds coupled with a higher than normal crash rate increases the importance of implementing an innovative and effective Incident Response Plan in order to minimize impacts and cause further unnecessary delays.

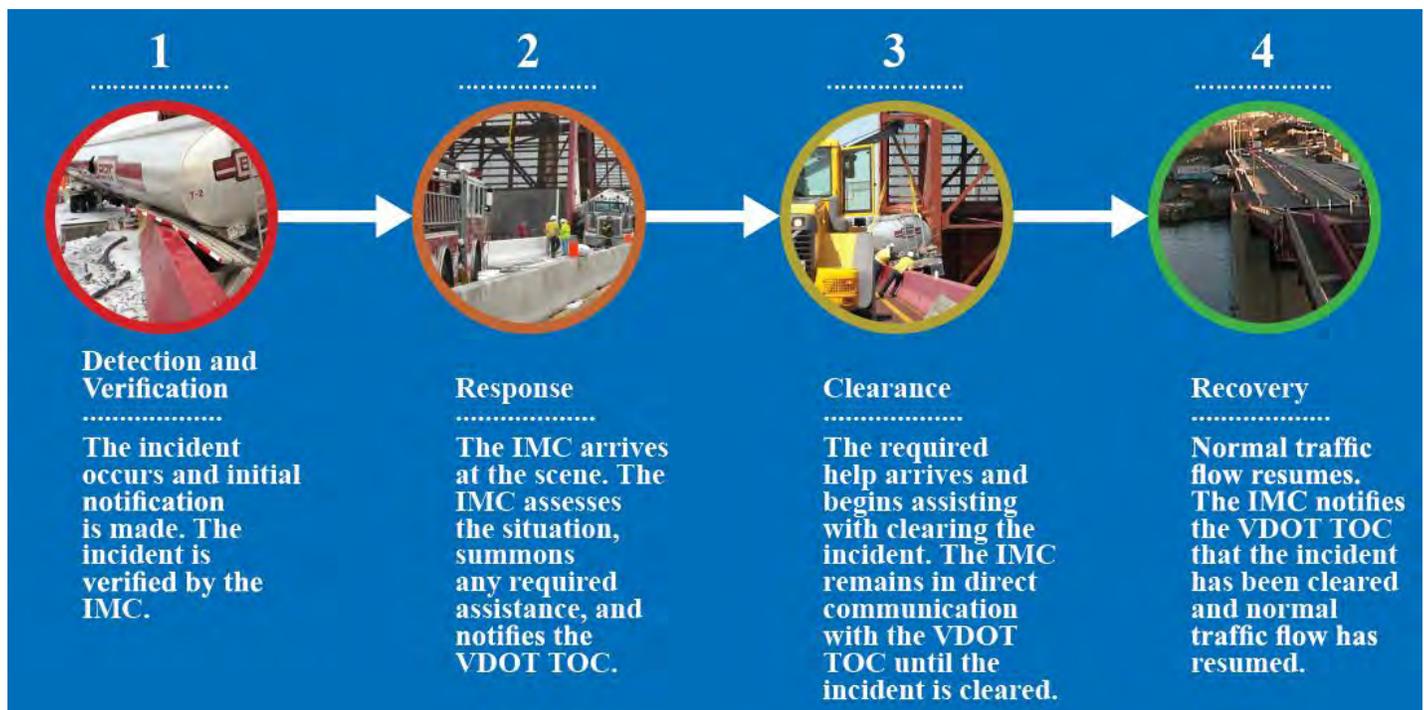
Why the Incident Response Management Risk is Critical and the Impacts to the Project: The 8-mile long project segment of I-64 currently operates at a Level of Service (LOS) ranging from “D” to “F”, with the worst problems being between US 17 and I-464 during rush hour. At the High Rise Bridge crossing, the existing 4-lane bridge (median barrier separated) provides very narrow shoulders, meaning any traffic incident will instigate major traffic back-ups and cause further safety issues. When construction commences on the roadway approaches, this potential will be heightened even more:

- In order to accommodate the widening of I-64 east and west of the High Rise Bridge, temporary concrete traffic barrier will be required on the existing roadway to separate and protect motorists from the construction activities within the work zones. Temporary concrete traffic barriers have a natural tendency to reduce driver comfort based on the restricted lateral offsets and lane widths through the work zone, which unintentionally causes motorists to reduce travel speeds. This reduced travel speed can reduce lane capacity and creates additional queue lengths due to the reduced lane capacity. Temporary concrete traffic barrier and narrowed shoulders also restrict the area where disabled vehicles can move out of the travel lanes, which can result in significant queues and delays. Construction entrances will introduce breaks in the temporary concrete traffic barrier, which create fixed object hazards for motorists and increase exposure to workers. There is also limited space to provide adequate acceleration and deceleration lanes for construction entrances, which is a challenge for ingress and egress by construction vehicles because they must enter and exit the site from the left lane of the highway. All of these factors increases the probability of crashes occurring within the work zone.
- There are many drivers that will travel this roadway and through this work zone that are unfamiliar with the construction efforts as they are destined for Virginia beaches. Inattentive drivers combined with those that unfamiliar with the area, pose a safety hazard to other motorists as well as construction workers and inspection staff within the work zone.
- The above risk is increased when additional changes are made for phased construction by shifting traffic patterns introducing alignment shifts, which increase the likelihood of traffic incidents and crashes.
- Traffic congestion heightens the likelihood of crashes, which then initiate a “chain reaction” of traffic stoppages. Also, the safety concern is always secondary crashes that result from an initial crash, which are usually more dramatic and can result in fatalities.
- Travelers tend to want to look at adjacent construction equipment and works in progress, especially the new High Rise Bridge. All of these inattentive behaviors are similar to texting while driving and create a very dangerous situation, particularly in heavy traffic resulting in traffic incidents that increase congestion to crashes that result in serious injuries and even death.

Failure to properly respond to and manage incidents will not only cause heightened safety concerns through the corridor but will also put the Project in jeopardy from a public perception point of view. The quicker the response to any traffic incident will improve both safety and mobility of the corridor.

Any type of prolonged incident can have an impact on Project schedule, which is a risk to both the Design-Builder and VDOT, eg. the schedule impacts of delaying construction material deliveries due to traffic incidents. Our Team is very familiar with the sensitivities of Hampton Roads travelers and how the media can exacerbate even the smallest situation into a larger one. We also understand and fully support VDOT’s commitment to provide this much needed improvement with minimal impacts to motorists.

Risk Mitigation Strategy: Our Team expects that the completion of an IMP will be one of our first primary submittals upon mobilization. The key elements of an IMP include a highly visible plan for notification and coordination with the VDOT TOC and the Virginia State Police/Safety Service Patrol as soon as a traffic incident occurs, as well as direct lines of communication with the VDOT Public Information Office (or designee for a particular project). The IMC will be key as it will be through his leadership and management that we will properly respond to, manage, and bring a timely resolution to any incident.



Some of our proposed IMP strategies would typically include the following:

Self-Patrolling/On-Site Towing – LME commits to having dedicated response and towing resources 24/7 during the construction period in order to quickly assist or remove any disabled vehicles or debris from the roadway. This effort will be managed and coordinated by our IMC. We are well versed in performing this for D-B projects in high traffic corridors. We would further employ full-time “highway rovers” to patrol the I-64 corridor during particularly heavily traveled periods, including special events and holiday weekends during the tourist season. In addition, the IMC will have a vehicle that is equipped with specialized equipment, light bars, cameras, etc. that will provide the IMC with the tools to deal with standard roadway incidents as well as the technology to immediately notify the VDOT TOC and other first responders when other significant incidents occur, which will follow all existing Standard Operating Procedures for all incidents in the Hampton Road area.

Communication – Regularly scheduled meetings will be lead by the IMC to discuss upcoming construction activities where work zones will be needed as well as to discuss previous incidents and discuss improvements/refinements. In addition, the IMC will attend coordination meetings with participating agencies to ensure that all Unified Commands and Incident Action Plans (IAP) are deployed within the Project limits.

Coordination with Nearby Major Projects – Given that several large VDOT projects are expected to be ongoing concurrently with the I-64 High Rise Bridge project (including the I-64/264 Ramp Improvement project and I-264/Witchduck Road Interchange and Ramp Extension project) the District Office has wisely implemented a proactive program to (a) coordinate traffic issues between these projects and (b) empower a single-point-of-contact to handle media outreach, facilitated by weekly meetings to discuss the interrelation of these projects from a traffic safety and capacity perspective. Our Project has the potential to magnify this issue. As such, immediately upon contract award, our team proposes that an initial partnering meeting be conducted with VDOT and representatives from adjacent projects as well as other appropriate stakeholders such as local governments, schools and businesses, local and state police, etc. These meetings will be led from our side by the IMC and will serve as a review of all project schedules and development of a coordination plan from a “global” Hampton Roads traffic viewpoint versus just the requirements of the contract, and to discuss the interplay between our work and these other projects. Our team pledges to incorporate – to the extent practical – discussions from this partnering meeting in order to devise a TMP that is sensitive to the needs of the entire transportation network, while maintaining safety as a top priority.

Well-Defined Detour Routes – If road or ramp closures become necessary, LME will coordinate closely with VDOT, the TOC, and the City of Chesapeake to design the most efficient pre-defined detour route. Ideally, LME’s remotely programmable Portable Changeable Message Signs (PCMS boards) would be integrated with VDOT’s stationary DMS’s and would augment that system.

Public Awareness – Proper signage for implementation of an Incident Management Plan event such as a short-term detour is critical, such that motorists are well aware of the options afforded to them. Our IMP will also contain provisions for coordination (through VDOT and City of Chesapeake) with the media (radio, TV, and social media) to get the word out expeditiously.

Evacuation Routes - As mentioned, I-64 is a major hurricane evacuation route. A Hurricane Evacuation Plan will be developed and approved by VDOT and other stakeholders as appropriate. LME takes public safety very seriously and is one reason we consider Incident Response Management a critical risk. Failing to provide a quick and effective response to any evacuation order is unacceptable to our Team and we hereby commit to implementing all aspects of our Hurricane Evacuation Plan in the most expeditious manner possible to provide maximum capacity for evacuees.

Monitoring the Work Zone with ITS Deployment - On other projects, the LME team has utilized support from ITS devices such as mobile cameras, radar count stations, dynamic message signs and other ITS devices to detect incidents and alert drivers of incidents. These devices provided early identification of incidents and allowed our team to refine traffic work zone strategies that increased both safety and increased mobility. As appropriate, we will engage VDOT TOC existing ITS equipment and supplement as needed to increase visibility of the work zone. All traffic incident and ITS information will be monitored regularly.

Role of VDOT and other Agencies: VDOT’s role pertaining to this risk primarily involves the approval of the IMP and to assist with the Design-Builder’s coordination with adjacent projects. Since this is a hurricane evacuation route, VDOT would also need to approve any necessary Hurricane Plans/Emergency Response Plans that will be required from us. We would encourage a close relationship and coordination the TOC and State Police, as well. VDOT has developed standard protocols under Unified Command as well as Incident Action Plans that will be adhered to by the IMC.



Incident Response. Dedicated response and towing resources 24/7 during the construction period will help mitigated incidents by quickly assisting or removing any disabled vehicles or debris from the roadway.





Attachment 3.1.2
SOQ Checklist

ATTACHMENT 3.1.2

Project: I-64 SOUTHSIDE WIDENING AND HIGH RISE BRIDGE, PHASE 1

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

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

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 20-page limit?	SOQ Page Reference
Statement of Qualifications Checklist and Contents	Attachment 3.1.2	Section 3.1.2	no	Appendix
Acknowledgement of RFQ, Revision and/or Addenda	Attachment 2.11 (Form C-78-RFQ)	Section 2.11	no	Appendix
Letter of Submittal (on Offeror's letterhead)				
Authorized Representative's signature	NA	Section 3.2.1	yes	Page 2
Offeror's point of contact information	NA	Section 3.2.2	yes	Page 1
Principal officer information	NA	Section 3.2.3	yes	Page 2
Offeror's Corporate Structure	NA	Section 3.2.4	yes	Page 2
Identity of Lead Contractor and Lead Designer	NA	Section 3.2.5	yes	Page 2
Affiliated/subsidiary companies	Attachment 3.2.6	Section 3.2.6	no	Appendix
Debarment forms	Attachment 3.2.7(a) Attachment 3.2.7(b)	Section 3.2.7	no	Appendix
Offeror's VDOT prequalification evidence	NA	Section 3.2.8	no	Page 2
Evidence of obtaining bonding	NA	Section 3.2.9	no	Page 2

ATTACHMENT 3.1.2

Project: I-64 SOUTHSIDE WIDENING AND HIGH RISE BRIDGE, PHASE 1

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 20-page limit?	SOQ Page Reference
SCC and DPOR registration documentation (Appendix)	Attachment 3.2.10	Section 3.2.10	no	Appendix
Full size copies of SCC Registration	NA	Section 3.2.10.1	no	Appendix
Full size copies of DPOR Registration (Offices)	NA	Section 3.2.10.2	no	Appendix
Full size copies of DPOR Registration (Key Personnel)	NA	Section 3.2.10.3	no	Appendix
Full size copies of DPOR Registration (Non-APELSCIDLA)	NA	Section 3.2.10.4	no	N/A
DBE statement within Letter of Submittal confirming Offeror is committed to achieving the required DBE goal	NA	Section 3.2.11	yes	Page 2
Offeror's Team Structure				
Identity of and qualifications of Key Personnel	NA	Section 3.3.1	yes	Page 4
Key Personnel Resume – DBPM	Attachment 3.3.1(a)	Section 3.3.1.1	no	Appendix
Key Personnel Reference – DBPM	Attachment 3.3.1(b)	Section 3.3.1.1	no	Appendix
Key Personnel Resume – RCE	Attachment 3.3.1(a)	Section 3.3.1.2	no	Appendix
Key Personnel Reference – RCE	Attachment 3.3.1(b)	Section 3.3.1.2	no	Appendix
Key Personnel Resume – QAM	Attachment 3.3.1(a)	Section 3.3.1.3	no	Appendix
Key Personnel Reference – QAM	Attachment 3.3.1(b)	Section 3.3.1.3	no	Appendix
Key Personnel Resume – DM	Attachment 3.3.1(a)	Section 3.3.1.4	no	Appendix

ATTACHMENT 3.1.2

Project: I-64 SOUTHSIDE WIDENING AND HIGH RISE BRIDGE, PHASE 1

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 20-page limit?	SOQ Page Reference
Key Personnel Reference – DM	Attachment 3.3.1(b)	Section 3.3.1.4	no	Appendix
Key Personnel Resume – CM	Attachment 3.3.1(a)	Section 3.3.1.5	no	Appendix
Key Personnel Reference – CM	Attachment 3.3.1(b)	Section 3.3.1.5	no	Appendix
Key Personnel Resume – Lead Structural Engineer	Attachment 3.3.1(a)	Section 3.3.1.6	no	Appendix
Key Personnel Reference – Lead Structural Engineer	Attachment 3.3.1(b)	Section 3.3.1.6	no	Appendix
Key Personnel Resume – IMC	Attachment 3.3.1(a)	Section 3.3.1.7	no	Appendix
Key Personnel Reference – IMC	Attachment 3.3.1(b)	Section 3.3.1.7	no	Appendix
Organizational chart	NA	Section 3.3.2	yes	Page 5
Organizational chart narrative	NA	Section 3.3.2	yes	Pages 5-9
Experience of Offeror’s Team				
Lead Contractor Work History Form	Attachment 3.4.1(a)	Section 3.4	no	Appendix
Subcontractor Work History Form	Attachment 3.4.1(b)	Section 3.4	no	N/A
Lead Designer Work History Form	Attachment 3.4.1(c)	Section 3.4	no	Appendix
Subconsultant Work History Form	Attachment 3.4.1(d)	Section 3.4	no	Appendix
Safety				
Lead Contractor Safety Qualifications Form	Attachment 3.5	Section 3.4	no	Appendix

ATTACHMENT 3.1.2

Project: I-64 SOUTHSIDE WIDENING AND HIGH RISE BRIDGE, PHASE 1

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 20- page limit?	SOQ Page Reference
Project Risk				
Identify and discuss three critical risks for the Project	NA	Section 3.6	yes	Pages 12- 20



Attachment 2.11
Form C-78-RFQ

ATTACHMENT 2.10

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION**

PROJECT: I-64 SOUTHSIDE WIDENING AND HIGH RISE BRIDGE, PHASE 1

State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638

Federal Project No. NHPP-064-3(488)

Contract ID Number C00106692DB93

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 – August 16, 2016
(Date)
- 2. Cover letter of RFQ Addendum No. 1 09/16/2016
(Date)
- 3. Cover letter of RFQ Addendum No. 2 10/04/2016
(Date)



 SIGNATURE October 13, 2016
 DATE

Robert E. Watt

 PRINTED NAME Pursuit Manager
 TITLE

ATTACHMENT 2.10**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION****PROJECT: I-64 SOUTHSIDE WIDENING AND HIGH RISE BRIDGE, PHASE 1**

State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638

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1. Cover letter of RFQ – August 16, 2016
(Date)
2. Cover letter of RFQ Addendum No. 1 09/16/2016
(Date)
3. Cover letter of RFQ Addendum No. 2 10/04/2016
(Date)

 SIGNATURE	<u>October 13, 2016</u> DATE
<u>George Bosmajian, III</u> PRINTED NAME	<u>President</u> TITLE

ATTACHMENT 2.10**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION****PROJECT: I-64 SOUTHSIDE WIDENING AND HIGH RISE BRIDGE, PHASE 1**

State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638

Federal Project No. NHPP-064-3(488)

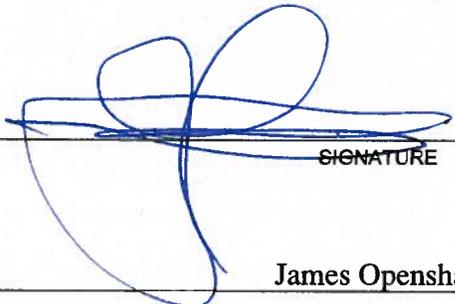
Contract ID Number C00106692DB93

ACKNOWLEDGEMENT OF RFQ, REVISION AND/OR ADDENDA

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(Date)
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(Date)
3. Cover letter of RFQ Addendum No. 2 10/04/2016
(Date)

 <hr/> SIGNATURE	<hr/> October 13, 2016 DATE
<hr/> James Openshaw PRINTED NAME	<hr/> President TITLE



Attachment 3.2.6
**Affiliated and Subsidiary
Companies**

ATTACHMENT 3.2.6

State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638

Affiliated and Subsidiary Companies of the Offeror

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

The Offeror does not have any affiliated or subsidiary companies.

Affiliated and/ or subsidiary companies of the Offeror are listed below.

Relationship with Offeror (Affiliate or Subsidiary)	Full Legal Name	Address
ULTIMATE PARENT COMPANY	Salini Impregilo, S.p.A.	Via dei Missaglia, 97 – 20142 Milan, Italy
PARENT COMPANY	Lane Industries Incorporated	90 Fieldstone Court Cheshire CT 06410
AFFILIATE	Lane Worldwide Infrastructure, Inc.	90 Fieldstone Court Cheshire CT 06410
AFFILIATE	Lane Infrastructure. Inc.	90 Fieldstone Court Cheshire, CT 06410
AFFILIATE	Lane International, B.V.	Prins Bernhardplein 200 1097 JB Amsterdam, the Netherlands
AFFILIATE	Lane Mideast Contracting, LLC	P.O. Box 35243 Abu Dhabi, UAE Makeen Tower Corner of 9th and 10th Streets
AFFILIATE	Lane Mideast, Qatar, LLC	Grand Hamad Street Bin Al Sheikh Bldg., 3rd Floor Doha, Qatar
SUBSIDIARY	S.A. Healy Company	901 N. Green Valley Parkway, Suite 260 Henderson, NV 89074

ATTACHMENT 3.2.6

State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638

Affiliated and Subsidiary Companies of the Offeror

SUBSIDIARY	Lanecon Corporation	90 Fieldstone Court Cheshire, CT 06410
SUBSIDIARY	Wardwell Family Realty, LLC	90 Fieldstone Court Cheshire, CT 06410
JOINT VENTURE (30% PARTNER)	Skanska-Granite-Lane	295 Bendix Road, Suite 400 Virginia Beach, VA 23452
JOINT VENTURE (30% PARTNER)	I4 Leasing, LLC	295 Bendix Road, Suite 400 Virginia Beach, VA 23452
JOINT VENTURE (35% PARTNER)	Fluor-Lane 95, LLC	6700 Las Colinas Blvd. Irving, TX 75039
JOINT VENTURE (20% PARTNER)	AGL Constructors	929 West Adams Street Chicago, IL 60607
JOINT VENTURE (25% PARTNER)	Gemma-Lane Liberty Partners	769 Hebron Avenue Glastonbury, CT 06033
JOINT VENTURE (25% PARTNER)	Gemma-Lane Patriot Partners	769 Hebron Avenue Glastonbury, CT 06033
JOINT VENTURE (51% MANAGING PARTNER)	Lane-Abrams Joint Venture	3001 Meacham Boulevard, Suite 215 Fort Worth, TX 76137
JOINT VENTURE (60% MANAGING PARTNER)	Lane-Corman, A Joint Venture	90 Fieldstone Court Cheshire, CT 06410
JOINT VENTURE (30% PARTNER)	Purple Line Transit Constructors, LLC	6811 Kenilworth Avenue East Riverdale, MD 20737
JOINT VENTURE (45% PARTNER)	Fluor-Lane South Carolina	100 Fluor Daniel Drive Greenville, SC 29607
TRADE NAME	Civil Wall Solutions, A Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410

ATTACHMENT 3.2.6

State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638

Affiliated and Subsidiary Companies of the Offeror

TRADE NAME	Cold River Materials, A Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410
TRADE NAME	Prestress of the Carolinas, A Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410
TRADE NAME	Senate Asphalt, A Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410
TRADE NAME	Virginia Paving Company, A Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410
TRADE NAME	Virginia Sign and Lighting Company, Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410
SUBSIDIARY	NORCUR	6700 McLean Way, Glen Burnie, MD 21060
PARENT	The Branch Group	P.O. Box 4004, Roanoke, VA 24022
PARENT	Branch Highways, Inc.	P.O. Box 4004, Roanoke, VA 24022
BROTHER/SISTER	Branch & Associates, Inc.	P.O. Box 40051, Roanoke, VA 24022
BROTHER/SISTER	G. J. Hopkins, Inc.	P.O. Box 12467, Roanoke, VA 24025
JOINT VENTURE (40% PARTNER)	Balfour Beatty Infrastructure, Inc./E.V. Williams, Inc. (BBI/EVW JV)	430 Eastwood Road, Wilmington, NC 28403
JOINT VENTURE (45% PARTNER)	Corman-E.V. Williams a Joint Venture	12001 Guilford Road, Annapolis Junction, MD 20701
JOINT VENTURE (UNIT PRICE/LINE ITEM)	Dominion Boulevard Constructors, Joint Venture	6700 McLean Way Glen Burnie, MD 21060



Attachment 3.2.7(a)

**Debarment Form – Primary
Covered Transactions**

ATTACHMENT NO. 3.2.7(a)

**CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS**

State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638

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

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

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

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

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

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

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


Signature _____ Date October 6, 2016 Title Pursuit Manager

The Lane Construction Corporation
Name of Firm _____

ATTACHMENT NO. 3.2.7(a)

**CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS**

State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638

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

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

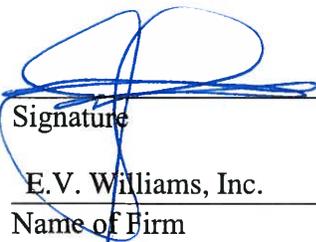
b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under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

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

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

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

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

	October 6, 2016	<u>President</u>
Signature	Date	Title
<hr/>		
E.V. Williams, Inc.		
Name of Firm		



Attachment 3.2.7(b)

Debarment Form – Lower-Tier Covered Transactions

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638

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

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



September 14, 2016
Signature _____ Date _____

Senior Vice President
Title _____

E. Richard Capps Jr., P.E.

STV Incorporated dba STV Group Incorporated
Name of Firm _____

Name of Firm

ATTACHMENT NO. 3.2.7(b)

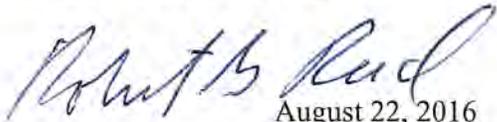
**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638

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

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

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



August 22, 2016

Vice President

Signature

Date

Title

Johnson, Mirmiran & Thompson, Inc.

Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638

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

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

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

 _____ 9/15/16 _____ President
Signature Date Title

Alvi Associates, Inc. _____
Name of Firm

ATTACHMENT NO. 3.2.7(b)

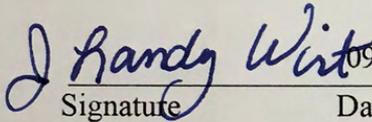
**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638

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

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

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

 09/16/2016

Signature

Date

Chief Engineer

Title

ECS Mid-Atlantic, LLC

Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638

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

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

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

Matthew E. Durby 9-30-2016
Signature Date

Branch Manager
Title

Froehling & Robertson, Inc.
Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638

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

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

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



September 16, 2016

President

Signature

Date

Title

GET Solutions, Inc.

Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638

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

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

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

Mary E. Gay 9/16/16 President & CEO
Signature Date Title

Harris Miller Miller & Hanson Inc.
Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638

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

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

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

Carroll Peterson 9/13/2016 President
Signature Date Title
HASBAN WATER RESOURCES, PLC
Name of Firm

ATTACHMENT NO. 3.2.7(b)

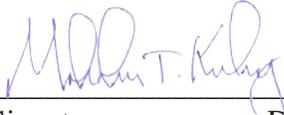
**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638

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

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

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

	September 20, 2016	President
Signature	Date	Title

NXL Construction Services, Inc.
Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638

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

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

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

John Amizor 9/15/2016 President
Signature Date Title

Polizos i Company Communications
Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638

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

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

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



Signature

9/14/2016

Date

President

Title

Precision Measurements, Inc.

Name of Firm



**Offeror's VDOT
Prequalification Certificate**

Richard A. McDonough

From: Prequalification (VDOT) <Prequalification@VDOT.Virginia.gov>
Sent: Monday, September 19, 2016 10:09 AM
To: Richard A. McDonough
Subject: Your assigned Joint Venture # is JV077

Dear
The Lane Construction Corporation,
McLean Contracting Company,
E.V. Williams, Inc.

Thank you for submitting the Joint Venture agreement to the Prequalification Office.
We have processed the paperwork and the Joint Venture: LME Constructors is assigned the Joint Venture # **JV077**
This email is sent to the Lead Firm so please forward to your Joint Ventures.

Please feel free to contact me if there are any concerns.

Thank-you

Suzanne Lucas, CAPM

State Prequalification Supervisor
Construction Division
Virginia Department of Transportation
1401 East Broad Street
Richmond, Virginia 23219
(804) - 786-2941

Email: Prequalification@VDOT.Virginia.gov



COMMONWEALTH OF VIRGINIA



CERTIFICATE OF QUALIFICATION

THE LANE CONSTRUCTION CORPORATION

Vendor Number: **L002**

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

PREQUALIFIED

Your firm specializes in the noted Classification(s):

**GRADING; MAJOR STRUCTURES; PORTLAND CEMENT CONCRETE PAVING;
MINOR STRUCTURES; UNDERGROUND UTILITIES; ASPHALT CONCRETE PAVING**

Issue Date: June 30, 2016

This Rating and Classification will Expire: June 30, 2017

A handwritten signature in blue ink, appearing to read "Suzanne FR Lucas".

Suzanne FR Lucas, State Prequalification Officer

A handwritten signature in blue ink, appearing to read "Don E. Silies".

Don E. Silies, Director of Contracts

It is not permissible to alter this document, use after posted expiration date, or use by persons or firms other than those named on this certificate.



COMMONWEALTH OF VIRGINIA



CERTIFICATE OF QUALIFICATION

MCLEAN CONTRACTING COMPANY

Vendor Number: **M047**

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

PREQUALIFIED

Your firm specializes in the noted Classification(s):

MAJOR STRUCTURES

Issue Date: July 31, 2016

This Rating and Classification will Expire: July 31, 2017

Handwritten signature of Suzanne FR Lucas in blue ink.

Suzanne FR Lucas, State Prequalification Officer

Handwritten signature of Don E. Silies in blue ink.

Don E. Silies, Director of Contracts

It is not permissible to alter this document, use after posted expiration date, or use by persons or firms other than those named on this certificate.



COMMONWEALTH OF VIRGINIA



CERTIFICATE OF QUALIFICATION

E. V. WILLIAMS, INC.

Vendor Number: **W488**

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

PREQUALIFIED

Your firm specializes in the noted Classification(s):

**GRADING; DRAINAGE STRUCTURES;
PORTLAND CEMENT CONCRETE PAVING; UNDERGROUND UTILITIES**

Issue Date: October 31, 2015

This Rating and Classification will Expire: October 31, 2016

Suzanne FR Lucas, State Prequalification Officer

Don E. Silies, Director of Contracts

It is not permissible to alter this document, use after posted expiration date, or use by persons or firms other than those named on this certificate.



Surety Letter

**Zurich American Insurance Company
Fidelity and Deposit Company of Maryland
Liberty Mutual Insurance Company
Hartford Fire Insurance Company**

September 28, 2016

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

RE: **LME Constructors**
Request for Qualifications
DESIGN-BUILD PROJECT FOR I-64 Southside Widening and High Rise Bridge, Phase 1
From: Rotunda Avenue 0.6 miles east of the I-264 interchange at Bowers Hill To: 0.9 miles east of the I-464 Interchange
City of Chesapeake, Virginia; Contract ID Number: C00106692DB93
Estimated Contract Price: \$480,600,000.00

To Whom It May Concern:

This letter will serve to confirm that LME Constructors is a highly regarded and valued client of the sureties, Zurich American Insurance Company (A.M. Best Financial Strength Rating of A+/Superior and Financial Size Category XV), Fidelity and Deposit Company of Maryland (A.M. Best Financial Strength Rating of A+/Superior and Financial Size Category XV), Liberty Mutual Insurance Company (A.M. Best Financial Strength Rating of A/Excellent and Financial Size Category XV), and Hartford Fire Insurance Company (A.M. Best Financial Strength Rating of A+/Superior and Financial Size Category XV), the 'co-sureties'. Each surety company is licensed to conduct surety business in the Commonwealth of Virginia, and each surety company holds a Certificate of Authority as listed in the Department of the Treasury's Listing of Approved Sureties (Department Circular 570) dated July 1, 2016.

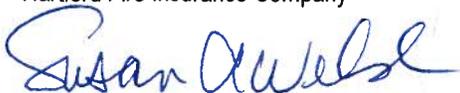
As the sureties for LME Constructors, we advise that LME Constructors is capable of obtaining 100% Performance Bond and 100% Labor and Materials Payment Bond in the amount of the anticipated cost of construction, and said bonds will cover the Project and any warranty periods as provided for in the Contract Documents on behalf of the Contractor, in the event that such firm be the successful bidder and enter into a contract for this Project.

Naturally, as is customary within the surety industry, the issuance of any bonds is contingent upon a favorable underwriting review of project specifics including, but not limited to, the contract terms, conditions, documents, bond forms and confirmation of complete project financing by both LME Constructors and its co-sureties at the time a request for bonds is made. We assume no liability to third parties or to you by issuance of this letter, should bid or final bonds not be issued.

Should you need additional assurance regarding the technical ability or bonding capacity of LME Constructors, please do not hesitate to contact this office.

Sincerely,

Zurich American Insurance Company
Fidelity and Deposit Company of Maryland
Liberty Mutual Insurance Company
Hartford Fire Insurance Company



Susan A. Welsh
Attorney-in-Fact

**ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND
POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Maryland, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Maryland (herein collectively called the "Companies"), by **GERALD F. HALEY, Vice President**, in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint **Sandra M. WINSTED, Susan A. WELSH, Judith A. LUCKY-EFTIMOV, James B. MCTAGGART, Debra J. DOYLE, Sandra M. NOWAK, Melissa L. FORTIER, Jessica B. DEMPSEY, Christina L. SANDOVAL and Diane M. O'LEARY, all of Chicago, Illinois, EACH** its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings**, and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said **ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND**, this 13th day of June, A.D. 2016.

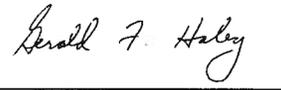
ATTEST:

**ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND**



By: 

*Secretary
Michael McKibben*

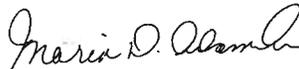


*Vice President
Gerald F. Haley*

**State of Maryland
County of Baltimore**

On this 13th day of June, A.D. 2016, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **GERALD F. HALEY, Vice President, and MICHAEL MCKIBBEN, Secretary**, of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, deposeth and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.



*Maria D. Adamski, Notary Public
My Commission Expires: July 8, 2019*



EXTRACT FROM BY-LAWS OF THE COMPANIES

"Article V, Section 8, Attorneys-in-Fact. The Chief Executive Officer, the President, or any Executive Vice President or Vice President may, by written instrument under the attested corporate seal, appoint attorneys-in-fact with authority to execute bonds, policies, recognizances, stipulations, undertakings, or other like instruments on behalf of the Company, and may authorize any officer or any such attorney-in-fact to affix the corporate seal thereto; and may with or without cause modify or revoke any such appointment or authority at any time."

CERTIFICATE

I, the undersigned, Vice President of the ZURICH AMERICAN INSURANCE COMPANY, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing Power of Attorney is still in full force and effect on the date of this certificate; and I do further certify that Article V, Section 8, of the By-Laws of the Companies is still in force.

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the ZURICH AMERICAN INSURANCE COMPANY at a meeting duly called and held on the 15th day of December 1998.

RESOLVED: "That the signature of the President or a Vice President and the attesting signature of a Secretary or an Assistant Secretary and the Seal of the Company may be affixed by facsimile on any Power of Attorney...Any such Power or any certificate thereof bearing such facsimile signature and seal shall be valid and binding on the Company."

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at a meeting duly called and held on the 5th day of May, 1994, and the following resolution of the Board of Directors of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at a meeting duly called and held on the 10th day of May, 1990.

RESOLVED: "That the facsimile or mechanically reproduced seal of the company and facsimile or mechanically reproduced signature of any Vice-President, Secretary, or Assistant Secretary of the Company, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power of attorney issued by the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies, this 28 day of Sep, 2016.



A handwritten signature in black ink, appearing to read "Michael Bond".

Michael Bond, Vice President

THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Certificate No. 7479482

American Fire and Casualty Company
The Ohio Casualty Insurance Company

Liberty Mutual Insurance Company
West American Insurance Company

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Christina L. Sandoval; Debra J. Doyle; Diane M. O'Leary; James B. McTaggart; Jennifer L. Jakaitis; Jessica B. Dempsey; Judith A. Lucky-Eftimov; Sandra M. Nowak; Sandra M. Winsted; Susan A. Welsh

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

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 8th day of September, 2016.



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

By: David M. Carey
David M. Carey, Assistant Secretary

STATE OF PENNSYLVANIA ss
COUNTY OF MONTGOMERY

On this 8th day of September, 2016, before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Insurance Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

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



COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Teresa Pastella, Notary Public
Plymouth Twp., Montgomery County
My Commission Expires March 28, 2017
Member, Pennsylvania Association of Notaries

By: Teresa Pastella
Teresa Pastella, Notary Public

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

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

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

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

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

I, Gregory W. Davenport, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 28th day of Sep, 2016.



By: Gregory W. Davenport
Gregory W. Davenport, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.

POWER OF ATTORNEY

Direct Inquiries/Claims to:

THE HARTFORD

Bond T-4

One Hartford Plaza

Hartford, Connecticut 06155

call: 888-266-3488 or fax: 860-757-5835)

KNOW ALL PERSONS BY THESE PRESENTS THAT:

Agency Code: 83-550003

- Hartford Fire Insurance Company**, a corporation duly organized under the laws of the State of Connecticut
- Hartford Casualty Insurance Company**, a corporation duly organized under the laws of the State of Indiana
- Hartford Accident and Indemnity Company**, a corporation duly organized under the laws of the State of Connecticut
- Hartford Underwriters Insurance Company**, a corporation duly organized under the laws of the State of Connecticut
- Twin City Fire Insurance Company**, a corporation duly organized under the laws of the State of Indiana
- Hartford Insurance Company of Illinois**, a corporation duly organized under the laws of the State of Illinois
- Hartford Insurance Company of the Midwest**, a corporation duly organized under the laws of the State of Indiana
- Hartford Insurance Company of the Southeast**, a corporation duly organized under the laws of the State of Florida

having their home office in Hartford, Connecticut (hereinafter collectively referred to as the "Companies") do hereby make, constitute and appoint, **up to the amount of Unlimited** :

Jennifer L. Jakaitis, Melissa Fortier, Sandra M. Nowak, Christina L. Sandoval, Susan A. Welsh, Sandra M. Winsted of CHICAGO, Illinois

their true and lawful Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign its name as surety(ies) only as delineated above by , and to execute, seal and acknowledge any and all bonds, undertakings, contracts and other written instruments in the nature thereof, on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

In Witness Whereof, and as authorized by a Resolution of the Board of Directors of the Companies on August 1, 2009, the Companies have caused these presents to be signed by its Vice President and its corporate seals to be hereto affixed, duly attested by its Assistant Secretary. Further, pursuant to Resolution of the Board of Directors of the Companies, the Companies hereby unambiguously affirm that they are and will be bound by any mechanically applied signatures applied to this Power of Attorney.



Wesley W. Cowling

Wesley W. Cowling, Assistant Secretary

M. Ross Fisher

M. Ross Fisher, Vice President

STATE OF CONNECTICUT }
COUNTY OF HARTFORD } ss. Hartford

On this 12th day of July, 2012, before me personally came M. Ross Fisher, to me known, who being by me duly sworn, did depose and say: that he resides in the County of Hartford, State of Connecticut; that he is the Vice President of the Companies, the corporations described in and which executed the above instrument; that he knows the seals of the said corporations; that the seals affixed to the said instrument are such corporate seals; that they were so affixed by authority of the Boards of Directors of said corporations and that he signed his name thereto by like authority.



CERTIFICATE

Kathleen T. Maynard

Kathleen T. Maynard
Notary Public

My Commission Expires July 31, 2016

I, the undersigned, Vice President of the Companies, DO HEREBY CERTIFY that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which is still in full force effective as of 9/23/12.

Signed and sealed at the City of Hartford.



Gary W. Stumper

Gary W. Stumper, Vice President



Attachment 3.2.10

**SCC and DPOR Information
Tables**

ATTACHMENT 3.2.10

State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638

SCC and DPOR Information

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

SCC & DPOR INFORMATION FOR BUSINESSES (RFQ Sections 3.2.10.1 and 3.2.10.2)							
Business Name	SCC Information (3.2.10.1)			DPOR Information (3.2.10.2)			
	SCC Number	SCC Type of Corporation	SCC Status	DPOR Registered Address	DPOR Registration Type	DPOR Registration Number	DPOR Expiration Date
The Lane Construction Corporation	F0254476	Foreign Corporation	Active	90 Fieldstone Court Cheshire, CT 06410	Contractor Class A	2701011871	2018-01-31
The Lane Construction Corporation	F0254476	Foreign Corporation	Active	90 Fieldstone Court Cheshire, CT 06410	Business Entity Registration	0407002174	2017-12-31
The Lane Construction Corporation	F0254476	Foreign Corporation	Active	14500 Avion Parkway, Suite 200 Chantilly, VA 20151	Business Entity Branch Office Registration	0411000988	2018-02-28
McLean Contracting Company	F0043929	Foreign Corporation	Active	6700 McLean Way Glen Burnie, MD 21060	Class A Contractor	2701000100	2018-08-31
E. V. Williams, Inc.	04784666	Corporation	Active	925 South Military Highway Virginia Beach, VA 23467	Contractor Class A	2705037384	2017-02-28
STV Incorporated DBA STV Group Inc.	F0253452	Foreign Corporation	Active	10800 Midlothian Turnpike, Suite 302 Richmond, VA 23235	Business Entity Branch Office Registration	0411000462	2018-02-28
STV Incorporated DBA STV Group Incorporated	F0253452	Foreign Corporation	Active	1400 I Street NW Suite 1100 Washington, D.C. 20005	Business Entity Branch Office Registration	0411001178	2018-02-28
STV Incorporated DBA STV Group Incorporated	F0253452	Foreign Corporation	Active	7125 Ambassador Road Suite 200 Baltimore, MD 21244	Business Entity Branch Office Registration	0411000845	2018-02-28
STV Incorporated DBA STV Group Incorporated	F0253452	Foreign Corporation	Active	2722 Merrillee Drive Suite 350 Fairfax, VA 22031	Business Entity Branch Office Registration	0411000661	2018-02-28

ATTACHMENT 3.2.10

State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638

SCC and DPOR Information

SCC & DPOR INFORMATION FOR BUSINESSES (RFQ Sections 3.2.10.1 and 3.2.10.2)							
Business Name	SCC Information (3.2.10.1)			DPOR Information (3.2.10.2)			
	SCC Number	SCC Type of Corporation	SCC Status	DPOR Registered Address	DPOR Registration Type	DPOR Registration Number	DPOR Expiration Date
STV Incorporated DBA STV/Ralph Whitehead Associates	F0253452	Foreign Corporation	Active	1000 West Morehead Street, Suite 200 Charlotte, NC 28208	Business Entity Branch Office Registration	0411000710	2018-02-28
Johnson, Mirmiran & Thompson, Inc.	F1499013	Foreign Corporation	Active	272 Bendix Road Suite 260 Virginia Beach, VA 23452	Business Entity Branch Office Registration	0411000440	2018-02-28
Johnson, Mirmiran & Thompson, Inc.	F1499013	Foreign Corporation	Active	9201 Arboretum Parkway Suite 310 Richmond, VA 23236	Business Entity Branch Office Registration	0411000029	2018-02-28
Johnson, Mirmiran & Thompson, Inc.	F1499013	Foreign Corporation	Active	13921 Park Center Road Suite 140 Herndon, VA 20171	Business Entity Branch Office Registration	0411000441	2018-02-28
Johnson, Mirmiran & Thompson, Inc.	F1499013	Foreign Corporation	Active	72 Loveton Circle Sparks, MD 21152	Business Entity Registration	0407001314	2017-12-31
Alvi Associates, Inc.	F1799750	Foreign Corporation	Active	110 West Road, Suite 250 Towson, MD 21204	Business Entity Registration	0407002864	2017-12-31
ECS Mid-Atlantic, LLC	S1208216	Limited Liability Company	Active	2119-D North Hamilton Street Richmond, VA 23230	Business Entity Branch Office Registration	0411000384	2018-02-28
Froehling & Robertson, Incorporated	00272112	Corporation	Active	833 Professional Place, Chesapeake, VA 23320	Business Entity Branch Office Registration	0411000049	2018-02-28

ATTACHMENT 3.2.10

State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638

SCC and DPOR Information

SCC & DPOR INFORMATION FOR BUSINESSES (RFQ Sections 3.2.10.1 and 3.2.10.2)							
Business Name	SCC Information (3.2.10.1)			DPOR Information (3.2.10.2)			
	SCC Number	SCC Type of Corporation	SCC Status	DPOR Registered Address	DPOR Registration Type	DPOR Registration Number	DPOR Expiration Date
Geotechnical Environmental and Testing Solutions, Inc. (dba GET Solutions, Inc.)	05418470	Corporation	Active	204-B Grayson Road Virginia Beach, VA 23462	Business Entity Registration	0407004018	2017-12-31
Harris Miller Miller & Hanson, Inc.	F1451857	Foreign Corporation	Active	N/A	N/A	N/A	N/A
Hassan Water Resources, PLC	S2293282	Limited Liability Company	Active	2255 Parkers Hill Drive Maidens, VA 23102	Professional Limited Liability Company	0413000299	2017-12-31
NXL Construction Co., Inc. (DBA NXL Construction Services, Inc.)	03497427	Corporation	Active	114 East Cary Street, Suite 200 Richmond, VA 23219	Business Entity Registration	0407003031	2017-12-31
Polizos & Company	06909725	Corporation	Active	N/A	N/A	N/A	N/A
Precision Measurements, Inc.	04504361	Corporation	Active	851 Seahawk Circle Suite 103 Virginia Beach, VA 23452	Business Entity Registration	0407003345	2017-12-31

ATTACHMENT 3.2.10

State Project No. 0064-131-811, P101, R201, C501, B662-B669, D637, D638

SCC and DPOR Information

DPOR INFORMATION FOR INDIVIDUALS (RFQ Sections 3.2.10.3 and 3.2.10.4)						
Business Name	Individual's Name	Office Location Where Professional Services will be Provided (City/State)	Individual's DPOR Address	DPOR Type	DPOR Registration Number	DPOR Expiration Date
The Lane Construction Corporation	David Grey, P.E.	Charlotte, NC	Davidson, NC 28036	Professional Engineer	0402014687	2017-05-31
STV Incorporated dba STV Group Incorporated	Michael Hooshangi, P.E.	Fairfax, VA	Fairfax, VA 22030	Professional Engineer	0402019827	2016-10-31
STV Incorporated dba STV Group Incorporated	Mark Robbins, P.E.	Charlotte, NC	Union Grove, NC 28689	Professional Engineer	0402046019	2017-06-30
NXL Construction Co., Inc.	William McDowall, P.E.	Richmond, VA	Hopewell, VA 23860	Professional Engineer	0402018236	2016-10-31



**SCC and DPOR Supporting
Registration/License
Documentation**



THE LANE CONSTRUCTION CORPORATION

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Business Entities

UCC or Tax Liens

General

SCC ID: F0254476
Entity Type: Foreign Corporation
Jurisdiction of Formation: CT
Date of Formation/Registration: 7/24/1972
Status: Active
Shares Authorized: 11700



MCLEAN CONTRACTING COMPANY

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Business Entities

UCC or Tax Liens

Court Services

Additional Services

General

SCC ID: F0043929
Entity Type: Foreign Corporation
Jurisdiction of Formation: DE
Date of Formation/Registration: 8/3/1933
Status: Active
Shares Authorized: 500000

Principal Office

6700 MCLEAN WAY
GLEN BURNIE MD21060



E. V. WILLIAMS, INC.

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Business Entities

UCC or Tax Liens

Court Services

Additional Services

General

SCC ID: 04784666
Entity Type: Corporation
Jurisdiction of Formation: VA
Date of Formation/Registration: 1/27/1997
Status: Active
Shares Authorized: 5000

Principal Office

925 S MILITARY HWY
VA BEACH VA23464



STV GROUP INCORPORATED (USED IN VA. BY: STVINCORPORATED)

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Business Entities

UCC or Tax Liens

Court Services

Additional Services

General

SCC ID: F0253452
Entity Type: Foreign Corporation
Jurisdiction of Formation: NY
Date of Formation/Registration: 8/9/1999
Status: Active
Shares Authorized: 2000

Principal Office

205 WEST WELSH DRIVE
DOUGLASSVILLE PA19518

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Business Entities

UCC or Tax Liens

Court Services

Additional Services

Johnson, Mirmiran & Thompson, Inc.

General

SCC ID: F1499013
Entity Type: Foreign Corporation
Jurisdiction of Formation: MD
Date of Formation/Registration: 10/17/2006
Status: Active
Shares Authorized: 1000

Principal Office

72 LOVETON CIRCLE
SPARKS MD21152



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Business Entities

UCC or Tax Liens

Court Services

Additional Services

ALVI ASSOCIATES, INC.

General

SCC ID: F1799750
Entity Type: Foreign Corporation
Jurisdiction of Formation: MD
Date of Formation/Registration: 8/13/2009
Status: Active
Shares Authorized: 1000

Principal Office

110 WEST ROAD SUITE 250
TOWSON MD21204



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Business Entities

UCC or Tax Liens

Court Services

Additional Services

ECS - Mid-Atlantic, LLC

General

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

Principal Office

14026 THUNDERBOLT PL STE 100
CHANTILLY VA20151



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Business Entities

UCC or Tax Liens

Court Services

Additional Services

FROEHLING & ROBERTSON, INCORPORATED

General

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

Principal Office

3015 DUMBARTON ROAD
HENRICO VA23228



Geotechnical Environmental and Testing Solutions, Inc.

General

SCC ID: 05418470
 Entity Type: Corporation
 Jurisdiction of Formation: VA
 Date of Formation/Registration: 6/16/2000
 Status: Active
 Shares Authorized: 5000

Principal Office

204 GRAYSON ROAD
 VIRGINIA BEACH VA23462

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Business Entities

UCC or Tax Liens

Court Services

Additional Services



Harris Miller Miller & Hanson Inc.

General

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

Principal Office

77 SOUTH BEDFORD ST
 BURLINGTON MA01803

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Business Entities

UCC or Tax Liens

Court Services

Additional Services

Hassan Water Resources, PLC

General

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

Principal Office

2255 PARKERS HILL DR
MAIDENS VA23102



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Business Entities

UCC or Tax Liens

Court Services

Additional Services

NXL Construction Co., Inc.

General

SCC ID: 03497427
Entity Type: Corporation
Jurisdiction of Formation: VA
Date of Formation/Registration: 11/17/1989
Status: Active
Shares Authorized: 5000

Principal Office

114 E CARY STREET SUITE 200
RICHMOND VA23219



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Business Entities

UCC or Tax Liens

Court Services

Additional Services

Polizos & Company

General

SCC ID: 06909725
Entity Type: Corporation
Jurisdiction of Formation: VA
Date of Formation/Registration: 2/29/2008
Status: Active
Shares Authorized: 25000

Principal Office

302 51ST STREET
VIRGINIA BEACH VA23451



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Business Entities

UCC or Tax Liens

Court Services

Additional Services

PRECISION MEASUREMENTS, INC.

General

SCC ID: 04504361
Entity Type: Corporation
Jurisdiction of Formation: VA
Date of Formation/Registration: 7/24/1995
Status: Active
Shares Authorized: 5000

Principal Office

851 SEAHAWK CIRCLE
SUITE 103
VIRGINIA BEACH VA23452

DPOR License Lookup License Number 2701011871

License Details

Name	THE LANE CONSTRUCTION CORPORATION / SENATE ASPHALT
DBA Name	VA PAVING COMPANY / VA SIGN AND LIGHTING COMPANY
License Number	2701011871
License Description	Contractor
Firm Type	Corporation
Rank ¹	Class A
Address	90 FIELDSTONE COURT, CHESHIRE, CT 06410
Specialties²	Commercial Building (CBC) Highway / Heavy (H/H) Residential Building (RBC)
Initial Certification Date	1972-10-12
Expiration Date	2018-01-31

DPOR License Lookup License Number 0407002174

License Details

Name	THE LANE CONSTRUCTION CORPORATION / SENATE ASPHALT
License Number	0407002174
License Description	Business Entity Registration
Firm Type	Corporation
Rank	Business Entity
Address	90 FIELDSTONE COURT, CHESHIRE, CT 06410
Initial Certification Date	1985-09-30
Expiration Date	2017-12-31

DPOR License Lookup License Number 0411000988

License Details

Name	THE LANE CONSTRUCTION CORPORATION / SENATE ASPHALT
License Number	0411000988
License Description	Business Entity Branch Office Registration
Business Type	Corporation
Rank	Business Entity Branch Office
Address	14500 AVION PKWY SUITE 200, CHANTILLY, VA 20151
Initial Certification Date	2013-04-18
Expiration Date	2018-02-28

DPOR License Lookup License Number 2701000100

License Details

Name	MCLEAN CONTRACTING COMPANY
License Number	2701000100
License Description	Contractor
Firm Type	Corporation
Rank ¹	Class A
Address	6700 MCLEAN WAY, GLEN BURNIE, MD 21060-6480
Specialties²	Highway / Heavy (H/H) Marine Facility (MCC)
Expiration Date	2018-08-31

DPOR License Lookup License Number 2705037384

License Details

Name	EV WILLIAMS, INC
License Number	2705037384
License Description	Contractor
Firm Type	Corporation
Rank ¹	Class A
Address	925 SOUTH MILITARY HWY, VIRGINIA BEACH, VA 23467-5128
Specialties²	Highway / Heavy (H/H)
Initial Certification Date	1997-02-07
Expiration Date	2017-02-28

DPOR License Lookup License Number 0411000462

License Details

Name STV INCORPORATED DBA STV GROUP INC
DBA Name STV GROUP INC
License Number 0411000462
License Description Business Entity Branch Office Registration
Rank Business Entity Branch Office
Address 10800 MIDLOTHIAN TNPK SUITE 302, RICHMOND, VA 23235
Initial Certification Date 2006-11-15
Expiration Date 2018-02-28

Related Licenses ¹

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402011415	BRIGGS, RONALD C	Professional Engineer License	Engineering	2017-06-30

DPOR License Lookup License Number 0411001178

License Details

Name STV INCORPORATED
DBA Name STV GROUP INCORPORATED
License Number 0411001178
License Description Business Entity Branch Office Registration
Rank Business Entity Branch Office
Address 1400 I STREET NW STE 1100, WASHINGTON, DC 20005
Initial Certification Date 2014-12-19
Expiration Date 2018-02-28

Related Licenses ¹

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402048603	RANDOLPH, MICHAEL W	Professional Engineer License	Engineering	2017-01-31

DPOR License Lookup License Number 0411000845

License Details

Name STV INCORPORATED
DBA Name STV GROUP INCORPORATED
License Number 0411000845
License Description Business Entity Branch Office Registration
Rank Business Entity Branch Office
Address 7125 AMBASSADOR RD SUITE 200, BALTIMORE, MD 21244
Initial Certification Date 2011-07-15
Expiration Date 2018-02-28

Related Licenses ¹

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402017907	OPPENHEIMER, JOEL K	Professional Engineer License	Engineering	2017-09-30

DPOR License Lookup License Number 0411000661

License Details

Name STV INCORPORATED
DBA Name STV GROUP INCORPORATED
License Number 0411000661
License Description Business Entity Branch Office Registration
Rank Business Entity Branch Office
Address 2722 MERRILLEE DR SUITE 350, FAIRFAX, VA 22031
Initial Certification Date 2009-09-11
Expiration Date 2018-02-28

Related Licenses ¹

License Number	License Holder Name	License Type	Relation Type	License Expiry
0401016386	STANDIFORD, PATRICK GERARD	Architect License	Architecture	2017-04-30
0402019827	HOOSHANGI, MICHAEL M	Professional Engineer License	Engineering	2016-10-31

DPOR License Lookup License Number 0411000710

License Details

Name	STV INCORPORATED
DBA Name	STV/RALPH WHITEHEAD ASSOCIATES
License Number	0411000710
License Description	Business Entity Branch Office Registration
Rank	Business Entity Branch Office
Address	1000 W MOREHEAD ST SUITE 200, CHARLOTTE, NC 28208
Initial Certification Date	2010-01-22
Expiration Date	2018-02-28

Johnson, Mirmiran & Thompson, Inc.

DPOR License Lookup License Number 0411000440

License Details

Name	JOHNSON MIRMIRAN & THOMPSON INC
License Number	0411000440
License Description	Business Entity Branch Office Registration
Rank	Business Entity Branch Office
Address	272 BENDIX ROAD SUITE 260, VIRGINIA BEACH, VA 23452
Initial Certification Date	2006-03-06
Expiration Date	2018-02-28

DPOR License Lookup License Number 0411000029

License Details

Name	JOHNSON, MIRMIRAN & THOMPSON, INC.
License Number	0411000029
License Description	Business Entity Branch Office Registration
Business Type	Corporation
Rank	Business Entity Branch Office
Address	9201 ARBORETUM PKWY SUITE 310, RICHMOND, VA 23236
Initial Certification Date	1992-03-24
Expiration Date	2018-02-28

DPOR License Lookup License Number 0411000441

License Details

Name	JOHNSON MIRMIRAN & THOMPSON INC
License Number	0411000441
License Description	Business Entity Branch Office Registration
Rank	Business Entity Branch Office
Address	13921 PARK CENTER RD SUITE 140, HERNDON, VA 20171
Initial Certification Date	2006-03-06
Expiration Date	2018-02-28

DPOR License Lookup License Number 0407001314

License Details

Name	JOHNSON MIRMIRAN & THOMPSON INC
License Number	0407001314
License Description	Business Entity Registration
Rank	Business Entity
Address	72 LOVETON CIRCLE, SPARKS, MD 21152
Initial Certification Date	1982-08-30
Expiration Date	2017-12-31

Alvi Associates, Inc

DPOR License Lookup License Number 0407002864

License Details

Name	ALVI ASSOCIATES, INC.
License Number	0407002864
License Description	Business Entity Registration
Rank	Business Entity
Address	110 WEST RD STE 250, TOWSON, MD 21204
Initial Certification Date	1988-04-04
Expiration Date	2017-12-31

DPOR License Lookup License Number 0411000384

License Details

Name	ECS MID-ATLANTIC LLC
License Number	0411000384
License Description	Business Entity Branch Office Registration
Rank	Business Entity Branch Office
Address	2119-D NORTH HAMILTON ST, RICHMOND, VA 23230
Initial Certification Date	2004-12-10
Expiration Date	2018-02-28

DPOR License Lookup License Number 0411000049

License Details

Name	FROEHLING & ROBERTSON, INC
License Number	0411000049
License Description	Business Entity Branch Office Registration
Business Type	Corporation
Rank	Business Entity Branch Office
Address	833 PROFESSIONAL PLACE, CHESAPEAKE, VA 23320
Initial Certification Date	1992-04-08
Expiration Date	2018-02-28

GET Solutions, Inc.

DPOR License Lookup License Number 0407004018

License Details

Name	GEOTECHNICAL ENVIRONMENTAL & TESTING SOLUTIONS INC
License Number	0407004018
License Description	Business Entity Registration
Firm Type	Corporation
Rank	Business Entity
Address	204-B GRAYSON ROAD, VIRGINIA BEACH, VA 23462
Initial Certification Date	2000-09-12
Expiration Date	2017-12-31

Harris Miller Miller and Hanson, Inc. (N/A)

Hassan Water Resources, PLC

DPOR License Lookup License Number 0413000299

License Details

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

NXL Construction Co., Inc.

DPOR License Lookup License Number 0407003031

License Details

Name	NXL CONSTRUCTION CO INC
DBA Name	NXL CONSTRUCTION SERVICES INC
License Number	0407003031
License Description	Business Entity Registration
Firm Type	Corporation
Rank	Business Entity
Address	114 E CARY ST STE 200, RICHMOND, VA 23219
Initial Certification Date	1991-11-08
Expiration Date	2017-12-31

Polizos and Company (N/A)

Precision Measurements, Inc.

DPOR License Lookup License Number 0407003345

License Details

Name	PRECISION MEASUREMENTS INC
License Number	0407003345
License Description	Business Entity Registration
Firm Type	Corporation
Rank	Business Entity
Address	851 SEAHAWK CIR SUITE 103, VIRGINIA BEACH, VA 23452
Initial Certification Date	1995-10-24
Expiration Date	2017-12-31

KEY PERSONNEL DPOR

David Grey, PE

DPOR License Lookup License Number 0402014687

License Details

Name GREY, DAVID WISEMAN
License Number 0402014687
License Description Professional Engineer License
Rank Professional Engineer
Address DAVIDSON, NC 28036
Initial Certification Date 1984-04-19
Expiration Date 2017-05-31

Related Licenses ¹

License Number	License Holder Name	License Type	Relation Type	License Expiry
0407002174	THE LANE CONSTRUCTION CORPORATION / SENATE ASPHALT	Business Entity Registration	Engineering	2017-12-31

Michael Hooshangi, PE

DPOR License Lookup License Number 0402019827

License Details

Name HOOSHANGI, MICHAEL M
License Number 0402019827
License Description Professional Engineer License
Rank Professional Engineer
Address FAIRFAX, VA 22030
Initial Certification Date 1989-06-14
Expiration Date 2016-10-31

Related Licenses ¹

License Number	License Holder Name	License Type	Relation Type	License Expiry
0411000661	STV INCORPORATED	Business Entity Branch Office Registration	Engineering	2018-02-28

Mark Robbins, PE

DPOR License Lookup License Number 0402046019

License Details

Name	ROBBINS, MARK FRANKLIN
License Number	0402046019
License Description	Professional Engineer License
Rank	Professional Engineer
Address	UNION GROVE, NC 28689
Initial Certification Date	2009-06-01
Expiration Date	2017-06-30

William McDowall, PE

DPOR License Lookup License Number 0402018236

License Details

Name	MCDOWALL, WILLIAM DOUGLAS II
License Number	0402018236
License Description	Professional Engineer License
Rank	Professional Engineer
Address	HOPEWELL, VA 23860-7777
Initial Certification Date	1988-02-23
Expiration Date	2016-10-31



Attachment 3.3.1(a)
**Key Personnel Resume
Forms**

ATTACHMENT 3.3.1(a)

(Addendum No. 1 – reference form on 2nd page removed)

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.	
a. Name & Title: TOM PHILLIPS, SENIOR PROJECT MANAGER	
b. Project Assignment: DESIGN-BUILD PROJECT MANAGER	
c. Name of Firm with which you are now associated: THE LANE CONSTRUCTION CORPORATION	
d. Employment History: With this Firm <u>< 1 Years</u> With Other Firms <u>39</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): Mr. Phillips has over 39 years of project management and construction management experience on a wide assortment of projects ranging in value from \$25M to \$23 billion. His project experience includes heavy civil infrastructure, roads, bridges, major earthworks operations, wastewater and potable water networks and plants, industrial plants, buildings. His responsibilities have included the management of office and field personnel, management of design effort, adherence to corporate safety policies, contracts administration, submittals, payment certifications, project and programmatic planning and scheduling, procurement, change order and claims negotiations and settlements, budget management and bottom-line P&L. <u>The Lane Construction Corporation, 7/2016-Present:</u> Mr. Phillips is currently responsible for supporting operations on active projects and projects in development. <u>Bechtel Corporation, 5/2007-7/2015 & 7/1999-5/2005:</u> Senior Project Manager- Directed operations of all design and construction and was responsible for the projects budget, oversaw professional office staff and field personnel. He personally directed operations and established delivery strategy under fast-track design approach. His duties included strategic planning and execution, established and managed budgets, set goals and objectives, developed construction means and methods, subcontract formation, change management, payment certifications, schedule development, quality metrics, cost and commitment reporting, stakeholder interface and project safety planning. He originally joined Bechtel as a project manager. <u>Parsons International Ltd., 5/2005-5/2007:</u> Sr. Program Manager for Saadiyat Island Project, Abu Dhabi, UAE leading significant transportation and infrastructure project. Reporting to the Regional VP, Tom directed operations of all design-construction for a major infrastructure development project. He personally-directed operations and established the overall delivery strategy under fast-track design approach. His duties included strategic planning and execution of all design-build work, he established and managed budgets, set program goals and objectives, oversight of all program activities involving design and construction management staff, presentations to key stakeholders, change management, payment certifications, schedule development, quality metrics and program cost reporting.	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Virginia Tech, Blacksburg, VA/ BS/1977/ Building Construction	
f. Active Registration: Year First Registered/ Discipline/VA Registration #: N/A	
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated. Provide references for each of the three (3) projects using Key Personnel References form-Attachment 3.3.1(b))	
* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.	
Wheatstone LNG Plant Project, Perth, Western Australia (DESIGN-BUILD)	
Name of Firm: Bechtel Oil, Gas & Chemicals	Project Role: Sr. Project Manager-Civil
Beginning Date: 12/2011	End Date: 6/2014
Specific Responsibilities: As Senior Project Manager for this project, Mr. Phillips was responsible for the overall project design and construction of all civil work, valued at \$4.5 billion. He supervised and managed the design, construction, quality management, contract administration and oversaw over 800 professional staff and field personnel. He personally directed operations and established the overall civil delivery strategy under a fast-track design approach successfully employing work front packaging to complete the site preparation, earthwork, roads, piling and concrete work for the plant site on-time in support of the overall project schedule and commencement of follow-on plant modules installation. He oversaw area activities involving field engineering,	

topographic surveys, contracts formation, change management, payment certifications, schedule management, engineering deliverables, design modifications, environmental permits, quality plan and cost and commitment reporting including engineering, procurement and timely delivery of all materials, equipment, services and labor. He established the project's TMP, Construction Traffic Control Plan, Construction Environmental Control Plan and Borrow Pit Management Plan and was party to Bechtel's Basis of Design governing the plant's civil improvements. Key contributor to project safety plan.

Project Relevance: The civil scope for the Wheatstone LNG project, a major project for Chevron of \$23B (overall budget), involved extensive mass earthworks of 14-million cubic meters of fill from borrow involving over 300 pieces of heavy earthmoving equipment, a CIP RCC bridge, installation of 24,000 tapered steel piling, placement of concrete foundations and superstructure (210,000-CM), soils improvement using dynamic replacement, surveys and testing, road network including module haul road, storm water management catering to cyclone events and, all under stringent safety and quality plans.

Khalifa Port & Industrial Zone Project, Abu Dhabi, UAE (DESIGN-BUILD)

Name of Firm: Bechtel International Ltd.	Project Role: Senior Project Manager
Beginning Date: 2009	End Date: 2010

Specific Responsibilities: Mr. Phillips was PM for the industrial zone area of major new port project establishing the overall delivery strategy. He oversaw all project area activities involving contract formation, change management, payment certifications, schedule management, quality metrics and cost and commitment reporting, including procurement and timely delivery of all materials, equipment, services and labor. He managed the complete cycle of bid, evaluation and award for 3 major infrastructure design-build packages each approximately \$1 billion in value. He conducted presentations to major stakeholders including electrical and water authority (ADWEA), Abu Dhabi Municipality, UAE Environmental Authority, Navy, Abu Dhabi Sewage Services Company and others.

Project Relevance: Scope of this \$7 billion project included heavy civil earthworks of 60-million cubic meters, highways and roads delivering access to new port and industrial zone area, extensive PC and CIP flyovers and bridges. Scope included power networks, potable water distribution, ground water control, open-channel conveyance of seawater cooling and process water distribution, pump stations, WW collection and WWTP using design/build, fast-track approach.

Saadiyat Island Development Project, Abu Dhabi, UAE (DESIGN-BUILD)

Name of Firm: Parsons International Ltd.	Project Role: Senior Program Manager
Beginning Date: 2005	End Date: 2007

Specific Responsibilities: Mr. Phillips led this significant civil infrastructure project of overall value of \$5 billion involving 2,700-Hectare island development in Abu Dhabi. He oversaw a professional team of 150 designers and construction supervision and he oversaw area activities involving field engineering, topographic surveys, contracts formation, change management, payment certifications, schedule management, engineering deliverables, design modifications, environmental permits, quality plan and cost and commitment reporting including engineering, procurement and timely delivery of all materials, equipment, services and labor. He established the project's TMP and he established a USACE-based safety plan for the program and conducted presentations to major stakeholders such as electrical and water authority (ADWEA), Abu Dhabi Municipality, UAE Environmental Authority and others.

Project Relevance: Project scope included 66 kilometers of highways and roads plus 19 segmental bridges, 15-million cubic meters of mass earthwork and channel dredging, dewatering, PW transmission pipeline, installation of HT UG electrical networks, HAZMATs remediation and 1,000-vessel marina. Responsible for design-construction under fast-track delivery, master plan development, environmental impact studies, aerial mapping, topographic and channel bathymetric surveys, geotechnical investigations, marine and traffic studies.

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. **N/A. Mr. Phillips is not required on-site full-time.**

ATTACHMENT 3.3.1(a)

(Addendum No. 1 – reference form on 2nd page removed)

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.	
a. Name & Title: DAVID GREY, PE, SENIOR ENGINEER/PURSUIT MANAGER	
b. Project Assignment: RESPONSIBLE CHARGE ENGINEER	
c. Name of Firm with which you are now associated: THE LANE CONSTRUCTION CORPORATION	
<p>d. Employment History: With this Firm 8 Years With Other Firms 30 Years</p> <p>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):</p> <p>Mr. Grey brings over 35 years of experience and has been instrumental in LANE’s D-B experience throughout North America. His hands-on D-B experience includes serving as Project Manager on over \$450M in alternative delivery, best value contracts. Prior to joining LANE, Mr. Grey led all D-B at risk operations for HDR Engineering. He provided constructability reviews, construction phasing, cost estimating, scheduling, and value engineering. He also participated in value engineering studies for the Alaska DOT (Knick Arm Bridge, Gravina Island Bridge), Colorado DOT, Oregon DOT (Oregon Bridge Delivery Program), Washington DOT (I-5 Columbia River Crossing), Illinois State Toll Highway Authority, Florida DOT, and Utah DOT.</p> <p>The Lane Construction Corporation, 2008-Present: Mr. Grey serves Senior Engineer/Pursuit Manager for The Lane Construction Corporation with responsibility for Design-Build and P3 pursuits. He has previously served as District Manager for Design-Build projects, the bridge construction division, major project estimating and prestress concrete operations.</p> <p>HDR Engineering, 2003-2008: As Manager of Transportation, Mr. Grey was responsible for all the company’s at-risk D-B Transportation pursuits. His responsibilities included business development, and project oversight for all transportation Design-Build projects. He also provided constructability reviews, construction phasing, cost estimating, scheduling and value engineering throughout the US. He also participated in four CEVP studies for Utah DOT on projects in the Salt Lake City area.</p> <p>Rea Construction Company, 1991-2003: As Vice President, Mr. Grey was responsible for the Bridge Division and Design-Build Services. While at Rea, Mr. Grey was involved in numerous bridge and highway projects including the reconstruction of I-85 and I-77 in Charlotte, NC, at several locations. He has also been involved in various projects including interstate reconstruction in the cities of Raleigh, Greensboro, and Winston-Salem, North Carolina, and Spartanburg and Columbia, South Carolina. He has been responsible for a significant number of successful Value Engineering proposals with the NCDOT and SCDOTs. He has performed constructability reviews for several entities including NCDOT that have resulted in cost savings, and improved construction phasing.</p>	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: University of North Carolina, Charlotte, NC/ BS/ 1975/ B.S Engineering	
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 1984/Professional Engineer/Virginia/ 0402014687	
<p>g. Document the extent and depth of your experience and qualifications relevant to the Project.</p> <ol style="list-style-type: none"> <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> <i>Note whether experience is with current firm or with other firm.</i> <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> <p>(List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated. Provide references for each of the three (3) projects using Key Personnel References form-Attachment 3.3.1(b))</p> <p>* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.</p>	
NCDOT, I-85 Yadkin River Bridge, Rowan & Davidson Counties, NC (DESIGN-BUILD)	
Name of Firm: The Lane Construction Corporation	Project Role: District Manager
Beginning Date: 2010	End Date: 2013
Specific Responsibilities: Mr. Grey was responsible for the overall project delivery of this \$136 million reconstruction and widening project. Mr. Grey worked with both the design and construction team to ensure the project delivered to NCDOT met and/or exceeded their expectations and requirements. He was fully integrated among the project team and provided supervisory direction in approving engineering decisions during construction. Mr. Grey communicated regularly with NCDOT and was vested	

with the authority to act on the behalf of the D-B team. A critical aspect of the project was maintenance of traffic (MOT) during construction and incident management. Mr. Grey oversaw the development and implementation of the MOT plan that placed great emphasis on separating construction from highway traffic, including a hauling plan that effectively separated haul vehicles from I-85 as much as possible. He also oversaw the development and implementation of an incident management plan (IMP) that addressed issues such as well-defined detour routing for major traffic incidents, on-site wrecker service for attending to crash sites, and close coordination with the Department of Motor Vehicles. The program was a huge success, there were no serious or fatal crashes during three years of interstate construction. ***STV was the Lead Designer and Mr. Grey worked closely with our proposed Lead Structural Engineer, Mr. Robbins, on this project.***

Project Relevance: The project included the widening of a 3-mile-long stretch of I-85 roadway to from four to eight lanes and the construction of six new bridges, including the 3,000-foot-long dual bridges over the Yadkin River, wetlands, and Norfolk Southern Railway and the North Carolina Railroad. The firm also designed the major reconstruction of the US 29/70 and NC 150 interchange, and relocation of the road from north of SR 2120 (Long Ferry Road) to south of the existing NC 150 flyover bridge. This corridor is the most direct and heavily traveled route between Richmond, VA and Atlanta, GA carrying nearly 70,000 vehicles each day. A complex phasing plan was required in order to maintain traffic during the replacement of the existing bridge carrying I-85 over the Yadkin River. This included shifts, major bridge designs, and extensive collaboration between team members. After the northbound lanes were constructed, all traffic was moved onto the northbound side of I-85 for construction of the southbound lanes. The new dual bridges span a wetland, river, and three railroad tracks. The structures span two Norfolk Southern Railway main line tracks, as well as a future freight and Atlanta-to-Washington high-speed rail line. Coordination efforts involved plan approval for bridge work and the proposed relocation of an at-grade crossing. The increased span of the new parallel bridges will provide room for future rail improvements. To maximize the efficiency of the bridge design, the team chose a modified 77-inch-deep bulb-T, prestressed concrete beam for all concrete spans. To eliminate the need for bridge overhang falsework, the team implemented a special edge beam that also served as the formwork for the deck slab overhang. The team discovered that by slightly widening the median of the bridge to 70 feet, that a single work bridge could be constructed in the center median, reducing project cost, timeframe, and environmental impacts.

NCDOT I-85/I-485 Turbine Interchange, Mecklenburg County, NC (DESIGN-BUILD)

Name of Firm:	The Lane Construction Corporation	Project Role:	Design-Build Project Manager
Beginning Date:	2011	End Date:	2014

Specific Responsibilities: Mr. Grey was the DBPM on this \$98M D-B project with ***STV as the Lead Designer.*** Mr. Grey was responsible for design and construction for the entire project. As DBPM, Mr. Grey was responsible for the project design and construction. Mr. Grey was fully integrated among the project team which included subcontractors and subconsultants. He provided supervisory direction on engineering decisions during construction. Mr. Grey was knowledgeable and proficient on engineering decisions related to design and/or construction. Mr. Grey communicated regularly with the Owner and had authority to act on behalf of LANE and shut down the project (not necessary on this project). Mr. Grey also ensured that engineering services were performed by qualified and licensed professionals and that plans were signed and sealed by such qualified professionals consistent with applicable licensing regulations by the NCBELS. Mr. Grey communicated frequently with the DM, CM and Quality personnel.

Project Relevance: Project consists of the design and construction of the interchange of Interstate 85 and Interstate 485 (Charlotte Outer Eastern Loop). The existing I- 85/I-485 Interchange was modified to a turbine interchange that utilizes smaller, single-span bridges, smaller columns and flatter roadway profiles. Under Mr. Grey’s direction, during the proposal phase, the team proposed a two level “turbine” interchange design rather than NCDOT’s originally four-level “stack” type directional interchange with high-speed ramps. The team identified significant potential safety and constructability issues with NCDOT’s original proposed interchange. The innovative concept greatly reduced the construction work performed and significantly improved safety, in addition to reducing costs to the point of eliminating the need for gap financing. The first of its kind in North Carolina, and extremely uncommon in the United States, the turbine interchange design circles all left-turning traffic around a central bridge in a counter clockwise direction, creating a seamless movement between the two highways.

NCDOT, Bridge over the Tar River, Pitt County, NC

Name of Firm:	The Lane Construction Corporation	Project Role:	District Manager
Beginning Date:	2009	End Date:	2011

Specific Responsibilities: As District Manager, Mr. Grey was responsible for the overall project construction. Mr. Grey was fully integrated among the project team which included subcontractors and subconsultants. He provided supervisory direction on engineering decisions during construction. Mr. Grey was knowledgeable and proficient on engineering decisions related to design and construction. Mr. Grey communicated regularly with the Owner and had authority to act on behalf of LANE and shut down the project (not necessary on this project).

Project Relevance: Project included the construction of a 1,963-foot-long bridge over a navigable waterway with ship impact provisions. Work was performed from a 1,900-foot-long work trestle. The bridge was founded on a combination of H-pile, pipe pile, and drilled shafts. The project also involved the removal of the existing structure, which included a movable span. The Tar River Bridge design features a “top down” construction method divided into two work segments, north and south of the Tar River. The equipment consisted of two custom-built overhead self-launching truss systems, each approximately 450 ft. long. Each system was designed to be a totally self-contained bridge-building machine. It was capable of driving piles, erecting the bent caps, erecting the girders, and pouring the deck. This eliminated the need to erect a temporary work bridge along the length of the bridge with the goal of streamlining the construction sequencing, reducing the construction costs, minimizing wetland impacts, and eliminating temporary wetland impacts from any work bridges.

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. **N/A. Mr. Grey is not required on-site full-time.**

ATTACHMENT 3.3.1(a)

(Addendum No. 1 – reference form on 2nd page removed)

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.	
a. Name & Title: WILLIAM MCDOWALL, II, PE, DBIA, QUALITY ASSURANCE MANAGER	
b. Project Assignment: QUALITY ASSURANCE MANAGER	
c. Name of Firm with which you are now associated: NXL CONSTRUCTION SERVICES, INC.	
d. Employment History: With this Firm <u>2</u> Years With Other Firms <u>36</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): Quality Assurance Manager/Engineer, NXL Construction Services, Inc. (2014-Present): Responsible for preparing QA/QC plans, as well as providing oversight QA procedures and plans for multiple, complex projects. Mr. McDowall is also responsible for the performance and coordination of QA testing and inspection in accordance with VDOT’s D-B. His other responsibilities include monitoring contractor QC programs and serving as the liaison with VDOT with respect to project compliance to make sure that IA/IV testing is being performed. He approves QC inspections, staffing assignments, and QC frequency testing plans before submission to VDOT. He handles the preparation, maintenance, and submission of associated project documentation, including diaries, EEO documentation, materials/notebook/documentation, as-built sketches, the approval of monthly pay packages, and the preparation/submission of final records. Mr. McDowall manages project QA staff and makes sure that there is sufficient staffing to deliver projects that are compliant with contracts, plans, and specifications. Vice President of Construction Management, Volkert, Inc. (2001-2014): Mr. McDowall managed construction engineering staff, contract management, quality control, and field inspection/review.	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: North Carolina State University, Raleigh, N.C./ B.S./1980/ Civil Engineering	
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 1988/Professional Engineer/VA #018236	
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated. Provide references for each of the three (3) projects using Key Personnel References form-Attachment 3.3.1(b)) * On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.	
VDOT GRTC Bus Rapid Transit (BRT), City of Richmond, VA (DESIGN-BUILD)	
Name of Firm: NXL Construction Services, Inc.	Project Role: Quality Assurance Manager
Beginning Date: 2016	End Date: 09/2017 (est.)
Specific Responsibilities: This project includes the development of a bus rapid transit (BRT) system in the City of Richmond, Virginia and Henrico County, Virginia. The corridor begins on Broad Street near Willow Lawn Drive in Henrico County and extends east to 14 th Street in the City of Richmond. As QAM, Mr. McDowall assists with ongoing D-B project to verify and validate performance and coordination of QA testing and inspection in accordance with VDOT’s D-B guidelines. He also monitors the contractor’s QC program and makes sure all contract requirements and specifications are appropriately administered and applied. Mr. McDowall is also responsible for making sure that all required QC testing and independent QA is carried out in accordance with requirements to confirm construction quality standards are met.	
Project Relevance: The BRT project is similar to the High Rise project in that the same project team is in place, and the BRT project is following the same minimum requirement guidelines for QA/QC that the High Rise project will follow. A key element to this project is maintenance of traffic due to the limited constraints of the downtown area which is also a focus on the High Rise project but on a larger scale due to the volume of traffic. On both projects the Design-Builder must develop strategies to minimize congestion and limit impacts to the traveling public.	
VDOT I-66 Pavement Rehabilitation Project, Fairfax County, VA (DESIGN-BUILD)	
Name of Firm: Volkert, Inc.	Project Role: Quality Assurance Manager
Beginning Date: 2011	End Date: 2013
Specific Responsibilities: Managed quality assurance for the design and construction of a \$43-million design-build project involving full-depth patching of concrete pavement and asphalt overly of a 6.5-mile segment of I-66. The project included roadway	

geometric improvements; drainage, utility, ITS, and lighting upgrades; TMP development; and public outreach. Mr. McDowall was involved with the preparation and implementation of the QA/QC plan and he monitored compliance throughout design and construction. Mr. McDowall developed, monitored, and updated CPM construction schedule. He conducted a constructability review during each of the four stages of design. A key challenge was coordination of concurrent design and construction through the development of an effective but complex sequencing plan and complex transportation management plan to maintain high volumes of traffic on I-66. Mr. McDowall managed QA inspection and materials testing of concrete, asphalt, and soil including preparation of the QA testing plan, review and approval of the QC testing plan, supervision of QA testing technicians, review of testing results, preparation of deficiency and non-conformance reports, and confirmation of accurate maintenance of testing documentation, including the materials notebook. He led preparatory and intermediate inspection meetings and prepared construction inspection checklists. Mr. McDowall coordinated with VDOT's OIA/OVST Inspectors. He worked with the contractor and QC team to anticipate and resolve field issues before schedule and budget was affected and to resolve nonconforming materials and construction work in the most efficient and cost-effective manner. Mr. McDowall reviewed and approved non-conformance recovery plans, monitored corrective actions and retests, and worked with contractor on plan to make sure the problem did not reoccur. He monitored the CPM schedule and conducted what-if analyses. Mr. McDowall prepared monthly summary reports. The project received a national pavement quality award from the *National Asphalt Pavement* association.

Project Relevance: This project is a VDOT D-B, therefore, it followed the same minimum requirement guidelines that the High Rise project will follow. The I-66 project was high profile, high budget, and required a lot of coordination between multiple parties.

VDOT Route 61 Bridge Replacement over the New River, Narrows, VA (DESIGN-BUILD)

Name of Firm: Volkert, Inc.	Project Role: Chief Construction Manager
Beginning Date: 2012	End Date: 2013

Specific Responsibilities: Provided oversight of QA services during the design and \$22 million construction of a new, 2-lane, pre-stressed concrete beam, bulb-t bridge (1,131 feet in length) to replace a structurally deficient bridge. The project also included the construction of 5,970-lf of MSE wall and 174-lf of other retaining wall, roadway approaches, storm drainage system, bike lanes, sidewalks, and utilities. Mr. McDowall reviewed the plans and the QA/QC plan, met regularly with the QA manager and inspector, monitored budget and schedule, evaluated and confirmed compliance of QA services with the VDOT minimum requirements for QA/QC on D-B and PPTA projects, as well as Volkert's quality standards. Mr. McDowall reviewed documentation to confirm accuracy and completeness, verified VDOT's and contractor's satisfaction with Volkert's services, and provided technical guidance regarding matters such as installation of drilled shafts and form work for bridge piers.

Project Relevance: This project is a VDOT D-B, therefore, it followed the same minimum requirement guidelines that the High Rise project will follow. Route 61 is a major road with heavy traffic and require extensive MOT. It is similar to the High Rise in that it is a large-scale bridge and will require coordination between multiple parties.

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.

Current Assignment: GRTC Bus Rapid Transit; **Role:** Quality Assurance Manager; **Duration of Assignment:** Mr. McDowall will be available as of September 2017 and will be on-site full-time for the High Rise project at the start of construction.

ATTACHMENT 3.3.1(a)

(Addendum No. 1 – reference form on 2nd page removed)

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.	
a. Name & Title: MICHAEL HOOSHANGI, P.E., PROJECT MANAGER	
b. Project Assignment: DESIGN MANAGER	
c. Name of Firm with which you are now associated: STV INCORPORATED	
d. Employment History: With this Firm <u>3</u> Years With Other Firms <u>34</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): STV Incorporated, Engineering Director (2013-Present): Mr. Hooshangi has more than 37 years of experience designing and managing transportation infrastructure projects in Virginia. Mr. Hooshangi is responsible for the quality execution of Design for Design Build (D-B) for transit, roadway, bridge, and interchange projects in the Mid-Atlantic region. He provides strategic planning, team management, and design; monitors schedules and budgets; and develops quality management plans. AECOM, Senior Program Director, Civil Department Manager (2000-2013): Mr. Hooshangi was responsible for overseeing design and providing quality control for civil engineering projects, including the DDOT 11 th Street corridor design-build project.	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Marshall University, Huntington, WV/ M.S./1978/ Civil Engineering WVU Institute of Technology, Montgomery, WV/B.S./1977/Civil Engineering	
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 2009/Professional Engineer/#402044906	
g. Document the extent and depth of your experience and qualifications relevant to the Project. <ol style="list-style-type: none">1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i>2. <i>Note whether experience is with current firm or with other firm.</i>3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> <p>(List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated. Provide references for each of the three (3) projects using Key Personnel References form-Attachment 3.3.1(b))</p> <p>*On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.</p>	
VDOT I-581/Valley View Boulevard Interchange Phase II Improvements, Roanoke, VA (DESIGN-BUILD)	
Name of Firm: STV	Project Role: Design Manager
Beginning Date: 2013	End Date: 2016
Specific Responsibilities: Served as the design manager for a diverging diamond interchange (DDI) in Roanoke, VA, to facilitate high-volume left-turn movements from Valley View Boulevard onto I-581. LANE is the lead contractor. Mr. Hooshangi had the primary responsibility for the value engineering efforts that led to revising the partial clover leaf interchange to a DDI at this location. Mr. Hooshangi oversaw the delivery of a complete, accurate, and buildable set of plans while providing quality control and oversight of all engineering details and design features, including the creation of project-specific DDI criteria using national best practices. Mr. Hooshangi conducted regular meetings with designers and detailers, working closely to facilitate continuous communication between all of the engineering disciplines, LANE, and VDOT to make sure that decisions were timely and consistent with the overall goals and objectives of the project. He was also responsible for reviewing details as they were prepared and reviewing the entire project for quality and completeness. Mr. Hooshangi was responsible for establishing and overseeing a QA/QC program for all disciplines involved in the design of the project, including review of design, working plans, shop drawings, specifications, and constructability. Mr. Hooshangi's work included managing the development of the design plans to widen and rehabilitate the bridge carrying Valley View Boulevard over I-581, overseeing the preparation of an IMR, and coordinating with VDOT, FHWA, the City of Roanoke, utility owners, and other stakeholders. Mr. Hooshangi has led many outreach efforts, including Citizen Information Meetings and Public Hearings. Along with the roadway and bridge structures, he was responsible for overseeing the design of bridges, retaining walls, sound walls, sidewalks and trails, utilities, permitting, drainage, stormwater management, erosion and sediment control, temporary traffic control devices, the Transportation Management Plan (TMP), pavement markings, signals and communications, signs, lighting, a parking lot relocation, and landscape architecture. He also oversaw geotechnical investigation, borings and analysis, materials analysis, hydraulic and hydrologic analysis, and significant traffic analysis. Mr. Hooshangi is providing support throughout construction, providing VDOT and LANE very timely and responsive service on for all construction administration requests. In many recent conferences and industry forums, VDOT has presented on this project, showcasing it as a model for D-B for VDOT, in particular, highlighting the successful value engineering process.	

Project Relevance: This project illustrates Mr. Hooshangi’s ability to coordinate all design disciplines, including subconsultants, and make sure that the overall project design is completed in conformance with the contract documents. The value engineering exercise saved VDOT millions of dollars by providing a DDI that reduced the overall footprint of the interchange, reduced the required width of the bridge carrying Valley View Boulevard over I-581 by 37.5 feet, and reduced the southbound I-581 deceleration lane by 900 feet. The DDI also eliminated over 900-lf of stream relocation work, significantly reduced impacts to existing utilities, and entirely eliminated the need for the acquisition/demolition of five residential structures, which significantly reduced project risk. This \$45 million D-B project is providing the region’s first diverging-diamond interchange and will carry up to 100,000 daily. The STV team is facilitating the safe and efficient movement of vehicles, pedestrians, and bicyclists through and around roadway work zones and providing protection for workers and equipment within work zones. The development of the TMP involved extensive coordination and input from various design disciplines, members of the construction team, VDOT, FHWA, the City of Roanoke, and other stakeholders. Traffic is being maintained at all times through staged construction and the use of permanent pavement in conjunction with temporary pavement to shift traffic.

DDOT 11th Street Bridges over Anacostia River and Interchanges, Washington, D.C. (DESIGN-BUILD)

Name of Firm: AECOM	Project Role: Design Manager (Roadways)
Beginning Date: 2009	End Date: 2013

Specific Responsibilities: Led design and highway engineering efforts for the District’s largest construction project, a \$375 million design-build project along the 11th Street corridor for the replacement of two existing bridges across the Anacostia River in Washington, D.C., for the District Department of Transportation (DDOT). As a subconsultant to JMT, Mr. Hooshangi was responsible for the entire project for all roadway and highway design, including all ramps, interchanges and roadways on both sides of the Anacostia River. He also oversaw the design of all the structures north of the Anacostia River, including 6 bridges. As well, Mr. Hooshangi oversaw a new bridge carrying two-way local traffic across the Anacostia River connecting the Capitol Hill and Anacostia neighborhoods. The project involved reconstructing and reconfiguring the interchanges at I-295, Anacostia River crossings, and connections to the Southeast/Southwest Freeway. Mr. Hooshangi had the primary responsibility for producing a complete, accurate, and buildable set of plans for all roadways and highways and seven bridges. He participated in meetings with designers and detailers, working closely with other engineering disciplines so that decisions were timely and consistent with the overall goals and objectives of the project. He maintained continuous communication with the JMT project manager concerning project issues, progress, deadlines, and cost. Mr. Hooshangi was responsible for the preparation of roadway plans for the new interchange, including realignment of inbound I-295, new ramps, retaining walls, signage, and pavement markings. He also oversaw development of a complex maintenance of traffic (MOT) scheme, which included a detailed TMP.

Project Relevance: This project illustrates Mr. Hooshangi’s ability to coordinate with other design disciplines to make sure the design is in conformance with contract documents. The 11th Street project included extensive MOT plans for roadways that carry over 150,000 vehicles daily, including a TMP plan and significant utility relocations. The MOT and TMP plans helped ensure constructability of the utility relocation and project itself, while maintaining access throughout the site. To mitigate the frequency of utility conflicts and the impact on the actual construction work, Mr. Hooshangi developed a strategy to identify the impacts and coordinate stormwater management facilities; permitting; signing, striping, and pavement marking; right-of-way; utilities; landscaping; stakeholder/third party coordination; public involvement/relations; QA/QC; and overall project management. Innovative/cost-effective design/construction saved DDOT a total of \$85 million from the original engineer’s estimate. Innovative design also resulted in 70% of the project being constructed without major interruption to vehicular traffic, thereby limiting impacts to the traveling public for an extended period of construction. The project included extensive public relations and communications work, including soliciting feedback from the community during stakeholder meetings and modifying the design to accommodate benefits to nearby neighborhoods based on the input received by the team.

VDOT Route 50 Courthouse Road and 10th Street Interchanges, Arlington County, VA

Name of Firm: AECOM	Project Role: Project Manager
Beginning Date: 2005	End Date: 2013

Specific Responsibilities: Project Manager and lead highway engineer for development of the construction plans to replace two major interchanges of Route 50 (Arlington Boulevard) with 10th Street and Courthouse Road in Arlington County, VA, at an estimated total cost of \$42 million for VDOT. Mr. Hooshangi supervised design of the new interchange, which includes two new collector distribution roads, ramps, three traffic signals, TMP, 13 mechanically stabilized earth retaining walls, two bridges, interchange lighting, and pedestrian improvements. He was responsible for all design, project scheduling, client and subconsultant coordination, and implementation of QA/QC procedures.

Project Relevance: This project illustrates Mr. Hooshangi’s ability to coordinate all design disciplines, including subconsultants, and make sure that the overall project design is completed in conformance with the contract documents. The scope of work included new roads, new signals, the development of a TMP, and pedestrian improvements. The westbound multipurpose trail was relocated and extended under the 10th Street bridge. Roadway improvements included milling and overlay of existing pavement; hydraulics; storm drainage and stormwater management facilities; geotechnical; signing, striping, and pavement marking; right-of-way; utilities; landscaping; stakeholder and third party coordination; public involvement/relations; QA/QC; construction engineering and inspection; and overall project management. The project was constructed in a congested urban area in Arlington, VA with high traffic volume, significant utility conflicts, and complex right-of-way acquisitions from businesses and residential areas. Mr. Hooshangi led the development of an effective TMP that included traffic controls to minimize the flow of traffic through the construction area advance signage and detour plans. Strategies used to mitigate and identify the impacts of utilities included early coordination, regular meetings with utility companies, and use of nightshift work.

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. N/A. **Mr. Hooshangi is not required on-site full-time.**

ATTACHMENT 3.3.1(a)

(Addendum No. 1 – reference form on 2nd page removed)

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.	
a. Name & Title: THOMAS BETTCHER, CONSTRUCTION MANAGER	
b. Project Assignment: CONSTRUCTION MANAGER	
c. Name of Firm with which you are now associated: MCLEAN CONTRACTING COMPANY	
d. Employment History: With this Firm <u>16</u> Years With Other Firms <u>3</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): McLean Contracting Company, 11/1999-Present, Field Engineer-Construction Manager: Mr. Bettcher has almost 20 years of experience in the construction industry. As Construction Manager, Mr. Bettcher is responsible for the supervision of project construction operations, quality control, resources and construction techniques and on-site project management of construction team responsible for managing supervision staff, subcontractors, field engineers, project material deliveries, project schedule and control of project budget. He works with the Contract Manager to coordinate submittals and project budgets and coordinates with on-site owner's representative and quality control staff. As Project Superintendent, Mr. Bettcher was responsible for the supervision of project construction operations and resource management, including subcontractors, field project staff, project material deliveries, project schedule and control of project budget. He worked with the Contract Manager to coordinate submittals and project budgets. As Assistant Superintendent, he was responsible for assisting project supervision of project construction operations and resource management. He had direct supervision of Field Engineering Staff, management of subcontractors and material deliveries. He coordinated monthly progress estimate with Owner representatives. As Field Engineer, Mr. Bettcher was responsible for field surveying operations for the project. He maintained project records and quantities and assisted with monthly progress and CPM schedules. He also provided coordination of subcontractors and suppliers.	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Clemson University, Clemson, SC/ Bachelor of Science/ Civil Engineering/1995	
f. Active Registration: Year First Registered/ Discipline/VA Registration #: N/A	
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated. Provide references for each of the three (3) projects using Key Personnel References form-Attachment 3.3.1(b))	
* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.	
City of Virginia Beach, Lesner Bridge Replacement, Virginia Beach, VA	
Name of Firm: McLean Contracting	Project Role: Construction Manager
Beginning Date: 2015	End Date: 06/2017 (est.)
Specific Responsibilities: Mr. Bettcher is the Construction Manager responsible for all project management of jobsite operations, managing jobsite budgets, supervision staff, labor and equipment, construction techniques as well as planning, scheduling and control of subcontractors and coordinating with the Owner Representatives.	
Project Relevance: McLean Contracting is the general contractor for this \$78.8M project. This project is for the replacement of the existing Lesner Bridges over the Lynnhaven Inlet in Virginia Beach, Virginia with a signature facility that includes over 1700 feet of roadway approaches with two urban intersections. This project features twin 1,575-foot-long precast concrete segmental bridges with drilled shaft foundations. Each structure consists of (9) each 150-foot approach spans that are being constructed utilizing span by span construction techniques with an overhead gantry. The 225-foot main span features a progressive cantilever design that is being constructed with the same overhead gantry system. The bridges are being constructed over a major navigable channel with continuous boat traffic from the Virginia Pilots Association, commercial and private fishing vessels and pleasure boats. The new bridges will provide a minimum 45-foot vertical clearance above mean high water and 150-foot minimum horizontal clearance at the center navigational span. This project is being constructed in an environmentally sensitive area that is subject to extreme tidal flows and the second bridge structure is to be constructed adjacent to an overhead transmission line. The combination of these challenges demands precise planning and execution of construction access and techniques.	

VDOT, I-64 & Battlefield Blvd. Interchange Bridges, Chesapeake, VA			
Name of Firm:	McLean Contracting	Project Role:	Project Superintendent
Beginning Date:	2006	End Date:	2008
<p>Specific Responsibilities: Mr. Bettcher was the project superintendent responsible for all jobsite operations, managing jobsite budgets, labor and equipment, quality control, construction techniques as well as planning and scheduling and control of subcontractors for McLean's scope of work.</p> <p>Project Relevance: <i>McLean was a major subcontractor to EVW</i> on this \$103M large scale urban highway project abutting the east end of the High Rise Bridge project which involved the complete re-construction of I-64 from Greenbrier Parkway to the I-464 Interchange. EVW teamed with McLean to construct five new bridges and two widenings that included the new Battlefield Blvd. bridge over I-64 and two new pre-stressed concrete girder bridges over the CSX Railroad, two existing bridge widening's over the CSX Railroad, and two "braided" bridges on the C-D Roadways between Greenbrier Parkway and Battlefield Boulevard. The work also entailed the demolition of the existing Battlefield Blvd. bridge and construction of its replacement bridge in phases to maintain traffic flow underneath during construction. This work required a detailed MOT plan and execution of that plan in order for the work to proceed without endangering the travelling public or our employees. Night work was required to complete portions of the Battlefield Blvd bridge over I-64 as part of execution of the MOT and phasing requirements. The work required 2420 tons of structural steel, 696 each piling, and 8100 cy of bridge concrete. The project included four miles of I-64 being widened from four into eight mainline lanes at the braided bridges and cloverleaf interchanges. The new High Rise Bridge Project will tie into this project.</p>			
VDOT, Rt. 895 Connector – Pocahontas Pkwy Interchange Bridges with I-95 & Bridge over the James River PPTA, Chesterfield & Henrico Counties, VA (DESIGN-BUILD)			
Name of Firm:	McLean Contracting	Project Role:	Field Engineer
Beginning Date:	1998	End Date:	2002
<p>Specific Responsibilities: Mr. Bettcher was responsible for field surveying operations for the project. He provided all survey layout for entire project. Maintained project records and production/estimate quantities, CPM scheduling, assisted Contract Manager with monthly project estimates and helped coordinate those items of work with the Owner's representatives. Managed subcontractors and material suppliers under the direction of the project superintendent. Ensured the materials used and work performed met contract requirements and the "approved for construction" plans and specifications.</p> <p>Project Relevance: McLean was a joint venture partner on this \$125 Design Build PPTA project. FD/MK submitted a proposal under Virginia's Public/Private Transportation Act to finance, design, build and construct the new 8.8 mile Pocahontas Parkway near Richmond, VA. The McLean/Recchi JV was responsible for construction of the interchange ramps between Route 895 and I-95, the approaches to the James River Bridge and the Route 895 Bridge over the James River. The 1,475-foot-long, high-level fixed bridge features a 672-foot main span with 145 feet of vertical clearance over a major navigable channel for marine traffic using Richmond's deep water port. The bridge also includes nearly 3,500 feet of high-level approach spans and three new, high-level ramp structures that connect to Interstate 95. This bridge features a combination of pre-cast and cast-in-place, post-tensioned segmental concrete structures, and a conventional cast-in-place deck supported by steel plate girders. The superstructure is supported by concrete piers on steel H-piles and drilled shafts. The James River Bridge crossing is cast-in-place, post-tensioned segmental construction consisting of twin cell boxes with depths of 41" at the piers and 16.5" at mid-span. Eight-foot diameter drilled shafts support the main span foundations. All pier footings were considered to be mass concrete. VDOT established their standard mass concrete specification based on the construction techniques and results observed from this project. The bridge design was coordinated to be performed around major interstate traffic to minimize the effects of construction on the travelling public. The western approach of the bridge was constructed over contaminated soils and our team's design helped to minimize those effects and reduce costs.</p>			
<p>h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. Current Assignment: Lesner Bridge Replacement Role: Project Superintendent. Duration of Assignment: Estimated completion date is June 2017. Mr. Bettcher will be available on-site full-time at the start of construction for the I-64 High Rise Bridge project.</p>			

ATTACHMENT 3.3.1(a)

(Addendum No. 1 – reference form on 2nd page removed)

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.	
a. Name & Title: MARK ROBBINS, P.E., DBIA, VICE PRESIDENT	
b. Project Assignment: LEAD STRUCTURAL ENGINEER	
c. Name of Firm with which you are now associated: STV INCORPORATED	
d. Employment History: With this Firm <u>18</u> Years With Other Firms <u>11</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): STV Incorporated, Vice President (1998-Present): Mr. Robbins has 29 years of experience managing complex bridge and roadway design projects. He has particular expertise in design-build projects for a variety of highway-related projects. He has provided bridge and roadway design, traffic control, and consultant coordination for multidisciplinary projects involving curved steel girders, seismic/dynamic isolation, permitting, 3-D bridge modeling, value engineering, phasing plans, and construction engineering. Mr. Robbins' project experience includes supervising the design and construction of major bridge structures over active navigable channels. He has extensive experience reviewing designs and verifying and modifying designs, if necessary, based on field conditions and construction activities related to dismantling and removing portions of existing structures, installing foundation structures, and handling and erecting bridge beams/girders. He is uniquely qualified to assess constructability through his work managing the construction services group for the Southeast region of STV.	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: North Carolina State University, Raleigh, NC/ B.S./1987/ Civil Engineering	
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 2009/Professional Engineer/#046019	
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated. Provide references for each of the three (3) projects using Key Personnel References form-Attachment 3.3.1(b)) *On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.	
NCDOT, I-85 over the Yadkin River, Rowan and Davidson Counties, NC (DESIGN-BUILD)	
Name of Firm: STV	Project Role: Design Project Manager
Beginning Date: 2009	End Date: 2014
Specific Responsibilities: Managed design services for the \$136 million reconstruction and widening of I-85 in Rowan and Davidson counties, NC. Mr. Robbins led the design effort for the project. In this capacity, he was responsible for coordinating individual design disciplines and making sure overall project design was completed in conformance with the contract documents. He established and oversaw QA/QC programs for all pertinent disciplines involved in design, including the review of designs, specifications, and constructability. Mr. Robbins's responsibilities included schedule preparation, pre-planning, and resource forecasting for engineering and other technical activities. Because multiple specialty disciplines reported to Mr. Robbins, two important responsibilities were interdisciplinary coordination and overall quality control of the engineering work. A critical aspect of the project was maintenance of traffic (MOT) during construction and incident management. Mr. Robbins managed the development of a comprehensive MOT plan that placed great emphasis on separating construction from highway traffic, including a hauling plan that effectively separated haul vehicles from I-85 as much as possible. He also oversaw the development of an incident management plan (IMP) that addressed issues such as well-defined detour routing for major traffic incidents, on-site wrecker service for attending to crash sites, and close coordination with Department of Motor Vehicles. The program was a huge success, there were no serious or fatal car crashes during three years of interstate construction. As the design project manager, Mr. Robbins was responsible for overseeing the design of all bridges, retaining walls, and sound barrier walls. He oversaw a team responsible for geotechnical investigation and design, roadway design, drainage design, permitting, maintenance of traffic, intelligent transportation system design, signage, utility design and coordination, railroad coordination, and public relations. The project incorporated innovative techniques to minimize environmental impacts and comply with NEPA commitments and permit requirements, and Mr. Robbins guided the process for obtaining the required major permit documents.	
Project Relevance: Mr. Robbins' role as the design project manager qualifies him for the lead structural engineer position on the I-64 Southside Widening and High Rise Bridge project, because it illustrates his ability to provide the necessary expertise and experience required to supervise the design and construction of a major bridge structure over a waterway. STV served as the lead designer for LANE and worked with proposed RCE, David Grey. The project included the widening of a 3-mile-long stretch of	

I-85 roadway from four to eight lanes and the construction of six new bridges, including the 3,000-foot-long dual bridges over the Yadkin River, wetlands, and Norfolk Southern Railway and the North Carolina Railroad. The firm also designed the major reconstruction of the US 29/70 and NC 150 interchange, and relocation of the road from north of SR 2120 (Long Ferry Road) to south of the existing NC 150 flyover bridge. This corridor is the most direct and heavily traveled route between Richmond, VA and Atlanta, GA carrying nearly 70,000 vehicles each day. A complex phasing plan was required in order to maintain traffic during the replacement of the existing bridge carrying I-85 over the Yadkin River. This included shifts, major bridge designs, and extensive collaboration between team members. After the northbound lanes were constructed, all traffic was moved onto the northbound side of I-85 for construction of the southbound lanes. The new dual bridges span a wetland, river, and three railroad tracks. The structures span two Norfolk Southern Railway main line tracks, as well as a future freight and Atlanta-to-Washington high-speed rail line. Mr. Robbins worked closely with the host railroads, the NCDOT Rail Division, and other rail stakeholders, such as Amtrak and the FRA. Coordination efforts involved plan approval for bridge work and the proposed relocation of an at-grade crossing. The increased span of the new parallel bridges will provide room for future rail improvements. To maximize the efficiency of the bridge design, the team chose a modified 77-inch-deep bulb-T, prestressed concrete beam for all concrete spans. To eliminate the need for bridge overhang falsework, the team implemented a special edge beam that also served as the formwork for the deck slab overhang. The team discovered that by slightly widening the median of the bridge to 70 feet, that a single work bridge could be constructed in the center median, reducing project cost, timeframe, and environmental impacts.

VDOT, I-581/Valley View Boulevard Interchange Phase II Improvements, Roanoke, VA (DESIGN-BUILD)

Name of Firm: STV	Project Role: Design QC
Beginning Date: 2013	End Date: 2016

Specific Responsibilities: Performing quality reviews for the design of a diverging diamond interchange in Roanoke, VA, to facilitate high-volume left-turn movements from Valley View Boulevard onto I-581. **LANE is the Lead Contractor.** Mr. Robbins reported directly to the design manager. He assisted in developing the design QA/QC plan for the project and oversaw all design QC activities for all disciplines. This included oversight of subconsultant work. He maintained continuous communication with the design manager concerning project issues, progress, deadlines, and cost. He was also responsible for reviewing details as they were prepared and reviewing the entire project for quality and completeness. Mr. Robbins was responsible for plan checking and review of structural plans. He was responsible for coordinating structural design with other disciplines and making sure the structural design is in conformance with contract documents. He is responsible for overseeing QC for the structural design, including the review of designs, working plans, shop drawings, specifications, and constructability.

Project Relevance: This project illustrates Mr. Robbins' ability review designs and verify and modify VDOT structural designs based on field conditions and construction activities related to dismantling and removing portions of existing structures, installing foundation structures, and handling and erecting bridge beams/girders. During the design-build procurement of this \$45 million project, the STV team proposed a diverging diamond interchange (DDI) to improve the existing partial interchange. The DDI reduced the overall footprint of the interchange, reduced the required width of the bridge carrying Valley View Boulevard over I-581 by 37.5 feet, and reduced the southbound I-581 deceleration lane by 900 feet. The DDI also eliminated over 900-lf of stream relocation work, significantly reduced impacts to existing utilities, and entirely eliminated the need for the acquisition/demolition of five residential structures, which significantly reduced project risk. Mr. Robbins' work included serving as the quality reviewer for all structural design plans to ensure compliance with VDOT standards and contract requirements, which included widening and rehabilitating the bridge carrying Valley View Boulevard over I-581, a shared use path bridge over I-581 and ramps W and X, three retaining walls, an extension of an existing box culvert, and more than 6,000-ft of sound barrier walls. Mr. Robbins also reviewed all the staged construction and MOT drawings that were utilized to complete the bridge widening, modification, and rehabilitation work on the bridge while maintaining traffic throughout construction.

NCDOT, Virginia Dare Bridge over Croatan Sound, Manteo, NC

Name of Firm: STV	Project Role: Lead Structural Engineer
Beginning Date: 2001	End Date: 2002

Specific Responsibilities: Designed erection plans for a \$203 million, post-tensioned, I-girder bridge over the Croatan Sound in Manteo, NC. Mr. Robbins designed the temporary falsework for the 3-span main channel unit to resist loading conditions from high local winds, which required evaluating each step in the erection process for wind loadings. He provided significant construction phase engineering services. This included reviewing designs and verifying and modifying designs based on field conditions and construction activities, installing foundation structures, and handling and erecting bridge beams/girders. His role involved evaluating contractor-initiated changes to the final design, identifying changes that conflicted with engineering plans, and marking potential change orders that presented the risk of cost increases and schedule overruns. Additionally, he provided QC reviews of various elements of design. Mr. Robbins' oversight involved peer reviews of design drawings to identify potential errors, such as miscalculations or inadequacies.

Project Relevance: Mr. Robbins' role as the lead structural engineer during construction qualifies him for the lead structural engineer position on the I-64 Southside Widening and High Rise Bridge project, because it illustrates his ability to provide the necessary expertise and experience required to supervise the design and construction of a major bridge structure over a navigable waterway. The 5.2-mile-long, 4-lane Virginia Dare Bridge is the longest highway structure in North Carolina, and features a post tensioned prestressed concrete I-girder channel span unit with a main span of 224 feet. The bridge rises to 65 feet at its apex and is supported by 88 concrete columns and more than 2,000 piles, which extend nearly 100 feet below the water. The falsework system consisted of 2-tower supports and strong-back system to temporarily support the large post-tensioned haunched bulb-tee girders.

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

ATTACHMENT 3.3.1(a)

(Addendum No. 1 – reference form on 2nd page removed)

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.
a. Name & Title: ANDREW SHELTON, PROJECT ENGINEER/QC MANAGER
b. Project Assignment: INCIDENT MANAGEMENT COORDINATOR
c. Name of Firm with which you are now associated: E. V. WILLIAMS, INC.
d. Employment History: With this Firm 1 Years With Other Firms 3.5 Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): <u>E. V. Williams, Inc. Dec. 2015-Present:</u> Project Engineer/QC Manager responsible for maintaining quality compliance of self-performed and subcontracted work. Maintains project documentation for compliance with specifications. Maintains project schedule/budget. Assists Project Manager/Superintendent in daily field operations. <u>DLB, Inc., Hillsville, VA (2012- 2015)</u> Project Manager/Estimator responsible for developing project budget/schedule and maintain throughout project. Managed all aspects from preconstruction to project closeout on multiple projects at one time. Managed resources from in house manpower/equipment allocations as well as subcontractors across multiple projects. Maintained quality compliance while meeting project schedules. Project Engineer responsible for maintaining project documentation of daily operations. Implemented schedule and cost control in conjunction with Project Manager/Superintendent. <u>Training and Certifications:</u> FHWA SHRP2 “TIM” Responder Training FEMA ICS/NIMS 100 FEMA ICS/NIMS 200 FEMA ICS/NIMS 700 FEMA/VDEM Hazardous Materials Awareness VA/NC Work Zone Traffic Supervisor VA/NC Erosion Control Supervisor VA DEQ Responsible Land Disturber OSHA 30 Hour Training SEC Underground Utility Training First Aid/CPR Training
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Virginia Tech., Blacksburg, VA./ B.S./2012/ Civil Engineering
f. Active Registration: Year First Registered/ Discipline/VA Registration #: N/A
g. Document the extent and depth of your experience and qualifications relevant to the Project. <ol style="list-style-type: none"><i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i><i>Note whether experience is with current firm or with other firm.</i><i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated. Provide references for each of the three (3) projects using Key Personnel References form-Attachment 3.3.1(b))
* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.

VDOT-H89 Route 709 Widening, Accomack Co., VA			
Name of Firm:	E. V. Williams, Inc.	Project Role:	Project Engineer/QC Manager
Beginning Date:	2015	End Date:	12/2016 (est)
<p>Specific Responsibilities: Mr. Shelton was hired as a Project Engineer/QC Manager to ensure contract and safety compliance of all subcontract and self-performed work on a group of project on the Eastern Shore of Virginia. Andrew also handles schedule and budget updates and ensures all documentation is consistent with E. V. William's policies and contract requirements as well. There was no requirement for an Incident Management Coordinator.</p> <p>Project Relevance: This Phased VDOT project includes road widening, clearing, grading, erosion and sediment control, storm drainage, paving and signage.</p>			
VDOT-F95 Route 609 Widening, Accomack Co., VA			
Name of Firm:	E. V. Williams, Inc.	Project Role:	Project Engineer/QC Manager
Beginning Date:	2015	End Date:	3/2017 (est)
<p>Specific Responsibilities: Mr. Shelton was hired as a Project Engineer/QC Manager to ensure contract and safety compliance of all subcontract and self-performed work on a group of project on the Eastern Shore of Virginia. Andrew also handles schedule and budget updates and ensures all documentation is consistent with E. V. William's policies and contract requirements as well. There was no requirement for an Incident Management Coordinator.</p> <p>Project Relevance: This Phased VDOT project includes road widening, clearing, grading, erosion and sediment control, storm drainage, paving and signage.</p>			
VDOT-K05 Rt. 114, Christiansburg, VA			
Name of Firm:	DLB Inc.	Project Role:	Project Engineer/Project Manager
Beginning Date:	2012	End Date:	2015
<p>Specific Responsibilities: Mr. Shelton began this project as a Project Engineer and was promoted to Project Manager (Construction Manager) part way through the project. Responsibilities included safety compliance, schedules, budgets, Quality Control and all day to day construction activities on the project</p> <p>Project Relevance: This VDOT project includes road widening, clearing, grading, erosion and sediment control, storm drainage, retaining walls, landscaping, paving and signage.</p>			
<p>h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. Current Assignment: VDOT H89-Route 709 widening and VDOT- F95 Route 609 Widening. Role: Project Engineer/QC Manager. Duration of Assignment: The Route 709 is scheduled for completion in December 2016 and the Route 609 project is scheduled for completion in March 2017. Mr. Shelton will be available on-site full-time for the duration of the project.</p>			



Attachment 3.3.1(b)

**Key Personnel Reference
Forms**

ATTACHMENT 3.3.1(b)

KEY PERSONNEL REFERENCE FORM

PROJECT NAME	POSITION HELD ON THE PROJECT	DURATION IN THAT POSITION	NAME OF REFERENCE	REFERENCE'S LOCATION	NAME OF REFERENCE'S EMPLOYER	REFERENCE'S TITLE/POSITION	REFERENCE'S PHONE	REFERENCE'S EMAIL ADDRESS
Wheatstone LNG	Senior Project Manager	31 Months	Jim Henschel	Houston, TX	Bechtel Oil, Gas & Chemicals	Sr. Vice President/Sr. Project Manager	(832) 472-7846 (M)	JHensche@bechtel.com
Khalifa Port & Industrial Zone	Senior Project Manager	12 Months	Mike McGarvey	London, UK	Bechtel Infrastructure Corp.	Manager of Engineering	+44-7766-924-260 (O)	mxmgarvey@bechtel.com
Saadiyat Island	Senior Program Manager	24 Months	Richard Russell	Muscat, Oman	Cyclone Development	CEO	+968—9-529-1111 (M)	rprussell@yahoo.com

ATTACHMENT 3.3.1(b)

KEY PERSONNEL REFERENCE FORM

PROJECT NAME	POSITION HELD ON THE PROJECT	DURATION IN THAT POSITION	NAME OF REFERENCE	REFERENCE'S LOCATION	NAME OF REFERENCE'S EMPLOYER	REFERENCE'S TITLE/POSITION	REFERENCE'S PHONE	REFERENCE'S EMAIL ADDRESS
I-85 Yadkin River Bridge	District Manager	3 Years	Rodger Rochelle	Raleigh, NC	NCDOT	Director of Technical Services	Ph: (919) 707-2900	rdrochelle@ncdot.gov
I-85/I-485 Turbine Interchange	Design-Build Project Manager	3 Years	Rick Baucom	Albemarle, NC	NCDOT	Division Construction Engineer – Division 10	Ph: (704) 983-4400	rwbaucom@ncdot.gov
Bridge over the Tar River	District Manager	2 years	Ron Hancock	Raleigh, NC	NCDOT	Deputy Chief Engineer	Ph: (919) 707-2500	rhancock@ncdot.gov

ATTACHMENT 3.3.1(b)

KEY PERSONNEL REFERENCE FORM

PROJECT NAME	POSITION HELD ON THE PROJECT	DURATION IN THAT POSITION	NAME OF REFERENCE	REFERENCE'S LOCATION	REFERENCE'S EMPLOYER	REFERENCE'S TITLE / POSITION	REFERENCE'S PHONE	REFERENCE'S EMAIL ADDRESS
GRTC BRT	QA Manager	3 months - Present	Scott Fisher	Richmond, VA	VDOT	Area Construction Engineer	804-674-2452	Scott.fisher@vdot.virginia.gov
I-66 Pavement Rehabilitation	QA Manager	28 months	Susan Shaw	Fairfax, VA	VDOT	Project Manager	703-259-1995	Susan.shaw@vdot.virginia.gov
Route 61 Bridge Replacement over the New River	Chief Construction Manager	11 months	Robbie Williams	Narrows, VA	VDOT	District Construction Engineer	540-387-5345	Robbie.williams@vdot.virginia.gov

ATTACHMENT 3.3.1(b)

KEY PERSONNEL REFERENCE FORM

PROJECT NAME	POSITION HELD ON THE PROJECT	DURATION IN THAT POSITION	NAME OF REFERENCE	REFERENCE'S LOCATION	NAME OF REFERENCE'S EMPLOYER	REFERENCE'S TITLE/POSITION	REFERENCE'S PHONE	REFERENCE'S EMAIL ADDRESS
I-581/Valley View Boulevard Interchange D-B	Design Manager	3 years and 6 months	Bobby Phlegar, PE	Salem, VA	VDOT Salem District	Construction Program Manager	(540) 378-5083 (work) (540) 598-7202 (mobile)	r.phlegar@VDOT.Virginia.gov
Arlington Boulevard Route 50, 10 th Street, and Courthouse Road Interchanges	Project Manager	8 years and 4 months	Calvin Britt, PE	Fairfax, VA	VDOT NOVA District	Senior Project Manager	(703) 259-2961	calvin.britt@vdot.virginia.gov
11 th Street Corridor D-B	Design Manager (Roadways)	4 years and 4 months	Nick Nicholson, PE	Washington, DC	District of Columbia Department of Transportation	Chief Engineer	(202) 775-3352 (work) (202) 549-6063 (mobile)	ronaldo.nicholson@parsond.com

ATTACHMENT 3.3.1(b)

KEY PERSONNEL REFERENCE FORM

PROJECT NAME	POSITION HELD ON THE PROJECT	DURATION IN THAT POSITION	NAME OF REFERENCE	REFERENCE'S LOCATION	NAME OF REFERENCE'S EMPLOYER	REFERENCE'S TITLE/POSITION	REFERENCE'S PHONE	REFERENCE'S EMAIL ADDRESS
Lesner Bridge Replacement	Construction Manager	17 months	Chris Wojtowicz	Virginia Beach, VA	City of Virginia Beach Department of Public Works, Engineering Division	Project Manager	757-385-5785	cwojtowi@vbgov.com
Replace Fuel Pier D Craney Island Fuel Terminal*	Project Superintendent	39 months	John Vogt	Norfolk, VA	Navfac Mid-Atlantic	Construction Manager	757-385-5785	John.Vogt@navy.mil
VDOT I-64 Battlefield Blvd. Interchange Bridges	Project Superintendent	32 months	Mike Prezioso	Williamsburg, VA	MBP	Senior VP & Regional Mgr.	757-382-0109	mprezioso@mbpce.com

*Reference for is no longer available for the Rt. 895 Connector – Pocahontas Pkwy Interchange Bridges with I-95 & Bridge over the James River PPTA project. Mr. Bettcher was the Construction Manager on the recent Pier D project.

ATTACHMENT 3.3.1(b)

KEY PERSONNEL REFERENCE FORM

PROJECT NAME	POSITION HELD ON THE PROJECT	DURATION IN THAT POSITION	NAME OF REFERENCE	REFERENCE'S LOCATION	NAME OF REFERENCE'S EMPLOYER	REFERENCE'S TITLE/POSITION	REFERENCE'S PHONE	REFERENCE'S EMAIL ADDRESS
I-85 over the Yadkin River D-B	Design Project Manager	4 years and eight months	Pat Ivey, PE	Winston Salem, NC	North Carolina Department of Transportation	Division 9 Engineer	(336) 747-7800	pivey@ncdot.gov
I-581/Valley View Boulevard Interchange D-B	Design QC	3 years and 6 months	Alex Price, PE	Roanoke, VA	VDOT Salem District	Salem District L&D Engineer	(540) 378-5053	alex.price@vdot.virginia.gov
Virginia Dare Bridge over Croatan Sound	Lead Structural Engineer	1 year and 6 months	Rodger Rochelle, PE	Raleigh, NC	North Carolina Department of Transportation	Director of Technical Services	(919) 707-6601	rrochelle@ncdot.gov

ATTACHMENT 3.3.1(b)

KEY PERSONNEL REFERENCE FORM

PROJECT NAME	POSITION HELD ON THE PROJECT	DURATION IN THAT POSITION	NAME OF REFERENCE	REFERENCE'S LOCATION	NAME OF REFERENCE'S EMPLOYER	REFERENCE'S TITLE/POSITION	REFERENCE'S PHONE	REFERENCE'S EMAIL ADDRESS
VDOT H89	Project Engineer/QC Manager	10 Months	Joseph L. Eller	Accomac Residency (23096 Courthouse Ave Accomac, VA 23301)	VDOT	Construction Manager	757-787-1550 (office) 757-592-0114 (cell)	Joseph.eller@vdot.virginia.gov
VDOT F95	Project Engineer/QC Manager	10 Months	Joseph L. Eller	Accomac Residency (23096 Courthouse Ave Accomac, VA 23301)	VDOT	Construction Manager	757-787-1550 (office) 757-592-0114 (cell)	Joseph.eller@vdot.virginia.gov
VDOT K05	Project Engineer/Project Manager	3.5 years	Robbie Williams, P.E.	Salem Residency (731 Harrison Ave Salem, VA 24153)	VDOT	District Construction Engineer	540-387-5345 (office) 540-521-5298 (cell)	Robbie.williams@vdot.virginia.gov



Attachment
3.4.1(a), 3.4.1(c), and 3.4.1(d)
Work History Forms

ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
SOUTH NORFOLK JORDAN BRIDGE REPLACEMENT Chesapeake, VA DESIGN-BUILD BRIDGE PROJECT	Figg Bridge	Name of Client./ Owner: United Bridge Partners Phone: 650.233.4975 Project Manager: Ed Diffendal Phone: 650.233.4975 Email: ediffendal@aimlp.com	10/2012	10/2012	\$105,000	\$105,000	\$76,000

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly.

Similar Scope of Work:
<ul style="list-style-type: none"> • Design-Build • Safety • Survey • Structural • Roadway • Demolition • Geotechnical • Environ./Drainage • Permit Acq. & Modifications • Traffic Control • Utility Coordination and Relocation • Design QA/QC • Constr. QA/QC • Scheduling • Stakeholder Coordination & communication • On-time and within budget
Personnel on Project:
Ben McKenna (LANE) Chris Monahan (LANE) Gary Meads (McLean)

PROJECT SCOPE
 The South Norfolk Jordan Bridge is a precast segmental bridge over the Elizabeth River and connecting roadway at major intersections. The bridge spans over an environmental superfund site, a park/marina, a major navigational channel, active rail lines, and local roads. This project was unique in that it was a project to improve the public transportation system that was provided by a private entity. The City of Chesapeake did not have the funding to rebuild this bridge, so the bridge had to be shut down due to structural deficiencies. Figg Bridge Builders acting as the managing partner for South Norfolk Jordan Bridge, LLC reached an agreement with the City to take over ownership of the bridge with the agreement to demolish the existing bridge and provide them with a new bridge in its place. The project featured a D-B Private Project atmosphere where the investment of the project is tied to future toll revenues. **LANE was the Lead Contractor on this project and McLean was a major dedicated subcontractor.**

RELEVANT PROJECT ELEMENTS
Bridge and Structures: The bridge is 5,375' long with 150' typical spans and a 385' main span with a 145' vertical clearance over a major navigational channel. The 150' typical spans were constructed using span by span segmental construction techniques with an underslung erection truss while the 385' main span and each of the adjacent 190' back spans were constructed by the balanced cantilever segmental construction technique utilizing a floating crane for segment erection. There are 35 precast segmental spans supported on precast segmental columns and cast-in-place footings. The land footings are founded on 24" prestressed concrete piles and the water footings are founded on 54" prestressed concrete cylinder piles. This project also included a pair of mass concrete fender rings supported on 66" prestressed concrete cylinder piles.
Safety: LANE and McLean finished this high profile project with an excellent safety record (no lost-time incidents) and had no permit violations while performing this work over an EPA superfund site and a major active navigational channel.
Meeting or Exceeding DBE: There were no DBE goals on this project, however the team ensured DBE participation on the contract.
Project Benefits: Restored critical transportation link that enables river, vehicular and pedestrian traffic to move at all times; improved fire, police, and emergency response access to South Norfolk; maintained military readiness connection to Norfolk Naval Shipyard; provided non-tunnel emergency evacuation route; offered greater horizontal and vertical clearances for river traffic than existing bridges; freed scarce tax



dollars for other needed projects (100 percent privately financed)

Roadway: When completed this bridge created a major river crossing over the Elizabeth River providing a valuable link between the cities of Portsmouth and Chesapeake, Virginia.

Environmental: This was an environmentally sensitive structure that could not be exposed to contaminants (creosote) from the nearby Superfund site. The concrete barriers on the bridge are covered in a nano-technology coating that removes pollutants from the air and provides a self-cleaning surface through a photoalytic reaction with the sunlight. The bridge is also lit at night using low-energy LED lights which have a 30-year maintenance lifetime.

EVIDENCE OF PERFORMANCE

The project has won numerous awards, including:

- ▶ International Bridge Conference 2014 Gustav Lindenthal Medal (recognizing an outstanding structure that is also aesthetically and environmentally pleasing);
- ▶ ARTBA 2013 Globe Award for Bridges >\$10 million;
- ▶ ARTBA 2013 PRIDE Award.

ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

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					Original Contract Value	Final or Estimated Contract Value	
I-64/BATTLEFIELD BOULEVARD Chesapeake, VA ROADWAY PROJECT	Kimley-Horn & Associates Inc.	Name of Client./ Owner: VDOT Phone: (757) 494-5470 Project Manager: Mr. Michael Johnson Phone: (757) 494-5470 Email: Michael.J.Johnson@vdot.Virginia.gov	07/2009	07/2009	\$98,000	\$102,000 *Increased due to owner directed scope changes	\$102,000

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly.

<p align="center">Similar Scope of Work:</p> <ul style="list-style-type: none"> • Interstate Widening • Roadways • Utilities • Bridges/Structures • Interchanges • Storm Drainage and SWM • Demolition of Structures • Retaining Walls • Pavement Reconstruction, Overlay and New • Railroad Coordination for 2 Bridges • Traffic Control Devices • Signs, Sign Structures, and Foundations • Transportation Management Plan • Survey • Retaining Walls • Intelligent Transportation System • Guardrail • Sound Barrier Walls • Traffic Maintenance and Management • Landscaping • Overall Project Management 	<p align="center">PROJECT SCOPE</p> <p>E.V. Williams Inc. was the prime contractor (<i>teamed with McLean</i>) on this large scale urban highway project abutting the east end of the High Rise Bridge project which involved the complete re-construction of I-64 from Greenbrier Parkway to the I-464 Interchange. Also included in the scope of work was an additional widening of I-64 from the I-464 Interchange to the High Rise Bridge. The project involved reconstructing and widening four miles of I-64, re-configuring a standard cloverleaf intersection to include the addition of Collector Distributor roadways for the entire length of the project, installation of several mechanically-stabilized earth retaining walls, design and construction of sound barrier walls, installation of traffic management systems and the incorporation of large storm water management facilities within the footprint of the I-64 corridor. EVW teamed with McLean to construct the new Battlefield Blvd. bridge over I-64 and two new pre-stressed concrete girder bridges over the CSX Railroad, two existing bridge widenings over the CSX Railroad, and two "braided" bridges on the C-D roadways between Greenbrier Parkway and Battlefield Blvd. Four miles of I-64 was widened from four into eight mainline lanes at the braided bridges and cloverleaf interchange. Mainline pavement sections included 13" of continuous reinforced concrete over cement treated aggregate. Feeder lanes consisted of full depth asphalt paving over cement treated aggregate. An additional asphalt pavement travel lane was added to the existing I-64 between I-464 and the High Rise Bridge. Similar to the high rise project, this project included additional lanes in what had been grass median, maintaining the existing two lanes of traffic while simultaneously increasing capacity, similar if not higher traffic counts to those expected on the High Rise project as well widening and replacement of bridge structures.</p> <p>This project was unique for a design-bid-build project and much more similar to a design-build project in that the owner retained the designer to attend progress meetings throughout the course of construction. This allowed a free flow of suggested improvements to various aspects of the project. A few of the improvements are listed below but many smaller improvements also occurred that were a benefit to the project as well as the motoring public. This was also the first project where the Hampton Roads District of VDOT had a robust project specific Public Relations effort. VDOT Public Relations, EVW and the VDOT Project Management all worked with third party stakeholders to keep the public informed of progress, changes to the project and successes on the project that would impact the surrounding area. Many of the same third party stakeholders on this project, in particular retail businesses as well as major employers, will be affected by the High Rise Bridge project as well. EVW has experience and gained the trust of these important members of our community.</p>	
<p align="center">Personnel on Project:</p> <p>Tom Bettcher (McLean) Gary Meads (McLean) Sam Williams (EVW)</p>	<p align="center">RELEVANT PROJECT ELEMENTS</p> <p>Innovative Construction Techniques: EVW worked with VDOT to become the first large project in Virginia to demolish the existing concrete pavement, crush it and use the crushed material as aggregate for CTA. A well was drilled in the median and a concrete batch plant was set up to produce the CTA base material for the new concrete pavement for the project and then later was used to generate the concrete pavement for the project. The crushing/batch plant operation eliminated the need to remove approximately 6,700 truckloads of broken concrete pavement from the median as well as deliver 6,700 loads of CTA into the median. EVW also worked with VDOT to revise the TMP/Phasing plans to develop a revised TMP approach that eliminated the original proposed temporary loops and ramps. This resulted in added safety to the traveling public as well as a \$360K savings to the project. This change also resulted in a 3 month acceleration of the project. Once it was clear the project was ahead of schedule and under budget VDOT, the designer and EVW collaborated to improve a portion of the roadway design resulting in a reconfigure of a major tie-in and adding an enhancement of and additional CD lane at the Rt. 168 interchange. This change improved final traffic flow and provides a safer merge from Rt. 168 onto westbound I-64. This resulted in exceeding the original contract value but kept the project within the contingency. This change was on a critical path of the schedule and resulted in the contract completion date being extended back out to the original completion date while still allowing EVW to earn an early completion bonus.</p> <p>Disadvantaged Business Enterprise Program: EVW exceeded the DBE goal for this project.</p> <p>Safety/Limiting Impacts to Traveling Public: The crushing/batch plant operation eliminated the need to remove approximately 6,700 truckloads of broken concrete pavement from the median as well as deliver 6,700 loads of CTA into the median. This greatly limited the impacts to and increased the safety for the traveling public.</p> <p>Bridges and Structures: McLean was a major subcontractor to EVW on this project responsible for the construction of five new bridges and the widening of two existing interstate bridges over the CSX Railroad. The new bridges consisted of two structural steel box girder braided ramp structures, two prestressed concrete bridges over CSX Railroad and a phased replacement of the existing Battlefield Blvd. Overpass Bridge. The two braided ramp structures were 515 feet and 763 feet long by 33 feet wide. They functioned as on ramps to I-64 while allowing exiting traffic to pass underneath them. The two RR bridges were +/- 170 feet long utilizing prestressed concrete girder design for the superstructure. The Battlefield Blvd Overpass Bridge was 484 feet long and 144 feet wide. This bridge utilized a complex phased construction sequence to completely replace the existing structure while maintaining interstate traffic underneath and local Battlefield Blvd. traffic on the structure. This bridge utilized structural steel girder design for the superstructure.</p>	
<p align="center">EVIDENCE OF PERFORMANCE</p> <p>➤ Project received the 2010 ACEC Engineering Excellence Honor Award</p>		

ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

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					Original Contract Value	Final or Estimated Contract Value	
DOMINION BOULEVARD IMPROVEMENTS Chesapeake, VA DESIGN-BUILD BRIDGE PROJECT	Parsons Brinckerhoff	Name of Client./ Owner: City of Chesapeake Phone: 757.382.2489 Project Manager: Kevin Lundgren, P.E. Phone: 757.389.5478 Email: Klundgrn@cityofchesapeake.net	04/2017	01/2017 (est.)	\$188,070	\$195,180 *Owner initiated scope changes	\$140,201

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.

<p align="center">Similar Scope of Work:</p> <ul style="list-style-type: none"> Design-Build Fixed span bridges over navigable waterway Fenders Land Bridges Box Culverts Interchanges Roadway Storm Drainage and SWM Retaining Walls Sound Barrier Walls Utilities Survey Structures Structure demolition Complex Geotechnical Challenges Environmental Traffic Maintenance and Management Guardrail Landscaping Intelligent Transportation System Toll Gantry Scheduling Early completion Bonus 	<p align="center">PROJECT SCOPE</p> <p>Dominion Boulevard Constructors, is comprised of <i>McLean Contracting Company</i> as the managing joint venture partner with <i>E. V. Williams, RR Dawson, Inc.</i>, and <i>Bryant Contracting. Lane Construction Corporation</i> is an integral part of the team providing asphalt pavement, electrical and signage for the project. Major items of work include twin 5,262-foot fixed span, high rise bridges, with 125' horizontal and 95' vertical clearances required in the channel and the demolition of the existing twin leaf bascule bridge over the Southern Branch of the Elizabeth River and seven land bridges throughout the project corridor. The new bridges consist of prestressed concrete bulb-T girders and post tensioned spliced bulb-T girders and a cast-in-place deck supported on mass concrete hammerhead or twin column piers and cast in place footings. The footings are founded on 16" to 30" prestressed concrete piles. Post tensioned spliced bulb-T are used on the main span units of four bridges. The main span for the twin bridges over the Elizabeth River included span lengths of 222'-6" – 285' – 222'-6" for a total unit length of 730 feet. The major items included 15 lane miles of new roadway, 700,000 CY of imported borrow, 30,000 SF of Mechanically Stabilized Earth (MSE) Walls and 25,000 SF of Sound Barrier Walls. The high rise bridges on this project are less than 2 miles from the proposed I-64/High Rise Bridge and are also over the Southern Branch of the Elizabeth River in Chesapeake, VA.</p> <p>The Dominion Boulevard project included a number of geotechnical challenges similar to those expected on the proposed I-64/High Rise Project. High organic content and poorly consolidated highly plastic clay soils in the lower portions of the Alluvial layer were handled by driving 61,000 LF of 12" concrete piles on 5.5 ft. to 10.5 ft. spacing depending on soil conditions with 4' X 4' square pile caps for ground improvement. Capping for these areas included VDOT Select Material Type 1 with two layers of high strength geogrid to bridge the pile cap gaps. Other less severe deeper soils were handled by installing 4,400,000 LF of PV (Wick) drains and associated drainage layers plus 70,000 CY of temporary surcharge to accelerate settlement in these areas. Poor surface soils were handled by standard undercut and replacement of 37,000 CY of material being removed and replaced. Additionally, in excess of 44,000 SY of varying geotextile fabrics were installed. High water tables were compounded by tidal effects to challenge most utility, storm drainage and box culvert installation.</p> <p>This project abutted large amounts of designated wetlands, requiring substantial erosion and sediment control focus and emphasis. This was achieved by assigning one construction manager responsibility for environmental concerns. This individual worked closely with designers and permit grantors to educate the entire project staff as to project requirements and the approach our team would take to preserve the wetlands and waterways in this area. Our efforts resulted in no DEQ citations for the entire duration of the project.</p>	<p align="center">RELEVANT PROJECT ELEMENTS</p> <p>Innovative Design Solutions: The Dominion Boulevard Constructors joint venture team worked with the Owner to identify in excess of \$5 million in Value Engineering Proposals that were accepted, resulting in savings of over \$2.5 million to the project. Replacing geotextile fabric and porous backfill with sand and drainage strips resulted in savings of \$2.8 million. Raising 37 land bridge footings from being completely below grade to roughly the bottom 1' below the finished grade eliminated coffer dams, dewatering and lessening excavation resulted in savings of \$1.6 million. Other smaller VEPs included eliminating portions of MSE walls and replacing RW-3 retaining walls with MSE walls.</p> <p>Limiting Impacts to the Traveling Public: Dominion Boulevard Constructors worked with the owner and designer to refine and adjust the TMP to lessen the number of traffic shifts, reroute traffic and increase the flow through the project during construction. Minor adjustments were made as potential improvements were analyzed to alleviate bottleneck areas on the project. Working together we were able to earn compliments from commuters stating that traffic was no worse during construction than prior to the initiation of construction.</p>	 
<p align="center">Personnel on Project:</p> <p>Gary Meads (McLean) Danny Saunders (EVW) Chris Morris (EVW) Sam Williams (EVW)</p>	<p>EVIDENCE OF PERFORMANCE</p> <p>On Time: The contractor submitted CPM schedule Update 37 with a data date of 7/25/2016. Update 37 has the projected completion on January 27, 2017 which is ahead of the contract completion date of April 1, 2017. – Mike Prezioso, PE, CCM, MBP.</p>		

ATTACHMENT 3.4.1(a)

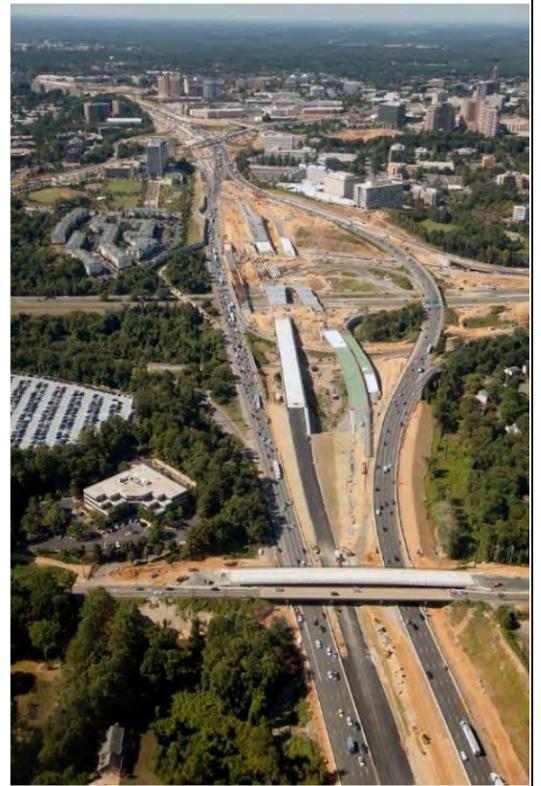
LEAD CONTRACTOR - WORK HISTORY FORM

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I-495 EXPRESS LANES Fairfax County, VA ROADWAY PROJECT	HNTB/HDR	Name of Client./ Owner: VDOT Phone: 540.829.7500 Project Manager: John Lynch, P.E. Phone: 540.829.7512 Email: John.Lynch@vdot.virginia.gov	12/2012	11/2012	\$1,346,560	\$1,481,670	\$642,000

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly.

Similar Scope of Work:	PROJECT SCOPE	Proposed Personnel on Project:	EVIDENCE OF PERFORMANCE
<ul style="list-style-type: none"> • Design-Build • Roadways • Incident Response Management • Bridges/Structures • Heavy VPD Counts/Extensive MOT • Environmental • Geotechnical • Right-of-Way • Hydraulics • Stormdrain and SWM • Demolition of Structures • Retaining Walls • Traffic Control Devices • Signs, Sign Structures, and Foundations • Transportation Management Plan • Utilities • Rail & Railroad Coordination • Stakeholder Coordination • Public Involvement/Communications • QA/QC • Survey • Construction Engineering and Inspection • Project Management and Coordination with other Active Construction Projects Within the Vicinity of the Project Site 	<p>Construction of four new managed/HOV traffic lanes (two in each direction) in the median of the existing lanes on the Capital Beltway. Work included the reconstruction of ramps, heavy maintenance of traffic effort, shoulder reconstructions, interchanges, frontage roads, Both overpasses and underpasses as well as bridge widening's. The Project encompassed the replacement of more than \$260M of aging infrastructure, including 58 bridges, 9 miles of roadway and 12 interchanges. Construction of the Project required close coordination with VDOT, MWAA, WMATA, local jurisdictions, businesses, community associations, and the traveling public. Although only a 35% CJV member, LANE provided nearly all of the project supervision and workforce, all of the MOT plus all asphalt paving.</p> <p>RELEVANT PROJECT ELEMENTS</p> <p>Safety/Limiting Impacts to the Traveling Public: The I-495 Express Lanes project has been the recipient of numerous awards including a safety award for more than 5,000,000 manhours without a lost time incident in September 2012. Despite working alongside traffic in a limited area, with many key activities like bridge demolition and steel erection occurring at night, the construction team achieved a Total Recordable Incident Rate (TRIR) of 0.69, which ranks the project among the best heavy civil projects in the nation.</p> <p>Innovative Design Solutions/Construction Techniques: Numerous ATCs, combined with reduction in the originally approved Record of Decision regarding ROW and length of the project, <i>saved VDOT over \$500 million in overall project cost.</i></p> <p>Meeting or Exceeding DBE Goals: Our team subcontracted over 40% of the project to DBE and SWaM firms (more than 280), totaling nearly \$550M. LANE received the 2013 Prime Contractor of the Year Award from VDOT for outstanding performance and participation in the DBE Program.</p> <p>Roadway: The I-495 Express Lanes project is one of the largest roadway projects constructed in the Commonwealth. Similar to the High Rise Bridge project, the I-495 Express Lanes project widened the existing roadway to the median and involved replacement and widening of numerous structures.. The Express Lanes project has similar scope elements including, roadway widening, box culvert extensions, ITS, incident response management, ramp extensions, public outreach, shoulder strengthening, work in high volume ADT's, sound barriers, complex MOT schemes and bridge widenings.. The team constructed three new access points and upgraded 12 key interchanges that increased capacity and mobility, improved driver safety and removed operational deficiencies, with minimal impact to the traveling public, residences, and businesses.</p> <p>Bridge and Structures: Our Team widened and/or replaced 58 bridges on this project adjacent to high ADT count/live traffic. LANE devised an innovative phasing and design for the widening/replacement of the Rt. 7 Bridge over 495; the original plan consisted of building a temporary bridge to maintain traffic, however, our team decided that phased construction of the permanent bridge improved MOT and was more cost-effective. The original concept called for three-stage replacement of the bridges over the Beltway, but we were able to plan and execute ALL bridge replacements in two stages except for the Rt. 7 Bridge.</p> <p>Maintenance of Traffic: A key challenge on the I-495 Express Lanes project was accommodating extreme volumes (over 200,000 VPD) of commuter, residential, and commercial vehicular traffic. The contract required the project to maintain the existing traffic during construction; affecting every phase of the planning, design, and construction. By conducting extensive traffic studies and through close coordination with VDOT and the local jurisdictions, our Team produced a number of innovative designs, work zone access methods, carefully planned lane shifts, and construction phasing sequences that helped to minimize disruption during construction. Additionally, the alignment of many of the existing bridges over the Beltway could not be shifted so new replacement bridges were built on the same footprint as the old structures. One of the significant challenges for this project was not starting daytime lane closures until after 9:30 am and having all four lanes of traffic open again at 3:30 pm. Overnight closures were similarly restricted and exceptions were rare – primarily for steel erection, where short-duration total closures were permitted. LANE fulfilled this requirement by not reducing traffic capacity during construction.</p> <p>Utilities: There were significant utility coordination effort, both in relocation of existing utilities and installation of new services for lighting and toll facilities. Two high voltage transmission lines ran in a corridor parallel to the main alignment of the project, crossing several arterial roads that were associated with the project. At one arterial, there was insufficient clearance between the transmission line sag and the road surface. The line had to be raised by installing an insert in one supporting tower. In total, over 175 utility conflicts were resolved requiring coordination with 13 different utility owners.</p> <p>Public Outreach/Involvement: More than 2,000 public outreach meetings were conducted and, in coordination with VDOT, the team kept the public involved through various media methods: project website, routine newsletters, and brochure mailings to residents and business.</p> <p>Rail/Railroad Coordination: Construction work was coordinated with one Class 1 rail agency and one commuter railroad. Norfolk Southern Railroad operates a network of heavy railroad lines that crossed the project, which required significant coordination in areas of the project that crossed over live track operations. The Washington Metro Transit Authority concurrently constructed a \$2.5 billion, 13-mile long extension of its rail line that crossed the project in multiple locations.</p>		



ATTACHMENT 3.4.1(a)

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I-485/I-85 "TURBINE" INTERCHANGE Charlotte, NC DESIGN-BUILD ROADWAY PROJECT	STV Incorporated	Name of Client./ Owner: NCDOT Phone: 919.707.6604 Project Manager: Virginia Mabry Phone: 919.707.6604 Email: vmabry@ncdot.gov	06/2014	02/2015 *Owner change order	\$92,162	\$98,727	\$65,641

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.

Similar Scope of Work:	PROJECT SCOPE	
<ul style="list-style-type: none"> • Design-Build with STV • Roadways • Bridges/Structures • Interchanges • Environmental • Geotechnical • Right-of-Way • Hydraulics • Stormdrain and SWM • Demolition of Structures • Retaining Walls • Traffic Control Devices • Signs, Sign Structures, and Foundations • Transportation Management Plan • Traffic Maintenance and Management • Utilities • Rail & Railroad Coordination • Stakeholder Coordination • Public Involvement/Communications • QA/QC • Survey • Construction Engineering and Inspection • Project Management and Coordination with other Active Construction Projects Within the Vicinity of the Project Site 	<p>LANE was the Lead Contractor responsible for the construction of a new two level "turbine" interchange and completion of the I-485 Loop around the north end of Charlotte, NC. The widening of I-85 and I-485 also occurred to accommodate the interchange configuration and to match improvements occurring in adjacent projects. The scope included significant roadway construction of ramps and landmark bridge structures in the heavily populated urban are of Charlotte. <i>STV was Lead Designer.</i></p>	
<p align="center">Personnel on Project:</p> <p>David Grey, PE (LANE) Mark Robbins, PE (STV) Suresh Karre, PE, PTOE (STV) Eric Ebert, PE, PTOE (STV)</p>	<th style="background-color: #0056b3; color: white;">RELEVANT PROJECT ELEMENTS</th> <p>Innovative Design Solutions/Construction Techniques: During the proposal phase, we proposed a two level "turbine" interchange design rather than NCDOT's originally four-level "stack" type directional interchange with high-speed ramps. We identified significant potential safety and constructability issues with NCDOT's original proposed interchange. Our innovative concept greatly reduced the construction work performed and significantly improved safety, in addition to reducing costs to the point of eliminating the need for gap financing. The first of its kind in North Carolina, and extremely uncommon in the United States, the turbine interchange design circles all left-turning traffic around a central bridge in a counter clockwise direction, creating a seamless movement between the two highways.</p> <p>Bridge and Structures: The construction of the new two level "turbine" interchange was the most significant structure on the project.. The turbine interchange used smaller, single-span bridges, smaller columns and flatter roadway profiles. Additionally, the turbine design reduced the earthwork and eliminated the need to haul material off-site. Another bridge was replaced over I-85 at Mallard Creek Road. This bridge was constructed to accommodate the new on/off ramps connecting I-85 to the new interchange.</p> <p>Safety/Limiting Impacts to Traveling Public: The turbine design reduced the need of hauling borrow earth material to the site and significantly reduced the exposure of the traveling public to construction traffic.</p> <p>DBE Program: The DBE goal for this project was 9%. LANE exceeded this goal and had a final DBE commitment of 11.0%.</p> <p>Roadway: The widening of I-85 & I-485 occurred. The work included earthwork, asphalt paving, and drainage.</p> <p>Maintenance of Traffic: Traffic management was a key challenge due to the 120,000 vehicles per day traveling through the project corridor. Traffic disruptions were minimized through the use of temporary ramp alignments and interstate detours, which minimized the amount of work performed in close proximity to traffic.</p> <p>ROW/Utilities: We were responsible for ROW acquisitions and utility relocations. A major sanitary sewer line had to be relocated because it crossed the center of the interchange. A sewer tunnel under I-85 was constructed along with maintenance access tunnel under one ramp.</p> <p>Public Outreach/Involvement: The innovative interchange concept created the need to for public involvement because the turbine interchange was a new design concept design. Several public meetings were held to communicate the revised concept to the public and key local stakeholders. Additionally, we provided regular construction and traffic pattern updates to the NCDOT for communication to the public. The LANE Team successfully partnered with NCDOT to provide a solution that was dramatically different than the concept originally presented to the public. The innovative interchange concept required not only a revised Interchange Modification Report for the Federal Highway Administration, but also created the need for further public involvement.</p> <p>Environmental: We were responsible for environmentally permitting. LANE adjusted the ramp alignments and relocations to minimize impacts to streams by 1,000 feet so that the departments of transportation didn't have to pay for environmental impact mitigation.</p>	RELEVANT PROJECT ELEMENTS
	<th style="background-color: #0056b3; color: white;">EVIDENCE OF PERFORMANCE</th> <p>#1 in <i>Roads & Bridges Magazine</i> Best of 2012.</p> <p>"State's first turbine interchange top road project for 2012; saves taxpayers \$40 million (\$20M in ROW and \$20M in Construction)." -NCDOT</p> <p>"Over the past three years, we have been able to move forward with critical transportation projects like this one using innovative financing and construction methods such as design-build-finance and the Mobility Fund." "It is great to see this innovation recognized at the national level." -North Carolina Gov. Bev Perdue.</p> <ul style="list-style-type: none"> ✓ 2015 Design-Build Institute of America (DBIA) Excellence in Design (Engineering) ✓ 2015 National Award of Merit - Design-Build Institute of America ✓ 2015 ENR Southeast Best Project - Highways/Bridges 	EVIDENCE OF PERFORMANCE



ATTACHMENT 3.4.1(c)

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)	
I-85 OVER THE YADKIN RIVER Rowan and Davidson Counties, NC ROADWAY PROJECT	Flatiron-LANE, a joint venture of Flatiron Constructors Inc. and the LANE Construction Corp.	Name of Client./ Owner: NCDOT Phone: 919.707.2900 Project Manager: Rodger Rochelle Phone: 919.707.2900 Email: rdrochelle@ncdot.gov	09/2010	03/2013	\$136,000	\$136,000	\$8,000

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

<p align="center">Similar Scope of Work:</p> <ul style="list-style-type: none"> Design-Build with LANE Roadways Bridges/structures Interchanges Environmental Geotechnical Right-of-way Hydraulics Stormdrain and SWM Demolition of structures Retaining walls Signs, sign structures, and foundations Transportation management plan Traffic maintenance and management Utilities Rail and railroad coordination Stakeholder coordination Public involvement/communications QA/QC Survey Construction engineering and inspection Project management and coordination with other active construction projects within the vicinity of the project site 	<p>PROJECT SCOPE</p> <p>I-85 is the most heavily used highway corridor for cars and trucks traveling between Richmond, VA, and Atlanta, GA. STV served as lead designer (with <i>LANE as the Lead Roadway Contractor</i>) to widen three miles of I-85 from four to eight lanes and construct a new major crossing of the Yadkin River, as well as four other prestressed concrete girder bridges. The firm was responsible for the design of all bridges, retaining and noise walls, roadway design, geotechnical investigation and design, drainage design, permitting, maintenance of traffic, intelligent transportation system (ITS) design, signage, utility design and coordination, railroad coordination, and public outreach/involvement. The work was performed in STV's Charlotte, NC; Rock Hill, SC; Jacksonville, FL; and New York, NY offices.</p>	
<p align="center">Proposed Personnel on Project:</p> <p>Mark Robbins, P.E., DBIA (STV) David Grey, PE (LANE)</p>	<p>RELEVANT PROJECT ELEMENTS</p> <p>Innovative Design Solutions/Construction Techniques: The innovative techniques the team used included the implementation of a comprehensive traffic maintenance and management plan to minimize disruption to I-85 traffic, which enhanced safety when hauling materials and equipment to construction sites by separating construction traffic from highway traffic. The project included the construction of a single temporary work bridge instead of two separate temporary work bridges. This approach was more environmentally friendly and accelerated the work schedule.</p> <p>Bridges and Structures: Led by proposed Lead Structural Engineer, Mark Robbins, PE, STV prepared plans and design calculations for the dual 21-span, 2,900-foot-long bridges spanning the Yadkin River, as well as a 2-span, 252-foot-long continuous girder bridge and two 100-foot-long dual girder bridges, all with 77-inch prestressed concrete girders. The firm also performed shop drawing reviews, prestressed girder stability calculations, and other construction engineering tasks.</p> <p>Safety/Limiting Impacts to Traveling Public: STV and LANE also developed an incident management plan (IMP) that addressed issues such as well-defined detour routing for major traffic incidents, on-site wrecker service for attending to crash sites, and close coordination with the DMV. The program was a huge success. There were no serious or fatal crashes during the three years of interstate construction.</p> <p>DBE Program: A 10% DBE goal was established for this project and the team exceeded this goal.</p> <p>Roadways: The project involved major reconstruction of the US 29/70 and NC 150 interchange, relocating it from north of SR 2120 to south of the existing NC 150 flyover bridge. The scope of work also included removing the interchange of I-85 at Clark Road and widening 3.3 miles of I-85 from four lanes to eight lanes from just north of Long Ferry Road (Exit 81) to just north of the N.C. 150 interchange.</p> <p>Maintenance of Traffic: A critical aspect of the project was maintenance of traffic during construction and incident management. STV and LANE devised a comprehensive MOT plan that placed great emphasis on separating construction from highway traffic, including a dirt hauling plan that effectively separated haul vehicles from I-85 as much as possible.</p> <p>Utilities: STV provided designs for the relocation of microwave vehicle detectors and a segment of the fiber-optic backbone cables along I-85, as well as for the installation of a new multi-duct conduit system under the bridges. By conducting partnering sessions with utility owners, the design-build team successfully managed the utility coordination for this and other facilities that were in conflict with the new construction.</p> <p>Public Outreach/Involvement: Our team implemented a public information plan to engage target audiences and notify them about project impacts. Our plan informed/educated the public at least three weeks before any construction activity that would have significant impact, including the start of construction, major traffic shifts, closures, detours, and night work. All material was coordinated with and through NCDOT.</p> <p>Rail/Railroad Coordination: The dual river bridge structures span two Norfolk Southern Railway main line tracks, as well as a future freight track and the Atlanta-to-Washington high-speed rail (HSR) line. The firm worked closely with the host railroads, the NCDOT Rail Division, Amtrak, and FRA in developing the construction plan. STV's coordination efforts involved plan approval for bridge work over operating railroad tracks and the proposed relocation of an at-grade crossing. The increased span of the new parallel bridges provide ample room for future rail improvements. In addition, the project encompassed a number of rail improvements aimed at increasing track speed and capacity for both passenger and freight trains, including realignment of the existing North Carolina Railroad tracks that cross under I-85 to remove a sharp curve.</p>	
<p>EVIDENCE OF PERFORMANCE</p> <p>When the improved highway opened to traffic in 2013, one of the most dangerous bridge crossings in the Southeast was eliminated, providing safe and smooth traffic flow for the traveling public. The major dual bridge structure has earned extensive recognition, including receiving a Design-Build Institute of America (DBIA) 2014 <i>National Award of Merit</i> and an <i>Engineering News-Record 2014 Award of Merit</i>, and being named one of the 2014 <i>Top 10 Bridges</i> by <i>Roads & Bridges</i> magazine. It also earned the 2015 <i>IPI Partnered Project of the Year Award, Honorable Mention</i>. "We're proud to bring the citizens of this region what they've wanted for many years – a modern bridge that can easily accommodate the 60,000 vehicles that travel through the area each day." NCDOT Secretary Tony Tata</p>		

ATTACHMENT 3.4.1(c)

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)	
FANTASY HARBOUR BRIDGE Myrtle Beach, SC BRIDGE PROJECT	R.R. Dawson Inc.	Name of Client./ Owner: SCDOT Phone: 803.737.4034 Project Manager: Michael Barbee Phone: 803.737.4034 Email: barbeemw@scdot.org	07/2004	06/2009	\$46,000	\$46,000	\$1,583

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

Similar Scope of Work:
<ul style="list-style-type: none"> • Roadways • Major bridges/structures over navigable waterways • Environmental • Geotechnical • Right-of-way • Hydraulics • Drainage and SWM • Retaining walls • Signs, sign structures, and foundations • Transportation management plan • Traffic maintenance and management • Utilities • Stakeholder coordination • Public involvement/communications • QA/QC • Survey • Construction engineering and inspection • Project management and coordination with other active construction projects within the vicinity of the project site
Proposed Personnel on Project:
Mark Robbins, P.E., DBIA (STV)

PROJECT SCOPE
To complete the metropolitan loop around Myrtle Beach, SC, STV designed the award-winning, 1,800-foot-long Fantasy Harbour Bridge over the navigable Atlantic Intracoastal Waterway. STV was the lead designer for the multi-faceted transportation project involving major bridge and roadway design—including the design of the longest spliced, post-tensioned concrete beam span in the country at the time of design (330 feet). STV's offices in Charlotte, NC, Charleston, SC, and Rock Hill, SC performed the design work. STV's responsibilities included all roadway and bridge design, drainage including closed systems, bridge hydraulics, scour analysis, vessel collision, ditches, outfalls, erosion and sediment control, culvert analysis, quantities, and a bridge deck drainage system.

RELEVANT PROJECT ELEMENTS
Innovative Design Solutions/Construction Techniques: This project was designed to overcome several challenges, including complex geological formations; long-span girder designs, including lateral stability measures; and vessel impact design. The bridge substructures were designed for vessel collisions so that a fender system was not necessary in the navigable waterway. Due to the presence of very soft soils in the roadway approaches to the bridge, and the anticipated large settlements from the approach fills, ground improvements consisting of stone columns were implemented., which was the first application of stone column ground improvement's ever on a bridge project in South Carolina.
Bridges and structures: The Fantasy Harbour project completed the "missing link" in the metropolitan loop around Myrtle Beach, SC, affording the tourist community new development opportunities as well as new local attractions. The project featured a record-setting, high-level bridge that won numerous awards. The STV team's visionary and creative design for this bridge earned high praise from SCDOT, demonstrating the team's dedication to quality service. With the longest-designed, spliced, post-tensioned concrete bulb-T beam design in the country at the time, the 1,800-foot-long Fantasy Harbour Bridge rises 65 feet above the Atlantic Intracoastal Waterway. Comprising 12 spans, the bridge has a 76-foot-wide roadway and carries five lanes of traffic. The three span channel region consists of a 270 feet + 330 feet + 270 feet span arrangement. The channel region is supported by multi-column piers founded on drilled shaft footings. Prestressed concrete bulb-T beams are used in approach regions and supported by multi-column piers founded on drilled shafts. To provide bidding flexibility, STV designed two channel crossing alternates—concrete and the selected alternate, steel—for contractors to bid on the most cost-effective alternate. The piers supporting the main channel span were designed for vessel collision forces so that no fender system was necessary in the navigable waterway, which reduced future maintenance costs for SCDOT and facilitated reviews and approvals from the U.S. Coast Guard.
Safety/Limiting Impacts to Traveling Public: The specifications prepared by STV required the contractor to maintain traffic throughout the length of the project. Additional traffic control was provided during traffic signal construction or lane closures, as directed by STV. The project also included the temporary adjustment of traffic control signal equipment and materials during construction, including intersection relocations and the installation of temporary construction traffic signals. The maintenance of traffic and the safety of traffic was of prime importance. Safety was enhanced by providing for the continuous operation of traffic signals. When adjusted, temporary signals were constructed, the operation smoothly transferred to that signal.
DBE Program: A 10% DBE goal was established for this project and the team exceeded this goal.

Roadways: STV led the environmental assessment, public involvement, and development of right-of-way and final roadway plans for the construction of 3.1 miles of roadway approaches, connecting the newly constructed Fantasy Harbour interchange at US 17 bypass to local roads adjacent to the Atlantic Intracoastal Waterway. The bridge was designed to accommodate six lanes without any widening.
Utilities: STV was responsible for all subsurface utility exploration work required to complete the project and all utility relocations and construction plans, including obtaining utility agreements.
Public outreach/involvement: STV managed the public outreach/involvement process, which included supporting public meetings to provide an opportunity to review and discuss the proposed design, purpose and need for the project, and limits of the project.
Safety: The project was delivered on time, under budget, without design claims, and without any lost-time incidents.

EVIDENCE OF PERFORMANCE
This project was recognized by *Roads and Bridges* magazine as one of the 2009 *Top Ten Bridges* in the United States. Other awards include the ACEC of South Carolina *Honor Award*. Besides the record-setting span design, the project offered numerous other challenges, including the need for ground modification techniques to strengthen the poor subsurface material; the requirement for seismic design to withstand earthquakes; and permitting issues with the U.S. Army Corps of Engineers and U.S. Coast Guard. These and other challenges were met successfully, and the project was delivered on time and under budget.
"...staff at STV displayed a high level of project management and structural design expertise on this very complicated project. STV's commitment went well beyond their contractual obligations and their partnership was a vital component in the success of the Fantasy Harbour project." Michael Barbee, SCDOT Program Manager



ATTACHMENT 3.4.1(d)

SUBCONSULTANT - 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 Subconsultant for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
11th STREET CORRIDOR BRIDGES AND INTERCHANGES Washington, DC DESIGN-BUILD ROADWAY PROJECT	Skanska USA Civil Southeast Inc./ Facchina Construction Company A Joint Venture	Name of Client: District Department of Transportation (DDOT) Phone: 202.673.6813 Project Manager: Joseph Dorsey Phone: 202.671.4605 Email: Joseph.Dorsey@dc.gov	12/2009	11/2015	\$260,000	\$375,079 <i>(Owner issued a significant change that increased scope and construction value.)</i>	\$17,300

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

Similar Scope of Work:	PROJECT SCOPE	
<ul style="list-style-type: none"> • Design-Build • Bridge Over Navigable Waterway • Multiple Bridges and Structures • Demolition of Structures • Navigable Channel Fender System • U.S. Coast Guard Coordination • Roadways/Utilities • Retaining & Sound Barrier Walls • Poor Geotechnical Soils • Environmental/Permitting/Geotechnical • Railroad Coordination • Right-of-Way and Surveying • Hydraulics, Storm Drainage, and SWM • ITS/Traffic Control Devices/Guardrail • Signs, Sign Structures, and Foundations • Roadway and Marine Navigation Lighting • TMP/Traffic Maintenance and Management • Public Involvement/Relations/Landscaping • Quality Assurance/Quality Control • Construction Engineering and Inspection • Overall Project Management 	RELEVANT PROJECT ELEMENTS	
Proposed Personnel on Project:	<p>Without direct access between the Southeast Freeway (I-695) and the northern segment of the Anacostia Freeway (DC 295/I-295) congestion along the 11th Street Bridges near Capitol Hill in the District had long been a problem for local/regional traffic. The primary goals of the 11th Street Bridges project were to complete all freeway connections to accommodate thousands of daily commuters and to replace structurally-deficient bridges along the 11th Street corridor. Undertaking the largest construction job in the history of DDOT and also the first transportation project administered by DDOT to be delivered by the D-B-To-Budget procurement method, the DB Team provided three new major continuous steel multi-girder bridge crossings of the Anacostia River and two complex interchanges with the Southeast Freeway and the Anacostia Freeway. The major structures included a 5 span, 866-foot-long bridge, a 5 span, 926-foot-long bridge, and a 10 span, 1,650-foot-long bridge. Spans ranged up to 234 feet for the main span over the Anacostia River. In total, the project included 18 bridges and 25 retaining walls. In addition, innovative design techniques that reduced environmental and community impacts were utilized to work within budget constraints. With a total design and construction cost of \$375M, DDOT saved a total of approximately \$85M from the original engineer's estimate.</p> <p>As lead designer, JMT provided technical services which included: highway and structural design; subsurface utility investigations; geotechnical engineering; traffic analysis and complex MOT plans for various phases of construction; utility coordination; design of utility relocations; drainage, ESC/SWM; environmental permitting including Section 404 and 401 of the Clean Water Act, Section 10 of the Rivers and Harbors Act, U.S. Coast Guard, and National Park Service permitting; environmental monitoring, compliance, and training programs; hazardous materials and other environmental investigations; landscaping design; field surveys and visual quality control. A challenge to this project, posed by the clients as part of the DB-to-Budget procurement, was how to maximize construction of crucial project elements including rehabilitation or replacement of existing bridges and providing interchange connectivity. JMT's design work was performed at the hub office in DC and JMT's headquarters in Sparks, MD.</p> <p>Innovative Design Solutions/Construction Techniques: JMT refined the planning document alignments and interchanges to reduce costs, environmental and community impacts, minimized community impacts, maintained traffic and built public support through extensive public involvement. Dozens of innovative ATC's were employed to improve the project and reduce costs which resulted in a saving of over \$85M.</p> <p>Safety/Limiting Impacts to Traveling Public: Provided innovative responses to project problems, including designing/scheduling activities that moved a majority of the construction work out of traffic, and minimized traffic shifts.</p> <p>Bridge over Navigable Channel: Three major continuous steel multi-girder bridges crossing the Anacostia River with lengths between 866 feet to 1,650 feet and the required vertical clearance over an active navigable channel. JMT coordinated extensively with various District agencies and the U.S. Coast Guard to provide the necessary vertical and horizontal clearances, pier protection and fire protection. During design JMT worked closely with the contractors regarding crane sizes and locations to facilitate girder erection to minimize MOT issues and pier footing sizes and locations to minimize conflicts with existing structures and utilities. JMT reviewed all contractor submittals related to the demolition and rehabilitation of existing structures as well as construction of new structures. Plans were modified quickly to reflect changes necessary due to field conditions to keep the project on schedule. It also included the widening of two complex interstate interchanges which involved new structures as well as the widening of existing bridges.</p> <p>DBE Program: The DBT met both the 15% design and 6% construction DBE goals through maintaining a proactive approach to utilizing DBE firms. Activities included hosting regular job fairs, helping potential DBE firms with the application process, and hosting regular "Lunch & Learn" sessions. The project had a dedicated DBE Compliance Officer on site to ensure the team activities, practices and reporting were in compliance with rules and regulations.</p> <p>Maintenance of Traffic: Sequencing plans minimized impacts to existing traffic. As a major commuter route within the nation's capital, this project not only impacts hundreds of thousands of commuters every day, but is also part of a major emergency access route. Our design and sequencing of construction allowed for approximately 70% of the project to be constructed with minimal impact to the existing roadway network. Most of the proposed roadways were built offline.</p> <p>Environmental Monitoring/Permitting: JMT authored the NEPA Reevaluation of the FEIS and provided all environmental compliance and permitting efforts with perfect compliance with all 188 environmental commitments.</p> <p>Geotechnical Engineering: To address geologic conditions encountered ground improvements techniques, such as installing additional wick drains and the use of geofoam blocks were utilized to ensure the schedule was maintained.</p> <p>Safety: There were two key safety challenges with the project: 40% of the work was done over water, and the construction took place in the midst of live traffic. Cranes were securely fastened to the barges and workers on them wore mandatory life vests. Certified flag persons and specially trained maintenance and protection of traffic personnel ensured a steady flow of traffic while maintaining site safety. This allowed for the project to be completed with only 22 recordable cases and just four cases with days away from work.</p>	
EVIDENCE OF PERFORMANCE		
<p>Through strong partnerships among owner, contractor, and designer; innovations in design that helped save \$85M; and by exceeding the expectations of other agencies and the public; the 11th Street Bridges project shines as few projects of its size can claim. The new bridges connect freeways, enable better accessibility to DC neighborhoods, enhance safety for residents, and improve regional connections. All work was completed while maintaining environmental compliance throughout construction over a major waterway. Furthermore, the project promotes job growth and economic stimulus to the area as part of the Greater Anacostia Waterfront Initiative. This project continues to receive both national and local award recognition and is truly a project example of a "Design-Build Done Right."</p> <p><i>"We need to build the most amount of project scope for the least amount of money by mending the quality and the Skanska/Facchina/JMT team fit the bill." - Ravi Ganvir, P.E., DDOT Deputy Chief Engineer</i></p> <p><i>"The team impressed me with their technical expertise, can-do attitude, and insistence on excellence in all facets throughout the project." - Joseph Dorsey, PE, DDOT Civil Engineering Project Manager, 11th Street Bridges D-B</i></p> <p><i>"I have worked with a lot of firms and JMT has been a firm very easy to work with, there is never any issues or any problems. JMT understands the Design-Build process." - Bjarne Gudmundsen, Skanska USA Design-Build Manager</i></p>		



Attachment 3.5

**Lead Contractor Safety
Qualifications Form**

ATTACHMENT 3.5

(Addendum No. 1 Form 3.5)

LEAD CONTRACTOR SAFETY QUALIFICATIONS FORM

The following information will be used to understand and evaluate the Offeror's past performance on safety in accordance with RFQ Section 3.5.

Company Name:	The Lane Construction Corporation	Date:	9/21/2016
Number of Employees:	3874		
Workers' Compensation Experience Modification Ratio (EMR) and/or Experience Modification Factor (EMF)	2013	2014	2015
3.5.1.1 List your company's Worker's Compensation EMR/EMF calculated by National Council on Compensation Insurance, Inc. or other similar advisory organization or rating bureau for the past 3 years.	.56	.56	.69
Accident and Illness	2013	2014	2015
3.5.1.2 List your company's recordable injuries and illnesses rate for the past 3 years.	2.4	1.8	2.7
3.5.1.3 List your company's days away from work injury incident rate for the past 3 years.	0.29	0.15	0.30
3.5.1.4 Submit a completed Occupational Safety and Health Administration (OSHA) Form 300A, Summary of Work-Related Injuries and Illnesses, for the past three (3) years.			

OSHA's Form 300A (Rev. 01/2004)

Summary of Work-Related Injuries and Illnesses

Year 2013



U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the log. If you had no cases write "0."

Employees former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR 1904.35, in OSHA's Recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
<u>0</u>	<u>12</u>	<u>37</u>	<u>47</u>
(G)	(H)	(I)	(J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
<u>446</u>	<u>1,282</u>
(K)	(L)

Injury and Illness Types

Total number of... (M)	(1) Injury	(2) Skin Disorder	(3) Respiratory Condition	(4) Poisoning	(5) Hearing Loss	(6) All Other Illnesses
	<u>96</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

Post this Summary page from February 1 to April 30 of the year following the year covered by the form

Public reporting burden for this collection of information is estimated to average 58 minutes per response, including time to review the instruction, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistics, Room N-3644, 200 Constitution Ave, NW, Washington, DC 20210. Do not send the completed forms to this office.

Establishment information

Your establishment name The Lane Construction Corporation

Street 90 Fieldstone Court

City Cheshire State Connecticut Zip 6410

Industry description (e.g., Manufacture of motor truck trailers)
Heavy Highway and Bridges

Standard Industrial Classification (SIC), if known (e.g., SIC 3715)
1 6 1 1

OR North American Industrial Classification (NAICS), if known (e.g., 336212)

Employment information

Annual average number of employees 5,971

Total hours worked by all employees last year 8,102,984

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.


Company executive

203-439-2948
Phone

Corporate Safety
Director
Title

February 01, 2014
Date

OSHA's Form 300A (Rev. 01/2004)

Summary of Work-Related Injuries and Illnesses

Year 2014



U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the log. If you had no cases write "0."

Employees former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR 1904.35, in OSHA's Recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
<u>1</u>	<u>6</u>	<u>29</u>	<u>36</u>
(G)	(H)	(I)	(J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
<u>440</u>	<u>1,618</u>
(K)	(L)

Injury and Illness Types

Total number of... (M)	(1) Injury	(2) Skin Disorder	(3) Respiratory Condition	(4) Poisoning	(5) Hearing Loss	(6) All Other Illnesses
	<u>66</u>	<u>4</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>2</u>

Post this Summary page from February 1 to April 30 of the year following the year covered by the form

Public reporting burden for this collection of information is estimated to average 58 minutes per response, including time to review the instruction, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistics, Room N-3644, 200 Constitution Ave, NW, Washington, DC 20210. Do not send the completed forms to this office.

Establishment information

Your establishment name The Lane Construction Corporation

Street 90 Fieldstone Court

City Cheshire State Connecticut Zip 6410

Industry description (e.g., Manufacture of motor truck trailers)
Heavy Highway and Bridges

Standard Industrial Classification (SIC), if known (e.g., SIC 3715)
1 6 1 1

OR North American Industrial Classification (NAICS), if known (e.g., 336212)

Employment information

Annual average number of employees 3,772

Total hours worked by all employees last year 7,912,580

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

Stephen Hubbard
Company executive

Corporate Safety
Director
Title

203-439-2948
Phone

January 20, 2015
Date

OSHA's Form 300A (Rev. 01/2004)

Summary of Work-Related Injuries and Illnesses

Year 2015



U.S. Department of Labor
Occupational Safety and Health Administration

Form approved OMB no. 1218-0176

All establishments covered by Part 1904 must complete this Summary page, even if no injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the log. If you had no cases write "0."

Employees former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR 1904.35, in OSHA's Recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
<u>2</u>	<u>12</u>	<u>27</u>	<u>67</u>
(G)	(H)	(I)	(J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
<u>1,070</u>	<u>870</u>
(K)	(L)

Injury and Illness Types

Total number of... (M)			
(1) Injury	<u>107</u>	(4) Poisoning	<u>0</u>
(2) Skin Disorder	<u>1</u>	(5) Hearing Loss	<u>0</u>
(3) Respiratory Condition	<u>0</u>	(6) All Other Illnesses	<u>0</u>

Post this Summary page from February 1 to April 30 of the year following the year covered by the form

Public reporting burden for this collection of information is estimated to average 58 minutes per response, including time to review the instruction, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about these estimates or any aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistics, Room N-3644, 200 Constitution Ave, NW, Washington, DC 20210. Do not send the completed forms to this office.

Establishment information

Your establishment name The Lane Construction Corporation

Street 90 Fieldstone Court

City Cheshire State Connecticut Zip 6410

Industry description (e.g., Manufacture of motor truck trailers)
Heavy Highway and Bridges

Standard Industrial Classification (SIC), if known (e.g., SIC 3715)
1 6 1 1

OR North American Industrial Classification (NAICS), if known (e.g., 336212)

Employment information

Annual average number of employees 3,625

Total hours worked by all employees last year 7,888,556

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

Stephen Hubbard
Company executive

Corporate Safety
Director
Title

203-439-2948
Phone

February 01, 2016
Date

ATTACHMENT 3.5

(Addendum No. 1 Form 3.5)

LEAD CONTRACTOR SAFETY QUALIFICATIONS FORM

The following information will be used to understand and evaluate the Offeror's past performance on safety in accordance with RFQ Section 3.5.

Company Name:	McLean Contracting Company	Date:	09/23/2016
Number of Employees:	280		
Workers' Compensation Experience Modification Ratio (EMR) and/or Experience Modification Factor (EMF)	2013	2014	2015
3.5.1.1 List your company's Worker's Compensation EMR/EMF calculated by National Council on Compensation Insurance, Inc. or other similar advisory organization or rating bureau for the past 3 years.	0.74	0.58	0.61
Accident and Illness	2013	2014	2015
3.5.1.2 List your company's recordable injuries and illnesses rate for the past 3 years.	5.0	5.5	8.4
3.5.1.3 List your company's days away from work injury incident rate for the past 3 years.	1.1	1.6	3.3
3.5.1.4 Submit a completed Occupational Safety and Health Administration (OSHA) Form 300A, Summary of Work-Related Injuries and Illnesses, for the past three (3) years.			

Summary of Work-Related Injuries and Illnesses

All establishments covered by Part 1904 must complete this Summary page, even if no work-related injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete and accurate before completing this summary.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the Log. If you had no cases, write "0."

Employees, former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR Part 1904.35, in OSHA's recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	3	2	9
(G)	(H)	(I)	(J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
25	39
(K)	(L)

Injury and Illness Types

Total number of... (M)			
(1) Injuries	14	(4) Poisonings	0
(2) Skin disorders	0	(5) Hearing loss	0
(3) Respiratory conditions	0	(6) All other illnesses	0

Post this Summary page from February 1 to April 30 of the year following the year covered by the form.

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Establishment information

Your establishment name McLean Contracting Company
 Street 6700 McLean Way
 City: Glen Burnie State: MD ZIP 21060

Industry description (e.g., *Manufacture of motor truck trailers*)

Heavy Marine Construction

Standard Industrial Classification (SIC), if known (e.g., 3715)

1 6 2 9

OR

North American Industrial Classification (NAICS), if known (e.g., 336212)

2 3 7 9 0 0

Employment information (If you don't have these figures, see the Worksheet on the back of the Original Form 300A to estimate.)

Annual average number of employees 290

Total hours worked by all employees last year 555,190

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate and complete.

 Exec. Vice President
 Frederick Rich Title
 410-553-6700 01/03/14
 Phone Date

Summary of Work-Related Injuries and Illnesses

All establishments covered by Part 1904 must complete this Summary page, even if no work-related injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete and accurate before completing this summary.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the Log. If you had no cases, write "0."

Employees, former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR Part 1904.35, in OSHA's recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	4	2	8
(G)	(H)	(I)	(J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
142	526
(K)	(L)

Injury and Illness Types

Total number of...	(1) Injuries	(2) Skin disorders	(3) Respiratory conditions	(4) Poisonings	(5) Hearing loss	(6) All other illnesses
(M)	14	0	0	0	0	0

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Establishment information

Your establishment name McLean Contracting Company
 Street 6700 McLean Way
 City: Glen Burnie State: MD ZIP 21060

Industry description (e.g., *Manufacture of motor truck trailers*)
Heavy Marine Construction

Standard Industrial Classification (SIC), if known (e.g., 3715)
1 6 2 9

OR
 North American Industrial Classification (NAICS), if known (e.g., 336212)
2 3 7 3 1 0

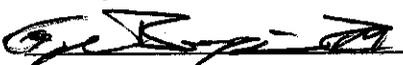
Employment information

(If you don't have these figures, see the Worksheet on the back of the Original Form 300A to estimate.)

Annual average number of employees 263
 Total hours worked by all employees last year 505,208

Sign here
 Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate and complete.

 President
 George Bosmajian Title
 410-553-6700 01/09/15
 Phone Date

Summary of Work-Related Injuries and Illnesses

All establishments covered by Part 1904 must complete this Summary page, even if no work-related injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete and accurate before completing this summary.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the Log. If you had no cases, write "0."

Employees, former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR Part 1904.35, in OSHA's recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	9	10	4
(G)	(H)	(I)	(J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
231	711
(K)	(L)

Injury and Illness Types

Total number of... (M)			
(1) Injuries	23	(4) Poisonings	0
(2) Skin disorders	0	(5) Hearing loss	0
(3) Respiratory conditions	0	(6) All other illnesses	0

Post this Summary page from February 1 to April 30 of the year following the year covered by the form.

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Establishment information

Your establishment name McLean Contracting Company
 Street 6700 McLean Way
 City: Glen Burnie State: MD ZIP 21060

Industry description (e.g., *Manufacture of motor truck trailers*)

Heavy Marine Construction

Standard Industrial Classification (SIC), if known (e.g., 3715)

1 6 2 9

OR

North American Industrial Classification (NAICS), if known (e.g., 336212)

2 3 7 3 1 0

Employment information (If you don't have these figures, see the Worksheet on the back of the Original Form 300A to estimate.)

Annual average number of employees 277

Total hours worked by all employees last year 550,095

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate and complete.

 President

George Bosmajian Title

410-553-6700 01/20/16

Phone Date

ATTACHMENT 3.5

(Addendum No. 1 Form 3.5)

LEAD CONTRACTOR SAFETY QUALIFICATIONS FORM

The following information will be used to understand and evaluate the Offeror's past performance on safety in accordance with RFQ Section 3.5.

Company Name:	E.V. Williams, Inc.	Date:	9/30/2016
Number of Employees:	183		
Workers' Compensation Experience Modification Ratio (EMR) and/or Experience Modification Factor (EMF)	2013	2014	2015
3.5.1.1 List your company's Worker's Compensation EMR/EMF calculated by National Council on Compensation Insurance, Inc. or other similar advisory organization or rating bureau for the past 3 years.	0.77	0.77	.70
Accident and Illness	2013	2014	2015
3.5.1.2 List your company's recordable injuries and illnesses rate for the past 3 years.	5.1	1.9	3.2
3.5.1.3 List your company's days away from work injury incident rate for the past 3 years.	0.5	0.0	0.0
3.5.1.4 Submit a completed Occupational Safety and Health Administration (OSHA) Form 300A, Summary of Work-Related Injuries and Illnesses, for the past three (3) years.			

OSHA's Form 300A

Summary of Work-Related Injuries and Illnesses

2013
 U.S. Department of Labor
 Occupational Safety and Health
 Administration

All establishments covered by Part 1904 must complete this Summary page, even if no work-related injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete and accurate before completing this summary. Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the Log. If you had no cases, write "0". Employees, former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR Part 1904.35, in OSHA's recordkeeping rule, for further details on the access provisions for these forms.

Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restrictions	Total number of other recordable cases
0	1	7	3
(G)	(H)	(I)	(J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
2	38
(K)	(L)

Injury and Illness Types

Total Number of...	(M)
(1) Injuries	11
(2) Skin disorders	0
(3) Respiratory conditions	0
(4) Poisonings	0
(5) Hearing loss	0
(6) All other illnesses	0

Establishment information

Your establishment name: 022 E. V. Williams, Inc.
 Street: PO Box 65128
 City: Virginia Beach State: VA Zip: 23467-5128

Industry description (e.g., *Manufacture of motor truck trailers*):
 Highway & Street Construction
 Standard Industrial Classification (SIC), if known (e.g., *SIC 3715*):
 1611
 Or
 North American Industrial Classification (NAICS), if known (e.g., *336212*):
 23731

Employment information (If you don't have these figures, see the Worksheet on the back of this page to estimate.)

Annual average number of employees: 207
 Total hours worked by all employees last year: 431,217

Sign here
 Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.


 Company executive: James A. Goushoo Title: President
 Phone: (757) 420-1140 Date: 1/14/2014

Post this Summary page from February 1 to April 30 of the year following the year covered by the form.

Public reporting burden for this collection of information is estimated to average 50 minutes per response, including time to review the instructions, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a current valid OMB control number. If you have any comments about these estimates or any other aspects of this data collection, contact: US Department of Labor, OSHA Office of Statistical Analysis, Room N-3644, 200 Constitution Avenue, NW, Washington, DC 20210. Do not send the completed forms to this office.

Summary of Work-Related Injuries and Illnesses

All establishments covered by Part 1904 must complete this Summary page, even if no work-related injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete and accurate before completing this summary.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the Log. If you had no cases, write "0."

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Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	0	3	1
(G)	(H)	(I)	(J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
0	24
(K)	(L)

Injury and Illness Types

Total number of... (M)			
(1) Injuries	4	(4) Poisonings	0
(2) Skin disorders	0	(5) Hearing loss	0
(3) Respiratory conditions	0	(6) All other illnesses	0

Post this Summary page from February 1 to April 30 of the year following the year covered by the form.

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Establishment information

Your establishment name E.V. Williams, Inc.
 Street PO Box 65128
 City: Virginia Beach State: VA ZIP 23467-5128

Industry description (e.g., *Manufacture of motor truck trailers*)

Heavy Highway

Standard Industrial Classification (SIC), if known (e.g., 3715)

1 6 1 1

OR

North American Industrial Classification (NAICS), if known (e.g., 336212)

2 3 7 3 1

Employment information (If you don't have these figures, see the Worksheet on the back of the Original Form 300A to estimate.)

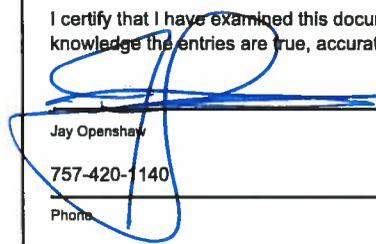
Annual average number of employees 203

Total hours worked by all employees last year 422,225

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate and complete.


 _____ Title President
 Jay Openshaw

 757-420-1140

 Phone _____ Date 1/20/15

Summary of Work-Related Injuries and Illnesses

All establishments covered by Part 1904 must complete this Summary page, even if no work-related injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete and accurate before completing this summary.
Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the Log. If you had no cases, write "0."
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Number of Cases

Total number of cases	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
<u>0</u>	<u>0</u>	<u>6</u>	<u>1</u>
(G)	(H)	(I)	(J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
<u>0</u>	<u>199</u>
(K)	(L)

Injury and Illness Types

Total number of...			
(M)			
(1) Injuries	<u>7</u>	(4) Poisonings	<u>0</u>
(2) Skin disorders	<u>0</u>	(5) Hearing loss	<u>0</u>
(3) Respiratory conditions	<u>0</u>	(6) All other illnesses	<u>0</u>

Post this Summary page from February 1 to April 30 of the year following the year covered by the form.

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Establishment Information

Your establishment name E. V. Williams
Street 925 South Military Highway
City: Virginia Beach State: VA ZIP 23464

Industry description (e.g., *Manufacture of motor truck trailers*)

Highway and Road Construction

Standard Industrial Classification (SIC), if known (e.g., 3715)

1 6 1 1

OR

North American Industrial Classification (NAICS), if known (e.g., 336212)

2 3 7 3 1

Employment Information (If you don't have these figures, see the Worksheet on the back of the Original Form 300A to estimate.)

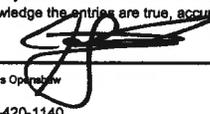
Annual average number of employees _____

Total hours worked by all employees last year 435,705

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate and complete.



James Openshaw Title
757-420-1140 01/18/16

Phone Date