

Original

JULY 8, 2020

Statement of Qualifications

I-81 WIDENING

MM 136.6 to MM 141.8

Roanoke County and
City of Salem, Virginia

State Project No.: 0081-080-946, P101,
R201, C501, B677, B678, B681, B682,
B683, B684, B685, B686, B687, B688

Federal Project No.: NHPP-0812 (323)

Contract ID Number: C00116203DB108



Lane-Corman I-81 Widening JV
in association with Rinker Design Associates, PC

July 8, 2020

Commonwealth of Virginia
Department of Transportation (VDOT)
1401 E. Broad Street
Richmond, Virginia 23219
Attention: Bryan Stevenson, P.E. DBIA (APD Division)

RE: I-81 Widening MM 136.6 to MM 141.8

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Federal Project No.: NHPP-0812 (323)
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Dear Mr. Stevenson:

Lane-Corman I-81 Widening JV (**Lane-Corman**), comprised of **The Lane Construction Corporation (Lane)** and **Corman Kokosing Construction Company (Corman)** is pleased to submit this Statement of Qualifications for the above referenced project to the Virginia Department of Transportation (VDOT).

Lane-Corman is the Offeror and will be the overall authority on the project as well as the Lead Contractor. We have teamed with **Rinker Design Associates, PC (RDA)** as the Lead Designer. RDA has provided transportation planning and engineering design services to VDOT for over 30 years. Together, the Lane-Corman 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.

Lane-Corman has engaged W.C. English Incorporated (English) as a dedicated subcontractor. RDA has engaged WSP USA, Inc. as a major subconsultant for the design effort. Together with additional hand-selected design and construction specialty firms, who are well experienced with VDOT processes and procedures, will provide the design and construction for the I-81 Widening project. We are confident in our team structure and experience, and have elaborated on our distinctive qualifications in the subsequent sections. The Lane-Corman Team has assembled committed personnel, with proven delivery of VDOT contracts to meet the similar requirements of quality, safety, and schedule demands of this Project.

3.2.2 Offeror's Point of Contact Information: Mr. Richard McDonough is the authorized representative and Point of Contact for the Lane-Corman Team for all matters associated with this qualifications submittal.

Richard McDonough, Director, Bid Development
14500 Avion Parkway, Suite 200
Chantilly, VA 20151
Tel: (703) 222-5670 Fax: (703) 222-5960
Email: RAMcdonough@laneconstruct.com

3.2.3 Offeror's Principal Officer Information: Mr. Mark Schiller is a Principal Officer of Lane-Corman.

Mark Schiller, President & CEO (The Lane Construction Corporation)
90 Fieldstone Court
Cheshire, CT 06410
Tel: (203) 235-3351 Fax: (203) 237-4260
Email: MASchiller@laneconstruct.com

3.2.4 Offeror's Corporate Structure: The Offeror for this submission is Lane-Corman, structured as a joint venture. The Lane Construction Corporation and Corman Kokosing Construction Company (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 Lead Contractor and Lead Designer: The full legal name of the Offeror is: Lane-Corman I-81 Widening JV. Lane-Corman 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: Rinker Design Associates, PC (RDA). RDA will serve as the lead design firm responsible for the overall design of this Project under contract to Lane-Corman.

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 as identified as members of the Lane-Corman Team and may be found in the Appendix.

3.2.8 Offeror's VDOT Prequalification Evidence: A Joint Venture Bidding Agreement was submitted and approved by VDOT. The prequalification number for this Joint Venture is: **JV098**. The respective active prequalification numbers for our respective firms are: Lane (L002) and Corman (C3607). Evidence of such is provided in the Appendix.

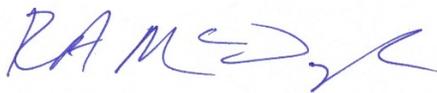
3.2.9 Letter of Surety: A single surety letter from the bonding companies is included in the Appendix confirming their willingness to provide any and all bonds for this Project on behalf of the joint venture.

3.2.10 SCC/DPOR Information and Evidence: The matrix in the Appendix delineates the respective state registrations and licensures of the Lane-Corman 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 may be found in the Appendix.

3.2.11 DBE Statement: Lane-Corman Team supports the Disadvantaged Business Enterprise (DBE) program and is committed to meeting the 9% 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,



Richard McDonough
Director, Bid Development
The Lane Construction Corporation



● 3.3 Offeror's Team Structure

Lane-Corman I-81 Widening JV (Lane-Corman), comprised of The Lane Construction Corporation and Corman Kokosing Construction Company, will serve as the Lead Contractor of the Design-Build (D-B) team for the I-81 Widening MM 136.6 to MM 141.8 (I-81 Widening) Project and will be responsible for managing the project, supervising construction, and self-performing the major work elements.

The **Lane-Corman** JV brings over 250 years of combined experience and has the right approach to successfully deliver this Project for VDOT, the local community, the traveling public, commerce and other stakeholders. The Lane-Corman Team has the experience and local resources to self-perform all aspects of the roadway, bridges, retaining walls, noise barriers, survey, ITS, signage, maintenance of traffic (MOT), and utility relocations. Our approach to organizing the JV is to fully integrate employees of these two companies across the Project, while relying on each company's individual strengths and specialties. **This approach was successfully implemented by Lane and Corman on one of the Commonwealth's most complex D-B projects - the national award-winning VDOT Route 29 Solutions project in Charlottesville.**

The JV has carefully chosen a group of the most highly skilled team members, both firms and individuals, to create a team structure that advantageously utilizes the D-B process and capitalizes on the strongest attributes of each team member's respective capabilities. We have selected **Rinker Design Associates, PC (RDA)** to serve as our Team's Lead Designer and will oversee all design activities.

Additionally, to ensure compliance with the Project's goals and objectives, we have enhanced our Team's depth of experience and resources by adding the following subconsultants:

- **WSP USA, Inc. (WSP)** – Design and Geotechnical Support
- **E.L. Robinson (ELR)** – Geotechnical Analysis and Structural Support
- **EEE Consulting, Inc. (3e)** – Environmental Analysis and Permitting
- **Alvi Associates, Inc. (Alvi)** – Drainage Support (DBE)
- **Century Engineering dba NXL (NXL)** – Quality Assurance
- **W.C. English Incorporated (English)** – Dedicated Construction Subcontractor

Many of our Team members have worked together on numerous projects throughout the Commonwealth and have developed a dynamic synergy that will provide VDOT tremendous value on this Project.

3.3.1 Qualifications of Key Personnel

All proposed Key Personnel have noteworthy experience on transportation projects similar to the roles they will serve on this Project. Information regarding their experience can be found in Attachment 3.3.1 in the Appendix.

Key Personnel/Role	Yrs Exp.	D-B Exp.	VDOT Exp.	Interstate Exp.	Complex MOT
Barry Bernstein / Design-Build Project Manager (Lane)	35	★	★	★	★
Ryan Gorman, PE, DBIA / Entrusted Engineer in Charge (Corman)	25	★	★	★	★
Joe Hamed, PE, DBIA / Quality Assurance Manager (NXL)	40	★	★	★	★
Darell Fischer, PE, DBIA / Design Manager (RDA)	34	★	★	★	★
Joe Baker / Construction Manager (Corman)	30	★		★	★
Jim Compton / Incident Management Coordinator (Lane)	30	★	★	★	★





Reporting Relationships of Key Personnel

Design Build Project Manager (DBPM), Mr. Barry Bernstein (Lane) will report to VDOT and serves as the Project's central point of contact. He will be responsible for the overall Project and will oversee design, construction, quality management, contract administration and other services required by the Contract Documents. He will facilitate communication; monitor design efforts to proactively eliminate potential constructability issues prior to breaking ground, and delegate resources to deliver the project on time. Additionally, he is responsible for the coordination of public outreach and meetings, construction quality management, and contract administration.

✓ **Added Value:** Mr. Bernstein has 35 years of construction management experience. His experience managing projects (with both Corman and RDA) with nearly identical scope and similar stakeholders significantly reduces the learning curve and minimizes risks.

Entrusted Engineer In Charge (EIC), Ryan Gorman, PE (Corman) reports directly to the DBPM and will have direct lines of communication with the DM, CM, and QAM. Mr. Gorman will be assigned to the Project full-time and will be actively engaged in coordinating all engineering decisions for the life of the Project (from Notice to Proceed through Final Acceptance). He is responsible for ensuring all engineering work for the Project is integrated and in conformance with the Contract Documents. Mr. Gorman will be involved or have personal supervisory direction and control authority in making and approving engineering decisions during construction. He will answer questions/inquiries relevant to engineering decisions regarding design and/or construction. Mr. Gorman is a registered Professional Engineer in Virginia.

✓ **Added Value:** Mr. Gorman brings 25 years of construction and design management experience. He was VDOT's first EIC (formerly known as Responsible Charge Engineer) on Lane-Corman's 29 Solutions project and additionally managed 7 D-B projects.

Quality Assurance Manager (QAM), Mr. Joe Hamed, PE, CCM, PMP, DBIA (NXL) will report directly to the DBPM on all quality issues and will communicate regularly with the EIC. Any item of work failing to meet minimum standards will be rejected and corrected immediately. Construction personnel have no authority over QA inspection staff, and issues raised by construction personnel will be resolved by Mr. Hamed and the DBPM. Mr. Hamed will keep VDOT informed on the status of quality of construction and issues/solutions through weekly reports and progress meetings. As QAM, Mr. Hamed holds the authority to suspend work if quality issues warrant. **Quality Assurance Inspectors, Carl Moore, (Structures/Bridge Element) and Carolyn Aliff, (Roadway Element),** will report directly to the QAM, and will be assigned to the project on a full-time basis for the duration of the project. The QA Testing firm will report to Mr. Hamed.

✓ **Added Value:** Mr. Hamed has 40 years of experience in the transportation-construction industry. He has extensive VDOT experience having served in several different roles with the Department. Additionally, he has served as a QAM on five VDOT D-B projects including Lane's I-581 Valley View D-B project.

Design Manager, Mr. Darell Fischer, PE, DBIA (RDA) will report directly to the DBPM and communicate regularly with the EIC. Mr. Fischer will maintain close communication with the DBPM and ensure the Project is designed in accordance with the requirements of the contract documents. He is responsible for coordinating all design disciplines and ensuring the overall project design conforms to the RFP, design criteria, and specifications (i.e. contract documents); all design disciplines report directly to Mr. Fischer, who will be assisted by Mr. Rick DeLong, PE in the role of Deputy Design Manager. Mr. Fischer will provide VDOT with design plans for review and approval to confirm that the design work is constructible and complies with the requirements of the Contract Documents. Mr. Fischer is also responsible for establishing oversight of the QA/QC program for each design discipline of the project. He will be assisted by Mark Gunn, PE, DBIA who will provide an independent design QA audit. Design QC will be performed by qualified independent staff for each discipline as the design is being performed.

✓ **Added Value:** Mr. Fischer has over 34 years of experience in the design and management of complex projects. He has been the Design Manager on 9 D-B projects over the last 10 years. All his D-B experience has been in Virginia. Mr. Fischer is a certified DBIA Professional and sits on the board of his local chapter and is a member of the VTCA D-B Committee.



Construction Manager, Mr. Joe Baker (Corman) will report directly to the DBPM and communicate regularly with the EIC. His daily duties include: safety, coordination of all project personnel including subcontractors, and construction QC. He holds ultimate responsibility for managing the project's construction schedule and will coordinate with the adjacent projects. He will hold routine meetings with the QA Lead Inspectors to discuss all ongoing construction activities. He will also review all QC reports and lab results. Any item that is not conforming to the specifications will be addressed immediately with corrective actions mandated that same day. Mr. Baker is currently working on the WVDOH Corridor H project and will be available prior to the start of construction. Mr. Baker will hold a Virginia DEQ Responsible Land Disturber (RLD) Certification and a VDOT Erosion and Sediment Control Contractor Certification (ESCCC) prior to commencement of construction.

Added Value: Mr. Baker brings over 30 years of experience in the construction industry. Mr. Baker has extensive experience on a wide variety of D-B interstate/highway projects. He has managed design coordination, constructability reviews, project management, utility relocation, stakeholder coordination, and subcontractor coordination.

Incident Management Coordinator, Jim Compton will report directly to the DBPM 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. Compton will be the key point of contact for incident management issues within the project corridor. He will complete the following classes prior to commencement of construction: FHWA SHRP2 "TIM" Responder Training; FEMA ICS/NIMS 100, 200 & 700; and FEMA/VDEM Hazardous Materials Awareness.

Added Value: Mr. Compton has nearly 30 years of experience maintaining traffic and responding to incidents in work zones in some of the most heavily traveled interstate projects including the 495 Express Lanes in Northern Virginia and the I-85 Widening project in NC

Narrative of other Functional Relationships

Following our successful model on Lane-Corman's Route 29 Solutions project, we have strategically arranged our Team to mirror the same integrated organizational approach.

Our team structure has a straightforward chain of command, with individual tasks and functional responsibilities clearly identified. Our organizational chart identifies key personnel and major functions to be performed for the successful management, design, and construction of the Project.

Lane-Corman will fully integrate the two construction companies to form a cohesive team that will report together under the direction of our DBPM. RDA will manage all design activities and perform a majority of the design work in-house. WSP, ELR, 3e, and Alvi will provide specific discipline support to RDA to help augment our design capabilities and resources. Our Design Manager, as he has done previously, will coordinate with each discipline and their design efforts, having continual discussions between the disciplines so design direction and consistency is provided throughout the entire Project. This is important to the success of the project and our ability to meet any design schedule. Our EIC, who reports directly to the DBPM, will work directly with the Design Manager and his team to ensure decisions are being made by competent, licensed engineers. He will also communicate directly with the Construction Manager, as well as the QAM. He will communicate regularly with VDOT and has the vested authority to act on behalf of the Lane-Corman Team.

Lane-Corman has added English to the construction team to help provide additional workforce capabilities as well as an extensive knowledge of the local area. English, along with other carefully selected construction subcontractors (including DBEs and SWaMs) will ensure our team has sufficient resources to construct the Project on-budget and within schedule.



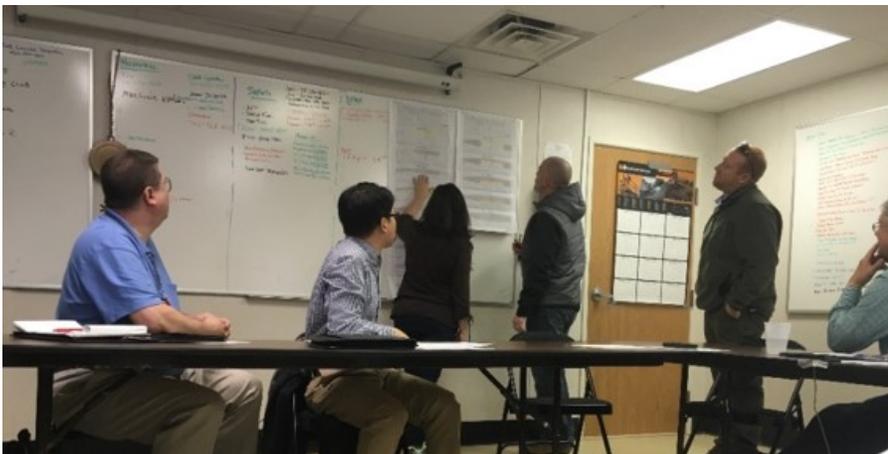
Design and Construction Team Interaction

The Lane-Corman 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 and construction teams will interface throughout the life of the contract.

Our DBPM, Mr. Bernstein, will be involved in all project development and construction processes to ensure overall quality management, adherence to the contract, and to allocate appropriate resources to meet the project schedule. Furthermore, Mr. Bernstein will guide the Team in Public Outreach efforts that will be critical in mitigating citizen concerns on a project of this magnitude.

To ensure a successful project, the Lane-Corman Team’s extensive D-B experience reflects that weekly scheduled discipline coordination meetings throughout project execution are critical. These focused meetings, which are led and coordinated by the EIC, Mr. Gorman, serve as a conduit for disseminating project-critical information and are the central point of decision-making and communication among all involved in the project. These regular, open forums of discussion among the Lane-Corman Team to address plan elements serve to clearly define project criteria. VDOT will be invited on a regular basis for over the shoulder reviews and coordination to ensure project goals are being met, observe how design is progressing, and how risks are being mitigated.

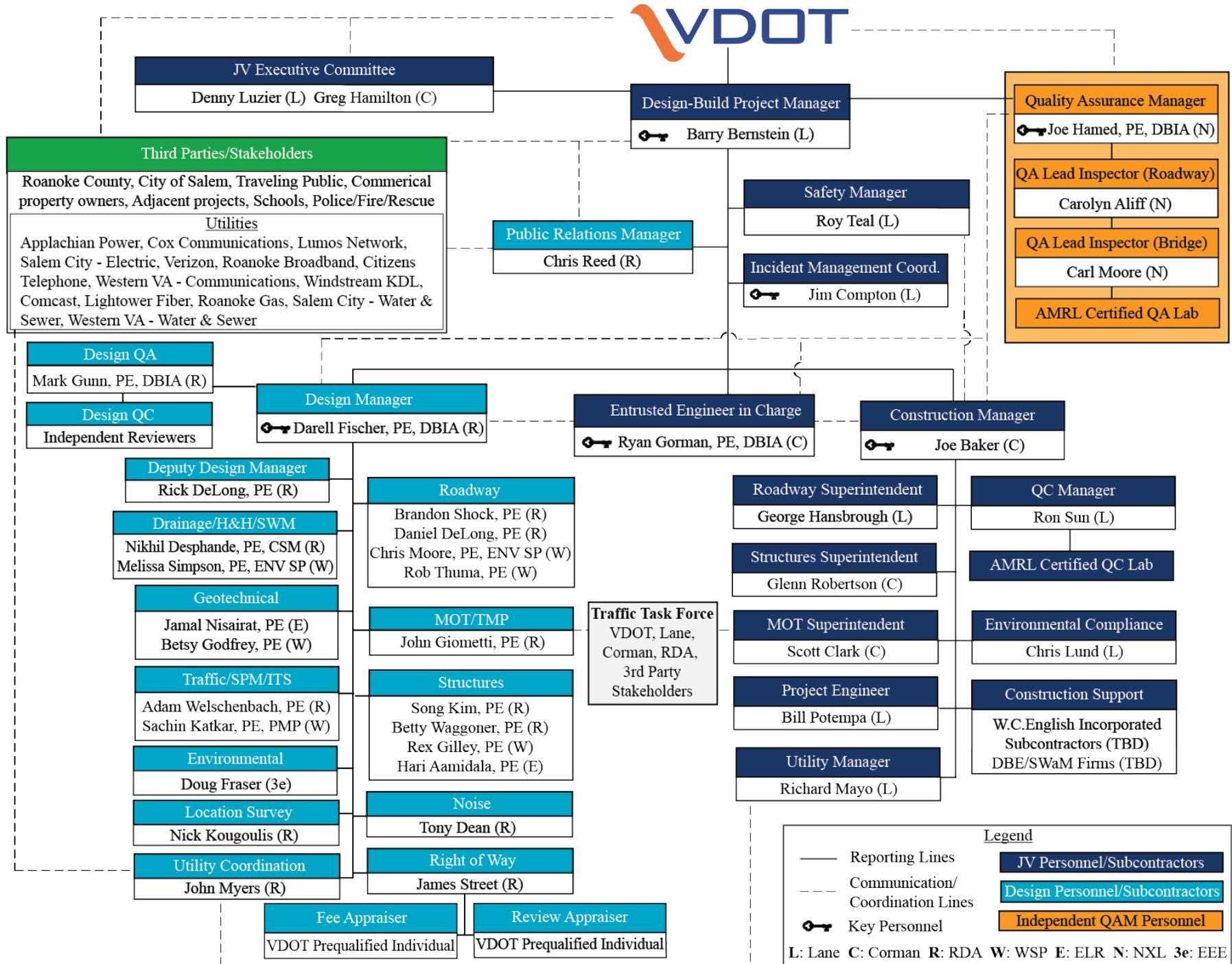
Through this approach, we create strong relationships and truly integrated D-B functions that set the foundation to interact and partner with VDOT and third-party stakeholders, streamline reviews, eliminate potential construction field issues, and deliver the project safely, as early as possible.



Over the Shoulder Review. On Lane-Corman’s 29 Solutions project the team worked closely with VDOT to help facilitate communication and the decision-making process.

3.3.2 Organizational Chart

The following Organizational Chart depicts VDOT, third party stakeholders, key personnel, and their respective relationships and functions.



3.4 Experience of Offeror's Team



● 3.4 Experience of Offeror's Team

The Lane-Corman Team is comprised of leading D-B contractors and designers from Lane, Corman, and RDA—all are among Virginia's top-ranked firms in their respective disciplines and fields of expertise. Together and individually, we have designed and built some of the Commonwealth's most important infrastructure. Each firm has achieved a widely recognized level of success by paying specific attention to detail in controlling, managing, and executing their work. Bringing this team together for the I-81 Widening Project unifies the abilities of each to perform in a complimentary manner based on our past performance together. Each team member, including our specialized subconsultants, was specifically selected due to their previous experience delivering projects of similar complexity and confirms our qualifications to successfully deliver all elements of this Project.

Award-Winning Experience Working Together

Lane, Corman, and RDA have worked together on complex projects throughout the Mid-Atlantic Region. As a team, we have received numerous accommodations and awards that further demonstrate the benefits our Team can bring to VDOT. Our Route 29 Solutions project, though not an interstate project and therefore not included in the Work Histories, is an excellent example of our Team's ability to successfully design and construct a project that limited impacts to the traveling public and businesses, used innovative design solutions and construction techniques, took on and managed calculated risks (and received early completion incentives), and implemented an effective QA/QC plan throughout the life of the project.

Route 29 Solutions, Charlottesville, VA (Lane/Corman/RDA)

"We do some pretty complex projects in Virginia, and this one is right up there. You had 103-day window to shut down the intersection. People said we couldn't get it done in 103 days and they were right. We did it in 57 days. The Lane-Corman team did everything we asked and more to deliver this project."
 – former VDOT Commissioner Charles Kilpatrick

"This project brought something that you cannot pay for: Good will... This should become the default model for community engagement." -Liz Palmer, Chair, Albemarle County, Board of Supervisors

"The speed and professionalism of Lane-Corman and the VDOT team was impressive... It's really amazing how good of a job they did – no question about it." - Member, PDAP

"We have found [the Rio project team] to be working exceedingly well together and significantly positively impacting the challenging business environment due to the roadway construction ... We have been impressed with the level of detail, safety and professionalism of the contractor." - President, Free Enterprise Forum



This project also received the following awards: **Pinnacle Award for Engineering Excellence, American Council of Engineering Companies of Virginia (ACEC/VA); Grand Award for Engineering Excellence, American Council of Engineering Companies of Virginia (ACEC/VA); DBIA Design-Build Award and Design Build Excellence in Engineering Award.**

3.4.1 Work History Forms

Work History Forms (Attachments 3.4.1(a) and (b)) as required for Lane-Corman (Lead Contractor) and RDA (Lead Designer) are included in the Appendix.



● 3.5 Project Risks

The Lane-Corman Team has carefully considered the critical elements of work for the I-81 Widening project to determine the three most relevant and critical project risks. During our evaluation of potential risks, we considered numerous risks to the project including geotechnical, utilities, FEMA floodplain, bridges, maintenance of traffic (MOT), construction resources, agency/stakeholder coordination, public relations, environmental, stormwater management, noise, and associated ROW acquisitions. We concluded that **MOT**, **Karst Topography**, and **Stormwater Management** are the three most critical risks that must be mitigated to ensure the success of the Project.

Risk No. 1 – Maintenance of Traffic (MOT)

Risk Identification/Why the Risk is Critical: I-81 is a critical north-south economic artery carrying local, commuter, commercial and tourist traffic throughout western Virginia and it is a significant risk to the project to keep this traffic flowing. As observed in traffic scoping memos provided by VDOT in the RFQ Informational Package, I-81 within the project limits carries an ADT of 52,424 to 62,847 vehicles per day, with approximately 13.5% to 16.4% of that being trucks. As observed from field observations and crash data, including the high percentage of trucks, rolling terrain, and associated speed differentials, this stretch of I-81 suffers one of the highest incident-related delays among interstates in Virginia. Given the nature of work anticipated for this project, it is critically important to implement a comprehensive maintenance of traffic (MOT) program. Construction must be sequenced to maintain consistency for motorists while widening and replacing bridges and reconstructing the existing pavement and shoulders. As a part of our MOT plan, the overall Transportation Management Plan (TMP) must communicate a concise plan to all stakeholders and detail operations and incident management. Failure to clearly identify and address potential issues, provide a well-defined traffic control plan, or effectively communicate the plan will result in driver confusion, indecision, congestion, delays, public backlash and a decrease in worker and motorist safety. Some of the specific elements our Team has identified as a basis for this risk include:

- The addition of construction work zones on a high-volume, heavily traveled truck route corridor, compounded by speed differentials due to steep grades, traffic entering/exiting from interchanges, and aggressive driving increases the potential for accidents due to driver distraction.
- Our analysis of the RFQ provided crash history from 2017 to 2020 confirms many of the accidents within the project corridor occur at exit and entrance ramps. Within the project limits, there were a total of 302 accidents for this period, an average of 60 accidents per mile. The multiple traffic shifts necessary to accomplish the project with the combination of inside and outside mainline widening and replacement/widening of 8 bridge structures has the potential to considerably constrict the corridor.
- Construction ingress/egress to the median work zone on a high speed / high volume roadway is dangerous, and therefore contributes to the maintenance of traffic risks on this project.

Impacts to the Project: The impacts of an inadequately developed and/or executed MOT program will have significant and severe consequences, including:

- Project schedule delays
- Increased project costs
- Reduction of safety for both the traveling public and construction personnel
- Increasing local, commuter and regional travel delays along I-81 and Route 11
- Traffic delays to area schools/colleges/universities for classes, sporting events, vacations, and graduation
- Interruptions to and/or increased response time for emergency response activities
- Increased congestion and/or accidents due to driver confusion/poor messaging
- Negative perceptions from local communities, leading to frustration/work zone travel fatigue
- Difficulty with constructability (i.e. moving materials in and out of work zones)

Risk Mitigation Strategy: The MOT plan must address appropriate mitigation strategies to alleviate concerns and facilitate delivery of a successful project. The following strategies will be implemented to minimize the impacts associated with the MOT risk in a safe, efficient, cost-effective manner:



Effective Public Outreach and Communications with Stakeholders: Our Team will develop and implement an effective Communication Plan, as a critical component of our Traffic Management Plan (TMP). Our focus will remain on informing and educating the public of the traffic pattern changes, delays, and project updates as they drive through I-81. Our Team will be responsible for inputting lane closures and related traffic impacts on VDOT's LCAMS and VaTraffic System through the duration of the project and in keeping both the public and VDOT aware of all traffic pattern changes. Multiple outreach tools will be used to deliver these messages, such as: VDOT's media and project website, social & traditional media, and pardon our dust/citizen meetings. This outreach will be fully coordinated with the VDOT Salem District Public Affairs staff. Additionally, we recommend incorporating active Driver Awareness measures in advance of, and within, the work zones to include portable changeable message signs, radar speed signs, and shoulder rumble strips.

Our Team will develop and implement an effective plan for continuous stakeholder input to mitigate issues and concerns. We will hold regularly scheduled meetings during construction with stakeholders to ensure all concerns are addressed in an orderly/timely fashion. This outreach will be fully coordinated with the VDOT Salem District Construction Division and Public Affairs staff. This outreach will include representatives from:

- VDOT, City of Roanoke, City of Salem
- Local schools & colleges
- Local and State Police
- Local Fire and Rescue
- Residential Community Groups
- Local Business Groups

Traffic Management Task Force (TMTF): Consisting of members from Lane-Corman, RDA, VDOT, and Third-Party Stakeholders noted above, the TMTF is our team's coordinated approach to managing traffic throughout the life of the contract – an approach we deem critical to minimizing disruptions of traffic. Having a task force dedicated to traffic management will proactively address risks associated with the MOT. VDOT and relevant stakeholders will be invited to work with our team's project staff throughout the duration of the project. The TMTF will meet regularly to review MOT and optimize traffic safety and efficiency. Its goal will be to minimize delays to the traveling public, reduce disruptions to adjacent businesses and maximize safety throughout the project's life cycle. These meetings will keep VDOT and project stakeholders up-to-date on the project's progress and alert them to any upcoming changes in the traffic pattern. Recommendations generated by the TMTF will be continually implemented into the MOT plan.

Adequate/ Safe Construction Access Points: Our Team will place access points in areas outside of ramps and avoid areas of heavy inflow of vehicles entering the corridor. We will also schedule construction deliveries (inflow and outflow) outside of peak hours as much as practical. Safe access points will be supported by appropriate notification and advanced warning signage and space to facilitate deceleration and acceleration for trucks entering or exiting a work zone. They will be strategically designed, highly visible, and located away from vertical or horizontal curved roadway segments. We will grade access and egress locations to develop VDOT Work Area Protection Manual compliant clear zones within each access or egress area. If this is not feasible, we will investigate the installation of temporary guardrail within the work area to allow sufficient opening length in the temporary barrier for acceleration or deceleration of construction traffic to safely merge with interstate traffic. As part of this investigation, the temporary ingress/egress lane will taper the barrier and attenuator away from traffic at the beginning of traffic barrier runs.

Lane Shifts and Construction Phases: The number of traffic shifts and construction phases will be minimized to limit changes in the work zone and reduce the associated distractions. The sequential nature of the work means that a delay in one area creates additional delays and a schedule risk to the remainder of the project. Our team actively looks at our proposed design from a constructability perspective, to ensure that it is both feasible and practical. Our experienced engineers will consider construction methods and look for opportunities to simplify field work while Lane-Corman's staff will provide input and be involved in plan development and reviews. This practice goes a long way toward ensuring that lane shifts and construction phasing can be efficiently constructed and avoid complications from foreseeable conflicts, such as: existing bridge elements, clear zone hazards to shifted traffic, subgrade pavement drainage in super-elevation sections, and exit/entrance ramps in work areas.



Constructability Review (TMP-based): Throughout design, our Team will conduct constructability reviews solely dedicated to traffic. These reviews will be independent of overall constructability reviews so that they can remain focused specifically on corridor safety. Examples of design/plan features that will be scrutinized include: construction ingress/egress (ensure locations are highly visible to motorists), crossovers (appropriately spaced and visible), traffic phasing shifts (minimized), work zones (ensure they provide safe separation from traffic), advance warning signage (increase spacing for truck reaction times), and sensitivity to local/commuter traffic and regional/interstate travelers. Three dimensional models will be developed where necessary to ensure that critical areas are properly perceived and evaluated. Our reviews will consider each TMP element and how it can be improved.

Emergency Pull Offs: While the VWAPM only recommends Emergency Pull-Offs when shoulders are removed for distances longer than two (2) miles, our team plans to ensure adequate pull off areas exist no more than one mile apart where practical. This approach will better accommodate space for drivers to pull out of the through lanes to reduce the potential for traffic impedances or accidents. RDA's design experience on the Transform 66 P3 Project has shown the value in providing additional pull-offs, a critically important feature for safety and traffic flow. These pull-off locations provide opportunities for the following: (1) broken down vehicles, (2) law enforcement activities, (3) snowplow staging when needed; and (4) overall confined space relief for drivers to feel less constrained along a work zone.

Optimizing Sequence of Traffic Flows During Construction Operations: Our Team's extensive experience and proven success on interstate projects enables us to create a MOT plan that not only minimizes construction phasing but optimizes other aspects of construction. RDA provided this critical service on Lane's I-66 Inside the Beltway and FAM's Transform 66 P3 Outside the Beltway projects. As an example, RDA was tasked with MOT for Transform 66 Segment 3C, which includes the I-66/I-495 interchange. This task posed a challenge in designing an MOT plan that would not only limit the number of phases for construction, but also avoid confusion for both local and non-local drivers. RDA's team skillfully reconfigured the MOT design from six phases to three, which included bridge elements as well as ramp designs to tie in smoothly with mainline I-66 for both eastbound and westbound traffic. RDA's efforts simplified the MOT documents without sacrificing safety for the public or construction personnel. Since changes in traffic patterns promote the potential for accidents, we will endeavor to minimize lane shifts and locate crossovers at points where high visibility is most prevalent. Coordination with adjacent projects, the public, and VDOT will be carried out at every step of the project.

Variable Construction Zone Speed Limit Signage (LED board): Our Team will explore the use of variable speed signs throughout the duration of the project. It will serve as a proactive measure to slow down the traffic through the corridor during construction hours while maintaining existing speeds outside of construction hours. Slowing down vehicles is important for two reasons. According to VDOT's crash data tool, 82% of the 302 crashes in the last three years were due to rear end collisions, side-swipes in the same direction, and fixed object impacts (off road). Furthermore, these crashes were attributed to the increasing number of drivers speeding and weaving through the corridor. Slowing drivers down will not only protect the traveling public but also the construction personnel in the work zone. In addition, when trucks need to be in the left most lane to maneuver to construction entrances and exits, lowering the speed limit will increase situational awareness and reduce the risk of accidents.

Incident Management Plan (IMP): The IMP will detail the response protocols for incidents to include weather impacts, traffic incidents (crashes), special events such as college graduations, sporting events, and holidays; establishing emergency detour routes and more. Our IMP will utilize an experienced team to minimize incident related risks by:

- Setting up coordination meetings with participating agencies to ensure that all Unified Commands and Incident Action Plans (IAP) are deployed within the Project limits.
- Immediately responding to all incidents within the Project Limits, first with our IMC and followed by a team of design and construction staff to forensically evaluate any issues.
- Abide by the VDOT safety regulations (hardhats, vest, etc.).



- Lane-Corman's IMC will distribute monthly updates, at a minimum, to the VDOT IMC providing a summary of crashes within the work zone, number of events requiring tow service, and recommendations (along with those items implemented and follow-up action reviews to ensure continued success), if any, to improve the safety of travel through the project.
- Our IMC will have a dedicated truck for Incident Management labeled "Incident Management" containing specialized equipment, light bars, cameras, etc. that will provide the IMC with the tools to deal with standard roadway incidents.

Our Team commits to the completion of an Incident Management Plan as part of our overall Traffic Management Plan prior to any construction activities requiring Maintenance of Traffic. The key elements of a successful IMP will be jointly developed with VDOT TOC, Virginia State Police, Safety Service Patrol, and local Police, local Fire & Rescue departments, and local communities, as appropriate.

Role of VDOT and Other Agencies: VDOT's anticipated role is to be involved in the review and approval of the TMP and IMP for the project. We also anticipate that VDOT will remain involved in the public outreach process during design and construction (either supporting or a lead role). However, as mentioned previously, communication will extend to emergency responders, local community, schools, City of Salem and Roanoke, and local and state police. Our team understands the importance of working with VDOT and related representatives as a part of maintaining a safe work site for motorists and our construction team.

Risk No. 2 – Karst Topography

Risk Identification/Why the Risk is Critical: Our Team's experience and knowledge of this region recognizes the realistic potential for karst topography to be present within the limits of this project posing a significant risk to the related design and construction.

Karst topography occurs where carbonate bedrock dissolves under exposure to acidic groundwater. Groundwater moves along discontinuities, such as fractures, joints and bedding planes within the carbonate bedrock mass, and these discontinuities become enlarged as the carbonate minerals are dissolved and transported away by the groundwater. The non-soluble clay minerals remain as very soft residual soils, but they too can be eroded and transported by groundwater coursing through the enlarged discontinuities, leaving open voids within the rock. Since the bedrock in the Valley and Ridge province is highly folded, faulted, and fractured, the groundwater flow paths are numerous, and the ripple patterns of the bedrock are complex and highly variable.

The borings and surface topography information found at the I-81 over Norfolk Southern, Middle Fork Holston River project located 80 miles to the south of this project, indicated the presence of karst conditions. The I-81 corridor is characterized by karst geology from Tennessee to West Virginia. Other locations where Karst Topography has been encountered along the I-81 Corridor and vicinity include: I-81 over Route 11 Exit 114, I-581/Elm Ave. Interchange, I-581 Valley View Interchange, and as recently as 2004, a sinkhole formed along I-81 just north of Exit 118C, just 18 miles south of the project.

Karst conditions include steep subsurface bedrock surfaces, undulated bedrock, cavities within the bedrock mass, and soil-filled cavities or gouges within the bedrock mass that impose stability concerns to the foundations of the proposed bridges. Non-uniform geotechnical support will cause uneven stress distribution which could cause structure foundations to be unstable causing settlements and cracking.

If the karst conditions are not addressed appropriately during design, satisfactory performance of the structures and embankments could be compromised, thereby, leading to stability, settlement, and structural performance issues. Based on the presence of intervals of carbonate bedrock located within portions of this geology, the risk of the development of sinkholes must be considered by the designer and warrants further exploration efforts, particularly in the locations of substructures, SWM Ponds, and various other structures.

Karst terrain often has unique and highly productive aquifers, which can be highly susceptible to contamination. Karst topography can have caves and sinkholes that have biological significance for rare species and bats. Eliminating any threats of contamination of ground water from construction activities is imperative, and if not addressed could contaminate ground water and create issues with environmental agencies.



Impacts to the Project: Because of the potential for an erratic bedrock surface, weak bedrock layers, clay seams, and void spaces characteristic of karst geology, we anticipate that support for bridge foundations may require deep foundations extending to competent bedrock in order to provide suitable support for structures. Competent bedrock may be overlain by intermixed bedrock and clay seams, requiring penetration to a suitable bedrock elevation within each foundation footprint.

Subgrade soils consisting of residuum and fill soils which classify as high-plastic clays and silts (CH/MH) are typical in karst geology. A significant portion of these soils may be moist to wet. These soils pose a risk to the project due to the additional time required to delineate the extent of these soils during construction and the time and cost required to modify or remove and replace these soils with suitable embankment material.

Some of the impacts (conditions and features) resulting from the effects of dissolution of carbonate bedrock, as described above, consist of:

- Enlarged joints – enhanced permeability
- Voids and Caves – openings in the rock and overlying soil
- Pinnacles – spires of rock left from dissolution of adjacent rock
- Sinkholes – Settlement or collapse of soils into karst voids
- Boulders (Floaters) - unconnected rock masses left from dissolution of surrounding rock
- Loss of support for structures on bedrock or on soil
- Loss of integrity for SWM facilities
- Collapse endangers people, livestock, vehicles, and facilities
- Subsidence damages structures through distortion
- Groundwater susceptibility
- High flows for dewatering

Risk Mitigation Strategy and Team Experience that will Ensure Successful Delivery of the Project:

Construction of this project in the karst topography will require careful planning and design to minimize the unacceptable performance of the proposed transportation facility. Erosion and sedimentation control measures must assure that construction runoff and discharge into groundwater is alleviated.

We recognize that that for this project we cannot use a “canned” geotechnical investigation process. Our approach to mitigate the risks associated with the presence of karst conditions includes the following steps:

- Define the purpose of investigation (hope for the best, plan for the worst),
- Focus on the invisible geotechnical conditions,
- Anticipate variable geotechnical conditions, and
- Be prepared to modify preliminary design approaches.

Material properties can be measured indirectly through the use of engineering geophysical methods such as electrical resistivity, micro-gravity, electromagnetic, and ground penetrating radar (GPR), to name only a few. The most important factor geophysics can help address is to reduce the risk associated with unknown subsurface conditions and to avoid related costly claims and repairs.

Depending on the conditions encountered at specific locations, mitigation techniques may be required for design and construction including, but not limited to, surface water diversion, grouting and/or graded backfill of features, impervious liners for basins, and/or joint sealing for utilities.

To mitigate the potential for karst unsuitable soils negatively affecting the project schedule, the Team will review existing geotechnical data and focus early phase geotechnical explorations, through traditional boreholes as well as engineering geophysical methods described above, on areas anticipated to include bridge foundations and unsuitable soils. This proactive planning will also focus on appropriate laboratory tests of the field samples. The results of these tests will help delineate the lateral extent and depth of unsuitable soils to allow for proactive measures to be taken in early earthwork construction phases. Typical treatment methods in this geologic setting and what the Team will evaluate on this project include undercut and replacement, geosynthetic separation and stabilization fabrics, and in-situ soil modification. The in-situ soil treatments will generally include lime or



cement admixtures to create a stabilized subgrade. Overall, this mitigation strategy is conducted during the design phase so as not to impact the project schedule during actual earthwork activities.

The Team will design and construct erosion and sediment controls to protect groundwater from contamination if and where these karst features are encountered. The Team will carefully plan and design the project to minimize the impact of the highway and bridge construction in karst topography.

Within structure foundation influence zones, cavities can be filled with flowable fill or concrete. At large soft soil-filled zones within the bedrock mass, the zones could be strengthened and stiffened by using pressure grouting to provide a stable support. To mitigate the impact of undulated bedrock surfaces, dental concrete could be used to fill the zones between bedrock surfaces and to provide a uniform bearing surface for the support of shallow foundations. Pile tips will be used to facilitate the pile driving and to protect the end of the pile when driving into highly weathered bedrock or to the top of competent bedrock.

Role of VDOT and Other Agencies: VDOT's role will be to review and approve our geotechnical boring plan and Geotechnical Engineering Report (GER). VDOT will also be asked to share their experience and best practices for karst mitigation along the I-81 corridor as well as discuss and approve any unique design methods to address karst issues.

Risk No. 3 – Stormwater Management (SWM)

Risk Identification/Why the Risk is Critical: Based upon current VSMP regulations and VDOT policy, the project will be subject to Part IIB (VRRM) criteria for the design of SWM/BMP systems. The RFQ plans have identified locations where SWM facilities could be placed based on available land. However, not all outfalls have potential SWM facilities identified for them. As a result, the risk in meeting the SWM requirements of VSMP is that design elements for quality, quantity, and flood control must be assessed on an individual outfall basis where terrain and ROW are highly constrained.

Impacts to the Project: Assessing the drainage patterns along the corridor as it relates to SWM on an outfall by outfall basis, include the following impacts:

- **Additional ROW:** In numerous locations, the size of facilities may need to be increased well beyond the space currently shown in the RFQ Plans. This is a result of the inefficiency of the presumed types of facilities that can be constructed in heavy terrain areas – primarily extended detention (or extended detention enhanced).
- **Diverting Areas:** Many of the minor cross culverts which outfall from the ROW appear to be relatively shallow with respect to the roadway profile which dictates where SWM facilities should be located. However, the locations where SWM can be provided without adversely impacting sideroads or residential properties will require project drainage to be conveyed beyond those shallow pipes to identified facilities. As a result, the shallow pipes will be impacted and outfalls will be diverted to these facilities. In turn, the facilities will need to be significantly larger to accommodate offsite drainage. Additionally, the elimination of an outfall may have a secondary effect of impacting wetlands that were fed by the eliminated outfalls.

These impacts will have a significant effect on the project cost due to earthwork/rock excavation, ROW, and environmental impacts.

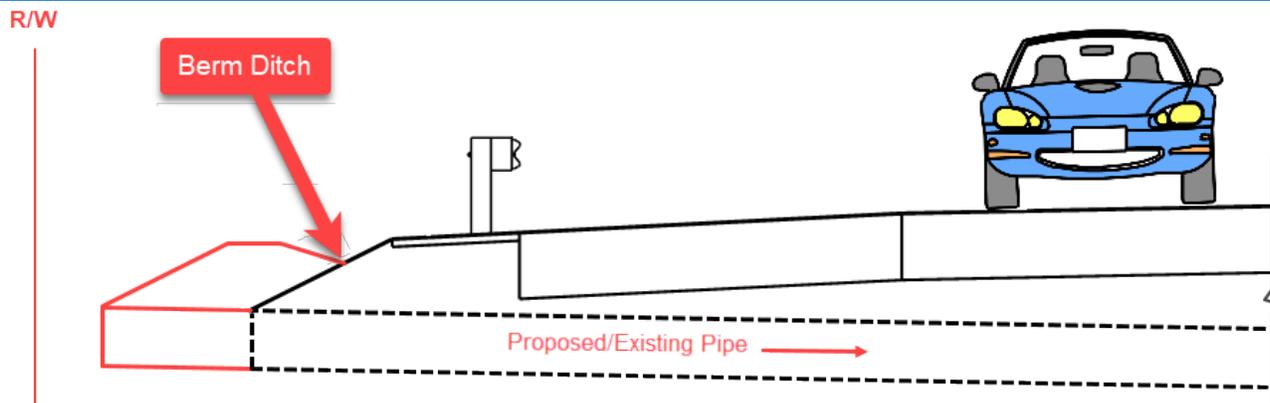
Risk Mitigation Strategy and Team Experience that will Ensure Successful Delivery of the Project: Our approach to managing risk associated with SWM design and VSMP compliance is based upon early assessment and identification of critical areas to develop a SWM program which will satisfy all requirements. During the technical phase of this project, we will prepare multiple SWM concepts to assess each outfall and receiving system in accordance with VSMP regulations.

Quantitative Approach: We will start with a quantitative analysis (energy balance) at each outfall to assess increases/impacts. Where conveyance to a centralized location is impacted by intermediate crossings/outfalls, we will explore the use of linear detention facilities. It is our experience that a linear approach for detention-



only facilities may achieve quantitative goals with minimal added construction. This may include the use of existing and proposed ditches, along the outside limits of the roadway as well as in the median, with weir walls to control and reduce the flows at each outfall.

Where ROW is constrained and linear facilities do not work, we will evaluate potential solutions by utilizing median ditches to convey project drainage to centralized facilities. Unfortunately, most of the roadway drains to the outside rather than the median. Conveying the water via pipe systems back to the median and over top of the shallow cross culverts to available facilities is unlikely. In this situation, we will explore the use of elevated berm ditches (as shown in the graphic below) along the outside to cross shallow pipes and divert the roadway runoff increases to an available facility. This will reduce flows to the intermediate outfalls and only slightly increase the size of the identified SWM facilities, while avoiding impacting and removing cross pipes/outfalls.



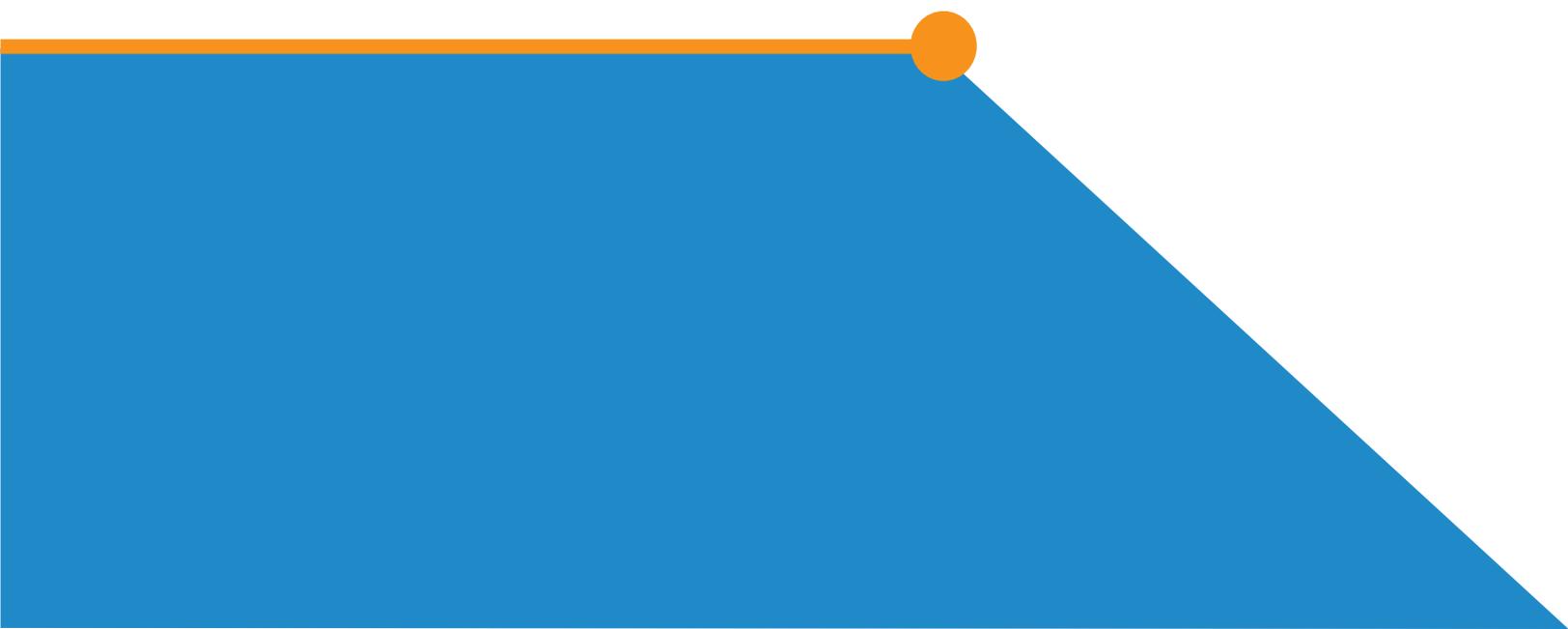
Potential Mitigation. Elevated berm ditches along the outside

Qualitative Approach: Once we have developed a concept that meets quantitative (energy balance) requirements, we will focus our attention on qualitative measures. An assessment of the Hydrologic Unit Codes (HUC) shows that the entire project is in a single unit code. This is critical to assessing the overall quality which does not need to be provided on an outfall by outfall basis but rather on a HUC basis. As allowed for in the requirements, we will explore the purchase of quality credits, up to 25% of the total required phosphorus removal for the project. We will then look at each required quantity control facility to see what quality measures can be incorporated. As identified above, some of these may only be suitable for quantity control so maximizing our opportunities at each of the larger facilities will be extremely important in achieving the remaining 75% phosphorus removal.

Role of VDOT and Other Agencies: Reducing project risk due to project SWM impacts is the responsibility of our Team. However, starting with our early and thorough assessment of SWM/outfall risk areas, we will ask the Department to participate in over-the-shoulder reviews to ensure efficient designs that minimize the amount of required ROW are developed. We will also ask VDOT to work with our Team to get to an expedited conceptual approval so that construction work packages can be expedited in hopes of an early design completion and approval.



Attachment 3.1.2
SOQ CHECKLIST



ATTACHMENT 3.1.2

Project: 0081-080-946

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

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

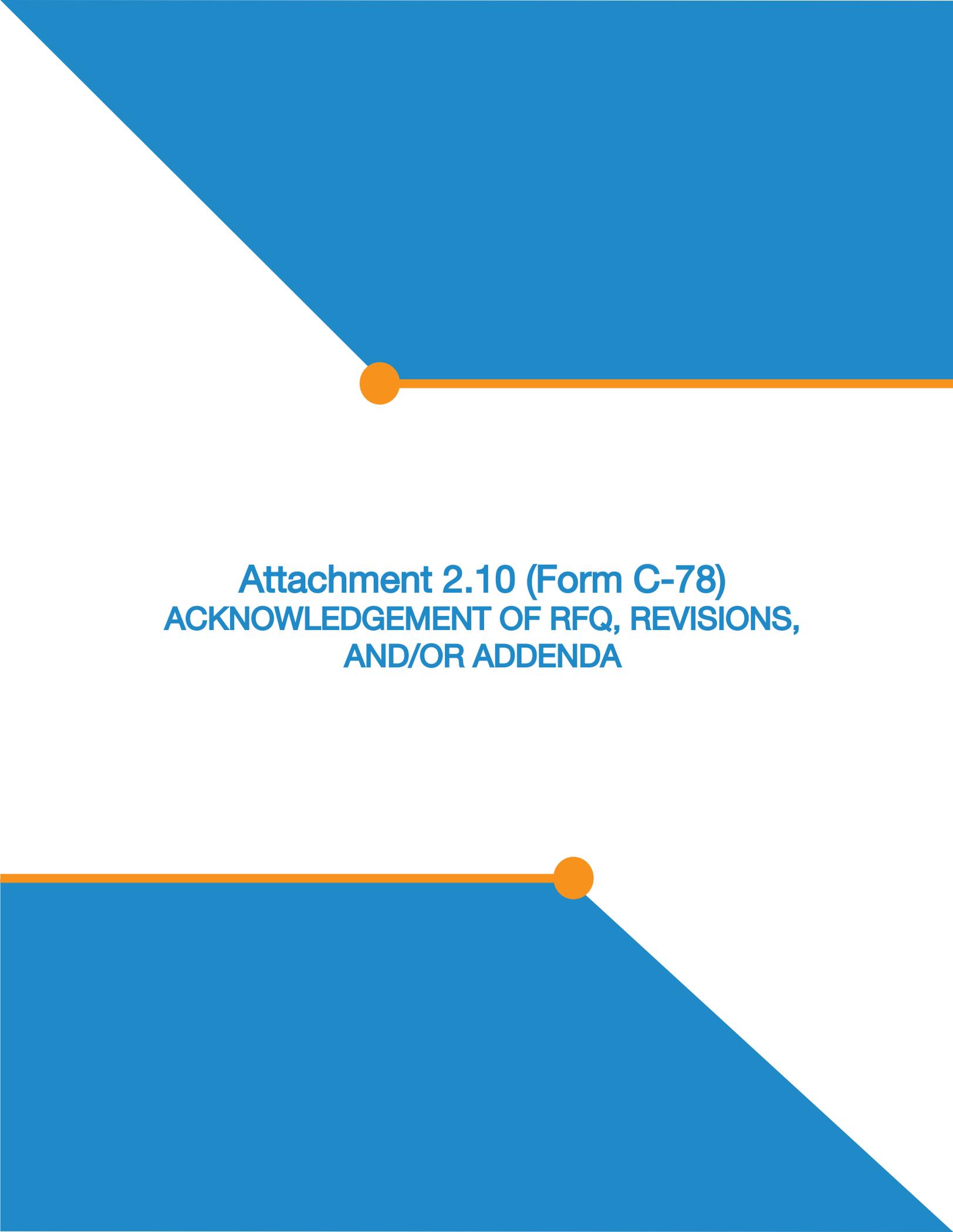
Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15-page limit?	SOQ Page Reference
Statement of Qualifications Checklist and Contents	Attachment 3.1.2	Section 3.1.2	no	Appendix
Acknowledgement of RFQ, Revision and/or Addenda	Attachment 2.10 (Form C-78-RFQ)	Section 2.10	no	Appendix
Letter of Submittal (on Offeror's letterhead)				
Authorized Representative's signature	NA	Section 3.2.1	yes	2
Offeror's point of contact information	NA	Section 3.2.2	yes	1
Principal officer information	NA	Section 3.2.3	yes	1
Offeror's Corporate Structure	NA	Section 3.2.4	yes	2
Identity of Lead Contractor and Lead Designer	NA	Section 3.2.5	yes	2
Affiliated/subsidiary companies	Attachment 3.2.6	Section 3.2.6	no	2, Appendix
Debarment forms	Attachment 3.2.7(a) Attachment 3.2.7(b)	Section 3.2.7	no	2, Appendix
Offeror's VDOT prequalification evidence	NA	Section 3.2.8	no	2, Appendix
Evidence of obtaining bonding	NA	Section 3.2.9	no	2, Appendix
SCC and DPOR registration documentation (Appendix)	Attachment 3.2.10	Section 3.2.10	no	
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

ATTACHMENT 3.1.2

Project: 0081-080-946

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15-page limit?	SOQ Page Reference
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	2
Offeror's Team Structure				3-7
Identity of and qualifications of Key Personnel	NA	Section 3.3.1	yes	3-5
Key Personnel Resume – DB Project Manager	Attachment 3.3.1	Section 3.3.1.1	no	Appendix
Key Personnel Resume – Entrusted Engineer in Charge	Attachment 3.3.1	Section 3.3.1.2	no	Appendix
Key Personnel Resume – Quality Assurance Manager	Attachment 3.3.1	Section 3.3.1.3	no	Appendix
Key Personnel Resume – Design Manager	Attachment 3.3.1	Section 3.3.1.4	no	Appendix
Key Personnel Resume – Construction Manager	Attachment 3.3.1	Section 3.3.1.5	no	Appendix
Key Personnel Resume – Incident Management Coordinator	Attachment 3.3.1	Section 3.3.1.6	no	Appendix
Organizational chart	NA	Section 3.3.2	yes	7
Organizational chart narrative	NA	Section 3.3.2	yes	5-6
Experience of Offeror's Team				8
Lead Contractor Work History Form	Attachment 3.4.1(a)	Section 3.4	no	Appendix
Lead Designer Work History Form	Attachment 3.4.1(b)	Section 3.4	no	Appendix
Project Risk				
Identify and discuss three critical risks for the Project	NA	Section 3.5.1	yes	9-15

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Attachment 2.10 (Form C-78)
ACKNOWLEDGEMENT OF RFQ, REVISIONS,
AND/OR ADDENDA

ATTACHMENT 2.10

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION**

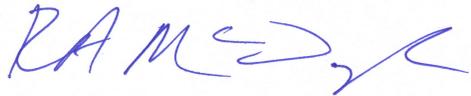
RFQ NO. C00116203DB108
PROJECT NO.: 0081-080-946

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 – May 29, 2020
(Date)
- 2. Cover letter of RFQ - June 18, 2020
(Date)
- 3. Cover letter of _____
(Date)



SIGNATURE

July 8, 2020
DATE

Richard McDonough

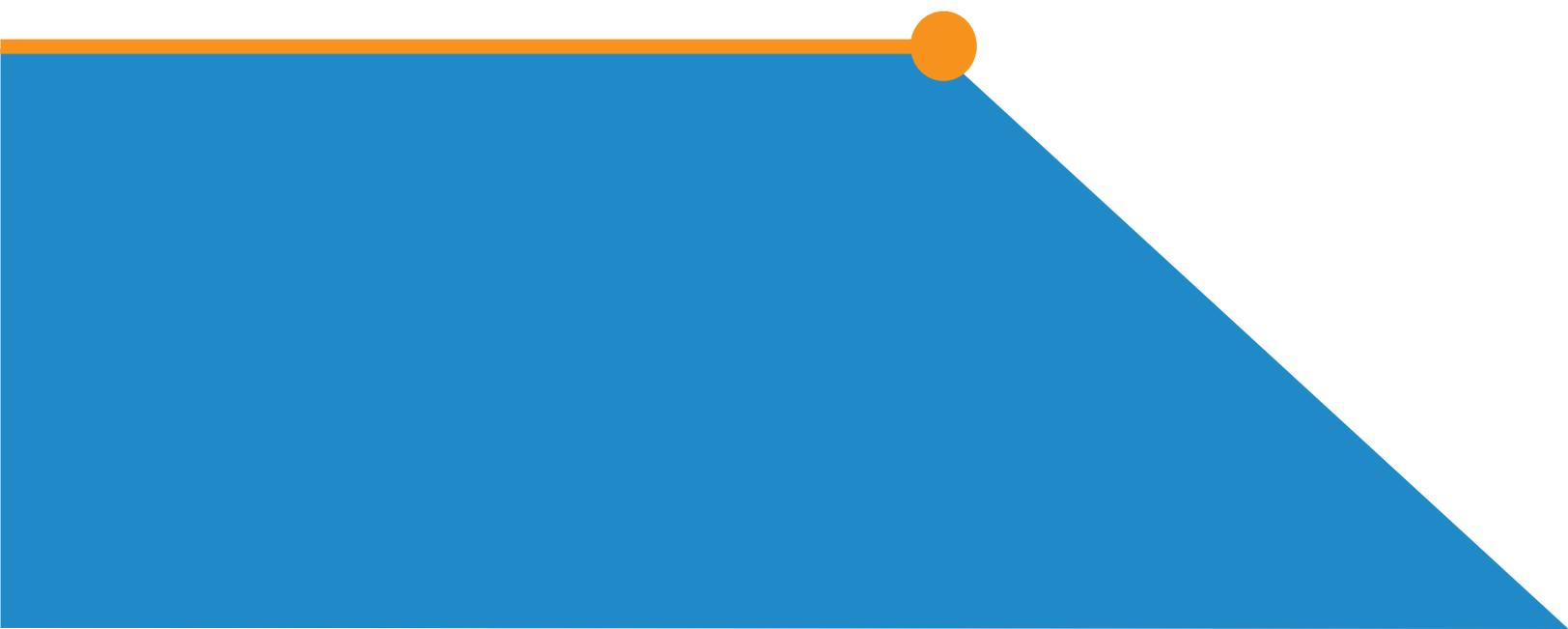
PRINTED NAME

Director, Bid Development

TITLE



Attachment 3.2.6
LIST OF AFFILIATED & SUBSIDIARY COMPANIES



ATTACHMENT 3.2.6

State Project No. 0081-080-946

Affiliated and Subsidiary Companies of the Offeror

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

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

Relationship with Offeror (Affiliate or Subsidiary)	Full Legal Name	Address
Ultimate Parent	Salini Impregilo, S.p.A. ("SI")	Via dei Missaglia, 97 – 20142, Milan, Italy
Grandparent (LII Parent)	Salini Impregilo US Holdings, Inc.	2711 Centerville Road, Suite 400, Wilmington, DE 19808
Parent	Lane Industries Incorporated ("LII")	90 Fieldstone Court, Cheshire, CT 06410-1212
Subsidiary	Impregilo International Infrastructures N.V.	World Trade Center Tower A, 12th Floor, Strawinskylaan 1205 Amsterdam 1077 XX, Amsterdam, The Netherlands
LII Child	Lane Infrastructure, Inc. ("LIFI")	90 Fieldstone Court, Cheshire, CT 06410-1212
LII Child	Lane Worldwide Infrastructure, Inc. ("LWI")	90 Fieldstone Court, Cheshire, CT 06410-1212
Brother/Sister*	Lanecon Corporation	90 Fieldstone Court, Cheshire, CT 06410-1212
Brother/Sister*	S.A. Healy Company	90 Fieldstone Court, Cheshire, CT 06410-1212
Brother/Sister*	Civil Wall Solutions, A Division of The Lane Construction Corporation	90 Fieldstone Court, Cheshire, CT 06410-1212
Brother/Sister*	Lane Concrete Frames, A Division of The Lane Construction Corporation	90 Fieldstone Court, Cheshire, CT 06410-1212
Brother/Sister*	Virginia Sign & Lighting Company, A Division of The Lane Construction Corporation	90 Fieldstone Court, Cheshire, CT 06410-1212
Active JV - TLCC Managing Partner **	C43 Water Management Builders	90 Fieldstone Court, Cheshire, CT 06410-1212
Active JV - TLCC Managing Partner	Lane-Security Paving Joint Venture	90 Fieldstone Court, Cheshire, CT 06410-1212
Active JV - TLCC Managing Partner **	Salini Impregilo Healy JV 3RPORT	90 Fieldstone Court, Cheshire, CT 06410-1212
Active JV - TLCC Managing Partner **	Salini Impregilo Healy JV NEBT	2600 Independence Ave. SE, Washington D.C., 20003

ATTACHMENT 3.2.6

State Project No. 0081-080-946

Affiliated and Subsidiary Companies of the Offeror

Active JV - TLCC Managing Partner	The Lane-Blythe Construction Joint Venture	6125 Tyvola Centre Drive, Charlotte, NC 28217
Active JV - TLCC Minority Partner	Flatiron West, Inc. - The Lane Construction Corporation Joint Venture	1400 Talbot Road S, Suite 500, Renton, WA 98055
Active JV - TLCC Minority Partner	Fluor-Lane South Carolina, LLC	100 Fluor Daniel Drive, Greenville, SC 29607
Active JV - TLCC Minority Partner	LMH-Lane Cabot Yard Joint Venture	100 Hancock Street, Suite 901, Quincy, MA 02171
Active JV - TLCC Minority Partner	Purple Line Transit Constructors, LLC	6811 Kenilworth Ave, East Riverdale, MD 20737
Active JV - TLCC Minority Partner **	Salini Impregilo Healy JV	786 E. 140th Street, Cleveland, OH 44110
Active JV - TLCC Minority Partner	Skanska-Granite-Lane Joint Venture/ I-4 Leasing	295 Bendix Rd, Suite 400, Virginia Beach, VA 23452
Active JV - TLCC Minority Partner	Unionport Constructors JV	150 Meadowlands Pkwy #3, Secaucus, NJ 07094
Inactive JV - TLCC Managing Partner	Lane-Abrams Joint Venture	3001 Meacham Blvd, Suite 215, Fort Worth, TX 76137
Inactive JV - TLCC Managing Partner	Lane-Corman, A Joint Venture	90 Fieldstone Court, Cheshire, CT 06410-1212
Inactive JV - TLCC Minority Partner	AGL Constructors	929 West Adams Street, Chicago, IL 60607
Inactive JV - TLCC Minority Partner **	Barnard Impregilo Healy Joint Venture	701 Gold Avenue, Bozeman, MT 59715
Inactive JV - TLCC Minority Partner	Fluor-Lane 95, LLC	6700 Las Collinas Blvd, Irving, TX 75039
Inactive JV - TLCC Minority Partner **	Impregilo Healy Parsons JV	2600 Independence Ave. SE, Washington D.C., 20003

**** JV with SI**

Subsidiary	Corman Kokosing Real Estate Holdings, LLC	12001 Guilford Road, Annapolis Junction, MD 20701
Subsidiary	CK – TV, LLC	12001 Guilford Road, Annapolis Junction, MD 20701
Affiliate	Kokosing, Inc.	6235 Westerville Road, Westerville, OH 43081
Affiliate	The Olen Corporation	4755 S High Street, Columbus, OH 43207

ATTACHMENT 3.2.6

State Project No. 0081-080-946

Affiliated and Subsidiary Companies of the Offeror

Affiliate	Third Gen, Inc.	6235 Westerville Road, Westerville, OH 43081
Affiliate	Corman-Branch, a Joint Venture	c/o Corman Kokosing Construction Company, 12001 Guilford Road, Annapolis Junction, MD 20701
Affiliate	Granite-Parsons-Corman Joint Venture	c/o Granite Construction Northeast, Inc., 120 White Plains Road, Suite 310, Tarrytown, NY 10591
Affiliate	Skanska-Corman-McLean Joint Venture	295 Bendix Road, Suite 400, Virginia Beach, VA 23452

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Attachment 3.2.7(a)
DEBARMENT FORM
PRIMARY COVERED TRANSACTIONS

ATTACHMENT 3.2.7(a)

**CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS**

Project No.: 0081-080-946

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

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

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

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

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

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

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

	July 8, 2020	Director, Bid Development
Signature	Date	Title

The Lane Construction Corporation
Name of Firm

ATTACHMENT 3.2.7(a)

**CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS**

Project No.: 0081-080-946

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

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

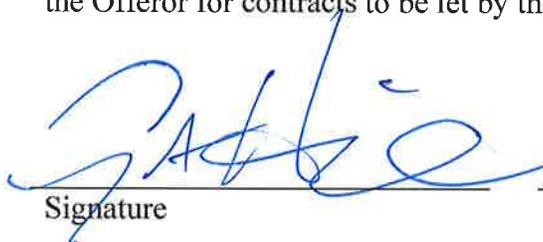
b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under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

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

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

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

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

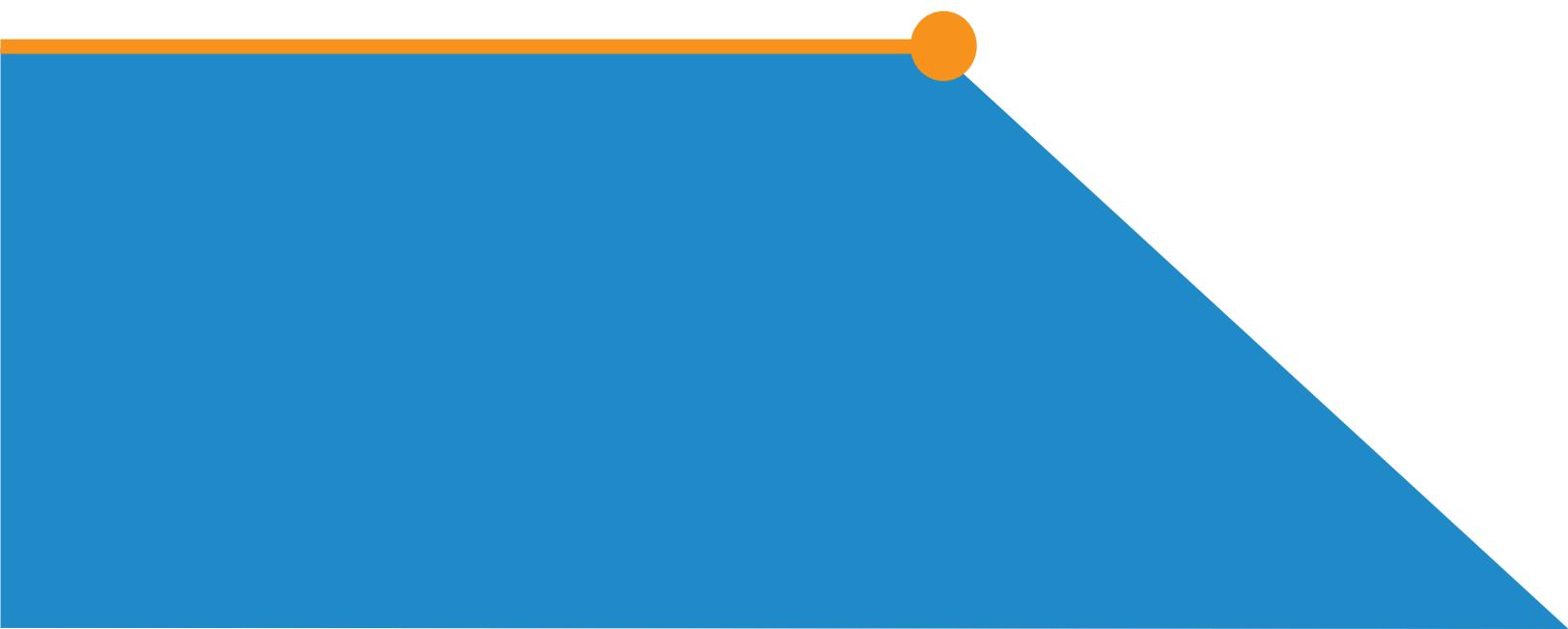
	6/12/20	Regional Sr. Vice President
Signature	Date	Title

Corman Kokosing Construction Company

Name of Firm



Attachment 3.2.7(b)
DEBARMENT FORM
LOWER TIER COVERED TRANSACTION



ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-080-946

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

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



Signature

06/10/2020

Date

President & CEO

Title

Rinker Design Associates, P.C.

Name of Firm

ATTACHMENT 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0081-080-946

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

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

 _____	6/26/20 _____	President & Chief Engineer _____
Signature	Date	Title

Alvi Associates, Inc.

Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-080-946

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

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


Signature

July 1, 2020
Date

Michael W. Saunders, P.E.
Senior Vice President
Title

Century Engineering, Inc. d/b/a
NXL
Name of Firm

ATTACHMENT 3.2.7(b)

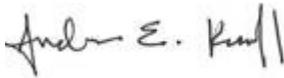
**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0081-080-946

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

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

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



	June 26, 2020	President
Signature	Date	Title

EEE Consulting, Inc.

Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-080-946

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

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

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



28 June 2020

Vice President

Signature

Date

Title

E. L. Robinson Engineering Co.

Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-080-946

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

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

<u>Judson A Dalton</u>	<u>7/1/2020</u>	<u>Vice President.</u>
Signature	Date	Title

W.C. English Incorporated
Name of Firm

ATTACHMENT 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0081-080-946

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

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



6/26/20

Vice President/Area Manager

Signature

Date

Title

WSP USA Inc.

Name of Firm

The page features a white background with decorative blue and orange elements. At the top left, a blue triangle points towards the top-left corner. A horizontal orange line extends from the right side of this triangle across the top of the page. At the bottom right, a blue triangle points towards the bottom-right corner. A horizontal orange line extends from the left side of this triangle across the bottom of the page.

OFFEROR'S VDOT PREQUALIFICATION CERTIFICATE

From: kristine.pyers@vdot.virginia.gov on behalf of [VDOT-Prequalification, rr](#)
To: [McDonough, Richard A.](#); [Shoemaker, Mary E.](#); kcountiss@cormanconstruction.com
Subject: Your assigned Joint Venture # is JV098
Date: Tuesday, June 23, 2020 1:23:45 PM

THE LANE CONSTRUCTION CORPORATION
CORMAN KOKOSING CONSTRUCTION COMPANY

Thank-you for submitting the Joint Venture Agreement for **LANE-CORMAN I-81 WIDENING JV** to the Prequalification Office.

We have processed the paperwork to assign a JV number.
This Joint Venture is assigned the # **JV098**

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

Thank-you,
Kristine Pyers
Prequalification Coordinator

--

Thank-you for your firm's inquiry

[Prequalification](#)

Construction Division
Virginia Department of Transportation
[1401 East Broad Street](#)
[Richmond, Virginia 23219](#)

Prequalification Coordinator: (804)-786-2938

Email: Prequalification@VDOT.Virginia.gov

Webpage: <http://www.virginiadot.org/business/const/prequal.asp>

This message contains information that may be privileged, confidential or otherwise protected from disclosure. Access to this e-mail by anyone other than the intended addressee is unauthorized. If you are not the intended recipient of this message, any review, disclosure, copying, distribution, retention, or any action taken or omitted by relying on it is prohibited and may be unlawful. If you are not the intended recipient, please notify the sender and delete the message, any attachments, and any copies thereof from your system. Thank you.



Vendor ID: L002
Vendor Name: THE LANE CONSTRUCTION CORPORATION
Prequal Level: Prequalified
Prequal Exp: 09/30/2020

-- PREQ Address --

90 FIELDSTONE COURT
CHESHIRE, CT 06410-1212
Phone: (203)235-3351
Fax: (203)237-4260

Work Classes (Listed But Not Limited To)

- 002 - GRADING
- 003 - MAJOR STRUCTURES
- 004 - ASPHALT CONCRETE PAVING
- 006 - PORTLAND CEMENT CONCRETE PAVING
- 007 - MINOR STRUCTURES
- 045 - UNDERGROUND UTILITIES

Bus. Contact: FIRMENDER, SETH TADDIA
Email: VAPREQUAL@LANECONSTRUCT.COM

-- DBE Information --

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



Virginia Department of Transportation

Date Printed: 06/24/2020

Department's List of Prequalified Vendors
Includes All Qualified Levels As Of 6/24/2020

12:00 AM

Page 100

- C -

Vendor ID: C3607

Vendor Name: CORMAN KOKOSING CONSTRUCTION COMPANY

Prequal Level: Prequalified

Prequal Exp: 03/31/2021

-- PREQ Address --

12001 GUILFORD ROAD
ANNAPOLIS JUNCTION, MD 20701
Phone: (301)953-0900
Fax: (301)953-0384

Work Classes (Listed But Not Limited To)

002 - GRADING
003 - MAJOR STRUCTURES
007 - MINOR STRUCTURES
045 - UNDERGROUND UTILITIES

Bus. Contact: SCHEELE, SHAWN MICHAEL

Email: [SSCHEELE@CORMANCONSTRUCTION.COM](mailto:sscheele@cormanconstruction.com)

-- DBE Information --

DBE Type: N/A

DBE Contact: N/A



SURETY LETTER



LIBERTY MUTUAL INSURANCE COMPANY
ZURICH AMERICAN INSURANCE COMPANY FIDELITY AND DEPOSIT COMPANY OF MARYLAND
BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY
UNITED STATES INSURANCE COMPANY NATIONWIDE MUTUAL INSURANCE COMPANY

June 24, 2020

Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219

RE: **Lane-Corman I-81 Widening JV**
Request for Qualifications
A DESIGN-BUILD PROJECT - I-81 Widening MM 136.6 to MM 141.8, Roanoke County and City of Salem, Virginia
State Project No.: 0081-080-946, P101, R201, C501, B677, B678, B681, B682, B683, B684, B685, B686, B687, B688
Federal Project No.: NHPP-0812 (323); Contract ID Number: C00116203DB108

To Whom It May Concern:

This letter will serve to confirm that Lane-Corman I-81 Widening JV is a highly regarded and valued client of the sureties, Liberty Mutual Insurance Company, Zurich American Insurance Company, Fidelity and Deposit Company of Maryland, Berkshire Hathaway Specialty Insurance Company, United States Fire Insurance Company and Nationwide Mutual Insurance Company (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, 2019. Furthermore, each surety company is rated "A" or better by A.M. Best Company, all with Financial Size Category "XIII" or better.

As the sureties for Lane-Corman I-81 Widening JV, we advise that Lane-Corman I-81 Widening JV 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 Lane-Corman I-81 Widening JV and its co-sureties, as well as such other underwriting criteria that may be applicable, 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 Lane-Corman I-81 Widening JV, please do not hesitate to contact this office.

Sincerely,

Liberty Mutual Insurance Company
Zurich American Insurance Company
Fidelity and Deposit Company of Maryland
Berkshire Hathaway Specialty Insurance Company
United States Fire Insurance Company
Nationwide Mutual Insurance Company


Theresan E. Rowedder
Attorney-in-Fact



Aon Risk Services
53 State Street
Suite 2201
Boston, MA 02109
860-830-1769



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.

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

Certificate No: 8197979-012022

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation 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, Maria Chaves; Jean Correia; Jane Gilson; Mark P. Herendeen; Bryan Huft; Theresan E. Rowedder; Kevin A. White

all of the city of Boston state of MA 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 15th day of November, 2018.



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

By: David M. Carey, 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.

State of PENNSYLVANIA
County of MONTGOMERY ss

On this 15th day of November, 2018 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty 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 King of Prussia, Pennsylvania, on the day and year first above written.



COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Teresa Pastella, Notary Public
Upper Merion Twp., Montgomery County
My Commission Expires March 28, 2021
Member, Pennsylvania Association of Notaries

By: 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 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, Renee C. Llewellyn, the undersigned, Assistant Secretary, 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 24th day of June, 2020.



By: Renee C. Llewellyn, Assistant Secretary

**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 Illinois, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Illinois (herein collectively called the "Companies"), by **Robert D. Murray, 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 **Mark P. HERENDEEN, Jean CORREIA, Maria CHAVES, Theresan E. ROWEDDER, Bryan HUFT and Jane GILSON, all of Boston, Massachusetts, 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 26th day of March, A.D. 2020.



By: *Robert D. Murray*
Vice President

By: *Dawn E. Brown*
Secretary

State of Maryland
County of Baltimore

On this 26th day of March, A.D. 2020, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **Robert D. Murray, Vice President and Dawn E. Brown, 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, depose 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.



Constance A. Dunn, Notary Public
My Commission Expires: July 9, 2023

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

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, Secretary 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 24th day of June, 2020.



Brian M. Hodges

By: Brian M. Hodges
Vice President

TO REPORT A CLAIM WITH REGARD TO A SURETY BOND, PLEASE SUBMIT A COMPLETE DESCRIPTION OF THE CLAIM INCLUDING THE PRINCIPAL ON THE BOND, THE BOND NUMBER, AND YOUR CONTACT INFORMATION TO:

Zurich Surety Claims
1299 Zurich Way
Schaumburg, IL 60196-1056
www.reportsfclaims@zurichna.com
800-626-4577

Power Of Attorney

**BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY
NATIONAL INDEMNITY COMPANY / NATIONAL LIABILITY & FIRE INSURANCE COMPANY**

Know all men by these presents, that **BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY**, a corporation existing under and by virtue of the laws of the State of Nebraska and having an office at One Lincoln Street, 23rd Floor, Boston, Massachusetts 02111, **NATIONAL INDEMNITY COMPANY**, a corporation existing under and by virtue of the laws of the State of Nebraska and having an office at 3024 Harney Street, Omaha, Nebraska 68131 and **NATIONAL LIABILITY & FIRE INSURANCE COMPANY**, a corporation existing under and by virtue of the laws of the State of Connecticut and having an office at 100 First Stamford Place, Stamford, Connecticut 06902 (hereinafter collectively the "Companies"), pursuant to and by the authority granted as set forth herein, do hereby name, constitute and appoint: **Maria Chaves, Jean Correia, Theresan E. Rowedder, Jane Gilson, Mark P. Herendeen, 53 State Street, Suite 2201 of the city of Boston State of Massachusetts**, their true and lawful attorney(s)-in-fact to make, execute, seal, acknowledge, and deliver, for and on their behalf as surety and as their act and deed, any and all undertakings, bonds, or other such writings obligatory in the nature thereof, in pursuance of these presents, the execution of which shall be as binding upon the Companies as if it has been duly signed and executed by their regularly elected officers in their own proper persons. **This authority for the Attorney-in-Fact shall be limited to the execution of the attached bond(s) or other such writings obligatory in the nature thereof.**

In witness whereof, this Power of Attorney has been subscribed by an authorized officer of the Companies, and the corporate seals of the Companies have been affixed hereto this date of December 20, 2018. This Power of Attorney is made and executed pursuant to and by authority of the Bylaws, Resolutions of the Board of Directors, and other Authorizations of **BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY, NATIONAL INDEMNITY COMPANY and NATIONAL LIABILITY & FIRE INSURANCE COMPANY**, which are in full force and effect, each reading as appears on the back page of this Power of Attorney, respectively. **The following signature by an authorized officer of the Company may be a facsimile, which shall be deemed the equivalent of and constitute the written signature of such officer of the Company for all purposes regarding this Power of Attorney, including satisfaction of any signature requirements on any and all undertakings, bonds, or other such writings obligatory in the nature thereof, to which this Power of Attorney applies.**

**BERKSHIRE HATHAWAY SPECIALTY
INSURANCE COMPANY,**

By: _____
David Fields, Executive Vice President



**NATIONAL INDEMNITY COMPANY,
NATIONAL LIABILITY & FIRE INSURANCE COMPANY,**

By: _____
David Fields, Vice President

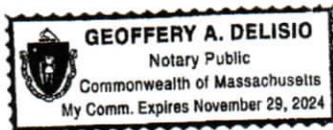


NOTARY

State of Massachusetts, County of Suffolk, ss:

On this 20th day of December, 2018, before me appeared David Fields, Executive Vice President of **BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY** and Vice President of **NATIONAL INDEMNITY COMPANY** and **NATIONAL LIABILITY & FIRE INSURANCE COMPANY**, who being duly sworn, says that his capacity is as designated above for such Companies; that he knows the corporate seals of the Companies; that the seals affixed to the foregoing instrument are such corporate seals; that they were affixed by order of the board of directors or other governing body of said Companies pursuant to its Bylaws, Resolutions and other Authorizations, and that he signed said instrument in that capacity of said Companies.

[Notary Seal]



Notary Public

I, Ralph Tortorella, the undersigned, Officer of **BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY, NATIONAL INDEMNITY COMPANY and NATIONAL LIABILITY & FIRE INSURANCE COMPANY**, 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 in full force and effect and has not been revoked. **IN TESTIMONY WHEREOF**, see hereunto affixed the seals of said Companies this **June 24, 2020**.



Officer



To verify the authenticity of this Power of Attorney please contact us at: BHSI Surety Department, Berkshire Hathaway Specialty Insurance Company, One Lincoln Street, 23rd Floor Boston, MA 02111 | (770) 625-2516 or by email at Jennifer.Porter@bhspecialty.com THIS POWER OF ATTORNEY IS VOID IF ALTERED
To notify us of a claim please contact us on our 24-hour toll free number at (855) 453-9675, via email at claimsnotice@bhspecialty.com, via fax to (617) 507-8259, or via mail.

BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY (BYLAWS)

ARTICLE V.

CORPORATE ACTIONS

....

EXECUTION OF DOCUMENTS:

....

Section 6.(b) The President, any Vice President or the Secretary, shall have the power and authority:

- (1) To appoint Attorneys-in-fact, and to authorize them to execute on behalf of the Company bonds and other undertakings, and
- (2) To remove at any time any such Attorney-in-fact and revoke the authority given him.

NATIONAL INDEMNITY COMPANY (BY-LAWS)

Section 4. Officers, Agents, and Employees:

A. The officers shall be a President, one or more Vice Presidents, a Secretary, one or more Assistant Secretaries, a Treasurer, and one or more Assistant Treasurers none of whom shall be required to be shareholders or Directors and each of whom shall be elected annually by the Board of Directors at each annual meeting to serve a term of office of one year or until a successor has been elected and qualified, may serve successive terms of office, may be removed from office at any time for or without cause by a vote of a majority of the Board of Directors, and shall have such powers and rights and be charged with such duties and obligations as usually are vested in and pertain to such office or as may be directed from time to time by the Board of Directors; and the Board of Directors or the officers may from time to time appoint, discharge, engage, or remove such agents and employees as may be appropriate, convenient, or necessary to the affairs and business of the corporation.

NATIONAL INDEMNITY COMPANY (BOARD RESOLUTION ADOPTED AUGUST 6, 2014)

RESOLVED, That the President, any Vice President or the Secretary, shall have the power and authority to (1) appoint Attorneys-in-fact, and to authorize them to execute on behalf of this Company bonds and other undertakings and (2) remove at any time any such Attorney-in-fact and revoke the authority given.

NATIONAL LIABILITY & FIRE INSURANCE COMPANY (BY-LAWS)

ARTICLE IV

Officers

Section 1. Officers, Agents and Employees:

A. The officers shall be a president, one or more vice presidents, one or more assistant vice presidents, a secretary, one or more assistant secretaries, a treasurer, and one or more assistant treasurers, none of whom shall be required to be shareholders or directors, and each of whom shall be elected annually by the board of directors at each annual meeting to serve a term of office of one year or until a successor has been elected and qualified, may serve successive terms of office, may be removed from office at any time for or without cause by a vote of a majority of the board of directors. The president and secretary shall be different individuals. Election or appointment of an officer or agent shall not create contract rights. The officers of the Corporation shall have such powers and rights and be charged with such duties and obligations as usually are vested in and pertain to such office or as may be directed from time to time by the board of directors; and the board of directors or the officers may from time to time appoint, discharge, engage, or remove such agents and employees as may be appropriate, convenient, or necessary to the affairs and business of the Corporation.

NATIONAL LIABILITY & FIRE INSURANCE COMPANY (BOARD RESOLUTION ADOPTED AUGUST 6, 2014)

RESOLVED, That the President, any Vice President or the Secretary, shall have the power and authority to (1) appoint Attorneys-in-fact, and to authorize them to execute on behalf of this Company bonds and other undertakings and (2) remove at any time any such Attorney-in-fact and revoke the authority given.

**POWER OF ATTORNEY
UNITED STATES FIRE INSURANCE COMPANY
PRINCIPAL OFFICE - MORRISTOWN, NEW JERSEY**

80844

KNOW ALL MEN BY THESE PRESENTS: That United States Fire Insurance Company, a corporation duly organized and existing under the laws of the state of Delaware, has made, constituted and appointed, and does hereby make, constitute and appoint:

Mark P. Herendeen, Theresan E. Rowedder, Jean Correia, Jane Gilson, Bryan Huft, Maria Chaves

each, its true and lawful Attorney(s)-In-Fact, with full power and authority hereby conferred in its name, place and stead, to execute, acknowledge and deliver: Any and all bonds and undertakings of surety and other documents that the ordinary course of surety business may require, and to bind United States Fire Insurance Company thereby as fully and to the same extent as if such bonds or undertakings had been duly executed and acknowledged by the regularly elected officers of United States Fire Insurance Company at its principal office, in amounts or penalties not exceeding: **UNLIMITED**

This Power of Attorney limits the act of those named therein to the bonds and undertakings specifically named therein, and they have no authority to bind United States Fire Insurance Company except in the manner and to the extent therein stated.

This Power of Attorney revokes all previous Powers of Attorney issued on behalf of the Attorneys-In-Fact named above and expires on January 31, 2021.

This Power of Attorney is granted pursuant to Article IV of the By-Laws of United States Fire Insurance Company as now in full force and effect, and consistent with Article III thereof, which Articles provide, in pertinent part:

Article IV, Execution of Instruments - Except as the Board of Directors may authorize by resolution, the Chairman of the Board, President, any Vice-President, any Assistant Vice President, the Secretary, or any Assistant Secretary shall have power on behalf of the Corporation:

(a) to execute, affix the corporate seal manually or by facsimile to, acknowledge, verify and deliver any contracts, obligations, instruments and documents whatsoever in connection with its business including, without limiting the foregoing, any bonds, guarantees, undertakings, recognizances, powers of attorney or revocations of any powers of attorney, stipulations, policies of insurance, deeds, leases, mortgages, releases, satisfactions and agency agreements;

(b) to appoint, in writing, one or more persons for any or all of the purposes mentioned in the preceding paragraph (a), including affixing the seal of the Corporation.

Article III, Officers, Section 3.11, Facsimile Signatures. The signature of any officer authorized by the Corporation to sign any bonds, guarantees, undertakings, recognizances, stipulations, powers of attorney or revocations of any powers of attorney and policies of insurance issued by the Corporation may be printed, facsimile, lithographed or otherwise produced. In addition, if and as authorized by the Board of Directors, dividend warrants or checks, or other numerous instruments similar to one another in form, may be signed by the facsimile signature or signatures, lithographed or otherwise produced, of such officer or officers of the Corporation as from time to time may be authorized to sign such instruments on behalf of the Corporation. The Corporation may continue to use for the purposes herein stated the facsimile signature of any person or persons who shall have been such officer or officers of the Corporation, notwithstanding the fact that he may have ceased to be such at the time when such instruments shall be issued.

IN WITNESS WHEREOF, United States Fire Insurance Company has caused these presents to be signed and attested by its appropriate officer and its corporate seal hereunto affixed this 10th day of March, 2016.

UNITED STATES FIRE INSURANCE COMPANY

ARR

Anthony R. Slimowicz, Executive Vice President



State of New Jersey }
County of Morris }

On this 10th day of March 2016, before me, a Notary public of the State of New Jersey, came the above named officer of United States Fire Insurance Company, to me personally known to be the individual and officer described herein, and acknowledged that he executed the foregoing instrument and affixed the seal of United States Fire Insurance Company thereto by the authority of his office.

SONIA SCALA
NOTARY PUBLIC OF NEW JERSEY
MY COMMISSION EXPIRES 3/25/2024
No. 2163686

Sonia Scala

Sonia Scala

(Notary Public)

I, the undersigned officer of United States Fire Insurance Company, a Delaware corporation, do hereby certify that the original Power of Attorney of which the foregoing is a full, true and correct copy is still in force and effect and has not been revoked.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the corporate seal of United States Fire Insurance Company on the 24th day of June 20 20

UNITED STATES FIRE INSURANCE COMPANY

Peter M. Quinn

Peter M. Quinn, Senior Vice President



Power of Attorney

KNOW ALL MEN BY THESE PRESENTS THAT:

Nationwide Mutual Insurance Company, an Ohio corporation

hereinafter referred to severally as the "Company" and collectively as "the Companies" does hereby make, constitute and appoint:

MARK P HERENDEEN; JEAN CORREIA; JANE GILSON; MARIA CHAVES; THERESAN E ROWEDDER; BRYAN HUFT;

each in their individual capacity, its true and lawful attorney-in-fact, with full power and authority to sign, seal, and execute on its behalf any and all bonds and undertakings, and other obligatory instruments of similar nature, in penalties not exceeding the sum of

UNLIMITED

and to bind the Company thereby, as fully and to the same extent as if such instruments were signed by the duly authorized officers of the Company; and all acts of said Attorney pursuant to the authority given are hereby ratified and confirmed.

This power of attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the board of directors of the Company:

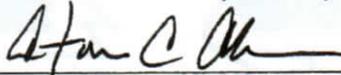
"RESOLVED, that the president, or any vice president be, and each hereby is, authorized and empowered to appoint attorneys-in-fact of the Company, and to authorize them to execute and deliver on behalf of the Company any and all bonds, forms, applications, memorandums, undertakings, recognizances, transfers, contracts of indemnity, policies, contracts guaranteeing the fidelity of persons holding positions of public or private trust, and other writings obligatory in nature that the business of the Company may require; and to modify or revoke, with or without cause, any such appointment or authority; provided, however, that the authority granted hereby shall in no way limit the authority of other duly authorized agents to sign and countersign any of said documents on behalf of the Company."

"RESOLVED FURTHER, that such attorneys-in-fact shall have full power and authority to execute and deliver any and all such documents and to bind the Company subject to the terms and limitations of the power of attorney issued to them, and to affix the seal of the Company thereto; provided, however, that said seal shall not be necessary for the validity of any such documents."

This power of attorney is signed and sealed under and by the following bylaws duly adopted by the board of directors of the Company.

Execution of Instruments. Any vice president, any assistant secretary or any assistant treasurer shall have the power and authority to sign or attest all approved documents, instruments, contracts, or other papers in connection with the operation of the business of the company in addition to the chairman of the board, the chief executive officer, president, treasurer or secretary; provided, however, the signature of any of them may be printed, engraved, or stamped on any approved document, contract, instrument, or other papers of the Company.

IN WITNESS WHEREOF, the Company has caused this instrument to be sealed and duly attested by the signature of its officer the 27th day of February, 2019.

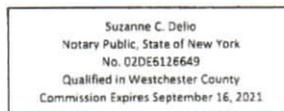


Antonio C. Albanese, Vice President of Nationwide Mutual Insurance Company

ACKNOWLEDGMENT

STATE OF NEW YORK, COUNTY OF NEW YORK: ss

On this 27th day of February, 2019, before me came the above-named officer for the Company aforesaid, to me personally known to be the officer described in and who executed the preceding instrument, and he acknowledged the execution of the same, and being by me duly sworn, deposes and says, that he is the officer of the Company aforesaid, that the seal affixed hereto is the corporate seal of said Company, and the said corporate seal and his signature were duly affixed and subscribed to said instrument by the authority and direction of said Company.

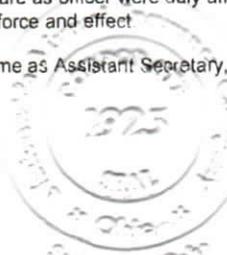
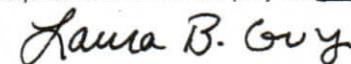



Notary Public
My Commission Expires
September 16, 2021

CERTIFICATE

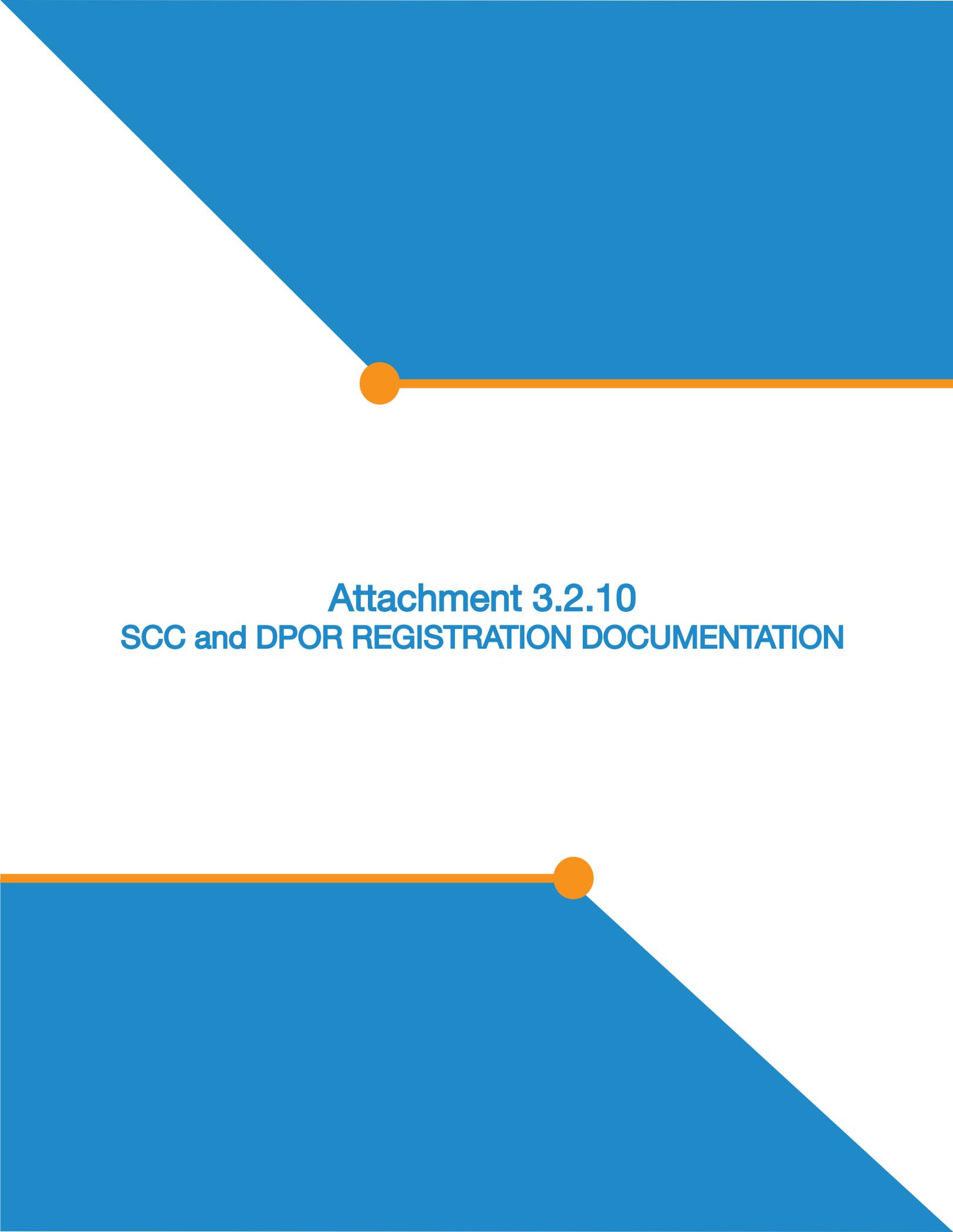
I, Laura B. Guy, Assistant Secretary of the Company, do hereby certify that the foregoing is a full, true and correct copy of the original power of attorney issued by the Company; that the resolution included therein is a true and correct transcript from the minutes of the meetings of the boards of directors and the same has not been revoked or amended in any manner; that said Antonio C. Albanese was on the date of the execution of the foregoing power of attorney the duly elected officer of the Company, and the corporate seal and his signature as officer were duly affixed and subscribed to the said instrument by the authority of said board of directors; and the foregoing power of attorney is still in full force and effect

IN WITNESS WHEREOF, I have hereunto subscribed my name as Assistant Secretary, and affixed the corporate seal of said Company this 24th day of JUNE, 2020.

Assistant Secretary

BDJ 1(02-19)00

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Attachment 3.2.10
SCC and DPOR REGISTRATION DOCUMENTATION

ATTACHMENT 3.2.10

State Project No. 0081-080-946

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	Stock Corporation	Active	90 Fieldstone Ct., Cheshire, CT 06410	Contractor Class A	2701011871	01-31-2022
The Lane Construction Corporation	F0254476	Stock Corporation	Active	14500 Avion Pkwy, Suite 200, Chantilly, VA 20151	Business Entity Registration	0407002174	12-31-2021
Corman Kokosing Construction Company	F2080481	Stock Corporation	Active	12001 Guilford Rd., Annapolis Junction, MD 20701	Contractor Class A	2705167185	02-28-2022
Rinker Design Associates, PC	02270627	Stock Corporation	Active	11100 Endeavor Ct., Suite 200, Manassas, VA 20109	Professional Corporation Registration	0405000502	12-31-2021
Alvi Associates, Inc.	F1799750	Stock Corporation	Active	110 West Rd. Suite 250, Townson, MD 21204	Business Entity Registration	0407002864	12-31-2021
Century Engineering, Inc. DBA NXL	F1909839	Stock Corporation	Active	2820 Dorr Ave., Suite 230, Fairfax, VA 22031	Business Entity Branch Office Registration	0411000994	02-28-2022
EEE Consulting, Inc.	05049416	Stock Corporation	Active	8525 Bell Creek Rd., Mechanicsville, VA 23111	Business Entity Registration	0407003798	12-31-2021
EEE Consulting, Inc.	05049416	Stock Corporation	Active	201 Church St., Blacksburg, VA 24060	Business Entity Branch Office Registration	0411000435	02-28-2022
E.L. Robinson Engineering, Co.	F2104455	Stock Corporation	Active	5088 Washington St. W, Charleston, WV 25313	Business Entity Registration	0407004252	12-31-2021
W.C. English, Inc.	00689448	Stock Corporation	Active	615 Church St., 2 nd Floor, Lynchburg, VA 24504	Contractor Class A	2701003331	04-30-2022
WSP USA, Inc.	F0501603	Stock Corporation	Active	227 Bendix Rd., Suite 300, VA Beach, VA 23452	Business Entity Branch Office Registration	0411000137	02-28-2022

ATTACHMENT 3.2.10

State Project No. 0081-080-946

SCC and DPOR Information

WSP USA, Inc.	F0501603	Stock Corporation	Active	1015 Half St. SE, Suite 650, Washington, DC 20003	Business Entity Branch Office Registration	0411000760	02-28-2022
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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
Corman Kokosing Construction Company	Ryan Gorman, P.E., DBIA	Powhatan, VA	Powhatan, VA 23139	Professional Engineer	0402033522	06-30-2022
Rinker Design Associates, P.C.	Darell Fischer, P.E., DBIA	Glen Allen, VA	14101 Spring Gate Ter. Midlothian, VA 23112	Professional Engineer	0402023296	06-30-2022
Century Engineering, Inc. DBA NXL	Joe Hamed, P.E., DBIA	Christiansburg, VA	Christiansburg, VA 24073	Professional Engineer	0402039327	02-28-2022

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FULL SIZE COPIES OF SCC REGISTRATION

State Corporation Commission Clerk's Information System

Entity Information

Entity Information

Entity Name: THE LANE CONSTRUCTION CORPORATION	Entity ID: F0254476
Entity Type: Stock Corporation	Entity Status: Active
Formation Date: N/A	Reason for Status: Active and In Good Standing
VA Qualification Date: 07/24/1972	Status Date: 09/11/2019
Industry Code: 0 - General	Period of Duration: Perpetual
Jurisdiction: CT	Annual Report Due Date: 07/31/2020
Registration Fee Due Date: 07/31/2020	Charter Fee: \$1000.00

State Corporation Commission Clerk's Information System

Entity Information

Entity Information

Entity Name: Corman Kokosing Construction Company	Entity ID: F2080481
Entity Type: Stock Corporation	Entity Status: Active
Formation Date: N/A	Reason for Status: Active and In Good Standing
VA Qualification Date: 01/22/2018	Status Date: 02/28/2019
Industry Code: 0 - General	Period of Duration: Perpetual
Jurisdiction: OH	Annual Report Due Date: N/A
Registration Fee Due Date: Not Required	Charter Fee: \$100.00

State Corporation Commission Clerk's Information System

Entity Information

Entity Information

Entity Name: Rinker Design Associates, P.C.	Entity ID: 02270627
Entity Type: Stock Corporation	Entity Status: Active
Formation Date: 02/24/1982	Reason for Status: Active and In Good Standing
VA Qualification Date: 02/24/1982	Status Date: 04/22/1991
Industry Code: 70 - Other Professional Companies	Period of Duration: Perpetual
Jurisdiction: VA	Annual Report Due Date: N/A
Registration Fee Due Date: Not Required	Charter Fee: \$0.00

State Corporation Commission Clerk's Information System

Entity Information

Entity Information

Entity Name: ALVI ASSOCIATES, INC.	Entity ID: F1799750
Entity Type: Stock Corporation	Entity Status: Active
Formation Date: N/A	Reason for Status: Active and In Good Standing
VA Qualification Date: 08/13/2009	Status Date: 08/13/2009
Industry Code: 0 - General	Period of Duration: Perpetual
Jurisdiction: MD	Annual Report Due Date: 08/31/2020
Registration Fee Due Date: 08/31/2020	Charter Fee: \$50.00

State Corporation Commission Clerk's Information System

Entity Information

Entity Information

Entity Name: Century Engineering Inc., a Maryland based corporation	Entity ID: F1909839
Entity Type: Stock Corporation	Entity Status: Active
Formation Date: N/A	Reason for Status: Active and In Good Standing
VA Qualification Date: 10/05/2012	Status Date: 10/05/2012
Industry Code: 0 - General	Period of Duration: Perpetual
Jurisdiction: MD	Annual Report Due Date: N/A
Registration Fee Due Date: Not Required	Charter Fee: \$2500.00

State Corporation Commission Clerk's Information System

Entity Information

Entity Information

Entity Name: EEE Consulting, Inc.	Entity ID: 05049416
Entity Type: Stock Corporation	Entity Status: Active
Formation Date: 06/23/1998	Reason for Status: Active and In Good Standing
VA Qualification Date: 06/23/1998	Status Date: 08/04/2004
Industry Code: 0 - General	Period of Duration: Perpetual
Jurisdiction: VA	Annual Report Due Date: N/A
Registration Fee Due Date: Not Required	Charter Fee: \$700.00

State Corporation Commission Clerk's Information System

Entity Information

Entity Information

Entity Name: E. L. Robinson Engineering Co.	Entity ID: F2104455
Entity Type: Stock Corporation	Entity Status: Active
Formation Date: N/A	Reason for Status: Active and In Good Standing
VA Qualification Date: 09/28/2018	Status Date: 09/28/2018
Industry Code: 0 - General	Period of Duration: Perpetual
Jurisdiction: WV	Annual Report Due Date: N/A
Registration Fee Due Date: Not Required	Charter Fee: \$50.00

State Corporation Commission Clerk's Information System

Entity Information

Entity Information

Entity Name: W. C. ENGLISH, INCORPORATED	Entity ID: 00689448
Entity Type: Stock Corporation	Entity Status: Active
Formation Date: 04/06/1954	Reason for Status: Active and In Good Standing
VA Qualification Date: 04/06/1954	Status Date: 05/09/2018
Industry Code: 0 - General	Period of Duration: Perpetual
Jurisdiction: VA	Annual Report Due Date: N/A
Registration Fee Due Date: Not Required	Charter Fee: \$390.00

State Corporation Commission Clerk's Information System

Entity Information

Entity Information

Entity Name: WSP USA Inc.	Entity ID: F0501603
Entity Type: Stock Corporation	Entity Status: Active
Formation Date: N/A	Reason for Status: Active and In Good Standing
VA Qualification Date: 02/11/1986	Status Date: 03/11/2002
Industry Code: 70 - All professions not listed above	Period of Duration: Perpetual
Jurisdiction: NY	Annual Report Due Date: N/A
Registration Fee Due Date: Not Required	Charter Fee: \$0.00

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**FULL SIZE COPIES OF DPOR REGISTRATION
(OFFICES)**

The Lane Construction Corporation

DPOR License Lookup License Number 2701011871

License Details

Name	THE LANE CONSTRUCTION CORPORATION
DBA Name	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	2022-01-31

DPOR License Lookup License Number 0407002174

License Details

Name	THE LANE CONSTRUCTION CORPORATION
License Number	0407002174
License Description	Business Entity Registration
Firm Type	Corporation
Rank	Business Entity
Address	14500 AVION PARKWAY STE 200, CHANTILLY, VA 20151
Initial Certification Date	1985-09-30
Expiration Date	2021-12-31

Corman Kokosing Construction Company

DPOR License Lookup License Number 2705167185

License Details

Name	CORMAN KOKOSING CONSTRUCTION COMPANY
License Number	2705167185
License Description	Contractor
Firm Type	Corporation
Rank ¹	Class A
Address	12001 GUILFORD RD, ANNAPOLIS JUNCTION, MD 20701
Specialties²	Highway / Heavy (H/H) Marine Facility (MCC)
Initial Certification Date	2018-02-20
Expiration Date	2022-02-28

Rinker Design Associates, P.C. (RDA)

DPOR License Lookup License Number 0405000502

License Details

Name	RINKER DESIGN ASSOCIATES PC
License Number	0405000502
License Description	Professional Corporation Registration
Firm Type	Corporation
Rank	Professional Corporation
Address	11100 ENDEAVOR CT STE 200, MANASSAS, VA 20109
Initial Certification Date	1986-07-16
Expiration Date	2021-12-31

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	2021-12-31

Century Engineering, Inc. (DBA NXL)

DPOR License Lookup License Number 0411000994

License Details

Name	CENTURY ENGINEERING, INC
DBA Name	CENTURY ENGINEERING INC A MARYLAND BASED CORPORATION
License Number	0411000994
License Description	Business Entity Branch Office Registration
Business Type	Corporation
Rank	Business Entity Branch Office
Address	2820 DORR AVE SUITE 230, FAIRFAX, VA 22031
Initial Certification Date	2013-05-09
Expiration Date	2022-02-28

DPOR License Lookup License Number 0407003798

License Details

Name	EEE CONSULTING INC
License Number	0407003798
License Description	Business Entity Registration
Firm Type	Corporation
Rank	Business Entity
Address	8525 BELL CREEK RD, MECHANICSVILLE, VA 23111
Initial Certification Date	1998-08-24
Expiration Date	2021-12-31

DPOR License Lookup License Number 0411000435

License Details

Name	EEE CONSULTING INC
License Number	0411000435
License Description	Business Entity Branch Office Registration
Business Type	Corporation
Rank	Business Entity Branch Office
Address	201 CHURCH ST, BLACKSBURG, VA 24060
Initial Certification Date	2006-02-09
Expiration Date	2022-02-28

DPOR License Lookup License Number 0407004252

License Details

Name	E L ROBINSON ENGINEERING CO
License Number	0407004252
License Description	Business Entity Registration
Firm Type	Corporation
Rank	Business Entity
Address	5088 WASHINGTON ST WEST, CHARLESTON, WV 25313
Initial Certification Date	2002-06-03
Expiration Date	2021-12-31

DPOR License Lookup License Number 2701003331

License Details

Name	W C ENGLISH INC
License Number	2701003331
License Description	Contractor
Firm Type	Corporation
Rank ¹	Class A
Address	615 CHURCH STREET 2ND FLOOR, LYNCHBURG, VA 24504
Specialties²	Commercial Building (CBC) Highway / Heavy (H/H) Residential Building (RBC)
Initial Certification Date	1955-02-10
Expiration Date	2022-04-30

DPOR License Lookup License Number 0411000137

License Details

Name	WSP USA INC
License Number	0411000137
License Description	Business Entity Branch Office Registration
Business Type	Corporation
Rank	Business Entity Branch Office
Address	277 BENDIX ROAD SUITE 300, VIRGINIA BEACH, VA 23452
Initial Certification Date	1997-02-10
Expiration Date	2022-02-28

DPOR License Lookup License Number 0411000760

License Details

Name	WSP USA INC
License Number	0411000760
License Description	Business Entity Branch Office Registration
Business Type	Corporation
Rank	Business Entity Branch Office
Address	1015 HALF ST SE STE 650, WASHINGTON, DC 20003
Initial Certification Date	2010-09-08
Expiration Date	2022-02-28

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**FULL SIZE COPIES OF DPOR REGISTRATION
(KEY PERSONNEL)**

DPOR INFORMATION FOR INDIVIDUALS – KEY PERSONNEL:

Ryan Gorman, P.E., DBIA (Corman Kokosing)

DPOR License Lookup License Number 0402033522

License Details

Name	GORMAN, RYAN GREGORY
License Number	0402033522
License Description	Professional Engineer License
Rank	Professional Engineer
Address	POWHATAN, VA 23139
Initial Certification Date	2002-06-18
Expiration Date	2022-06-30

Darell Fischer, P.E., DBIA (RDA)

DPOR License Lookup License Number 0402023296

License Details

Name	FISCHER, DARELL LEE
License Number	0402023296
License Description	Professional Engineer License
Rank	Professional Engineer
Address	MIDLOTHIAN, VA 23112
Initial Certification Date	1992-06-25
Expiration Date	2022-06-30

Joseph Hamed, P.E., DBIA (NXL)

DPOR License Lookup License Number 0402039327

License Details

Name	HAMED, JOSEPH ROY
License Number	0402039327
License Description	Professional Engineer License
Rank	Professional Engineer
Address	CHRISTIANSBURG, VA 24073
Initial Certification Date	2004-02-24
Expiration Date	2022-02-28

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Attachment 3.3.1

KEY PERSONNEL RESUMES

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.		
a. Name & Title: BARRY BERNSTEIN / DESIGN BUILD PROJECT MANAGER		
b. Project Assignment: DESIGN BUILD PROJECT MANAGER		
c. Name of the Firm with which you are employed at the time of submitting SOQ: THE LANE CONSTRUCTION CORPORATION		
d. Employment History: With this Firm 35 Years With Other Firms 0 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): The Lane Construction Corporation, Project Manager, 2005 - Present: Mr. Bernstein has over 35 years of experience in the construction industry and is responsible for overall project design and construction, managing project construction efforts including quality control activities. His responsibilities include overseeing all daily construction, managing subcontractors, coordinating with the quality assurance manager, and ensuring all materials used and work performed are in-compliance with contract specifications; contract administration and other services required by the contract documents, including procuring and furnishing all materials, equipment, services and labor reasonably inferable from the Contract Documents in a timely manner. Mr. Bernstein will answer questions/inquiries about the project and, will be responsible for meeting the Design Builder's obligations under the contract and avoiding and resolving disputes as required. He has served as Project Manager and Construction Manager on several D-B projects in Virginia and the greater Washington, DC metro area. Mr. Bernstein is familiar with VDOT projects, including bridge and roadway construction, utility relocations, environmental and geotechnical management, complex maintenance of traffic (MOT), intelligent transportation systems (ITS), signage and lighting, safety, traffic control devices, tolling and traffic management systems (TTMS), transportation management plan (TMP), quality assurance, quality control (QA/QC), and similarly to many of his previous projects, he will coordinate any required public outreach and public meetings.		
SUMMARY OF RELEVANT EXPERIENCE		
<ul style="list-style-type: none"> ▪ 35 years of Transportation Construction ▪ Understands D-B contracts ▪ Capable to avoid/resolve disputes ▪ 4 VDOT D-B Projects 	<ul style="list-style-type: none"> ▪ Interstate Experience ▪ Bridge/Roadway Construction ▪ Answer questions/inquiries relevant to the project ▪ 20+ MOT Management 	<ul style="list-style-type: none"> ▪ Complex TMP/MOT Coordination ▪ QA/QC Management ▪ Public outreach/public meetings coordination
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Lehigh University, Bethlehem, PA/BS/1984/Civil Engineering		
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 1993/Licensed Professional Engineer/MD #19991		
g. Document the extent and depth of your experience and qualifications relevant to the Project. <ol style="list-style-type: none"> 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> <p>(List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)</p> <p>* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.</p>		
MDOT, Purple Line, Montgomery & Prince George's Counties, MD (DESIGN-BUILD)		
Name of Firm: The Lane Construction Corporation	Project Role: DBPM	
Beginning Date: 03/2017	End Date: Present	
Specific Responsibilities: As the DB Project Manager for the Purple Line project, Mr. Bernstein is responsible for a large segment that runs over heavily-traveled and high-traffic area and for the overall construction, quality and safety programs ensuring all requirements and specifications are delivered, contract administration, directing and managing project development, constructability reviews with the designers, defining project scope, goals and deliverables, collaborating with stakeholders, public outreach and public meetings, supervising the procurement and furnishing of all materials, equipment, services and labor necessary for project completion, scheduling project timelines and milestones, supervising team members, and developing best practices and tools for project execution. Mr. Bernstein is the incident management coordinator and responds to all incidents within the project limits. The majority of the bridge work is over live traffic and waterways. Mr. Bernstein maintains periodic coordination with Montgomery and PG counties for traffic closures for activities such as installing girders, protection shields, SIP, and deck concrete placements. Similarly, to his proposed role on the I-81 project, he coordinates with the Designer team Rinker Design Associates (RDA) utility and construction modeling. Additionally, he is responsible for weekly meetings with		

construction team, client and stakeholders to discuss the schedule to perform work; all work activities are supported with work plans which are submitted for approval prior to the scheduled work.

Project Relevance: This \$2.2B project, for which Lane is a 30% partner in the Design-Build team (PLTP), consists of dedicated alignment on existing roadway of 8.7 miles and the construction of a 16-mile light rail line that will extend from Bethesda in Montgomery County to New Carrollton in Prince George's County, providing a direct connection to several major rail lines and communities in the greater Washington DC metro area. The project entails eight segments. Three segments (1.2 miles) will operate in mixed traffic: Wayne Avenue, Paint Branch Parkway, and Ellin Road. Ten miles of the Purple Line's dedicated lanes will allow cross-traffic at intersections. Also, cars will be able to make left turns over the tracks at intersections without traffic lights, and the Purple Line will have the right of way. Running the cars over central tracks will eliminate the problem of conflicts with parked cars along the shoulder. Only a half mile of tracks will run through a tunnel. Twenty-one stations are planned along the route, creating new connections between communities and neighborhoods. **Relevant scope of work to the I-81 Widening project includes:** roadway; survey; structure and/or bridge; environmental; geotechnical; drainage, erosion and sediment control, and stormwater management; traffic control devices; transportation management plan; soundwalls; right-of-way; utilities (including conduit for future considerations); public involvement/ relations; signage, lighting, variable message boards, and cameras; quality assurance and quality control; construction engineering & inspection; and overall Project management.

VDOT, I-95 Express Lanes, Fairfax, Prince William & Stafford Counties, VA (DESIGN-BUILD)

Name of Firm: The Lane Construction Corporation	Project Role: DBPM
Beginning Date: 06/2012	End Date: 11/2014

Specific Responsibilities: Mr. Bernstein's responsibilities as DBPM for Area 1 included the coordination and scheduling of subcontractors, design coordination and constructability review, oversight of crew and work conditions, VDOT coordination, safety, procurement and furnishing all materials equipment, services and labor in a timely manner; contract administration and all services required by the contract, and public outreach and public meetings coordination. Mr. Bernstein was on-site full time on this project through construction completion. He coordinated with lead designer for constructability reviews of numerous design packages and managed project construction; and worked closely with design team subcontractor Rinker Design Associates (RDA) who provided all the TMP/MOT, as a sub to HNTB and HDR (the full 29 miles). They also provided utility coordination/relocation and right of way support services, performing a similar role as his proposed role on the I-81 Widening project. Mr. Bernstein was the incident management coordinator holding the authority to immediately halt any and or all portions of work deemed necessary, negotiated with VDOT regarding changes to the scope of work and other matters, subcontractor management and personnel changes. The Project required extensive coordination with 3rd parties, including utilities and several government agencies. This Project was in one of the most congested corridors in the country, with heavy traffic involving extensive MOT planning, mitigating risks and prioritizing safety throughout the life of the project, which Mr. Bernstein has managed for Area 1 in coordination with his counterparts on adjacent projects.

Project Relevance: Area 1, segment of the I-95 Express Lanes DB project, included an 8.3-mile roadway extension and widening with major clearing, earthwork, bridge flyovers, structural bridge work, asphalt mill and overlay, and shoulder reconstruction. Area 1 (the Southern Section, 15 miles, \$250M value) included 7 new bridges, 3 bridge rehabilitations, sound walls, guard rails, earthwork, asphalt paving, overhead sign structures, and miles of conduit and cable. Storm water management and environmental concerns were a challenge and included the successfully completed Swan's Creek Revitalization. **Relevant scope of work to the I-81 Widening project includes:** roadway; survey; structure and/or bridge; environmental; geotechnical; drainage, erosion and sediment control, and stormwater management; traffic control devices; transportation management plan; soundwalls; right-of-way; utilities (including conduit for future considerations); public involvement/ relations; signage, lighting, variable message boards, and cameras; quality assurance and quality control; construction engineering & inspection; and overall Project management.

MSHA, I-495/I-95 Arena Drive, Prince Georges County, MD (DESIGN-BUILD)

Name of Firm: The Lane Construction Corporation	Project Role: DBPM
Beginning Date: 01/2007	End Date: 12/2009

Specific Responsibilities: Mr. Bernstein's responsibilities as DBPM included planning, directing, and coordinating the project's budget, scheduling and coordination of subcontractors; overall project design and construction, quality management, contract administration and all services required by the contract. Additionally, he directed and managed the project progress, and coordinated with lead designer including constructability reviews. Mr. Bernstein was the incident management coordinator and held specific authority to immediately halt any and or all portions of work deemed necessary, negotiated on Lane's behalf with MSHA regarding scopes changes and other matters, subcontractor management and personnel changes.

Project Relevance: This project consisted of widening I-495/95 at Arena Drive to Glenarden Parkway overpass and was designed to fill in two miles of median with new lane and median shoulders in each direction. The Arena Drive Interchange required widening of three existing ramps and closure of three existing loop ramps, the project elements included excavation, concrete traffic barriers, storm drain pipes and structures, erosion and sediment control, SWM, paving, slip form bifurcated median barriers, guardrail, street light foundation poles, traffic signal foundation and poles, overhead signs, traffic control devices, utilities, transportation management plan and extensive MOT, QA/QC, construction engineering and inspection; and overall Project management. **Relevant scope of work to the I-81 Widening project includes:** roadway; survey; structure and/or bridge; environmental; geotechnical; drainage, erosion and sediment control, and stormwater management; traffic control devices; transportation management plan; right-of-way; utilities (including conduit for future considerations); public involvement/ relations; signage, lighting, variable message boards, and cameras; quality assurance and quality control; construction engineering & inspection; and overall Project management.

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**

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.		
a. Name & Title: RYAN GORMAN, P.E., DBIA / VICE PRESIDENT, DESIGN-BUILD		
b. Project Assignment: ENTRUSTED ENGINEER IN CHARGE (EIC)		
c. Name of the Firm with which you are employed at the time of submitting SOQ: CORMAN KOKOSING CONSTRUCTION COMPANY		
<p>d. Employment History: With this Firm 23 Years With Other Firms 1 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>Corman Kokosing Construction Company 2005 - Present: Vice President, Design-Build (2016-Present): Mr. Gorman manages design-build (D-B) projects from procurement to final execution. He was the first responsible charge engineer on a VDOT D-B project and design/construction integrator on two VDOT design-builds where he streamlined integration with design/construction teams.</p> <p>D-B Manager (2015-2016): Involved on an executive level on D-B procurements/projects.</p> <p>Business Development Manager Sr. Estimator (2012-2015): Managed D-B, Estimating, and Marketing Departments in the Corman South office near Richmond, VA.</p> <p>Operations Manager (2009-2012): Oversaw Corman South office, including managing onsite personnel, assisting in evaluating current/proposed systems, policies/procedures, determining labor requirements, developing/reviewing QA/QC plans/programs, outlining project plans, inspecting/reviewing projects for safety/quality compliance and ensuring projects are completed on time.</p> <p>Project Engineer/Superintendent/Project Manager/Sr. Project Manager (2005-2009): Progressed from Project Engineer to Superintendent, to Project Manager to Sr. Project Manager assigned to road, road widening, bridge, and combined sewer overflow projects for VDOT, City of Richmond, and Henrico County.</p>		
SUMMARY OF RELEVANT EXPERIENCE		
<ul style="list-style-type: none"> ▪ 24+ years of experience working with VDOT ▪ 23 years of transportation engineering/construction experience ▪ 23 Construction Management ▪ Understands D-B contracts 	<ul style="list-style-type: none"> ▪ 20+ years' experience complex engineering ▪ Understands D-B contracts ▪ Ensures Contract Compliance ▪ Environmental/geotechnical/E&SC/SWM 	<ul style="list-style-type: none"> ▪ High Traffic Interstate Corridor Bridge/Roadway Construction ▪ Reports directly to PM ▪ Answer questions/inquiries relevant to the project ▪ Registered Professional Engineer
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Clarkson University, Potsdam, NY / B.S. / 1995 / Civil Engineering		
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 2002 / Registered Professional Engineer / #0402033522		
<p>g. Document the extent and depth of your experience and qualifications relevant to the Project.</p> <ol style="list-style-type: none"> 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> <p>(List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)</p> <p>* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.</p>		
VDOT, High Rise Bridge, Phase 1, Chesapeake, VA (DESIGN-BUILD)		
Name of Firm: Corman Kokosing	Project Role: Design/Construction Integrator	
Beginning Date: 11/2017	End Date: 7/2021 (Est. completion date)	
<p>Specific Responsibilities: Mr. Gorman works with the designer/construction teams to streamline integration, is in conformance with the contract, compiles the final Released for Construction Plans/specifications/final work packages, ensures complex design decisions involving multi-disciplinary work are made by qualified professional engineers, performs design quality and constructability reviews, confirms owner's requirements are met, holds designer to the project schedule, and coordinates design reviews with reviewing agencies. He manages the lead designer, coordinates the design, led design coordination meetings, tracked outstanding items, performed value engineering, and coordinates interaction between lead designer, design-builder, and owner to meet design schedules, build in innovation, and vet opinions. Mr. Gorman makes engineering designs as needed, evaluates for project impacts, makes/approves engineering decisions during construction, and ensures safe, constructible, functional project delivery.</p> <p>Project Relevance: This \$409.5 million 8.5-mile long project widens 7 miles of I-64 from 4-6 lanes and adds a HOT Toll/Express Lane in each direction to 2 general-purpose toll-free lanes to improve mobility/safety. Constructing new lanes in the existing interstate median and exterior shoulders to address congestion. In addition to the HOT lane, this creates 4 travel lanes in each direction along 4 miles of roadway. Constructing a new 6,300-ft. long fixed-span bridge</p>		

(93,000 ADT), replacing Great Bridge Blvd. Bridge over I-64 and widening 6 bridges that carry I-64 over a highway/2 roadway. Installing sound walls, resurfacing roadway, drainage improvements, stormwater management facilities, noise analysis, MOT and construction access, and coordinating with adjacent work. Completed the design phase ahead of schedule and environmental permitting two months ahead of schedule. **Relevant scope to I-81 Widening:** VDOT D-B, roadway; survey; structure and bridges; environmental; geotechnical; drainage, erosion and sediment control, and stormwater management; traffic control devices; transportation management plan; soundwalls; right-of-way; utilities (including conduit for future considerations); public involvement/relations; signage, lighting, variable message boards, and cameras; quality assurance and quality control; construction engineering and inspection; and overall Project management.

VDOT, I-64 Widening Exits 200-205, Henrico & New Kent Counties, VA (DESIGN-BUILD)

Name of Firm: Corman Kokosing **Project Role:** Design/Construction Integrator/Deputy D-B PM

Beginning Date: 08/2017 **End Date:** 08/2019

Specific Responsibilities: Mr. Gorman worked with the designer/construction teams to streamline integration, was in conformance with the contract, compiled the final Released for Construction Plans/specifications/final work packages, ensured complex design decisions involving multi-disciplinary work were made by qualified professional engineers, performed design quality and constructability reviews, confirmed owner's requirements were met, held designer to the project schedule, and coordinated design reviews with reviewing agencies. He managed the lead designer, coordinated the design, led design coordination meetings, tracked outstanding items, performed value engineering, and coordinated interaction between lead designer, design-builder, and owner to meet design schedules, build in innovation, and vet opinions. Mr. Gorman made engineering designs as needed and evaluated for project impacts, made/approved engineering decisions during construction, could stop work and ensured safe, constructible, functional project delivery.

Project Relevance: This \$46.6 million project widened 5 miles of I-64 from 2-3 travel lanes in each direction, added a 12-ft. wide travel lane and a 10-ft. wide shoulder in both directions, widened eastbound/westbound bridges and deck rehabilitation, and constructed sound walls. Since there was not enough width between the widened bridges for cranes, foundations, piers, and girders, they were constructed from the middle out. Lane closures were only at night; Variable Message Boards communicated traffic conditions so motorists could divert to other routes. Designed/constructed temporary sediment basins in locations that remained for earthwork duration and then could be removed/converted to a permanent stormwater management basin. Project was completed ahead of schedule and relieves traffic congestion, enhances safety, and adds capacity to the I-64 corridor. The additional travel lanes accommodate current/future traffic volumes on I-64 and is expected to lesson travel times to/from VA Beach. **Relevant scope to I-81 Widening:** VDOT D-B, roadway; survey; structure/ bridges; environmental; geotechnical; drainage, erosion and sediment control, and stormwater management; traffic control devices; transportation management plan; soundwalls; right-of-way; utilities; public involvement/relations; signage, lighting, variable message boards, and cameras; quality assurance and quality control; construction engineering and inspection; and overall Project management.

VDOT, Route 29 Solutions, Albemarle County, VA (DESIGN-BUILD)

Name of Firm: Corman Kokosing **Project Role:** Responsible Charge Engineer

Beginning Date: 01/2015 **End Date:** 07/2017

Specific Responsibilities: For the first VDOT D-B project requiring a Responsible Charge Engineer, Mr. Gorman accepted professional responsibility for engineering decisions relating to final work product and facilitated coordination between the design/construction teams. He worked with them to streamline integration, was in conformance with the contract, compiled the final Released for Construction Plans/specifications/final work packages, ensured complex design decisions involving multi-disciplinary work were made by qualified professional engineers, communicated regularly with owner and acted on behalf of the design-builder. Mr. Gorman worked with the design and construction managers and ensured each designed element was constructible and met VDOT's needs. He oversaw coordinating design elements from a design/construction perspective and worked shoulder-to-shoulder with the design manager in a co-located project office. He reviewed design/construction work in progress/final product, including quality management, contract administration and other services, including procuring/furnishing materials, equipment, services and labor. He made engineering decisions and evaluated for project impacts, made/approved engineering decisions during construction, could stop work and ensured safe, constructible, functional project delivery. He also was Deputy Project Manager during Berkmar Dr. Extension and Route 29/Rio Road Grade Separated Intersection preconstruction.

Project Relevance: This \$129 million LANE/Corman Joint Venture project improves mobility and reduces congestion through new road construction/improvements, and streamlined signalization using a multi-modal approach on US 29, a major regional traffic corridor that runs parallel to I-81 and I-95 connecting Washington, DC/Northern VA, and Greensboro/Raleigh/Durham, NC. Extended a 2.3-mile urban connector road on a new alignment parallel to US 29, including a 716-ft. long steel girder bridge with a concrete deck and MSE retaining walls. There are two 12-ft. travel lanes and provides ROW for a four-lane divided roadway with a 16-ft. raised median. Widened/improved US 29 from 4-6 lanes for 1.8 miles to complete a 6-lane roadway section and reconstructed the northbound lanes. US 29 widening roadway design and MOT were considered simultaneously to eliminate costly retaining walls and minimize temporary pavement while staying within existing ROW. Traffic Management Plan involved phases that brought vertical geometry to standard, maintained capacity, and resulted in owner cost savings. Project was completed ahead of schedule.

Relevant scope to I-81 Widening: VDOT roadway; survey; structure and bridges; environmental; geotechnical; drainage, erosion and sediment control, and stormwater management; traffic control devices; transportation management plan; right-of-way; utilities; public involvement/relations; signage, lighting, and cameras; quality assurance and quality control; construction engineering and inspection; and overall Project management.

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. **Design-Build High Rise Bridge, Phase 1; Design/Construction Integrator; 11/2017- 7/2021 (Est.) Mr. Gorman will be on site full time from commencement of construction through Final Acceptance of the Project**

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.									
a. Name & Title: JOSEPH HAMED, PE, CCM, PMP, DBIA / PROJECT MANAGER									
b. Project Assignment: QUALITY ASSURANCE MANAGER (QAM)									
c. Name of the Firm with which you are employed at the time of submitting SOQ: CENTURY ENGINEERING, INC. DBA NXL									
d. Employment History: With this Firm 9 Years With Other Firms 31 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. Hamed is a Licensed Professional Engineer, Project Manager, and Construction Manager with over 30 years of experience in the transportation-construction industry. Mr. Hamed has extensive VDOT experience having served in several different roles with the Department before joining NXL. NXL is an independent firm that has no contractual relationship and no involvement in construction operations for the Project (including QC inspection and testing). Mr. Hamed has served, as QAM on five VDOT D-B projects. Century Engineering, Inc. dba NXL, 2011–Present: Mr. Hamed’s responsibilities with NXL include Independent Quality Assurance for D-B Projects. He also reviews specifications and drawings to determine the scope of work and required contents of estimate. He reviews and certifies estimates, ensures contract requirements and specifications are appropriately administered and applied, verifies QC testing and independent QA is carried out in accordance with applicable requirements and ensures construction quality standards are met. Virginia Department of Transportation, Salem District, 2011: As Area Construction Engineer, Mr. Hamed managed projects that included drainage, grading, paving, bridges, bridge superstructure / substructure restorations, signal, guardrail, pavement markings, utilities, etc. Mr. Hamed’s responsibilities included: identifying and communicating with stakeholders; identifying the need for extra work; preparing independent parametric estimates for extra work (for comparison to Contractor’s proposal); reviewing and negotiating work order prices; and providing Responsible Charge oversight to ensure projects were constructed in conformance with plans, specifications, and standards. Virginia Department of Transportation, Southwest Region Operations, 2006-2011: As Program Delivery Manager, Mr. Hamed provided oversight of all project delivery in all project phases, including planning, programming, project development, and construction. He reviewed specifications and drawings to determine the scope of work and required contents of estimate. He provided support for traffic signal projects, traditional traffic engineering projects, two mountain tunnel facilities (including fire, life and safety systems), and provided support for technology projects. Mr. Hamed developed estimates and evaluated the need for candidate projects. Virginia Department of Transportation, Salem District, 2005: As Project Manager, Mr. Hamed provided estimates of project duration and project costs, independent parametric estimates for extra work (for comparison to Contractor’s proposal) constructability reviews, E&S and safety reviews for several projects in various phases including design and construction. He also provided project management and engineering analysis on a variety of projects.									
SUMMARY OF RELEVANT EXPERIENCE									
<table border="0"><tr><td>▪ 10+ years of ACE/QAM Experience</td><td>▪ Independent QA Management</td><td>▪ Interstate Experience</td></tr><tr><td>▪ 30+ years of transportation engineering/construction experience</td><td>▪ Understands D-B contracts</td><td>▪ Bridge/Roadway Construction</td></tr><tr><td></td><td>▪ Contract document and management</td><td>▪ Worked with Lane as the QAM on previous VDOT D-B project</td></tr></table>	▪ 10+ years of ACE/QAM Experience	▪ Independent QA Management	▪ Interstate Experience	▪ 30+ years of transportation engineering/construction experience	▪ Understands D-B contracts	▪ Bridge/Roadway Construction		▪ Contract document and management	▪ Worked with Lane as the QAM on previous VDOT D-B project
▪ 10+ years of ACE/QAM Experience	▪ Independent QA Management	▪ Interstate Experience							
▪ 30+ years of transportation engineering/construction experience	▪ Understands D-B contracts	▪ Bridge/Roadway Construction							
	▪ Contract document and management	▪ Worked with Lane as the QAM on previous VDOT D-B project							
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: University of Idaho, Moscow, Idaho / BS / 1990 / Civil Engineering									
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 2004 / Professional Engineer / #039327; 2012 / Certified Construction Manager; 2005 / Project Management Professional; 2015 / Design-Build Institute of America									
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.) * On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.									

VDOT, Route 220 Corridor Improvements, Phase I, II, and III, Botetourt County, VA (DESIGN-BUILD)	
Name of Firm: NXL	Project Role: QAM
Beginning Date: 04/2017	End Date: Ongoing (est. November 2020)
<p>Specific Responsibilities: As the Quality Assurance Manager Mr. Hamed is responsible for administering the QA plan, monitoring the activities of QA/QC personnel, auditing QA/QC and Materials project records, and reviewing and approving payment applications. Mr. Hamed monitors and verifies QA/QC inspection, sampling and materials testing activities to verify compliance with VDOT Material requirements and Industry standards, verifies work performed, including monitoring of the Contractor’s execution of work, maintenance of traffic, environmental protection measures, and Quality Control activities. Responsibilities also include verification that construction complies with Approved for Construction plans and VDOT’s specifications, verifying compliance with environmental permits and erosion and sediment control requirements, developing punch lists, and independent audits of project records including IDR’s, materials testing, materials documentation, and plant inspection records.</p> <p>Project Relevance: This \$64.5 million D-B project will provide safety improvements to approximately nine miles of existing two-lane rural highway. The project will incorporate various safety measures including improving vertical and horizontal alignments, widening shoulders, realigning intersections, adding turn lanes, creating additional passing zones, providing raised center-line pavement markers, and providing centerline and edge-line rumble strips. The finished product will consist of improved existing alignment and some new alignment. Acid-producing soil is a key consideration, and it must be handled and placed in a manner that mitigates the potential for damaging runoff. Relevant scope of work to the I-81 Widening project includes: roadway; survey; structure and/or bridge; environmental; geotechnical; drainage, erosion and sediment control, and stormwater management; traffic control devices; transportation management plan; soundwalls; right-of-way; utilities (including conduit for future considerations); public involvement/ relations; signage, lighting, variable message boards, and cameras; quality assurance and quality control; construction engineering and inspection.</p>	
VDOT, I-81 Truck Climbing Lanes, Montgomery County, VA (DESIGN-BUILD)	
Name of Firm: NXL	Project Role: QAM
Beginning Date: 05/2011	End Date: 07/2014
<p>Specific Responsibilities: As the Quality Assurance Manager, Mr. Hamed was responsible for providing independent oversight of QA and QC activities including periodic review of materials book and materials sampling and testing records, evaluating materials testing rates for compliance with VDOT frequency requirements, planning IA/IV testing and comparing results with QA/QC, and working with QA, QC, and the Contractor to resolve quality issues.</p> <p>Project Relevance: This \$75 million D-B project provided an additional interstate southbound lane through five miles of mountainous terrain. The contractor’s scope of work included design, right of way services, drilling, blasting, grading, drainage, paving, multiple bridge construction, demolition of existing structures, environmental permitting, maintenance of traffic, and retaining walls. Relevant scope of work to the I-81 Widening project includes: roadway; survey; structure and/or bridge; environmental; geotechnical; drainage, erosion and sediment control, and stormwater management; traffic control devices; transportation management plan; soundwalls; right-of-way; utilities (including conduit for future considerations); public involvement/ relations; signage, lighting, variable message boards, and cameras; quality assurance and quality control; construction engineering and inspection; and overall Project management.</p>	
VDOT, I-581 & Valley View Blvd Interchange, Phase II, Roanoke, VA (DESIGN-BUILD)	
Name of Firm: NXL	Project Role: QAM
Beginning Date: 03/2013	End Date: 06/2018
<p>Specific Responsibilities: As the Quality Assurance Manager, Mr. Hamed was responsible for ensuring execution of the project QA/QC plan by the contractor/QC/QA personnel, adherence to the VDOT QA/QC requirements and working with the contractor to proactively resolve deficiencies and NCRs at the lowest level and overall project administration to reassure VDOT that the D-B process is working per VDOT policy and procedures.</p> <p>Project Relevance: This \$38.5 million D-B project completes an existing interchange that serves a major shopping center. The D-B team’s scope of work includes design, right-of-way services, environmental permitting, traffic management, grading, drainage, paving, sound walls, lighting, traffic signals, bridge repair/ construction, and pedestrian trails/bridges. The project’s innovative approach provides a diverging diamond interchange that reduces right-of-way acquisition and environmental impacts. Relevant scope of work to the I-81 Widening project includes: roadway; survey; structure and/or bridge; environmental; geotechnical; drainage, erosion and sediment control, and stormwater management; traffic control devices; transportation management plan; soundwalls; right-of-way; utilities (including conduit for future considerations); public involvement/ relations; signage, lighting, variable message boards, and cameras; quality assurance and quality control; construction engineering and inspection; and overall Project management.</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. VDOT Route 220 Corridor Improvements (Botetourt County, VA) / QAM / November 2020. Mr. Hamed will be on the Project site full-time for the duration of construction operations.</p>	

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.									
a. Name & Title: DARELL L. FISCHER, P.E., DBIA / CHIEF BUSINESS OFFICER									
b. Project Assignment: DESIGN MANAGER									
c. Name of the Firm with which you are employed at the time of submitting SOQ: RINKER DESIGN ASSOCIATES, P.C.									
d. Employment History: With this Firm 13 Years With Other Firms 21 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): Design Manager, Darell Fischer has 34 years of hand-on transportation design and management experience including nine Design-Build projects as the Design Manager – five of which included interstate and interchange design. His eye for innovation and flexibility to find a way to get it done while meeting the requirements adds to his leadership in providing design-build services. Furthermore, Darell was instrumental in establishing RDA’s first formal QA/QC manual over a decade ago and remains committed to ensuring the delivery of a quality design. Rinker Design Associates, P.C., Chief Business Officer, 2018 - Present: In addition to all duties from his previous position which were carried over to this newly created position at RDA, Mr. Fischer is concurrently responsible for directing RDA’s business development and marketing efforts. He also oversees the opening and development of new offices. Rinker Design Associates, P.C., Director of Design-Build Services, 2016 - Present: Mr. Fischer is responsible for pursuing and overseeing all design-build projects. He is responsible for allocating, overseeing, and managing all designs and subconsultant work performed on design-build/P3 projects. His duties include development and implementation of design QA/QC programs for Design-Build (DB) projects. Mr. Fischer is responsible for staffing projects, hiring subconsultants, negotiating contracts, and project scheduling to ensure on-time/on-budget performance. Actively involved in DBIA and with VTCA’s Design-Build Committee. Rinker Design Associates, P.C., Director of Transportation/Principal, 2007 - 2016: Mr. Fischer was responsible for allocating, overseeing, and managing all designs performed in RDA’s Richmond office. His duties included the development and implementation of design QA/QC programs for design-build projects. Johnson, Mirmiran & Thompson (JMT), Vice President, 2005 - 2007 : Mr. Fischer was responsible for obtaining the work, executing the work and ensuring the quality of all work produced by the Richmond Office of JMT, oversight of roadway, drainage, structures, survey, construction inspection, and environmental work. He was responsible for contractual obligations with clients and subconsultants as well as project management on many key projects.									
SUMMARY OF RELEVANT EXPERIENCE									
<table border="0"><tr><td>▪ 34 years of Transportation Design</td><td>▪ 10 Projects in DM Role</td><td>▪ Complex TMP/MOT development</td></tr><tr><td>▪ 28 years of Design Management</td><td>▪ 15 VDOT DB Projects</td><td>▪ Management and QA/QC responsibility for multidisciplinary teams</td></tr><tr><td></td><td>▪ Interstate Experience</td><td>▪ Registered Professional Engineer</td></tr></table>	▪ 34 years of Transportation Design	▪ 10 Projects in DM Role	▪ Complex TMP/MOT development	▪ 28 years of Design Management	▪ 15 VDOT DB Projects	▪ Management and QA/QC responsibility for multidisciplinary teams		▪ Interstate Experience	▪ Registered Professional Engineer
▪ 34 years of Transportation Design	▪ 10 Projects in DM Role	▪ Complex TMP/MOT development							
▪ 28 years of Design Management	▪ 15 VDOT DB Projects	▪ Management and QA/QC responsibility for multidisciplinary teams							
	▪ Interstate Experience	▪ Registered Professional Engineer							
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Virginia Polytechnic Institute and State University, Blacksburg, VA/BS/1986/Civil Engineering									
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 1992/Licensed Professional Engineer/#0402023296									
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.) <i>* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.</i>									

VDOT, I-64 Capacity Improvements – Segment II, Newport News, VA (DESIGN-BUILD)	
Name of Firm: Rinker Design Associates, P.C. (RDA)	Project Role: Design Manager
Beginning Date: 01/2016	End Date: 05/2019
<p>Specific Responsibilities: As Design Manager, Mr. Fischer was responsible for all design elements and disciplines for this \$139M DB project that widened and reconstructed 7.5 miles of interstate roadway from four to six lanes. Responsibilities included overall management, subconsultant oversight and management (geotechnical analysis, structural support, environmental evaluations, and landscaping), roadway design, drainage design, structure and bridge design, signing and pavement marking plans, ITS design, complex MOT/TMP development, and management of the design QA/QC program. Darell led weekly meetings with the contractor. He attended and participated in monthly meetings with the contractor, VDOT, and other stakeholders to update the design status and to facilitate resolution of design issues as they arose to avoid construction concerns. Mr. Fischer also attended Comment Resolution Meetings where design direction was explained to negotiate a solution acceptable to both VDOT and the contractor. After construction began, he led the effort in addressing requests for information, reviewing shop drawings, and working with the contractor to resolve field issues and field design change requests.</p> <p>To support regional growth and traffic demands, this project included inside and outside interstate widening, widening and rehabilitation of nine existing bridge structures, 19 ramps associated with three interchanges, six box culvert extensions, retaining walls, a sound wall, and more than 30 new SWM features.</p> <p>Project Relevance: Relevant scope of work to the I-81 Widening project includes: D-B project, improved connectivity and capacity, improved interchanges, interstate widening, complex MOT, bridge widenings, environmental, geotechnical analysis, design QA/QC, roadside drainage design, detailed H&HA design, E&S, traffic signage, SWM design, utility coordination and design, right-of-way acquisition, post design services.</p>	
VDOT, Transform I-66 Outside the Beltway (Segment 1C East), Fairfax County, VA (DESIGN-BUILD)	
Name of Firm: Rinker Design Associates, P.C. (RDA)	Project Role: Executive Design Manager
Beginning Date: 01/2019	End Date: 12/2022 (estimated)
<p>Specific Responsibilities: As Executive Design Manager, Mr. Fischer was responsible for design oversight of all elements and disciplines for this \$39M DB project segment that reconstructs and widens a 1-mile section of I-66 through the Route 29 interchange, raises the roadway and replaces the I-66 bridges over Route 29. Responsibilities included the overall project management and coordination of the contract, which was comprised of interchange/roadway design, bridge and retaining wall design, MOT, signing and pavement marking plans, ITS, lighting design, review of design work plans, specifications and deliverables; monitoring of design project schedule, QA/QC program, cost controls, and coordination/OTSR/Comment Review meetings with the contractor and VDOT. Mr. Fischer was integrally involved in evaluating the vertical clearances under the new bridge to existing Route 29 below. He directed the team on profile adjustments on I-66 to achieve the proper clearance to Route 29's future reconstruction plan. He also provided an independent review of the design/plans to ensure compliance with all contract requirements.</p> <p>Project Relevance: Relevant scope of work to the I-81 Widening project includes: D-B project, capacity improvements, structure and bridge replacement, drainage/SWM, E&S, utility coordination/design, QA/QC, noise wall coordination/design, post design services, and ROW coordination.</p>	
VDOT I-581/Elm Avenue Interchange Improvements, Roanoke, VA (DESIGN-BUILD)	
Name of Firm: Rinker Design Associates, P.C. (RDA)	Project Role: Design Manager
Beginning Date: 04/2012	End Date: 05/2015
<p>Specific Responsibilities: As Design Manager, Mr. Fischer was responsible for the design, management and QA/QC for complete roadway construction plans. The project scope included the development of roadway widening along Elm Avenue, on and off-ramps for I-581/Route 220 and shoulder improvement along I-581/Route 220 approach. In order to accommodate adequate taper lengths and simplify sequencing, we designed and reconstructed medians and roadway beyond the project limits. Mr. Fischer's project responsibilities included the design of a complex MOT/TMP plan to replace a 3 span structure over I-581 with a 4 span structure that included a pier in the center of the roadway. The center pier was needed to thin up the structural depth and gain vertical clearance for an overpass that had been struck several times. Additional responsibilities included: roadway design, drainage design, utility coordination/design, bridge reconstruction/widening design (over I-581 and NSRR), geotechnical analysis (which included field resolution for encountering karst formations), and oversight/management of the design QA/QC program. He was responsible for coordinating with the contractor, VDOT, the City of Roanoke, and utility companies to ensure that the design requirements of the contract were met, and the design and associated services were expedited.</p> <p>This project won the 2016 VTCA Design-Build Honorable Mention.</p> <p>Project Relevance: Relevant scope of work to the I-81 Widening project includes: D-B project, improved connectivity and capacity, improved interchanges, interstate widening, geotechnical analysis (karst), design QA/QC, roadside drainage design, E&S, utility coordination and design, right-of-way acquisition, post design services, stakeholder coordination / public outreach, client coordination/collaboration.</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. N/A</p>	

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.	
a. Name & Title: JOSEPH R. BAKER / PROJECT MANAGER	
b. Project Assignment: CONSTRUCTION MANAGER	
c. Name of the Firm with which you are employed at the time of submitting SOQ: KOKOSING, INC.	
<p>d. Employment History: With this Firm 30 Years With Other Firms 1 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):</p> <p><u>Kokosing Construction Company, 2005 – Present:</u> Mr. Baker is a project manager/superintendent on heavy/highway projects including design-builds (D-B). He has extensive knowledge/experience in bridges, roadways, mass grading, site preparation, rock excavation, drilling/blasting, underground utilities, and automated grading systems. He manages construction, cost control tracking; field layouts; survey; and safety implementation. Mr. Baker is accountable for project QC activities, CPM scheduling, submittals, RFIs; progress reports, and subcontractor coordination. He has control over constructability reviews with designers and owners to meet approved construction plans/specifications. Mr. Baker leads /implements safety initiatives establishes project objectives, policies, procedures and performance standards, sets/monitors budgets, and assures a quality management system is in place.</p> <p>Mr. Baker initially started with the company as a Foreman/Grade Checker on roadway and utility projects and progressed to a Senior Trade Superintendent.</p>	
SUMMARY OF RELEVANT EXPERIENCE	
<ul style="list-style-type: none"> ▪ 30+ years of transportation engineering/construction experience ▪ Complex TMP/MOT Coordination 	<ul style="list-style-type: none"> ▪ Understands D-B contracts ▪ Environmental/geotechnical/E&SC/SWM ▪ Interstate Experience ▪ Bridge/Roadway Construction ▪ High traffic corridor
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: N/A	
f. Active Registration: Year First Registered/ Discipline/VA Registration #: Mr. Baker Will Hold the Virginia Department of Environmental Quality (DEQ) Responsible Land Disturber (RLD) Certification and a VDOT Erosion and Sediment Control Contractor Certification (ESCCC) Prior To Commencement of Construction.	
<p>g. Document the extent and depth of your experience and qualifications relevant to the Project.</p> <ol style="list-style-type: none"> 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> <p>(List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)</p> <p>* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.</p>	
West VA Dept. of Highways (WVDOT) Corridor H2-Kerens to 219 Connector, Kerens, WV (DESIGN-BUILD)	
Name of Firm: Kokosing Construction Co.	Project Role: Construction Manager
Beginning Date: 11/2019	End Date: 2023 (Est. completion date)
<p><i>Specific Responsibilities:</i> As the Construction Manager, Mr. Baker is responsible for overseeing all field operations, including ensuring construction is per drawings, maintaining as-built documents, conducting pre-construction staff meetings establishing goals and responsibilities, evaluating safety exposures and risks, participating in developing the project-specific safety program, work plans, and Job Hazard Analyses, reviewing scope to identify any specialized safety training needs, reviewing Toolbox Talks, Take Fives, and Morning Huddles, coordinating labor, equipment, and subcontractors, schedules, overseeing quality control compliance and project close out.</p> <p><i>Project Relevance:</i> This \$176 million project consists of 4.5 miles of four-lane highway on new alignment, box culvert, grade, and drain construction. Constructing three bridges over road crossings/streams, side roads with asphalt milling/resurfacing, over 10 million CY of earthwork, 18,000 LF of drainage, guardrail, stormwater management facilities, sound walls, 6 million lbs. of rebar, 8 million lbs. of structural steel, and 24,000 CY of concrete. An interesting factor is that there are anticlines and synclines, which is where the natural rock folds like a wave. Time is being invested in studying these characteristics to accurately design the highways slopes.</p>	

Relevant scope of work to the I-81 Widening project includes: design-build; roadway; survey; structures/bridges; environmental; geotechnical; drainage, erosion and sediment control, stormwater management; traffic control devices; transportation management plan; sound walls; right-of-way; utilities (including conduit for future considerations); public involvement/relations; signage, lighting, variable message boards, and cameras; quality assurance and quality control; construction engineering and inspection; and overall Project management.

West Virginia Department of Highways (WVDOH) Corridor H1, Kerens and Parsons, WV (DESIGN-BUILD)

Name of Firm: Kokosing Construction Co.	Project Role: Construction Manager
Beginning Date: 8/2017	End Date: Fall 2020 (Est.)

Specific Responsibilities: As the Construction Manager, Mr. Baker is responsible to oversee all field operations including ensuring construction is per drawings, maintaining as-built documents, conducting pre-construction staff meetings establishing goals and responsibilities, evaluating safety exposures and risks, participating in developing the project-specific safety program, work plans, and Job Hazard Analyses, reviewing scope to identify any specialized safety training needs, reviewing Toolbox Talks, Take Fives, and Morning Huddles, coordinating labor, equipment, and subcontractors, schedules, overseeing quality control compliance and project close out.

Project Relevance: This \$209 million project is the largest D-B in West Virginia and is a 4.75-mile expansion of US Route 48, a four-lane highway which spans and joins I-79 and is a lifeline for economic development. The majority of this project is within a national forest. This project presented a significant amount of heavy earthwork which consists of moving 9 million CY of material. Similar to the work needed on I-81 Widening, the work in this project includes clearing over 396 acres of wooded area, installing erosion and sediment controls, installing/removing 49 sediment basins and constructing five bridges (one spans over 1,200-ft. long over the valley below and USR 219), one temporary bridge, precast and box culverts, retaining wall, and 8.5 miles of drainage. Some of the geotechnical challenges include analysis of underlying strikes and dips and designing the project to avoid the potential effects of an ancient landslide.

Relevant scope of work to the I-81 Widening project includes: Design-build; roadway; survey; structures/bridges; environmental; geotechnical; drainage, erosion and sediment control, stormwater management; traffic control devices; transportation management plan; right-of-way; utilities (including conduit for future considerations); public involvement/relations; signage, lighting, variable message boards, quality assurance and quality control; construction engineering and inspection; and overall Project management.

West Virginia Department of Highways (WVDOH), US 35, Winfield, WV (DESIGN-BUILD)

Name of Firm: Kokosing Construction Co.	Project Role: Construction Manager
Beginning Date: 4/2007	End Date: 4/2009

Specific Responsibilities: As the Construction Manager, Mr. Baker oversaw all field operations including ensuring construction was per drawings, maintaining as-built documents, conducting pre-construction staff meetings establishing goals and responsibilities, evaluating safety exposures and risks, participating in developing the project-specific safety program, work plans, and Job Hazard Analyses, reviewing scope to identify any specialized safety training needs, reviewing Toolbox Talks, Take Fives, and Morning Huddles, coordinating labor, equipment, and subcontractors, schedules, overseeing quality control compliance and project close out.

Project Relevance: This \$74 million D-B project consisted of 6.5 miles of new four-lane highway to eliminate the existing two-lane road, improve safety, and add capacity. To meet the aggressive 24-month schedule, the team worked double shifts to complete the 8.1 million CY earthwork, averaging nearly 1 million CY per month. There was heavy grading which involved significant rock blasting, constructed four new bridges over roads/water, 300,000 SY of concrete pavement, milling/resurfacing, guardrail, stormwater management facilities, soundwalls, and 38,000 LF of storm sewers, waterline and sanitary. The project presented a challenging site terrain, including box and hillside cuts were overcome through careful preplanning of access points and scheduling of heavy earthwork crews. Value engineering concepts involving drainage and roadway items were proposed/accepted, resulting in an owner savings.

Relevant scope of work to the I-81 Widening project includes: design-build; roadway; survey; bridges/structures; environmental; geotechnical; drainage, erosion and sediment control, stormwater management; traffic control devices; transportation management plan; right-of-way; utilities (including conduit for future considerations); public involvement/relations; signage, lighting, variable message boards, and cameras; quality assurance and quality control; construction engineering and inspection; and overall Project management.

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. **Design-Build Corridor H1 | Construction Manager | Fall 2020; Design-Build Corridor H2 | Construction Manager | 2023 (Est.)**

Mr. Baker will be on the project site for the duration of construction operations

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.	
a. Name & Title: JAMES COMPTON, SR. / MOT MANAGER	
b. Project Assignment: INCIDENT MANAGEMENT COORDINATOR (IMC)	
c. Name of the Firm with which you are employed at the time of submitting SOQ: THE LANE CONSTRUCTION CORPORATION	
<p>d. Employment History: With this Firm <u>29</u> Years With Other Firms <u>0</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):</p> <p>The Lane Construction Corporation, MOT Manager, 2005 – Present: Mr. Compton serves as MOT Manager for LANE. His responsibilities include: the management of all MOT crews and equipment. Coordinates with all subcontractors, businesses, projects, and local authorities. Works closely with VDOT and adjacent projects to develop and maintain a safe corridor during design and construction. He is also responsible to locate utilities throughout the project; works directly with segment-managers on environmental and production solutions; serves as senior LANE onsite representative. Mr. Compton has 29 years of experience in heavy civil construction. He has worked on VDOT projects in Virginia for over 20 years. His construction experience includes bridges, roadway, interstate, ITS/ Managed lanes, light rail, and a wide range of complex D-B projects valued at up to \$4 billion. As the proposed IMC on the I-81 Widening Project, 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; and will also be the key point of contact with issues arising relative to incident management. Mr. Compton’s multi-faceted experience will be a great asset to the I-81 Widening Project.</p>	
SUMMARY OF RELEVANT EXPERIENCE	
<ul style="list-style-type: none"> ▪ 29 years of Transportation Construction ▪ 10 years of MOT/Incident Management 	<ul style="list-style-type: none"> ▪ 10 VDOT DB Projects ▪ Interstate Experience ▪ Responds to project incidents ▪ Utility Coordination ▪ Bridge/Roadway Construction ▪ TMP Coordination
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Lackawanna College, Scranton, PA/ Bachelor’s in business administration /Accounting/ 1986	
f. Active Registration: Year First Registered/ Discipline/VA Registration #: N/A 10/5/17-Present VDOT flagger training; 10/5/17-Present VDOT Advanced TCDS #100517028; First Aid CPR.	
<p>g. Document the extent and depth of your experience and qualifications relevant to the Project.</p> <ol style="list-style-type: none"> 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> <p>(List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)</p> <p>* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.</p>	
Transurban, 395 Express Lanes Extension, from Alexandria, VA to Washington, DC. (DESIGN-BUILD)	
Name of Firm: The Lane Construction Corporation	Project Role: Sr. Superintendent / MOT Manager
Beginning Date: 06/2017	End Date: 06/2020
<p>Specific Responsibilities: As the Sr. Superintendent / MOT Manager, Mr. Compton worked closely with VDOT/Transurban on safe, unique solutions to complex traffic control needs. He was responsible for placement of LCRs and LCAMs for daily and nightly lane closures. Hiring and managing MOT crews and equipment. Responsible for all MOT purchases. Coordinate with TCC, other contractors and outside entities including VSP for conflicts in work zones. Coordination with Pentagon officials for implementing and maintaining traffic control. Assist superintendents with traffic control, production needs and crew coordination.</p> <p>Project Relevance: This \$336 million D-B projects extends the 395 Express Lanes through Fairfax and Arlington Counties in Virginia. The toll lanes were extended for eight miles north from Turkeycock Run near Edsall Road to Eads Street. The project added a third reversible Express lane on I-395, accessible at no charge to HOV vehicles and tolling to all others utilizing E-ZPass Flex transponders. The improvements primarily were built within the existing footprint of the I-395 HOV lanes. The project provides more capacity and reliable transportation in this heavily travelled corridor. Relevant scope of work to the I-81 Widening project includes: roadway; survey; structure and/or bridge; environmental; geotechnical; drainage, erosion and sediment control, and stormwater management; traffic control devices; transportation management plan; soundwalls; right-of-way; utilities (including conduit for future</p>	

considerations); public involvement/ relations; signage, lighting, variable message boards, and cameras; quality assurance and quality control; construction engineering and inspection; and overall Project management.

NCDOT, I-85 Widening, Cabarrus County, Charlotte NC (DESIGN-BUILD)

Name of Firm: The Lane Construction Corporation **Project Role:** Assistant Superintendent / MOT Coordinator

Beginning Date: 12/2012 **End Date:** 11/2014

Specific Responsibilities: As Assistant Superintendent / MOT Coordinator, Mr. Compton was responsible for overall construction operations including enforcing a safety program, mass excavation and embankments, environmental program, subcontractor and personnel management, supervise production, cost schedule and weekly progress meetings. Also worked directly with segment Managers on environmental and production solutions.

The majority of the new roadway capacity was constructed in the existing 70-foot median, which had the potential to create difficult access for construction equipment and personnel. The need for an innovative work zone traffic control and access plan was particularly critical due to the severe state of deterioration of existing facilities and a high Average Daily Traffic (ADT) count of 118,000 vehicles. Unimpeded access to the existing median was critical to improve safety, minimize impacts to traffic, reduce stress on existing infrastructure, accelerate the project schedule, and save costs. Mr. Compton’s role and experience were essential assets to achieve the completion of this project successfully. LANE staff determined that the construction of a temporary bridge with direct median access would solve their needs for unimpeded access. This concept was developed by LANE on previous D-B projects utilizing an existing bridge and a temporary access ramp. Mr. Compton coordinated the MOT efforts, mitigating risks and prioritizing safety throughout the project. The LANE team was able to accelerate the schedule during the proposal phase by 11 months ahead of the owner’s schedule. The I-85 temporary bridge was the first time a dedicated temporary bridge was constructed along with temporary access ramps. He was also a Senior LANE onsite representative.

Project Relevance: This \$145 million D-B project included the widening of approximately seven miles of I-85 from four to eight lanes starting south of Bruton Smith Boulevard/Concord Mills Boulevard to north of NC 73. LANE (as Lead Contractor) removed the existing deteriorated pavement and replaced it with eight lanes of new concrete pavement. Improvements to area roads and interchanges were also performed, including two diverging diamond intersections and a super street. Similar to the I-81 Widening project, this I-85 project included the following scope elements: major interstate corridor widening in the median, shoulder strengthening, work in high ADT counts, structures, MOT, ITS, drainage/hydraulics/SWM, geotechnical (poor soils mitigations), earthwork, environmental, permitting, demolition, noise walls and pavement markings, signage, lighting, variable message boards, and cameras, quality assurance and quality control; construction engineering and inspection; and overall Project management.

Relevant scope of work to the I-81 Widening project includes: roadway; survey; structure and/or bridge; environmental; geotechnical; drainage, erosion and sediment control, and stormwater management; traffic control devices; transportation management plan; soundwalls; right-of-way; utilities (including conduit for future considerations); public involvement/ relations; signage, lighting, variable message boards, and cameras; quality assurance and quality control; construction engineering and inspection; and overall Project management.

VDOT, I-495 Express Lanes, Tyson’s Corner, VA (DESIGN-BUILD)

Name of Firm: The Lane Construction Corporation **Project Role:** Assistant Superintendent / MOT Coordinator

Beginning Date: 06/2009 **End Date:** 11/2011

Specific Responsibilities: Mr. Compton’s responsibilities as Assistant Superintendent / MOT Coordinator included supervision of all field activities, enforcing a safety program, coordination of the project’s budget, trucking, MOT plan and traffic control, mass excavation, grading and environmental, scheduling and coordination of subcontractors, quality management, schedule and monitoring project progress; contract administration and all services required by the contract. Mr. Compton coordinated the MOT efforts, mitigating risks and prioritizing safety throughout the project.

Project Relevance: This \$1.5 billion D-B project in NOVA was the most significant package of improvements to the Capital Beltway. LANE constructed two new express lanes in each direction on a 14-mile stretch of I-495 from the Springfield Interchange to just north of the Dulles Toll Road with Open Road Tolling. The project encompassed the replacement of more than \$260M of aging infrastructure, including 12 interchanges and 58 bridges. Fifty-six lane miles of new interstate roadway was constructed. The project contained cast-in-place concrete walls constructed over soil-nail and shotcrete supported shoring. Constructed three express access points and upgraded 12 key interchanges increasing capacity, mobility, improved driver safety and removed operational deficiencies, with minimal impacts to the traveling public, residences, and businesses. The project required an extensive and complex MOT plan, requiring maintaining the existing traffic during construction; affecting every phase of the planning, design, and construction. By conducting extensive traffic studies and with close coordination with VDOT and the local jurisdictions, our Team produced a number of innovative designs, work zone access methods, lane shifts, and phasing sequences that helped to minimize disruption. **Relevant scope of work to the I-81 Widening project includes:** roadway; survey; structure and/or bridge; environmental; geotechnical; drainage, erosion and sediment control, and stormwater management; traffic control devices; transportation management plan; soundwalls; right-of-way; utilities (including conduit for future considerations); public involvement/ relations; signage, lighting, variable message boards, and cameras; quality assurance and quality control; construction engineering and inspection; and overall Project management.

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. Compton will be on the project site for the duration of construction operations; and will complete the following training classes prior to the commencement of construction: FHWA SHRP2 “TIM” Responder Training; FEMA ICS / NIMS 100, 200 & 700; FEMA/VDEM Hazardous Material Awareness.**

The page features a white background with decorative blue and orange elements. At the top left, a blue triangle points towards the top-left corner. A horizontal orange line extends from the right side of this triangle across the top of the page. At the bottom right, a blue triangle points towards the bottom-right corner. A horizontal orange line extends from the left side of this triangle across the bottom of the page. The text is centered between these two orange lines.

Attachment 3.4.1(a)
LEAD CONTRACTOR WORK HISTORY FORMS

ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: I-85 Widening Location: Cabarrus County, NC (DESIGN BUILD)	Name: HDR	Name of Client./ Owner: NCDOT Phone: 704.983.4171 Project Manager: Davis Diggs, PE Phone: 704.983.4171 Email: DDiggs@ncdot.gov	10/2014	10/2014	\$125,000	\$145,000*	\$145,000

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. The Work History Form shall include only one singular project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form. If the Offeror chooses to submit work performed as a Joint Venture or Partnership, identify how the Joint Venture or Partnership was structured and provide a description of the portion of the work performed only by the Offeror's firm.

<p>Similar Scope of Work:</p> <ul style="list-style-type: none"> • Design-Build • Roadways • Survey • Bridges and Structures • Extensive MOT • Environmental • Geotechnical • Drainage • E&SC • SWM • Traffic Control Devices • Transportation Management Plan • Right-of-Way • Utilities • Public Involvement/Relations • Signage • QA/QC • CEI • Overall Project Management 	<p>PROJECT SCOPE</p> <p>The widening of the heavily traveled I-85 was needed to accommodate additional traffic and reduce congestion. This \$145 million DB project included the widening of approximately seven miles of I-85 from four to eight lanes starting south of Bruton Smith Boulevard/Concord Mills Boulevard to north of NC 73. LANE (as Lead Contractor) removed the existing deteriorated pavement and replaced it with eight lanes of new concrete pavement. Improvements to area roads and interchanges were also performed, including two diverging diamond intersections and a super street. This I-85 project included many tourist attractions including the popular Charlotte Motor Speedway and Concord Mills Mall (North Carolina's No. 1 visitor attraction) which are both accessed by this route Specific project related elements included; major interstate corridor widening in the median of existing high traffic volumes, shoulder strengthening, structures, MOT, drainage/ hydraulics/SWM, geotechnical (poor soils mitigations), earthwork, permitting, demolition, noise walls and pavement markings/signage.</p>	
<p>Proposed Personnel on Project:</p> <p>Jim Compton (Lane)</p>	<p>RELEVANT PROJECT ELEMENTS TO I-81 WIDENING</p> <p>Limiting Impacts to the Traveling Public and Affected Businesses and Communities, including Commitments to Minimizing Congestion During Construction: LANE coordinated with several stakeholders including two (2) municipalities, over 60 business owners, six (6) utility owners, and multiple local residential communities, and participated in Chamber of Commerce and other public meetings with the client. This was one of the largest D-B projects in the region and involved interstate maintenance of traffic plans, as well as concrete paving, which Lane was highly experienced in.</p> <p>Use of Innovative Design Solutions and Construction Techniques: Our Team's ability to collaborate and devise innovations was exemplified on this project in a major way. The majority of the new roadway capacity was constructed in the existing 70-foot median, which had the potential to create difficult access for construction equipment and personnel. The need for an innovative work zone traffic control and access plan was particularly critical due to the severe state of deterioration of existing facilities and a high Average Daily Traffic count of 118,000 vehicles. Unimpeded access to the existing median was critical to improve safety, minimize impacts to traffic, reduce stress on existing infrastructure, accelerate the project schedule, and save costs. LANE staff determined that the construction of a temporary bridge with direct median access would solve their needs for unimpeded access. This concept was developed by LANE on previous D-B projects utilizing an existing bridge and a temporary access ramp – LANE used a temporary ramp off an existing bridge for direct median access on the I-95 Widening at Dumfries, VA for VDOT that greatly increased safety, schedule and other impacts. LANE was able to accelerate the schedule during the proposal phase by 11 months ahead of the owner's schedule. The I-85 temporary bridge was the first time a dedicated temporary bridge was constructed along with temporary access ramps. The safety improvements resulting from this concept were significant. The need to haul 40,000 loads of material across interstate traffic into the median was completely eliminated. Thousands of trips by construction and NCDOT inspection staff were also made safely and without entering traffic.</p> <p>Success Taking and Managing Risks and Realizing Incentives: A temporary access bridge with an access ramp was constructed, construction vehicles can access the median areas by traversing this ramp, eliminating any conflict with the normal flow of traffic on these heavily traveled interstate highways. Upon completion of the work, the ramps are removed and existing facilities restored to their original condition or better. The LANE team owns all necessary structural components to build this bridge. The project won multiple awards for this innovative access concept. By leveraging the efficiency afforded by the access bridge and ramp system, LANE provided the NCDOT and FHWA with a very aggressive schedule and highly competitive cost proposal. Utilizing this concept, LANE was able to submit a project completion date 11 months earlier than the required final completion and a bid price \$8.5 million below the engineers' estimate at bid time. To our knowledge, this was only the fourth time a temporary median access ramp has been implemented in the US, <i>all implemented by LANE.</i></p> <p>Implementing/Maintaining an effective QA and QC Plan: The use of the temporary median access bridge and ramps provided a significant quality improvement for not only the temporary traffic control measures, but also for the new concrete pavement. This concept allowed the concrete pavement to be placed continuously, without the need for "breaks" in the paving, because there was no need for multiple traditional median ingress/egress points. The result was superior concrete pavement quality and exceptional ride smoothness.</p> <p>Interstate Widening/Roadway: The project included the widening of approximately seven miles of I-85 from four to eight lanes.</p> <p>Bridge and Structures: Six existing bridges were replaced with new structures, two major interchanges were replaced with DDIs, and another major interchange was improved. The project also included the improvement of several miles of crossing streets with a superstreet arrangement.</p> <p>Safety: The safety improvements resulting from this concept are significant. The need to haul 40,000 loads of material across interstate traffic into the median has been completely eliminated and, while hauling is critical, thousands of trips by construction and NCDOT inspection staff have also been made safely and without entering traffic.</p> <p>Public Outreach/Involvement: LANE coordinated with several stakeholders including two (2) municipalities, over 60 business owners, six (6) utility owners, and multiple local residential communities.</p> <p>Utility Coordination: The LANE Team's responsibilities included coordinating the relocation of multiple major utilities. These included power distribution (two separate owners), natural gas transmission and distribution, water, sanitary sewer, and extensive communication utilities. To successfully resolve the utility conflicts, the team assigned a LANE engineer to that task exclusively as well as a utility coordination subconsultant.</p> <p>Environmental: There were major and extensive environmental permit modifications on this project which involved 2,000 feet of stream and wetland impacts. There were bridges over a major river and creek as part of the project.</p>	
<p>EVIDENCE OF PERFORMANCE</p> <p>This project won the 2012 "TransOvation" Award and "Roadway Work Zone Safety Awareness" award from the American Road & Transportation Builders Association (ARTBA). LANE also received an award for "Asphalt Operations Safety Innovation" in 2012 from The National Asphalt Pavement Association (NAPA); in addition to the "Top Ten Project" award given by the Roads and Bridges Magazine in 2014.</p> <p>* Owner requested incorporation of alternative design concepts; including the introduction of DDI concepts at two interchanges, the addition of a roundabout intersection, and the implementation of a Superstreet concept on a major crossing road. Contract variance \$24.4 million</p>		

ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: 95 Express Lanes Location: Fairfax, Prince William & Stafford Counties, VA (DESIGN BUILD)	Name: HNTB/ HDR	Name of Client./ Owner: VDOT Phone: 571.483.2651 Project Manager: Charlie Warraich, PE Phone: 571.273.8229 Email: H.S.Warraich @virginia.gov	12/2014	12/2014*	\$691,147	\$726,194**	\$326,850

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

Similar Scope of Work:	PROJECT SCOPE	
<ul style="list-style-type: none"> • Design-Build • Roadways • Survey • Bridges and Structures • Extensive MOT • Environmental • Geotechnical • Drainage • E&SC • SWM • Traffic Control Devices • Transportation Management Plan • Soundwalls • Right-of-Way • Utilities • Public Involvement/Relations • Signage • Lighting • Variable Message Boards/Cameras • QA/QC • CEI • Overall Project Management 	RELEVANT PROJECT ELEMENTS TO I-81 WIDENING	
Proposed Personnel on Project:		
Barry Bernstein (Lane)		
<p>Phones Program was implemented on this project. Geotechnical: Our Team performed geotechnical investigation and analysis for more than 400 borings; performed pavement design and optimized foundation design in areas containing Potomac clay and acidic sulfate soils. DBE: Over \$193M was committed to more than 131 DBE/SWaM firms. Additionally, the team surpassed the On the Job Training Program goal of 24 trainees set by VDOT (31 trainees graduated the program).</p>		
EVIDENCE OF PERFORMANCE		
<p>“The progress on the 95 Express Lanes project is a visible reminder of the congestion relief and new travel choices that Virginians will have available to them in less than a year.” – said Virginia Governor, Terry McAuliffe “The 95 Express Lanes combined with the nearly completed 495 Express Lanes will bring a transportation network that manages congestion efficiently, saving time and better connecting commuters with some of Virginia's most important employment centers and military sites”. – said Sean T. Connaughton, [former] Virginia Secretary of Transportation. The project also received the following awards: “Construction Management Association of America 2013 Project Achievement Award”; “ENR’s 2015 Project of the Year in the Mid-Atlantic”; “ARTBA’s 2015 Safest Project of the Year”; “Excellence in Virginia Government Public Private Partnership Award”; “P3 Highway Project of the Year finalist”; “VDOT and Transportation DBE Advisory Committee 2014 Prime Contractor of the Year”; “ARTBA and Transportation Builders Association Transportation Development Foundation 2014” for substantial completion two weeks ahead of schedule. *The project was completed one month ahead of schedule. **Value was increased by the Owner as a result of increased scope of work. The Owner exercised all contract allowance items which included landscaping, additional ramps, and additional I-395 gate integration work.</p>		

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

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: Intercounty Connector Contract A (ICC-A) Location: Montgomery County, MD (DESIGN BUILD)	Name: Parsons Transportation Group/Jacobs	Name of Client./ Owner: Maryland Dept. of Transportation/State Highway Administration Phone: 410-545-0300 Project Manager: Robert Shreeve (Retired; now with AECOM) Phone: 410.785.7220 Email: robert.shreeve@aecom.com	08/2010	02/2011 <i>Due to owner-directed change orders</i>	\$463,885	\$483,409 <i>Owner-directed change orders due to changes in scope, price adjustments and incentive payments</i>	\$483,409

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

<p align="center">Similar Scope of Work:</p> <ul style="list-style-type: none"> • Design-Build • Roadways • Survey • Bridges and Structures • Extensive MOT • Environmental • Geotechnical • Drainage • E&SC • SWM • Traffic Control Devices • Transportation Management Plan • Soundwalls • Right-of-Way • Utilities • Public Involvement/Relations • Signage • Lighting • Variable Message Boards/Cameras • QA/QC • Overall Project Management 	<p>PROJECT SCOPE</p> <p>Corman, an Intercounty Constructors JV partner who was the design builder on ICC-A which consisted of 7.2 miles controlled-access tri-lane divided highway beginning at the I-270/I-370 interchange in Rockville. There were 18 steel girder or precast concrete girder bridges and four bridge widenings on I-370 highlighted by a 625-ft. deck-over structure, a signature arch bridge, and a Gateway Bridge at the MD 97 interchange. Widened/constructed a new I-370 interchange to Shady Grove Metro Station to replace the existing partial interchange. I-370/Metro Access Road and Shady Grove Road interchanges were constructed in phases to accommodate the two lanes of traffic in each direction while the roadway was widened to the inside and outside, making three lanes in each direction. Scope included 2.5 million CY earthwork, 400,000 SF sound walls, box culverts, stormwater management/drainage systems, 130,000 SF retaining/MSE walls, 630,000 SY HMA pavement, which encompassed new access ramps to two major interchanges, including milling/resurfacing at tie-in limits, lighting/signalization, overhead/cantilever signs, utility relocations, maintenance of traffic, erosion and sediment controls, guardrails, and community outreach. ICC-A ramps were constructed and tie in a heavily travelled thoroughfare to existing local roads. The project eases congestion on Maryland's highways/local roads while improving mobility/safety.</p> <p>RELEVANT PROJECT ELEMENTS TO I-81 WIDENING</p> <p>Limiting Impacts to the Traveling Public and Affected Businesses and Communities, including Commitments to Minimizing Congestion During Construction: Some bridges with interior/exterior widenings on existing I-370, a deck-over structure and signature bridge necessitated working and maintaining traffic on major thoroughfares and working over heavily-traveled roadways and in extremely sensitive neighborhoods. Maintained traffic with temporary traffic barriers, VMS signs and arrow boards. Temporary roads/walkways were detoured to safely provide access for pedestrian/vehicle traffic through the construction area. A community/public outreach manager was hired to complete the Community Outreach Plan. We did such a good job that the owner used our services to tackle community issues/concerns, meetings, and all other community needs. We supported the owner in media relations and outreach to 10,000 residents surrounding the corridor. Over 100 community meetings and public outreach hearings were held and included sound barrier meetings, general construction updates, and special information outreach tailored to specific communities and individual residents.</p> <p>Use of Innovative Design Solutions and Construction Techniques: Developed a stormwater runoff treatment using citosan flocculant to let the clay soils remain suspended and solids in stormwater runoff indefinitely. The Maryland Dept. of the Environment set an NTU discharge limit of a 50 NTU monthly average, and a 150 NTU daily maximum for this project. It was the first time this was used in Maryland and this sort of water treatment made it possible to achieve those levels. We also re-designed the MAR Interchange from a three-level to a two-level trumpet interchange eliminating retaining walls and saving the owner millions of dollars long term.</p> <p>Success Taking and Managing Risks and Realizing Incentives: The environmental sensitivity was unprecedented nationwide and in Maryland at the time as it traversed through Rock Creek Regional Park, protected wetlands/watersheds, specimen forests, streams and cultural/socio-economic resources. The FEIS mandated unprecedented environmental designs and erosion and sediment controls as set forth in the Commitment Tracking Database. Fully committed to Deliver the Promise, an environmental team educated, assisted, and monitored progress. Developed environmental strategies to reduce impacts, which were incorporated into written management plans, and included water quality monitoring, thermal reductions to stormwater runoff, reforestation, air quality management, construction noise mitigation, spill prevention and storm water pollution countermeasures, rigorous review of design/construction for regulatory compliance and environmental stewardship employee training. With requirements and major incentives to avoid/minimize impacts to forest, wetlands, and waterways, over 35 acres of forest, over 1,000 LF of stream, five acres of parkland were saved, and a great deal of stream channel and wetlands were restored.</p> <p>Implementing/Maintaining an effective QA and QC Plan: Owner provided a lower frequency QA oversight while we provided more detailed QC services. Our quality management system had a construction QC plan that assigned roles/responsibilities of every contractor participant, from laborer to executive management. An independent QC Engineer measured/recorded quality conformance. The formal QC organizational structure included 35 full-time independent construction QC professionals and field engineers, designers and installer superintendents. Each participated in planning for and measuring quality as work progressed. Field Engineers, working with the QC Engineer, were responsible for regulatory agency and environmental permit compliance, document/data control, subcontractor procurement, major materials purchasing, operational/administrative process control, correcting non-conformances, material handling/storage/preservation, and quality training. They interacted with the QC Engineer on performance of Field Inspection and Test Plans, control of measurement, inspecting/testing equipment, laboratory testing services, off-site plant inspections, preventive action plans, control of quality records, internal quality audits, and surveillances and statistical analysis techniques to identify quality performance trends. Because this was one of the first large, design-build projects in Maryland, many new ideas were implemented in design/construction (with independent contractor-supplied QC) including special roadway embankment provisions, using self-consolidating concrete in more than 329 concrete beams, and using CMP pipe, caisson supported bridges, and large-diameter bottomless culverts. The owner observed/analyzed the QC program, compared it with other independent programs across the corridor, and promoted the QC Vendor Surveillance program as a success. Overall, the QA Oversight assessments gave the program a 93% success rating from over 79,000 assessments.</p>	
<p>EVIDENCE OF PERFORMANCE</p> <p>Awards: 2012 AGC of America Alliant Build America Award -Design-Build Highway & Transportation 2011 FHWA Award for Exceptional Environmental Stewardship 2011 ENR (NE Division) Best Project-Transportation ICC-A finished with a 92% A rating for environmental compliance and averaged A ratings for erosion & sediment control.</p>		



Attachment 3.4.1(b)
LEAD DESIGNER WORK HISTORY FORMS



ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Original Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: I-64 Capacity Improvements – Segment II Location: City of Newport News and York & James City Counties, VA (DESIGN BUILD)	Name: Allan Myers	Name of Client./ Owner: VDOT Phone: 703.259.2734 Project Manager: Mike Davis Phone: 757.925.2680 Email: mike.davis@vdot.virginia.gov	01/2016	05/2019	\$138,747	\$141,370 <i>(increases due to additional landscaping and bridge repairs)</i>	\$9,237

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

<p align="center">Similar Scope of Work:</p> <ul style="list-style-type: none"> • Roadway and Interstate Widening • Survey • Structures and Bridges • Environmental Management • Geotechnical • Drainage and SWM • Traffic Control Devices • Transportation Management Plan • Right-of-Way • Utilities • Sound Walls • Sign Structures • Lighting • QA/QC • Safety • Public Involvement • CEI 	<p align="center">PROJECT SCOPE</p> <p>As the Lead Designer on the I-64 Capacity Improvements Segment II Project, RDA managed the design from their Glen Allen office, with assistance from their Manassas and Fredericksburg offices. The design was completed in 2017. Design services included: design and subconsultant management, roadway design, traffic engineering, drainage and SWM design, structural design, MOT/TMP design, and community involvement. The project consists of widening for approximately 7.5 miles of roadway as well as the reconstruction of the existing through lanes in both directions. The western portion of the project includes a wider/depressed median from the beginning of the project through the Busch Gardens interchange and up to approximately Jefferson Avenue. The eastern portion of the project has a narrower/raised median, which requires barrier walls separated by a raised landscape area. Design elements include: open ditch designs, closed storm drainage designs, detailed H&HA designs, extensive SWM designs, roadway widening/reconstruction, nine bridge widenings, numerous box culvert extensions, guardrail, and several retaining walls. Furthermore, ITS is being impacted and replaced along with numerous overhead sign structures.</p>	
<p align="center">Proposed Personnel on Project:</p> <p>Darell Fischer, P.E., DBIA (RDA) Brandon Shock, P.E., DBIA (RDA) John Giometti, P.E. (RDA) John Myers (RDA) Song Kim, P.E. (RDA) Rick DeLong, P.E. (RDA) Nikhil Desphande, P.E. (RDA) James Street (RDA)</p>	<p align="center">RELEVANT PROJECT ELEMENTS TO I-81 WIDENING</p> <p>Limiting Impacts to the Traveling Public and Affected Businesses and Communities, including Commitments to Minimizing Congestion During Construction: The design and construction of this segment of roadway interfaced with the I-64 Segment I project. Several phases of MOT required our Team to relocate or change the signage on the adjacent project. Additionally, the design required adjustments by our Team to accommodate the final design features of the adjacent segment to include the relocation of an emergency crossover.</p> <p>Use of Innovative Design Solutions and Construction Techniques: In order to create more green space and to reduce significant median barrier construction, our design deviated from the RFP design to provide outside widening along the westbound direction from east of the Busch Gardens interchange to the bridges over Jefferson Avenue at Exit 147. This design change cleared more tress adjacent the Yorktown Naval Weapons Station property which was received in a positive manner by the Navy as it allowed them better visibility to potential encroachments. Furthermore, the change provided an increased benefit with respect to greenspace as the landscaping within the median barrier section was removed from the contract by the Department due to future maintenance concerns. Another design change/innovation dealt with the bridge clearance issue over Jefferson Avenue. The existing bridge clearance was at the minimum, and the proposed widening lowered the girders to the side where the roadway underneath was increasing due to cross slope and grade. As a result, there would be inadequate clearance if the same size girders were used to widen the structure. To solve the problem, our Team designed dissimilar beams to shallow up the depth and achieve adequate clearance.</p> <p>Success Taking and Managing Risks and Realizing Incentives: Although our design was almost complete, the team opted to submit a VE which would cause us to revise all stormwater management facilities on the project to convert from the new regs to the old regs. Although there was a significant savings, the risk was that the construction schedule would be severely impacted. Through long hours and collaborative sessions with VDOT, our team was able to revise the design. The savings, both in dollars and number of SWMs removed from the design, allowed the contractor to gain time in his schedule and ultimately achieve incentives on the project.</p> <p>Implementing/Maintaining an Effective QA and QC Plan: The design fully complied with the approved QA/QC Manual developed for the project which followed VDOT's QA/QC guidelines as required by the RFP. Furthermore, the QA/QC Manual evolved with the project. It was a "living" document. An important tool that was implemented during the design process to improve QA/QC was the use of Bluebeam® to perform QC comments, track their disposition, and document their implementation. This tool became especially useful when our team changed the SWM design from Part IIB to Part IIC, which significantly altered the number of facilities and their types. Ultimately, this reduced future maintenance costs for VDOT.</p> <p>On Budget: Our team worked with VDOT to implement a Value Engineering proposal to alter the SWM obligations while still meeting DEQ requirements. As a result, the future maintenance of the SWM facilities will save VDOT millions, while our design stayed within budget for the contract.</p> <p>DBE: RDA had several subconsultants on the project to provide support services. Most significantly, we utilized a DBE geotechnical firm to provide all drilling, lab, and geotechnical design elements on the project.</p> <p>Environmental Compliance, Safety, Quality, Workmanship: The design and construction teams maintained continual communication through each phase of construction to implement interim E&S controls and to address unexpected conditions. Furthermore, as implementation progressed, there were several non-sequential requests by the construction team that required redesign of several of E&S controls to accommodate and to progress through final completion. As the design developed, safety was a primary focus of each design element and its implementation.</p>	

team, and future maintenance workers. Consideration was given with each feature to ensure that it met the requirements but also provided functionality for future needs and maintenance. Finally, our team worked with the Department to ensure that the quality of the plans met their expectations, that the landscape design met the goals of the project and that the finished products was maintainable. As a result, the raised median barrier section which was intended to be landscaped was redesigned, at the request of the Department, to be a river rock bed rather than landscaping, which required reanalysis and design of portions of the barrier section to meet structural strength.

Safety: The design and construction teams maintained continual communication through each phase of construction to implement interim E&S controls and to address unexpected conditions. Furthermore, as implementation progressed, there were several non-sequential requests by the construction team that required redesign of several of E&S controls to accommodate and to progress through final completion. As the design developed, safety was a primary focus of each design element and its implementation.

EVIDENCE OF PERFORMANCE
To manage risks to the project schedule, implementation of the VE and assumption of its potential risk impact created a more construction friendly design that finished on schedule and allowed the contractor to achieve substantial completion ahead of schedule to receive incentives.

ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Original Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: I-66 Eastbound Widening Inside the Beltway Location: Arlington & Fairfax Counties, VA (DESIGN BUILD)	Name: The Lane Construction Corporation	Name of Client./ Owner: VDOT Phone: 703.259.2734 Project Manager: Mark Gibney, P.E. Phone: 703.259.2734 Email: mark.gibney@vdot.virginia.gov	10/2021	10/2021 (Estimated)	\$85,655	\$85,655	\$7,059

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

Similar Scope of Work:	PROJECT SCOPE	
<ul style="list-style-type: none"> • Roadway and Interstate Widening • Survey • Structures and Bridges • Environmental Management • Geotechnical • Drainage and SWM • Traffic Control Devices • Transportation Management Plan • Right-of-Way • Utilities • Sound Walls • Sign Structures • Lighting • QA/QC • Safety • Public Involvement/Communications • CEI • Overall Project Management 	RELEVANT PROJECT ELEMENTS TO I-81 WIDENING	
Proposed Personnel on Project:	<p>RDA provided professional engineering services from their Manassas office serving as the Lead Designer for LANE's I-66 Eastbound Widening Inside the Beltway D-B project for VDOT. This \$85.6M project will provide an additional lane for eastbound traffic on I-66 from west of Great Falls Street (Route 694) to just east of George Mason Drive for a distance of approximately 3.6 miles. The project includes interstate roadway widening, drainage and stormwater management, and full corridor lighting. The project replaces approximately 4,300 feet of dilapidated noise walls along eastbound I-66. In addition, another 5,100 feet of new noise walls along the eastbound and westbound roadway are being provided based on our team's noise analysis and design. The project includes ramp modifications at Exits 69 and 71 and bridge widening, rehabilitations and/or repairs on I-66. The project upgrades several sections of the W&OD Trail and provides (design and construction) a new W&OD Trail bridge over Route 29, which was challenged by high tension power lines overhead and large underground utility duct banks near proposed foundations.</p> <p>This project, part of the I-66 Inside the Beltway improvements, will provide direct access from eastbound I-66 to the West Falls Church Metro station by constructing a new ramp connection between two existing ramps (eastbound I-66 to Route 7 and the eastbound I-66 collector-distributor road adjacent to the station's parking garage) along with widening of an existing bridge. Currently, vehicles exit from I-66, turn right to head south on Route 7, turn left at the signalized intersection at Haycock Road, and then turn left onto Falls Church Drive. These movement have operational and safety issues due to maneuvering, especially during morning and evening peak periods. Our direct access design will save motorists bound for the Metro station time and reduce traffic on already congested Route 7 in these two intersections.</p> <p>Limiting Impacts to the Traveling Public and Affected Businesses and Communities, including Commitments to Minimizing Congestion During Construction: : Our Team worked with the Department to modify the allowable work hours associated with the project to facilitate the construction schedule while maintaining no increased impacts on the traveling public. Furthermore, our Team performed an increased amount of nightwork (originally scheduled as daywork) to minimize congestion along the corridor. The development of MOT/TMP steered the design changes/efficiencies that were implemented into the project which allowed our Team to eliminate the reconstruction of significant retaining wall structures. The initial phase of MOT provided shoulder strengthening along the outside to allow a preliminary shift of traffic to facilitate future phases of construction. A major concern and challenge during MOT was to ensure that previously constructed (by others) ITS/Tolling facilities were unaffected by construction.</p> <p>Use of Innovative Design Solutions and Construction Techniques: Innovation on the project focused on numerous small items rather than big ones due to the nature of the work and the constraints of the project. Our Team worked with Dominion Energy to revamp their policy on clearance from our bridge fencing to their high-tension power lines. Generally stated, their policy identified a distance in plan view. Through detailed discussions, we got them to accept the clearance based on the 3D perspective. While this may not seem like a big deal, it allowed our design to eliminate all bridge fencing that would have needed to have been constructed of composite materials to avoid conductive materials within the "clear zone" and utilize the architectural fencing used along the remainder of the pedestrian bridge over US Route 29.</p> <p>Success Taking and Managing Risks and Realizing Incentives: The Team's approach to risk management is to identify all anticipated risks, their probability, and their impact (value); maintain a living document of risks and their mitigation strategies; and continually evaluate over time to adjust strategies or eliminate the risk. The top three risks during the pursuit of the project were identified as: MOT, noise barrier walls, and ITS/tolling. Through the design phase, each of these risks have been managed through a well planned and executed design. The MOT was facilitated by implementing shoulder strengthening to handle traffic for a temporary shift. To manage the short timeframes allowed by contract where an existing noise wall can be decommissioned, we developed detailed schedules and work packages to reconstruct the noise walls incrementally. Finally, the ITS/tolling for the project was designed and built by others. Our design then adjusted our design to provide a solution with no impacts to the existing/proposed ITS systems.</p> <p>Implementing/Maintaining an Effective QA and QC Plan: The LANE/RDA Team developed and implemented a QA/QC program tailored to the project features and evolved the program as the design progressed by incorporating Lessons Learned. The QA/QC effort was led by Darell Fischer. His depth of experience in design-build allowed him to see beyond the criteria and use the QA/QC process to also innovate the design. Reviews were performed to ensure compliance with all design standards and criteria, as well as, ensure efficiency, cost effectiveness, and plan appearance.</p> <p>Interstate Widening/Roadway: The project required widening to add an additional lane in the eastbound direction for tolling purposes. Widening required shoulder strengthening to the outside in order to shift traffic and construct to the median. Additionally, the widening was tightly constrained by the WMATA tracks down the median of I-66.</p> <p>Bridge and Structures: The project contained ten bridges – five inside/outside widening or reconstruction, three outside widening for sound walls, one relocation of a pier, and one new. Four of the five widening/reconstruction bridges abut up to WMATA tracks and structures carrying WMATA over the same side roads as the VDOT structures. The proximity of the WMATA structures to the widened bridges is on the average about six feet. The closest is one and half feet.</p> <p>Safety: With the tight constraints of the corridor, working under and over pedestrian facilities and roadways, and in close proximity to high tension power lines, RDA ensured that the roadway and MOT designs addressed all potential factors that could pose safety concerns.</p>	
EVIDENCE OF PERFORMANCE		
<p>Although design for the project was initially behind schedule with the previous designer, RDA's collaborative efforts allowed the design accelerate and finish plan packages ahead of schedule to enable construction activities to start sooner.</p>		

ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Original Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: VDOT I-66 Widening Outside the Beltway, Segment 1C East Location: Fairfax and Prince William County, VA (DESIGN BUILD)	Name: FAM Construction LLC	Name of Client./ Owner: FAM Construction LLC/Express Mobility Partners Phone: 317.513.3799 Project Manager: Tom Heil Phone: 571.485.0387 Email: theil@fam66.us	06/2019	12/2022 (Estimated)	\$39M	\$39M	\$3,175

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

Similar Scope of Work:

- Design-Build
- Roadway
- Structure/Bridge
- Hydraulics (Drainage & SWM)
- Traffic Control Devices
- TMP/MOT
- ITS
- Utilities Coordination
- Stakeholder Coordination
- Public Involvement/Communications
- QA/QC
- Project Management and Coordination with other Active/Adjacent Construction Projects

Proposed Personnel on Project:

Darell Fischer, P.E., DBIA (RDA)
Rick DeLong, P.E. (RDA)
Song Kim, P.E. (RDA)
John Myers (RDA)
Adam Welschenbach, P.E. (RDA)
Nikhil Desphande, P.E. (RDA)
Tony Dean (RDA)

PROJECT SCOPE

As part of the I-66 Transform (Outside the Beltway) Project, RDA was contracted by FAM to lead Segment 1C East. This segment is approximately 4,300 LF of interstate widening over U.S. Route 29 and includes improvements to the interchange. More specifically, this segment includes complete reconstruction of the I-66 bridges over U.S. Route 29 and ramp tie-ins due to raising the bridges several feet to meet VDOT clearance requirements. RDA's design focused on widening I-66 mainline to include the future toll facility lanes, new bridges over U.S. Route 29, a box-culvert extension, installation of sound walls/retaining walls and removal of the existing roadway bifurcation and providing for an extensive MOT to mitigate impacts to I-66 and U.S. Route 29 users.

RELEVANT PROJECT ELEMENTS TO I-81 WIDENING

Limiting Impacts to the Traveling Public and Affected Businesses and Communities, including Commitments to Minimizing Congestion During Construction: The TMP/SOC (MOT) Design for Segment 1C East required significant coordination with the Contractors to maintain traffic on I-66 and U.S. Route 29 Ramp Connections.

Use of Innovative Design Solutions and Construction Techniques: Innovation on the project focused on numerous small items rather than big ones due urban community surrounding and the nature of the proposed work.

Success Taking and Managing Risks and Realizing Incentives: The Team's approach to risk management is to identify all anticipated risks with FAM during optimization of the design, their probability, and their impact (value); maintain a living document of risks and their mitigation strategies; and continually evaluate over time to adjust strategies or eliminate the risk. The two biggest risks were TMP/SOC plan development and potential schedule delay due to the accelerated pace of design. Through the design phase, each of these risks have been managed through a well planned and executed design. The MOT was facilitated by implementing shoulder strengthening to handle traffic for a temporary shift. This was executed well to the point the MOT plans were completed and approved early on in the project's development. To ensure design elements were not hindered by schedule impacts, in coordination with FAM, we developed detailed schedules and work packages all design elements separately, as such: roadway/drainage, signage/pavement markings, retaining walls, MOT plans, sound walls, bridge plans, etc. so all design work was advanced concurrently and release for material procurement and construction when approved.

Implementing/Maintaining an Effective QA and QC Plan: The RDA Team worked in a collaborative manner through design and construction to follow and evolve the QA/QC Manual FAM developed for the project. The QA/QC effort was led by Darell Fischer. His depth of experience in design-build allowed him to see beyond the criteria and use the QA/QC process to also innovate the design. Reviews were performed to ensure compliance with all design standards and criteria, as well as, ensure efficiency, cost effectiveness, and plan appearance.

Interstate Widening/Roadway: This project involves the widening of approximately 1 mile of Interstate 66 to include future toll facilities and includes minor interchange ramp adjustments Hydraulics (Drainage/SWM): RDA prepared a Hydrologic and Hydraulic Analysis for a box culvert extension, to include HEC-RAS model development and assessment of hydrology for the adjacent unnamed tributary. RDA further prepared a Design Waiver to demonstrate that the culvert can be extended despite its inadequate capacity without impact to the roadway or adjoining landowners.

Bridge and Structures: 1C East includes complete reconstruction of the I-66 bridges over U.S. Route 29 and ramp tie-ins due to raising the bridges several feet to meet ASSHTO clearance requirements. In coordination with VDOT, the project team worked together to prepare a design wavier for meeting 16' vs. the 16.5' VDOT requirement through mitigations developed in design, such as under bridge lighting and signage. The project team was also responsible for the design of 1,200 LF of combination retaining wall/sound wall design, along with 2,100 LF of ground mounted sound walls to mitigate sound wall impact to the adjacent community. The project also design approximately 3,500 of retaining wall (post/panel, MSE and RW-

3 type wall in varying locations).

TMP/SOC (MOT): The project was required to maintain four lanes of traffic on I-66 in each direction, along with maintaining two lanes of traffic on U.S. Route 29 in each direction. Given the urban corridor, RDA/FAM worked together to develop a phase shift traffic I-66 traffic to enable I-66 to be raised 3-5 feet for the new bridges. Additionally, ramp connection which were equally being raised to connect with the bridge, required detours to be developed to provide adequate continuity and service of the movements for the life of the project. Maintaining overhead signage with temporary ground mounts, sound wall coverage (during construction) for the adjacent community, and providing construction access were all critical component that were successfully mitigated and addressed to provide the Contractor space to work in this very tight urban interchange.

Safety: Safety was designed into the project as part of the RDA Team's strategic development—not only from a traffic operations perspective, but also from an end user perspective. Working closely with FAM, the pedestrian facility and traffic shifts and detours, were developed as such to ensure Contractor had adequate space to work given urban environment constraints of the interchange and everyday users wee adequately separated from construction activities.

DBE: The I-66 Transform (Outside the Beltway) Project has extensive DBE requirements, however for Rinker Design Associates contract with FAM there were no DBE commitments/requirements.

EVIDENCE OF PERFORMANCE

Although design for the project was initially behind schedule with the previous designer, RDA's collaborative efforts allowed the design accelerate and finish plan packages ahead of schedule to enable construction activities to start sooner.

