

Design Build Project for Route 29 Solutions Albemarle County, VA

State Project Nos.:

US 29 Rio Road Grade Separated Intersection (0029-002-091)
US 29 Widening (0029-002-135)
Berkmar Drive Extension (9999-002-900)

Federal Project Nos:

US 29 Rio Road Grade Separated Intersection (NHPP-002-7(045))
US 29 Widening (STP-5104(166))

Contract ID Number: C00077383DB80



Submitted to:



Submitted by:



In association with:





3.2 Letter of Submittal

LANE AND

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CONSTRUCTION

In association with:

RK&K



August 28, 2014

John Daoulas, PE
Alternate Project Delivery Office
Virginia Department of Transportation
1401 East Broad Street
Richmond, Virginia 23219

RE: Design-Build Project for Route 29 Solutions, Albemarle County, Virginia
State Project Nos.: US 29 Rio Road Grade Separated Intersection (0029-002-091),
US 29 Widening (0029-002-135), and Berkmar Drive Extension (9999-002-900)
Federal Project Nos.: US 29 Rio Road Grade Separated Intersection (NHPP-002-7(045))
US 29 Widening (STP-5104(166))
Contract ID Number: C00077383DB80

Dear Mr. Daoulas:

The LANE/Corman Joint Venture is pleased to present this Statement of Qualifications for the above referenced project to the Virginia Department of Transportation (VDOT). Our response contains all information requested in the RFP dated July 24, 2014 and Addendum 1 dated August 15, 2014. LANE and Corman are transportation and heavy civil construction leaders with established track records in Virginia for successful transportation projects. Our firms, joined together specifically for this endeavor, represent over 215 years of experience; we fully appreciate and understand the value and power of partnership.

We are guided by our values-based cultures and traditions of excellence. We are committed to providing VDOT with the best team for Route 29 Solutions, and have carefully considered the fast track schedule and risks involved with the Project.

- Innovative ideas and solutions
- Reliable project management approach
- Extensive experience in Design-Build projects
- Maximized resource efficiencies
- Superior customer satisfaction
- Partnering with VDOT
- Experience in roadways, bridges, and interchanges

The LANE/Corman JV is the Offeror and will be the overall authority on the project. LANE will serve as Lead JV Partner. We have teamed with Rummel, Klepper, & Kahl, LLP (RK&K) as the Lead Designer supported by WR&A and RDA. Together, we provide VDOT with a reputable team capable of completing projects of any size and scope on time and on budget.

The LANE/Corman JV and RK&K, in conjunction with hand-selected specialty firms experienced with VDOT processes and procedures, will provide the design and construction for Route 29 Solutions. 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's requirements to meet the quality, safety, and schedule demands of this Project.

3.2.2 Offeror's Point of Contact Information: Mr. Richard A. McDonough is the authorized representative and point of contact for the LANE/Corman JV for all matters associated with this qualifications submittal.

Richard A. McDonough, Senior National Pursuit Manager
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. Kirk D Junco will be the principal officer of the LANE/Corman JV and the legal entity with whom a Design-Build contract with VDOT will be written.

Kirk D Junco, Chief Operating Officer and Executive Vice President
The Lane Construction Corporation
90 Fieldstone Court
Cheshire, CT 06410
Tel: (203) 235-3351 Fax: (203) 237-4260
Email: KDJunco@laneconstruct.com

3.2.4 Offeror's Corporate Structure: The Offeror for this submission is the LANE/Corman JV, structured as a joint venture. The Lane Construction Corporation and Corman Construction, Inc. (the joint venture partners) have joint and several liability for the performance of the work required for the Project.

3.2.5 Lead Contractor and Lead Designer: The full legal name of the Offeror is: LANE/Corman JV. LANE/Corman JV 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: Rummel, Klepper, & Kahl, LLP (RK&K). RK&K will serve as the lead design firm responsible for the overall design of this Project under contract to the LANE/Corman JV.

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

3.2.8 Offeror's VDOT Prequalification Evidence: A Joint Venture Bidding Agreement was submitted and approved by VDOT on August 5, 2014. The prequalification number for this Joint Venture is: JV067. The respective prequalification numbers for our respective firms are: LANE (L002) and Corman (C097). Evidence of such is provided in the Appendix.

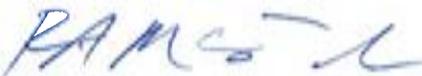
3.2.9 Letter of Surety: A single surety letter from the bonding companies is included in the Appendix, confirming their willingness to provide any and all bonds for this Project on behalf of the joint venture.

3.2.10 Professional Services Evidence: The matrix in the Appendix delineates the respective state registrations and licensures of the 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 can be found in the Appendix.

3.2.11 DBE Statement: The LANE/Corman Team supports the Disadvantaged Business Enterprise (DBE) program and is committed to meeting the 13% goal for the design and construction of this Project utilizing Virginia certified DBE companies. The Team will take all necessary and reasonable steps to ensure that DBE firms have the maximum opportunity to compete for and perform services on this design-build contract.

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

Respectfully submitted,



Richard A. McDonough
Senior National Pursuit Manager
The Lane Construction Corporation
Offeror's Point of Contact



Arthur C. Cox, III
Vice President
Corman Construction, Inc.



3.3 Team Structure

LANE AND

 **CORMAN**
CONSTRUCTION

In association with:

RK&K

3.3 OFFEROR'S TEAM STRUCTURE

The Lane Construction Corporation and Corman Construction, Inc. have formed a joint-venture (LANE/Corman JV) to pursue the Design-Build Project for Route 29 Solutions (Route 29 Solutions). Together, the JV brings successful relevant experience delivering road and bridge design-build (D-B) projects, as well as a solid reputation of strategically aligning our teams to meet the specific needs and requirements of a project.

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 **Rummel, Klepper & Kahl, LLP (RK&K)** to serve as our Team's Lead Designer; they will oversee all design activities and in addition will lead the design of the Rio Road Project Element.

In order to meet the Project's aggressive schedule while maintaining the highest level of quality, we have enhanced our Team's depth of experience and resources by adding the following subconsultants who will provide both project-wide positions as well as lead specific activities below:

- **Whitman Requardt & Associates, LLP (WR&A) – Berkmar Drive Extension Project Element design**
- **Rinker Design Associates, PC (RDA) – Route 29 Widening Project Element design**
- **Schnabel Engineering Consultants, Inc. (Schnabel) – Geotechnical**
- **CES Consulting LLC (CES) – Quality Assurance**

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

3.3.1 KEY PERSONNEL

The LANE/Corman Team has assembled a team of highly-qualified and experienced individuals, and structured them accordingly for optimal performance. These key staff and design firms come together with a shared past history on successful D-B projects, have established working relationships, and are ready to begin immediately. The Key Personnel offer extensive road and bridge construction, along with exceptional design expertise. Our team, including Key Personnel, will remain intact for the duration of the Project providing constant leadership throughout each project phase. The chart below introduces our Key Personnel proposed for this Project. Information regarding their qualifications and experience can be found in Attachment 3.3.1 in the Appendix.

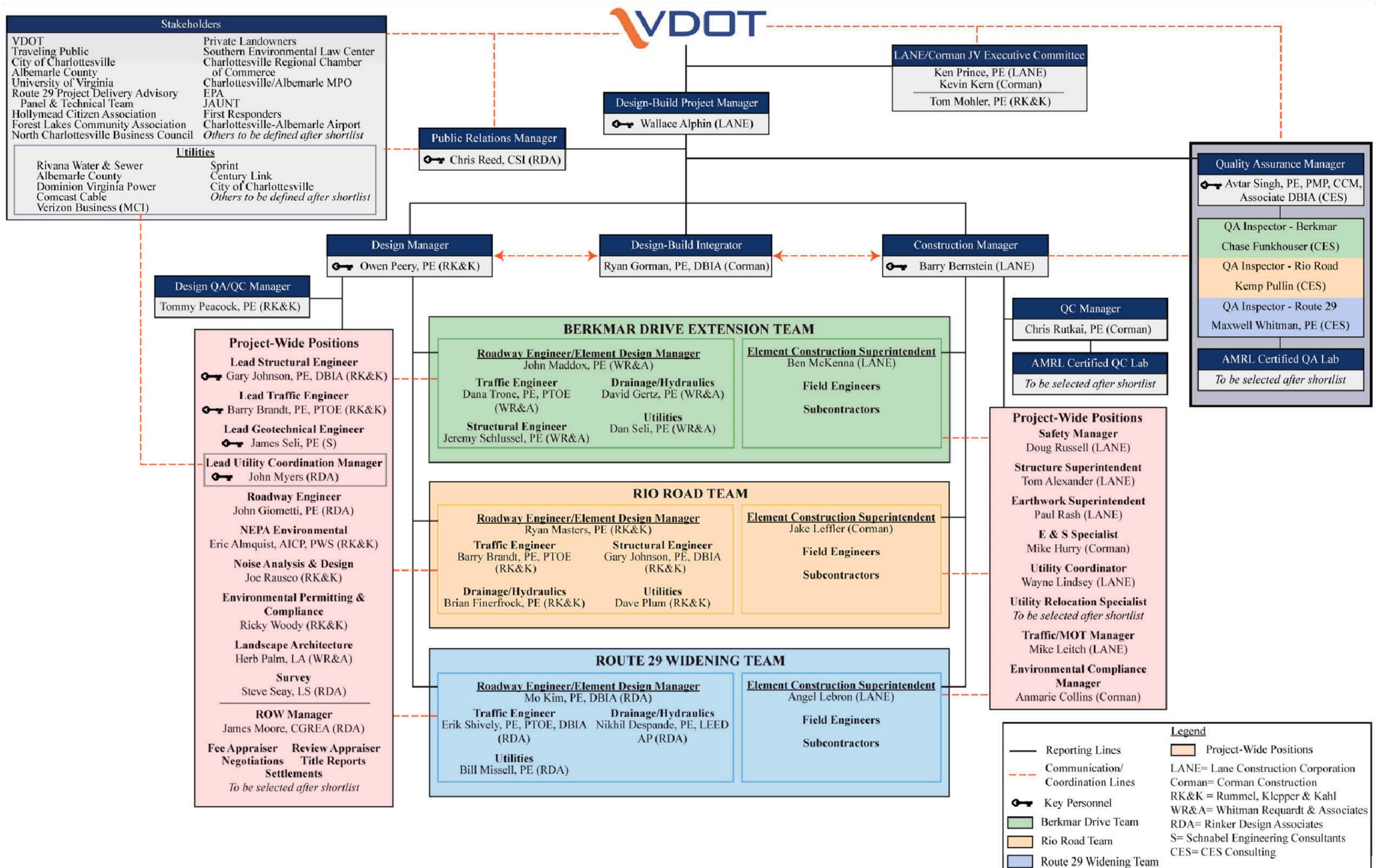
Key Personnel Reporting Relationship	Responsibilities on Route 29 Solutions
Wallace Alphin Design-Build Project Manager (DBPM) Reports to VDOT	Management of overall project design, construction, quality management, and contract administration for the Project.
Avtar Singh, PE, PMP, CCM, Associate DBIA Quality Assurance Manager (QAM) Reports to DBPM	QA inspection and testing of all materials used and work performed including monitoring of QC program. Ensures construction quality meets or exceeds <i>VDOT Minimum QC and QA Requirements for D-B and PPTA Projects, 01/12</i> . QAM will have no involvement in construction operations (to include QC inspection and testing). Ensure materials used and work performed meet contract requirements and "approved for construction" plans and specs. Will be on-site full time for the duration of construction operations and have three (3) respective QA Inspectors for the three (3) Project Elements.

<p>Owen Peery, PE Design Manager (DM) Reports to DBPM</p>	<p>Coordinates individual design disciplines, including sub-consultants, and ensures overall project design conformance with contract documents. Responsible for establishing and overseeing the design QA/QC program for all pertinent design disciplines.</p>
<p>Barry Bernstein Construction Manager (CM) Reports to DBPM</p>	<p>Manages construction process, including schedule, means and methods and all construction QC activities to ensure materials used and work performed meet contract requirements and “approved for construction” plans and specs. On-site full time for the duration of construction operations. Holds current DEQ RLD and VDOT ESCCC.</p>
<p>Gary Johnson, PE, DBIA Lead Structural Engineer Reports to DM</p>	<p>Responsible for structural design of bridges and retaining walls. Reviews designs, verifies and modifies designs based on field conditions and construction activities related to structures, installation of foundation structures, and handling and erecting bridge girders.</p>
<p>Barry Brandt, PE, PTOE Lead Traffic Engineer Reports to DM</p>	<p>Responsible for traffic studies and operational analysis. Develops, implements, and monitors TMP. Ensures safety and efficiency in all phases. Plans, designs, implements, and manages operations of ITS and other traffic control devices, Performance Management, and active TMS.</p>
<p>James Seli, PE Lead Geotechnical Engineer Reports to DM</p>	<p>Responsible for geotechnical design of the retaining walls, foundations, soil and rock cut and fill slopes, embankment materials and construction, ground improvement, geotechnical instrumentation and pavement subgrade and structure. Review designs and verifies and modifies designs based on field conditions and construction activities. Provides construction inspection related to the geotechnical design in accordance with the RFP requirements. Experienced performing geotechnical design and construction in areas with similar geologic conditions that exist in the Charlottesville region.</p>
<p>John Myers Lead Utility Coordination Manager Reports to DM</p>	<p>Coordinates all utility relocations. Verifies conflicts; determines cost responsibilities; conducts utility field inspections; coordinates utility relocation design; reviews and recommends approval of utility relocation plans and estimates, and ensures inspection of utility relocation construction and perform other duties as required. Reviews utility relocation designs prepared by a PE for contract utility relocations, and verifies and recommends modifications, as needed. Ensures continuity of service.</p>
<p>Chris Reed, CSI Public Relations Manager Reports to DBPM</p>	<p>Develops public relations plan and manages all external communication with stakeholders, media, and general public during the design and construction. Coordinates with the Culpeper District Communications Office. Experienced with public outreach on transportation related projects. Leads the Public Outreach Task Force.</p>

3.3.2 ORGANIZATIONAL CHART

The Organizational Chart on the following page depicts VDOT-identified Key Personnel, the major functions each will perform, and the designated reporting structure of the Team for the Route 29 Solutions project. The LANE/Corman Team organization has a straight-forward chain of command, with individual tasks, responsibilities, and functional relationships clearly identified. We have identified specific personnel that will address the design and construction of each of the respective Project Elements and their reporting relationships. The Organizational Chart includes VDOT, third party stakeholders, and utilities. A clear separation of Quality Assurance and Quality Control for construction activities is shown.

We recognize the importance of inclusivity of the stakeholders and utilities throughout the development of each of the Project Elements. The LANE/Corman Team has existing relationships with many of the third party stakeholders as well the numerous utility companies that will be involved in this project. These relationships will aid in the comprehensive, expeditious and successful delivery of this project.



Organizational Structure and Functional Relationships

Our Team has taken the organizational structure for this project very seriously and has developed our structure specifically for this project. Based on the three distinct Project Elements, RK&K (Lead Designer) has retained two additional design firms (WR&A and RDA) who bring their expertise to the Project as a whole as well as to a specific Project Element. The combined manpower of RK&K, WR&A, and RDA will provide extensive resources to meet the aggressive schedule for design and project completion. Each of these firms will lead a Project Element Team (PET), with RK&K overseeing the simultaneous designs for all PETs. In addition to the responsibilities of the Key Personnel roles noted above, the following details our organizational structure including a description on how the PETs will operate.

Project-Wide Positions

The foundation of our organizational structure is our Key Personnel and other project-wide positions. Our Team will draw upon their extensive and relative experience to lead and direct each PET to produce and execute the optimal designs and methods of construction to exceed VDOT's requirements and public expectations.

The **Executive Committee** will be tasked to keep the "30,000 foot" view of the Project, ensuring that all team partners, including VDOT, are on the same page. They will meet at least monthly to discuss the overall progress and performance of the Team.

Our **DBPM** is responsible for the overall success of the Project. He will maintain constant communication with VDOT and the Executive Committee. He is supported by our **Design Manager (DM)** and **Construction Manager (CM)** who will perform the work according to the contract documents. The DM and CM will ensure each PET has the necessary resources to perform their roles, including the support from the project-wide positions.

The **QAM** (no contractual relationship with the QC firm and no involvement in construction operations) will be responsible for the overall Quality Assurance program and will be supported by three **QA Inspectors** who will each be assigned to a respective Project Element.

Our **Design-Build Integrator**, will facilitate the discussion between the design team and construction team. Working directly with the DM and the CM, he will make sure that what is designed for each PET is constructible and meets VDOT's needs for this project. Most importantly, he will oversee the coordination between the design Project Elements from both a design and construction perspective.

Key Personnel (**Lead Structural Engineer, Lead Traffic Engineer, Lead Geotechnical Engineer, and Lead Utility Coordination Manager**) will work with the PETs to ensure compliance with VDOT Policies and Procedures and contract requirements. They will also be responsible for consistency with detailing and plan development among the PETs. All submittals to VDOT will be reviewed by these individuals as part of the inter-disciplinary review process. These Key Personnel will ensure that resources within their discipline are assigned appropriately and will make adjustments, as necessary, to meet the project schedule.

Other project-wide design staff (**Roadway, Noise Analysis, Environmental, Permitting, Landscape Architecture, Survey, and ROW**) and construction staff (**Safety, Structures, Earthwork, E&S, Utilities, MOT, and Environmental**) will work alongside the Key Personnel to ensure consistency with detailing and plan development amongst the PETs. They will interact with their counterparts within the PETs.

Project Element Teams (PETs)

We have organized our team into separate yet integrated PETs for the three specific Project Elements. **The benefit of this arrangement is a dedicated staff for design that is overseen by project-wide staff.**

The major challenge on LANE's I-495 Express Lanes project was meeting an aggressive delivery schedule. In order to mitigate this risk, the Team broke the project into four areas. Each Area Manager was then able to focus on critical work items and develop phased plans to sequence work efforts to meet the schedule. This organizational structure was so successful that it was implemented on the I-95 Express Lanes project. As a "lessons learned" from the I-495 project, the Team contracted with two design leads to fast track the design to meet schedule deliverables. This fast track design started in March 2012 and measurable construction commenced August 2012, just over four months.

The LANE/Corman Team is structured in a similar way - three Project Element teams with a dedicated designer assigned to each Element and managed by one project-wide D-B Team - to support simultaneous Element design and collaborative construction sequencing to meet the fast track schedule for Route 29 Solutions.

Each Project Element is led by a dedicated designer, enabling the simultaneous design of each of the PETs and greater efficiencies with the overall design process.

Each Project Element, under the direction of the DM, will be managed by the Element Design Manager (EDM). The EDM will work with their assigned staff to deliver the Project Element. Each PET will focus on the task at hand in order to meet the schedule.

Individual discipline leaders, identified on the organizational chart, will report directly to the EDM. These disciplines, specific to the Project Element, are critical to the overall success of the project. The Project Element Discipline Leaders will work with the project-wide individuals for overall consistency and dissemination of information.

Likewise, we have assigned Element Construction Superintendents, managed by the CM, to lead the construction efforts of each PET. These Superintendents will, from day one of design, work with the designers to tailor the design to meet the specific constructability issues associated with the PET. The Superintendents serve a critical role for the overall success of the project. They will be supported by a project-wide construction leadership team and crews.

Some of the design and construction efforts of the individual PET's will need to be coordinated as a project wide effort. Examples of these include MOT, Utilities, and Public Outreach. They will be handled by specific Task Forces to coordinate combined efforts such as lane closures or community outreach. These Task Forces will meet regularly to coordinate joint efforts ensuring consistency of methods.

BERKMAR DRIVE EXTENSION TEAM

John Maddox, PE, with 29 years of experience in the design and management of major highway projects, will manage the design efforts for the Berkmar Drive Extension PET. He was selected to lead this PET based on his past experience having managed several large VDOT transportation projects including: Route 29 Madison Heights Bypass Sweet Briar Interchange, Fairfax County Parkway Interchange at Fair Lakes Parkway, I-81 Bridges over Buffalo Creek and Maury River, Route 1 Interchange at Route 123, and the I-81 Bridges over the New River. Each project includes major roadway and bridge components that will be needed for the successful delivery of the Berkmar Drive Extension Project Element.

Jeremy Schlusel, PE has more than 18 years of experience and will lead the bridge design efforts for the Berkmar Drive bridge. During the course of his career, he has worked on complex bridge projects throughout the Commonwealth that meet current VDOT and AASHTO standards. Mr. Schlusel has extensive experience with the design of major VDOT bridges over rivers with spans ranging up to 270 feet. Some of his relevant projects include: I-81 Bridges over Buffalo Creek, I-81 Bridges over Maury River, and the I-81 over the New River. These bridges have all been designed with the innovative "Virginia Abutment," which was originally developed by WR&A for the I-81 Bridges over Buffalo Creek and Maury River and was incorporated into VDOT standards.

Mr. Maddox will also be supported by **David Gertz, PE** with 35 years of drainage experience, **Dana Trone, PE, PTOE** with 18 years of experience for traffic and **Dan Seli, PE** with 26 years of experience for utility design and coordination. These individuals are currently working on the Fall Hill Avenue D-B project with Cormann demonstrating a proven D-B Team approach for the accelerated delivery of the Berkmar Drive Project Element.

Ben McKenna will be the Superintendent for this Project Element. Mr. McKenna has more than 41 years of experience in the construction of roadways, bridges, retaining walls, and other structures. His recent D-B experience as a Structures Superintendent includes: I-95 Express Lanes, South Norfolk Jordan Bridge, and the I-495 Express Lanes. His extensive structures experience/knowledge will be invaluable to the Berkmar Drive Extension PET.

Chase Funkhouser will serve as the QA Inspector for the Berkmar Drive Extension PET. Mr. Funkhouser has performed similar QA responsibilities on large D-B projects including the I-495 Express Lanes project.



RIO ROAD TEAM

For the Rio Road PET, we have identified **Ryan Masters, PE**, as the Roadway Engineer/ Element Design Manager. Mr. Masters was identified for this position due to his experience with the nearby McIntire Interchange Project in Charlottesville, VA where a grade-separated interchange was designed and is being constructed where an at-grade intersection existed. This project is extremely similar to the Rio Road Project Element. Mr. Masters also led the roadway design for the I-64 Widening and Route 623 Interchange Improvements D-B Project (I-64 Widening) with Corman.



RK&K was selected to lead the Rio Road PET based on their successful design of the grade-separated McIntire Interchange Project in Charlottesville, VA. Additionally, each PET member (including construction) has worked together on the I-64 Widening project.

Gary Johnson, PE, DBIA will lead the structural work for Rio Road. Building on his top-down construction experience gained as part of his Boston Central Artery work, he brings the expertise required to deliver the complex structural components of this Project Element. Mr. Johnson will conduct this work along with efficiently serving as the Lead Structural Engineer for the overall project.

Mr. Masters will also be supported by **Brian Finerfrock, PE** for drainage, **Barry Brandt, PE** for traffic, and **Dave Plum, PE** for utilities. All three individuals worked alongside Mr. Masters as part of I-64 Widening, so there is no learning curve for this Team.

Jake Leffler will be the Construction Superintendent for this PET. Mr. Leffler's experience with D-B projects includes the recently completed Zion Crossroad project for the Culpeper District as well as the I-64 Widening project with RK&K. His knowledge and experience with the roadway widening projects, the Culpeper District and the D-B process will be an invaluable for this PET.

Kemp Pullin will serve as the QA Inspector for the Rio Road PET. Mr. Pullin has performed similar QA responsibilities on numerous VDOT project throughout the Culpeper District.

ROUTE 29 WIDENING TEAM

Mo Kim, PE, DBIA, with 21 years of experience in the design and management of complex roadway projects, will serve as the Roadway Engineer and Element Design Manager for the Route 29 Widening Project Element. He has served in the role of Design Manager and Project Manager for numerous roadway widening projects and possesses experience on 17 Design-Bid-Build / PPTA roadway projects all in the Commonwealth. His experience as Design Manager on similar projects includes James Madison Highway (Route 15) PPTA/D-B, Sudley Manor Drive PPTA/D-B, and VDOT's I-66/Route 15 Interchange D-B (with LANE) are ideally suited for the Route 29 Widening Project Element. Mr. Kim will be supported by **Erik Shively, PE, PTOE, DBIA** who will lead the traffic engineering efforts with his 20 years of roadway design experience. Mr. Shively most recently served as the Engineer of Record for Traffic Management Plans on three (3) segments of the I-95 Express Lanes where he worked closely with the GEC and LANE (including our proposed DBPM) ensuring safe and effective operations during construction.

Bill Missell, PE will also support Mr. Kim with his 23 years of engineering experience as the Utility Liaison for the Route 29 Widening Element. He also served on the I-95 Express Lanes team. Mr. Missell was tasked to lead the utility and relocation efforts on all segments of the I-95 Express Lanes from Alexandria to Stafford and worked closely with LANE team members including proposed our DBPM and CM.

Nikhil Deshpande, PE, LEED AP (BD+C) will provide the Drainage and Hydraulics support for the Route 29 Widening Project Element. Mr. Deshpande's experience includes innovative BMP's and low impact designs understanding the sensitivity in working with the existing developments along the corridor.



RDA was selected to lead the Route 29 Widening PET based on their similar experience on the James Madison Highway (Route 15) PPTA/D-B which consisted of roadway widening in an urban setting. The proposed design staff for this PET all worked together on the Route 15 project.

Angel Lebron has been identified as the Construction Superintendent for the Route 29 Widening PET. Mr. Lebron’s experience as Deputy Area Manager on the I-95 Express Lanes project (working alongside our proposed DBPM and CM) provides the Rio Road construction team with a strong leader who is familiar with complex/grade separated interchanges and expedited construction schedules.

Maxwell Whitman, PE will serve as the QA Inspector for the Route 29 Widening PET. Mr. Whitman has performed similar QA responsibilities on large D-B projects including the I-495 Express Lanes and Telegraph Road/I-95.

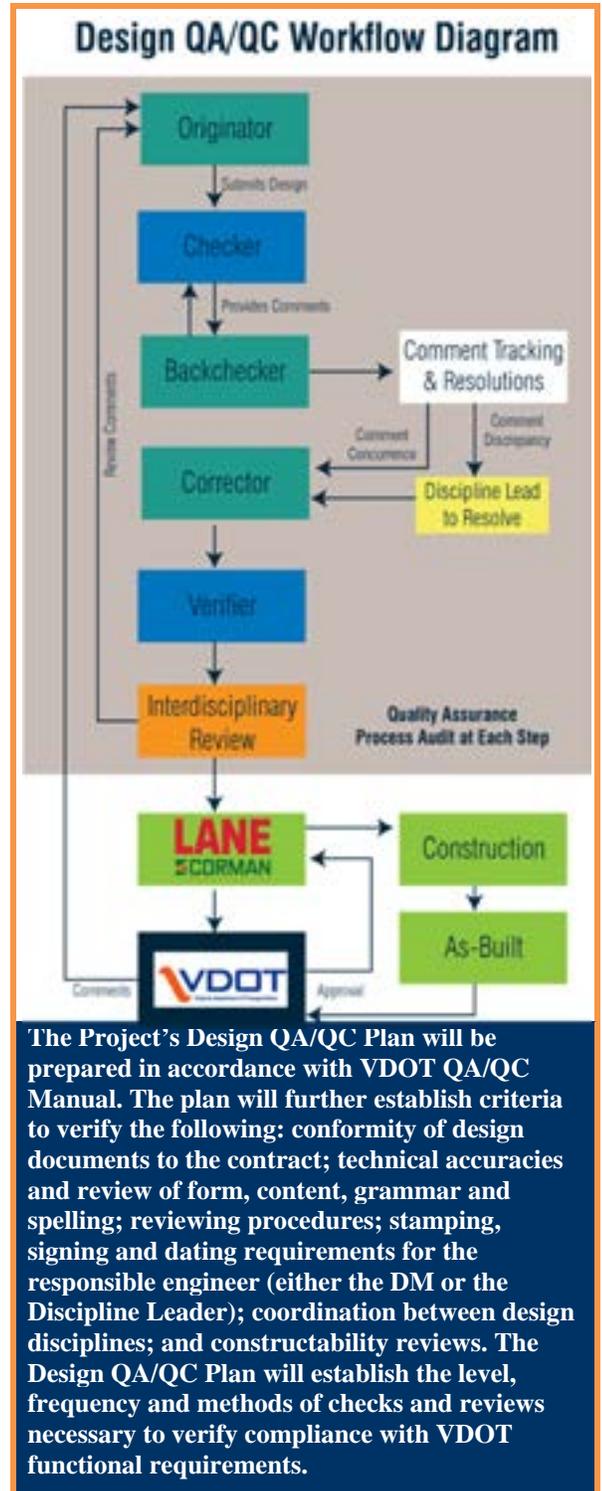
QA/QC Program

The LANE/Corman Team’s QA/QC Management Plan creates a clearly defined and concise structure that will provide a proactive oversight and inspection program for the Route 29 Solutions Project and its three Project Elements. The QA/QC Plan will maintain independent responsibilities between the QA and QC staff. The QAM will ensure that the construction quality of the project meets or exceeds *VDOT’s Minimum Requirements for Quality Assurance and Quality Control on Design Build and Public-Private Transportation Act Projects, January 2012*. Our Quality Assurance Program will be led by our **QAM**, who will report directly to the DBPM. The QAM reports directly to VDOT, independent of QC, and has the authority/responsibility to shut down the project for quality related issues. Our QA Team will staff a minimum of one Lead QA Inspector for each of the three Project Elements, each reporting directly to the QAM. Supporting our QA and QC Teams will be separate and independent, AMRL-certified QA and QC labs.

The Project QA/QC plan will describe the interaction and the independent relationship between the QA and QC organizations. It will describe testing and inspection activities including the frequency of testing and inspection. Standard inspection procedures will meet the guidelines described in VDOT’s *Construction Manual, Materials Manual of Instruction, Road and Bridge Standard Specifications*.

Once construction starts, the QAM will interface with the CM and each Project Element Construction Superintendent. The QAM will remain independent of all QC activities including inspection and testing. The QAM will, however, confirm that QC activities are completed as recorded. As demonstrated on our organizational chart, LANE/Corman will self-perform the Construction QC (CQC) on this project. CQC will be led by the Project **QC Manager** (QCM), who will report directly to the CM. Based on the contractor’s look-ahead schedule provided to the QAM and his staff on a weekly basis, he will be able to ensure upcoming work items are inspected and tested in conformance with the Specifications. In addition to attending project meetings, the QAM will receive deficiency reports from the QCM and will then discuss these issues directly with the DBPM with recommendations to correct the problem(s). The QAM, DBPM, QCM and the Element Construction Superintendents will also use the inspection preparatory meetings as an opportunity to proactively address issues related to upcoming work.

Our QC staff’s responsibilities go beyond keeping records and testing materials. Their roles include the traditional duties of a VDOT inspector and being assertive if anything is non-compliant.



The Project’s Design QA/QC Plan will be prepared in accordance with VDOT QA/QC Manual. The plan will further establish criteria to verify the following: conformity of design documents to the contract; technical accuracies and review of form, content, grammar and spelling; reviewing procedures; stamping, signing and dating requirements for the responsible engineer (either the DM or the Discipline Leader); coordination between design disciplines; and constructability reviews. The Design QA/QC Plan will establish the level, frequency and methods of checks and reviews necessary to verify compliance with VDOT functional requirements.



3.4 Team Experience

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3.4 EXPERIENCE OF OFFEROR'S TEAM

As previously mentioned, the LANE/Corman Team is comprised of industry leading D-B firms. Together and individually, we have designed, built and maintained some of the Commonwealth's most critical infrastructure. Each Team member has achieved widely recognized levels of success by paying specific attention to detail in planning, managing, and executing their work. Assembling this Team for the Route 29 Solutions project optimizes the abilities of each to perform in a complimentary manner based on our successful past performance. The blend of similar projects that we have worked on individually and collectively confirms our qualifications to successfully deliver all of the Project Elements on the Route 29 Solutions project.

The following table demonstrates how our Team is a well-integrated organization with proven cooperative work histories and teaming experience, which have resulted in relevant and verifiable evidence of good performance. The table also demonstrates our Team's experience with projects of similar scope and complexity as the project parameters for the Route 29 Solutions project.

Design-Build Projects	Project Parameters									Team Members					
	Multiple Concurrent Projects	Urban Corridors	Innovative Design/Construction	Design-Build	Limiting Impacts	Effective Communication	Successful Risks	Complex Utility Relocation	Met DBE Commitments	LANE	Corman	RK&K	WR&A	RDA	Schnabel
VDOT I-495 Express Lanes	●	●	●	●	●	●	●	●	●	●			●	●	
VDOT I-64 Widening & Route 623 Improvements		●	●	●	●	●	●		●		●	●			
VDOT I-95 Express Lanes	●	●	●	●	●	●	●	●	●	●				●	
VDOT Fall Hill Avenue Widening		●	●	●	●	●	●	●	●		●		●		
VDOT I-66/Route 15 Interchange		●	●	●	●	●	●	●	●	●				●	
VDOT Zion Crossroads			●	●	●	●	●		●		●		●		●
FHWA Route 1 Widening	●	●	●	●	●	●	●	●	●		●				●
PWC Sudley Manor Drive/Linton Hall Road	●	●	●	●	●	●	●	●	●	●				●	●
CSX Arkendale to Powells Creek			●	●	●	●	●		●		●	●			●
MSHA Arena Drive Interchange		●	●	●	●	●	●	●	●	●			●		
MDTA ICC A & B	●	●	●	●	●	●	●	●	●		●	●			●
MSHA MD 237 Pegg Road			●	●	●	●	●	●	●	●			●		
NCDOT I-85/I-485 Interchange	●	●	●	●	●	●	●	●	●	●		●			
MSHA MD 216/I-95		●	●	●	●	●	●	●	●		●	●			●

3.4.1 Work History Forms

Work History Forms are included in the Appendix and clearly indicate our Team's demonstrated previous experience with regard to the RFQ parameters.



3.5 Project Risks

LANE AND

 **CORMAN**
CONSTRUCTION

In association with:

RK&K

3.5 PROJECT RISKS

The LANE/Corman Team will employ the CMAA endorsed approach to risk management through the use of a “Risk Register” which includes a formal list of identified risks, potential impacts to the project, and mitigation strategies for each issue. Our Team’s risk management process has already commenced, will continue throughout design and construction, and enable the Team to respond to changes in an organized and proactive way as specific project issues unfold. The LANE/Corman Team will employ a five step risk management approach to the project including the following stages:

1. **Identify** – name risks facing the project, determine cause and effect, and categorize risks
2. **Assess** – assign probability of occurrence, severity of impact, and determine response
3. **Analyze** – quantify risk severity, determine risk exposure, establish risk tolerance level, and determine risk contingency (applicable during preliminary design and pricing)
4. **Manage** – define response plans and actions, establish ownership of risk, and manage response (after NTP)
5. **Monitor / Review** – monitor/review/update risks, monitor response plans, update risk exposure, analyze trends, and produce reports (after NTP, during design, during construction)



We have reviewed the available information for the project, visited the site during various traffic and weather conditions, and jointly discussed the major risks. With the mindset of project *risk* being defined as an issue that has the potential to impact the project schedule, budget, or both, our Team has identified the five most critical risks facing the D-B team during the course of the project.

RISK NO. 1 – MEETING AGGRESSIVE SCHEDULE

Risk Identification: The schedule provided in the RFQ allows approximately 30 months from Notice of Award to Substantial Completion to complete all three Project Elements of the Route 29 Solutions Project including design, environmental permitting, right-of-way acquisitions, utility relocations, and construction.

Within the overall project schedule, the singular, most critical schedule risk is the Rio Road Intersection Project Element due to the contractual restrictions limiting disruption to local traffic flow from approximately mid-May through the last week in August. To accomplish this task, the D-B team must create an underpass for four Route 29 through lanes under Rio Road; a construction site that is approximately 3,000 feet in length, 70 feet wide, with retaining walls on each side to support four local lanes of Route 29 in their current location; and construct four new through lanes for Route 29 within the excavation; plus construct a bridge to carry Rio Road, at its current elevation, over the through lanes. These activities must all be completed within the three month construction period in order to accomplish the early completion goal. Or, construct all items of work within two three-month construction periods over 15 months just to finish on time. Either scenario is extremely challenging due to the time and inherent space restrictions related to maintaining vehicular traffic on Route 29 and Rio Road.

The other two Project Elements – Route 29 Widening and Berkmar Drive Extension are both aggressive schedules and contain the similar issues but the work area restrictions are not as severe and make the schedule a bit less complicated. Specific areas of concern associated with the schedule include:

1. **Permits and Design – Timeliness of Acquisition/Approvals**
2. **Right of Way Acquisitions – Speed of the Process**
3. **Utility Relocations – Utility Company Cooperation**
4. **Construction CPM Schedule – Management, Manpower, and Equipment**

Why this Risk is Critical and an Impact on the Project: First and foremost, VDOT has committed to the local community and the citizens of Virginia to provide congestion relief to the Route 29 Corridor by way of this Project’s three Project Elements by October 2017. Failure to accomplish this completion date has ramifications from impacts to quality of life for the local citizens, impacts on local commerce, the traveling public and regional stakeholders to waning political support for future roadway funding. Both VDOT and the

D-B teams' credibility would be tarnished and make future negotiations and community support a difficult process.

Risk Mitigation Strategy: The LANE/Corman Team is very experienced in delivering high profile, extremely challenging projects on-time and without excuses. Our Team will dissect the scope of work into manageable components, staff each Project Element and phase of work with appropriate experts in the field, and utilize our expansive resources to handle this aggressive work schedule.

Our Team has developed specific processes and procedures to control the schedule; we take great pride in the fact that every one of our D-B projects has been completed on-time or ahead of schedule. This all starts with our Teams' comprehensive and efficient Project Design Manual (PDM) that will enhance and expedite the development of fully integrated project-compliant designs which meet or exceed VDOT's requirements. The PDM will detail deliverable schedules and products; provide design criteria and design standards; outline document control methods; identify key staff; outline methods for prioritizing resources and assigning staff; list design methods, procedures and submittal guidelines; and provide communication procedures among the Team members and VDOT. The following are our mitigation strategies for the schedule risks outlined above:

LANE's construction of Idylwood Road Bridge on the I-495 Express Lanes project was scheduled to take two years to rebuild. In order to expedite the schedule, our team developed an alternate construction plan to rebuild it in six months. The alternate plan would close Idylwood Road Bridge completely for six months to allow construction crews to rebuild the entire bridge. Our team held a public information session on the two plans for the Bridge and sent out 5,000 direct mail invitations with information on each plans. The direct mailer provided information for residents to submit comments if they couldn't make the information session. 91% of the comments submitted by nearby residents were in support of the alternate six month plan. LANE worked with VDOT, elected officials, and community leaders to improve detours and signage for construction of the new bridge. The construction was completed on-time, as promised, to the satisfaction of all affected.

1. Permits and Design – Timeliness of Acquisitions/Approvals

- Our design team is comprised of three of the top design firms in the Commonwealth (RK&K, WR&A, and RDA) in order to meet the aggressive project schedule. RK&K is the overall Lead Designer and has developed a strategy to assign each Project Element to a specific design firm to lead all permitting and design efforts. This will ensure each Project Element receives the highest level of commitment and attention to meet the schedule milestones, while providing additional Team-wide design support/resources, as needed. Additionally, each design firm has in-house personnel to address the timely permit acquisition to ensure we are in control of our own schedule.
- Breaking down the Project into the three Project Elements for distinctive design packages, including the early work packages, enables the design to stay in front of the critical path construction activities.
- The Team will submit to VDOT a Master Plan Submittal schedule early in the process to provide VDOT with proper notice to be able to plan and respond to the aggressive demands that will be placed on them to meet the schedule.
- Our Team is staffing a full time D-B Integrator, Mr. Ryan Gorman, PE, to provide proper coordination of design reviews for constructability, QA/QC, and coordination with VDOT.

2. Right of Way Acquisitions – Speed of the Process

- RDA is staffed with 12 right-of-way (ROW) specialists to internally address the needs of the three Project Elements. Having the ability to control our own workload, pace of acquisition and staffing is an immense benefit to our Team since we will not be subjected to the limited capacities and staffing of outside agencies.
- To ensure fast, efficient, and accurate appraisals, our Team will procure the services of several, local appraisers to augment our services where needed. For federally funded project(s), local appraisers will perform the appraisals and RDA will perform the appraisal reviews. For the state funded projects, the appraisals will be performed by RDA and local appraisers as schedules dictate. This approach was successfully implemented on recent projects. RDA acquired 55+ parcels on their Route 28 Widening project in Prince William County – federally funded with separation of appraisal and appraisal reviews. They also acquired 70+ parcels on their Mountain View Road projects in Stafford County – state funded with appraisals being performed by RDA and local appraisal firms.

3. Utility Relocations – Utility Company Coordination & Cooperation

- *Utility Coordination* –Lead Utility Coordination Manager, Mr. John Myers will handle all pre-construction utility issues. Mr. Myers has 15 years of experience with VDOT in a similar role and will personally address the critical utility coordination process. He will be proactive in identifying potential conflicts; conduct early and frequent meetings with the utility agencies to obtain easement needs and agreement on the design approach; and review plans and estimates from the utility companies to minimize schedule delays in expediting relocations. He will establish and lead our Utility Task Force, a group made up of utility owner representatives and our design and construction team, to meet on a regular basis to optimize utility avoidance and relocation strategies and processes. We will develop a Utility Conflict Matrix along with UT-9s utilizing data from the utility owners, utility designations/locations, and field/constructability meetings, to assist with the planning and design of utility relocations, where avoidance cannot be obtained.
- *Utility Relocations* – We are also establishing the position of Utility Relocation Specialist for post-design utility relocation issues, who will deal directly with utility companies once they are given NTP to relocate. To expedite the overall process, the LANE/Corman Team will prioritize the critical utilities. Our Utility Relocation Specialist will be the unified voice of the Team in expediting our agreements and early design requirements for utility relocations. A significant aspect of our proposal schedule is the prioritized utility relocations component which takes into consideration time of year restrictions where utility owners will not allow interruptions. In addition to the above, utility relocation success will hinge on the following mitigation strategy to lessen or eliminate their impact:
 - Secure buy-in from the utility companies, including their top officials, and VDOT in order to establish common ground.
 - Establish a well-defined utility corridor with consideration for future facilities to provide the greatest amount of flexibility as change occurs.
 - Hold regular progress meetings with the utility owners for accountability to aid in dispute resolution.
 - Gain early understanding of the logistics of material acquisition to help maintain the project schedule.
 - Immediately notify owners when unknown utilities are encountered – evaluate potential design revisions versus relocation and weigh against the schedule to establish the most efficient means of rectification.
 - Be prepared to perform the design or construction with our own forces if required.

4. Construction CPM Schedule: Management, Manpower and Equipment

- Our Team will have an on-site Primavera P6 CPM Scheduling Engineer (employed full-time) who will be in charge of developing, maintaining and updating a cost and resource (men, equipment and materials) loaded schedule. The Scheduling Engineer will develop a Master Project Schedule that will incorporate the three separate Project Element CPM schedules to make one unified document to best optimize our time and resources. It will be updated daily to identify critical items of work, labor, and equipment and material needs to ensure no lost time due to improper planning or changed conditions. At the start of the Project we will develop a staffing chart to provide a sense of the magnitude of effort required to complete the design for this Project. The schedule will address all components of the project to include: permits, ROW needs, utility interfaces and relocation plans, design and construction. Specific work activity calendars will be developed within the schedule to address restrictions related to contractual requirements, Owner review periods, utility accommodations and normal weather patterns.
- The Scheduling Engineer will work with the design and construction teams on a daily basis to anticipate issues and develop alternate “what if” scenario schedules based on realistic but unanticipated issues so we are better prepared to address the unknowns that arise on every project as best possible.

Role of VDOT and Other Agencies: VDOT’s primary and most critical role will be the timely review and approval of all submittals. It would be our expectation that VDOT would partner with the LANE/Corman Team by accelerating their typical plan review policies and procedures to assist in meeting the aggressive schedule. These modifications could include rolling or “Over the Shoulder” reviews, accelerated turnaround of submissions, partial approvals to allow early construction packages, etc. We will invite/request VDOT to participate in preparatory meetings for the implementation of major design and construction of the three Project Elements. The LANE/Corman Team will also provide regular updates to VDOT to address questions from third-party stakeholders and update VDOT’s project website.

RISK NO. 2 – PUBLIC INVOLVEMENT/STAKEHOLDERS COORDINATION

Risk Identification: The Route 29 Corridor has been a flashpoint for public opposition to capacity improvements for many years. Delay of one or more of the Project Elements due to public opposition or political resistance is a reality based on information reviewed in the local press and as witnessed by the Secretary of Transportation’s recent visits to local elected officials to shore up the recommendation from the Route 29 Project Delivery Advisory Panel.

Why this Risk is Critical and an Impact on the Project: Citizen opposition and/or political resistance to the Route 29 Solutions project could potentially delay or cancel the three Project Elements – individually or collectively. The development of solutions to address safety and capacity of the Route 29 Corridor in Charlottesville/Albemarle County has been years in the making and throughout the process, VDOT has maintained involving stakeholders as a priority. The formation of the Route 29 Project Delivery Advisory Panel is an example. That responsibility to involve and inform stakeholders will now fall upon the LANE/Corman Team.

If consensus cannot be built among the stakeholders and public, then political pressure could potentially cancel one or more of the proposed Project Elements. The **Rio Road Project Element** is of particular concern due to the issues of the local business community and the perceived impacts on access to these businesses. Potential environmental issues have been raised by the public on impacts due to another river crossing associated with the **Berkmar Drive Extension Project Element** as well as impacts to future development along this corridor. The **Route 29 Widening Project Element** could face opposition from local communities of Forest Lakes and Hollymead as major vertical alignment revisions are associated with this Project Element.

Risk Mitigation Strategy: We believe that the public involvement process must be led by a strong leader and integrated into the overall project throughout both the design and construction phases. Mr. Chris Reed, the Team’s Public Relations Manager, has been involved in VDOT projects in the Route 29 Corridor dating back to the mid-1990s. He will draw on his past experience with many of the same stakeholders here to be proactive and avoid the pitfalls that could lead to delays. Strategic contacts have already been and will continue to be maintained throughout the design and construction process. Mr. Reed can also draw on the expertise of fellow team member, Mr. John Giometti, PE, who is a former VDOT Culpeper District Location and Design Engineer and District Planner, for assistance in identifying key stakeholder and developing viable mitigation strategies.



RDA’s Minnieville Road project received numerous pushbacks from the local community. Through an effective and well-planned Public Involvement Plan, RDA and Prince William County were able to successfully address 70% of citizens concerns which allowed the project to continue without further opposition.

VDOT has proven success with the Route 29 Project Delivery Advisory Panel. We will recommend that Mr. Reed, be instated as a member of the Route 29 Project Delivery Advisory Panel. By integrating Mr. Reed on the Advisory Panel, accurate communications regarding the project development and stakeholder input can be ensured. The Route 29 Project Delivery Advisory Panel includes the participation of many key stakeholders; we expect their active participation to continue as we actively coordinate the overall outreach program.

We understand the importance of maintaining and fostering good relations with the project stakeholders and will develop a specialized communications plan to support these efforts. As a broader parallel to the Advisory Panel, our Public Relations Manager will establish contact and identify other stakeholders such as Emergency Responders, transit operators, citizen associations, UVA, the Chamber of Commerce, and Charlottesville-Albemarle Airport to effectively engage public and private stakeholders throughout the project duration. Our Public Involvement Plan will employ many tactics to reach each of these stakeholders both individually and as a group throughout the lifecycle of the project, including:

- Stakeholder Identification
- Stakeholder Engagement
- Media Relations
- Spokesperson Training
- Web/Digital Outreach/Hotlines
- Community Outreach/Public Meetings

- Briefings to Elected Official

Role of VDOT and Other Agencies: VDOT's role will be to review and approve the Public Involvement Plan and the procedures for public communication. The LANE/Corman Team's participation on the Route 29 Project Delivery Advisory Panel will ensure our Public Relations Manager can provide all the details and support as a single point of contact for VDOT's Culpeper District Communications Office. In addition, our Public Relations Manager will prepare all necessary documents for public release and the content for any Public Meetings for review prior to the District Communication Office's dissemination of the material.

RISK NO. 3 – UTILITY RELOCATIONS

Risk Identification: Utility relocation and coordination are a typical cost and schedule risk for any roadway improvement project. The cost implications to VDOT are variable due to the incomplete designs and the pro-rating of utility conflicts located within the existing ROW. The magnitude of the utility relocation risk is significantly greater on the Route 29 Solutions project due to the aggressive construction schedule. The project team is often at the mercy of the current workload, labor constraints and material needs of the utility companies that are performing the relocation work.

Why this Risk is Critical and an Impact on the Project: The impacts to utilities occur throughout the project, but the main areas of concern include:

Rio Road Project Element: Creating a grade separated intersection poses a major problem when attempting to avoid utility conflicts and accommodating relocations in advance of construction. Since four Route 29 through lanes are being lowered below Rio Road, with an excavation site 3,000 feet long, 70+ feet wide, and 30 feet deep at the mid-point, the grade difference will greatly limit areas that are available to use for relocations. Utilities known in conflict with construction are:

- 6" Steel High Pressure gas line currently located inside the roadway of Route 29. This could be problematic to find a new alignment for, as well as having MOT issues to make the tie-in to the existing line in the roadway for any relocation performed.
- 12" Rivanna water main running down the lanes of existing Route 29. This will be problematic to find re-alignments for and also some supply tie-ins into the Albemarle waterline plus some additional equipment needed to be relocated to keep the connection active.
- Rivanna water main has a main traveling down Rio Road South from the intersection that will have to be re-routed due to the grade separation. The re-route will be challenging due to lack of area outside the footprint of the proposed retaining walls.
- 8" Albemarle County Sanitary Sewer line running along the north edge of Route 29 may be impacted by the retaining structures.
- Underground communications facilities will need to be re-routed around the grade separation along Route 29.
- The existing aerial span for electric and communication lines crossing Route 29 at Rio Road is excessively long. It is probable that the existing poles will need to be moved further apart due to the grade separation and that steel poles may be needed to support the span. The engineering and manufacturing associated with steel poles can create cost and schedule implications.

Route 29 Widening Project Element: The utility relocation risks for this Project Element will be dependent upon the age, material and condition of the existing underground lines.

- 6" High Pressure Steel Gas Line running down Route 29 will be a risk to the schedule, plus, any relocation will be at project cost since it is a municipally owned utility. Due to the labor effort and the MOT challenges needed for tie-ins to the existing line, short relocation lengths or offsets will not be practical which leads to longer relocation lengths with higher costs and longer relocation times.
- 12" Rivanna water main running down Route 29 will be a risk based on the unknown age and condition of the existing pipe. If the waterline is in poor condition, it will be challenging to make multiple taps for short relocations and offsets and lead to longer lengths of pipe requiring relocation.
- The numerous underground communications lines will be a risk to the schedule due to the time it takes to acquire materials, relocate and splice the facilities. Communication line relocations are typically performed by a 3rd party creating a work production risk that is out of the control of the D-B team.

- Overhead utility poles supporting lines from multiple companies will be a risk to the schedule as well. Utility company safety policies won't allow two companies to work concurrently on a pole line. Their relocations will need to be run in singular (one utility at a time, from the top of the pole down) sequence leading to longer durations for the relocations.

Berkmar Drive Extension Project Element: The Berkmar Drive Extension will have the least amount of utility risks of the three Project Elements. Although the risk will be minimal, there are utilities along the project path that will need to be accounted for during the design in order to keep the risk at a minimum. These include:

- WCHV AM Radio towers – Five radio towers with associated communication lines will have to be accommodated in the design along with their respective buried grounding grids.
- A cell phone tower on the same premises as the AM Radio towers will have multiple large underground communications lines as well.
- Three phase electric pole lines exist along the Rivanna River and alongside the cell and radio towers. This pole line serves the Rivanna Water and Sewer Authority's water treatment facility and the subdivision located along Templeton Circle. All of these pole lines carry communications lines as well.
- Water and Sewer lines owned and operated by the Rivanna Water and Sewer Authority near the water treatment facility and water tower are at risk of being in conflict.

Risk Mitigation Strategy: The primary tactic to mitigate this risk to the project is to develop a design that avoids the in-place utilities. Avoidance is not only helpful in limiting the work and involvement of the utility companies, but it is key in demonstrating value in our relationships with VDOT and the utility companies and gives them an interest in making the project successful as well. Another practice is open, honest, ongoing communication with the impacted utility companies. While we would strive to miss all the utilities within the project limits, even the utility companies realize this is not always possible. Building on the relationships and strong reputation we have established in the industry over the years, we will work together with the various utilities to make the relocations as smooth and as minimal as possible.

Design team members, RK&K, WR&A, and RDA, have extensive working relationships with utilities local to this Project as well as other VDOT, municipality, and private projects.

WR&A and RDA have established contracting relationships with Rivanna Water and Sewer Authority and Albemarle County Sanitary Sewer, respectively.

To mitigate these risks, as soon as Notice to Proceed is received we will hold a meeting with Mary Zylowski of City of Charlottesville (Gas), Victoria Fort of Rivanna Water & Sewer Authority, and Jeremy Lynn of Albemarle County Service Authority; the bridge and roadway designers and the construction team to brainstorm solutions for the associated lines. Temporary re-routing of the lines for construction phases will be discussed to see if some of the grading and structural work can be completed to allow for additional areas of relocation or routes to open up. However, due to the timeframe allowed for the Rio Road intersection, this will not be a viable option for this area. We will focus on trying to relocate the utilities to the outer limits of the right of way where grading is the lowest to allow for construction to get to work within the timeframe allowed in the contract documents. Additionally, we will check to see if betterments are desired by any of the companies that could be constructed and utilized as re-routes for lines in conflict with the proposed work.

To further mitigate the utility impacts, we will meet with Dave Fisher of MCI, Jerry Burge of Century Link and Kewsi Wright of Sprint to obtain the as-builts for their facilities, review the work to be completed, and discuss possible solutions. We would propose a joint duct bank for all relocations to consolidate the area required for easements.

We will also reach out to John Kennedy and Verna Love at Dominion Virginia Power. We will develop and share a proposed relocated pole alignment plan and get their approval early to ensure the areas needed for relocations are incorporated with our design.

Role of VDOT and Other Agencies: Our Team will limit VDOT's role to oversight only when it comes to the utility coordination process. VDOT will be invited to participate at the UFI meeting and review copies of all P&E packages. All utility coordination will be performed directly by our team, relying heavily on the relationships and reputation we have developed with the various utilities to ensure efficient and successful relocations.

RISK NO. 4 – PERMITTING

Risk Identification: The LANE/Corman Team sees environmental permitting as a critical risk to this project. This risk is divided into subsets that are identified as follows:

1. The Berkmar Drive Extension Project Element is on new location and state funded. Therefore, the Corps of Engineers (Corps) will be the lead federal agency for water quality permitting. Prior to issuing an individual water quality permit for the project, the Corps will have to complete their NEPA process to support the Least Environmentally Damaging Practicable Alternative (LEDPA) decision and prepare the Corps Public Interest Finding. The risk is to the project schedule to complete this process in a timely manner and impact the overall cost.
2. The State Historic Preservation Officer (SHPO) coordination has not been completed including the archaeological investigation for the Berkmar Drive Project Element of the project. The risk relates directly to schedule and cost because the archaeological investigation along the Berkmar Drive corridor has not been undertaken so the "effect determination" cannot be made at this time.
3. In June 2012, a mussel survey was conducted from the South Fork Rivanna Dam to 800 meters downstream. However, this survey has expired and is no longer in effect therefore a new survey must be undertaken. Since the results are unknown, the risk cannot be fully understood; different findings resulting from the new survey could easily effect design, schedule and project cost. The risk is that the project stream and wetland systems impacts will exceed regulatory agencies general permit thresholds to these natural systems that in turn would trigger the need for an individual permit for the Route 29 corridor which will affect the project delivery schedule and cost.
4. There are many roadside ditches, naturally occurring waterways and seeps along the corridor that must be assessed for classification and regulatory jurisdiction. Delayed or improper coordination with applicable agencies could pose schedule and/or cost delays.

Why this Risk is Critical and an Impact on the Project:

1. The Corps' final step (under the 404 program) in identifying the LEDPA is to conduct a public interest review where the Corps must consider 21 broad environmental areas as well as their cumulative impacts on the public. This process can often be lengthy and requires the Corps to prepare a NEPA document to support their permit decision. The time it will take to complete this process is unknown and has the potential to push the project delivery schedule to a later date, thus affecting not only project cost but also public perception of this procurement in its entirety.
2. The Corps will be the lead federal agency for the SHPO coordination requirements on Berkmar Drive to complete Section 106 of the National Historic Preservation Act. This is a multi-step process that includes comment periods. At this time, it is impossible for our Team to know: a) the SHPO findings or b) the length of time the permit process will take. Because of these factors we consider this risk critical and has considerable potential to negatively impact project schedule and cost.
3. The June 2012 mussel survey found no James spiny mussel (*Pleurobema collina*) in this reach of the South Fork of the Rivanna River. However, due to the age/expiration of the James spiny mussel survey, it will have to be updated to support the permit application. The risk is if the updated survey finds the species to be present, Section 7 consultation will be required between the Corps and U.S. Fish and Wildlife Service for Berkmar Drive and between Federal Highway Administration and U.S. Fish and Wildlife Service for Route 29 Widening. This risk is critical because the project will have two separate lead federal agencies (FHWA & the Corps) and a regulatory prescribed timeframe of 135 days for U.S. Fish and Wildlife Service to issue their Biological Opinion that will have to be completed prior to the NEPA re-evaluation and water quality permit issuance. This puts significant pressures on the project schedule and costs.
4. A number of the channels appear to have developed from drainage from the roadway and wetland systems and have been developed through constraints associated with drainage to the median. Roadside ditches and water seeps are prevalent along the corridor and have their own nuances of assessing regulatory jurisdiction. Wetlands and stream impacts require compensatory mitigation and if improperly identified, the project cost will increase.

Risk Mitigation Strategy:

1. Our Team will endeavor to design and construct Berkmar Drive and the Route 29 Widening projects so that impacts to wetlands and streams are below 1/3 of an acre of waters of U.S. for each single and complete crossing, below 1/3 of acre of waters of U.S. and less than 2000 linear feet of stream impacts for lateral encroachments to qualify for the Virginia Department of Environmental Quality (VDEQ) issued State Programmatic General Permit (SPGP) and Virginia Water Protection General Permit WP3. This will eliminate the issuance of a Corps of Engineers Individual permit and the requirement for their LEDPA decision and public interest finding requirements. To further remediate the permit risk, our team will establish an early understanding of the water quality permit requirements and apply it during the project's preliminary engineering and construction activities.
2. At the onset of the project, our team will complete the archaeology survey along the Berkmar Drive Project Element in accordance with the Virginia Department of Historic Resources Guideline for Conducting Historic Survey in Virginia as well as Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation. We will provide a recommended "effect determination" to the Corps that can range from "No Effect" to "No Adverse Effect" which allows the agency to proceed with the undertaking in compliance with any agreed-upon conditions to an "Adverse Effect" which requires consultation with the SHPO to seek ways to avoid, minimize, or mitigate the adverse effects.
3. At the beginning of the project, our team will update the June 2012 a mussel survey from the South Fork Rivanna Dam to 800 meters downstream to clarify the coordination requirement with the U.S. Fish and Wildlife Service. If the species is found, we will prepare the Biological Assessment report to ensure the permit application review time of the Corps of Engineers, and the Federal Highway administration NEPA reevaluation time runs concurrently with the U.S. Fish and Wildlife preparation of their Biological Opinion to minimize effects on the project schedule.
4. At the start of the project, our team will complete wetlands and stream delineations and secure Corps of Engineers Jurisdictional Determinations to support the permit application. During the field review, we will present in-field factors to eliminate or minimize the potential stream impacts by clarifying previously identified stream features as either non-jurisdictional or jurisdictional road side ditches which do not require stream compensation mitigation. Our Team has the proven experience with the regulatory agencies to work collaboratively to achieve consensus on their jurisdiction and apply appropriate avoidance and minimization actions that will result in securing the required environmental permits within the project schedule and minimize the projects' compensatory mitigation requirements. We will use early informal meetings with the regulatory agencies to ensure complete understanding of their expectations on regulated environmental resources within our project limits to eliminate surprises and minimize risk.

RK&K's Route 250 project drew much opposition and comments during the development of NEPA documentation. This was primarily centered on the project's partial impact to a City park and other 4(f) resources. Additionally, there were historic resources in all four quadrants of the interchange being directly or indirectly impacted by the project. Mitigating these impacts required four meetings with Consulting Parties plus other meetings directly with VDHR to negotiate suitable mitigation strategies for these impacts. Ultimately, RK&K's strategies to minimize impacts and the development of proper mitigation strategies kept this project going forward.

Role of VDOT and Other Agencies: The LANE/Corman Team will be responsible for environmental permitting, however we anticipate that VDOT will enter into a programmatic agreement with the SHPO; conduct agency negotiations with the Corps and FHWA and the appropriate resource agencies for Cultural Resources and Threatened Endangered species for each Project Element.

The Corps will be expected to provide jurisdictional determinations for each Project Element.

State and Federal resource agencies will provide resource information under their jurisdiction, comment on our project proposal and accept our project's avoidance, minimization and mitigation strategies for these resources identified in the state environmental review process and NEPA clearances.

State and Federal Permitting agencies will provide comments on our natural resources reports, review our permit applications, complete any State and Federal resource agency coordination and issue water quality project permits and clearances.

RISK No. 5 – MOT DURING CONSTRUCTION

Risk Identification: The Route 29 Corridor is the north/south transportation lifeline for local, regional, and through-state travelers. This “gateway to Charlottesville” serves a mix of commuter, shopping, school and regional traffic that experiences significant daily congestion. This congestion is amplified during University of Virginia (UVA) sporting, educational, and social events. Maintaining traffic flow during construction through this corridor is not only essential, it is imperative.

Due to the high traffic volumes in the corridor, it is anticipated that VDOT will require the D-B team to maintain existing travel lanes during construction. Also anticipated are the geometric improvements/upgrades on the Route 29 Widening Project Element located north of the Rivanna River. These vertical profile improvements will require reconstructing extensive sections of the existing north and southbound lanes, eliminating the option of simply adding a lane and shoulder to the north and southbound roadway. Traffic will have to be maintained when making these improvements and will require work during off-peak hours. Similarly, the MOT at the Rio Road Project Element must accommodate the construction of a 70+ foot wide, 30 foot deep underpass below the existing Rio Road (in the middle of Route 29 within limited ROW) plus extensive utility conflicts and strict seasonal restrictions on impacting the travel lanes. The traffic volume along Route 29, does not experience a significant drop when UVA students are gone in the summer as typically expected when a university goes into summer break. Additionally, this corridor experiences heavy retail traffic which tends to remain at morning peak levels throughout the day into the evening hours when the stores and shopping centers have the high customer volumes.

Why this Risk is Critical and an Impact on the Project: If left unmitigated, existing congestion may be exacerbated resulting in decreased capacity and mobility; impacts to the traveling public, businesses, and local residences; a negative project image; and, unsafe conditions – all of which are in direct contradiction to the project goals. Disruptions to access to and egress from the work site and businesses is also a risk in this highly congested corridor that will need to be addressed. Failure to implement new work zones, traffic shifts, or new traffic patterns to the public may create traffic gridlock and unsafe conditions that would impact the schedule by restricting the delivery of materials and work operations. If this were to happen, community and stakeholder dissatisfaction would become a major issue to be dealt with every day, impacting progress and public support for this project as well as future projects in the corridor.

Risk Mitigation Strategy: The LANE/Corman Team’s mitigation strategies will begin with the development of the TMP that has a major focus on incident management and communication strategies. The TMP will be influenced by the lessons learned by our Team’s vast experience designing and constructing projects along major corridors in this region and throughout the Mid-Atlantic. Our mitigation strategies for the MOT/TMP risk identified above include:

Public Awareness and Outreach: Keeping the public informed as to the construction plans and sequences, traffic movement changes, potential impacts, project status and upcoming schedule will be top priority to obtain public support, which in turn will minimize complaints when there are short term impacts to their travel route. In addition to the normal updates regarding roadway work and lane closures to the Regional Traffic Operations Center, this project will require updating regional and local stakeholders identified as part of our Public Involvement Plan.

Our plan uses a multi-layered approach to inform the public and minimize traveling inconveniences. It will incorporate proven and innovative strategies and tools, including:

- Social media to provide motorists up-to-date information on construction progress, work zone changes, and incident reports
- Local media outreach and special announcements
- Dynamic message signs to reflect current work zone conditions
- Working closely with Charlottesville Area Transit (Route 5 has stops along the project footprint), UVA, and local ride share programs to encourage travelers to use carpooling or alternative modes of travel during construction.

Limitation of Road Closures: A discussion of potential work hours and restrictions has been stated above. Our Team will comply with the lane closure restrictions. We will undertake additional traffic analyses to not create periods during “non-peak” hours where congestion burdens motorists.

Detours / Alternate Routes: Multiple detour/alternate routes will be explored with the local municipalities and adjacent property owners to establish alternate routes to reduce the anticipated volumes in the construction zones. For example, to reduce left turn lanes at Rio Road/Route 29 intersection explore utilizing Berkmar Drive to Hilton Heights Road and Woodbridge Drive to return to Route 29. Discussions will also be held with the City and Albemarle Square owners to utilize Gardens Boulevard, which could also eliminate some of the turn movements at the Rio Road intersection. Any alternate routes would include advanced public notification and extensive directional signing.

Construction Staging and Access: Staging areas would be situated so as to not increase traffic along the corridor by establishing site specific yards and field offices close to each of the three Project Elements. Restrict material deliveries to off-peak hours, haul routes for excavated material, concrete and asphalt would be strictly controlled with an emphasis in separating construction from local/regional traffic.

Coordination with Adjacent City and VDOT projects: We will propose regular coordination meetings with the construction staff and owners of any ongoing projects in the region (VDOT, City, County and Private) to hopefully synchronize and reduce construction impacts within the corridor. These meetings were conducted on the Woodrow Wilson Bridge, Telegraph Road project and resulted in less construction impacts and improved traffic flows.

Incident Management Plan: A good MOT TMP accommodates the unexpected, i.e., disabled vehicles, collisions, weather or special events. We will implement a plan that makes provisions for dealing with disabled vehicles by engaging a local wrecker service to be on-call to quickly respond to a road blockage. For issues such as weather or special events, we will implement a plan that curtails or limits construction to maintain safe passage of traffic.

In addition to the above mitigation strategies, we would propose to establish a MOT Task Force that would meet bi-weekly during design and construction. At a minimum, this Task Force would include our DBPM, CM, DM, Lead Traffic Engineer, VDOT PM and District Staff. This key Task Force would be supplemented by stakeholders, such as City and County staff, EMS staff, etc. This Task Force approach has proven invaluable on many of our successfully completed projects with complex MOT, including the I-495 Express Lanes, I-95 Express Lanes, ICC and Woodrow Wilson Bridge projects.

These strategies are just some of the tools our Team will put into place to mitigate the MOT risks for this project. Even with these strategies, the best tool is a well-planned and executed MOT/TMP and stakeholder involvement that optimizes safety and reduces delay and stress to motorists.

Role of VDOT and Other Agencies: We will request that VDOT be an active partner in the MOT Task Force and provide coordination with local stakeholders and adjacent projects. VDOT will need to provide crash and traffic data and existing traffic operation models for the LANE/Corman Team to utilize in developing the TMP and provide reviews and comments on the TMP for the project. VDOT will assist with support from the Traffic Operations Center to help communicate traffic operations during construction. Also, provide input and advice early on through timely “Over the Shoulder Reviews.”



Appendices

LANE AND

 **CORMAN**
CONSTRUCTION

In association with:

RK&K

ATTACHMENT 3.1.2

DESIGN-BUILD PROJECT FOR ROUTE 29 SOLUTIONS, CONTRACT ID C00077383DB80
STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

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

Statement of Qualifications Component	Form (if any)	RFQ Cross-Reference	Included within 20-page limit	SOQ Page Reference
Statement of Qualifications Checklist and Contents	Attachment 3.1.2	Section 3.1.2	no	A1 – A3
Acknowledgement of RFQ, Revision and/or Addenda	Attachment 2.11 (Form C-78-RFQ)	Section 2.10	no	A4 – A5
Letter of Submittal (on Offeror's letterhead)				1 – 2
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	2
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	A6 – A8
Debarment forms	Attachment 3.2.7(a) Attachment 3.2.7(b)	Section 3.2.7	no	A9 – A15
Offeror's VDOT prequalification evidence	NA	Section 3.2.8	no	A16 – A20
Evidence of obtaining bonding	NA	Section 3.2.9	no	A21 – A23

ATTACHMENT 3.1.2

DESIGN-BUILD PROJECT FOR ROUTE 29 SOLUTIONS, CONTRACT ID C00077383DB80
STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross-Reference	Included within 20-page limit	SOQ Page Reference
SCC and DPOR registration documentation (Appendix)	Attachment 3.2.10	Section 3.2.10	no	A24 – A26
Full size copies of SCC Registration	NA	Section 3.2.10.1	no	A27 – A36
Full size copies of DPOR Registration (Offices)	NA	Section 3.2.10.2	no	A37 – A42
Full size copies of DPOR Registration (Key Personnel)	NA	Section 3.2.10.3	no	A43 – A44
Full size copies of DPOR Registration (Non-APELSCIDLA)	NA	Section 3.2.10.4	no	A41 & A44
DBE statement within Letter of Submittal confirming Offeror is committed to achieving the thirteen (13%) DBE goal	NA	Section 3.2.11	yes	2
Offeror's Team Structure				
Identity and qualifications of Key Personnel	NA	Section 3.3.1	yes	3 - 9
Key Personnel Resume – DB Project Manager	Attachment 3.3.1	Section 3.3.1.1	no	A45 – A46
Key Personnel Resume – Quality Assurance Manager	Attachment 3.3.1	Section 3.3.1.2	no	A47 – A48
Key Personnel Resume – Design Manager	Attachment 3.3.1	Section 3.3.1.3	no	A49 – A50
Key Personnel Resume – Construction Manager	Attachment 3.3.1	Section 3.3.1.4	no	A51 – A52
Key Personnel Resume – Lead Structural Engineer	Attachment 3.3.1	Section 3.3.1.5	no	A53 – A54
Key Personnel Resume – Lead Traffic Engineer	Attachment 3.3.1	Section 3.3.1.6	no	A55 – A56
Key Personnel Resume – Lead Geotechnical Engineer	Attachment 3.3.1	Section 3.3.1.7	no	A57 – A58
Key Personnel Resume – Lead Utility Coordination Manager	Attachment 3.3.1	Section 3.3.1.8	no	A59 – A60
Key Personnel Resume – Public Relations Manager	Attachment 3.3.1	Section 3.3.1.9	no	A61 – A62
Organizational chart	NA	Section 3.3.2	yes	5

ATTACHMENT 3.1.2

DESIGN-BUILD PROJECT FOR ROUTE 29 SOLUTIONS, CONTRACT ID C00077383DB80
STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross-Reference	Included within 20-page limit	SOQ Page Reference
Organizational chart narrative	NA	Section 3.3.2	yes	
Experience of Offeror's Team				10
Lead Contractor Work History Form	Attachment 3.4.1(a)	Section 3.4	no	A63 – A68
Sub-Contractor Work History Form, if applicable	Attachment 3.4.1(b)	Section 3.4	no	N/A
Lead Designer Work History Form	Attachment 3.4.1(c)	Section 3.4	no	A69 – A72
Sub-Consultant Work History Form, if applicable	Attachment 3.4.1(d)	Section 3.4	no	A73 – A74
Project Risk				
Identify and discuss five critical risks for the Project	NA	Section 3.5.1	yes	11 - 20

ATTACHMENT 2.11

**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION**

PROJECT: Design-Build Project for Route 29 Solutions
CONTRACT ID: C00077383DB80

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 07/24/2014
(Date)
- 2. Cover letter of Addendum No. 1 08/15/2014
(Date)
- 3. Cover letter of _____
(Date)


SIGNATURE

8/27/2014
DATE

Richard A. McDonough
PRINTED NAME

Senior National Pursuit Manager
Offeror's Point of Contact
TITLE

ATTACHMENT 2.11**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION**PROJECT: Design-Build Project for Route 29 SolutionsCONTRACT ID: C00077383DB80**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 07/24/2014
(Date)
2. Cover letter of Addendum No. 1 08/15/2014
(Date)
3. Cover letter of _____
(Date)

 <hr/> SIGNATURE	<u>8.28.14</u> <hr/> DATE
Arthur C. Cox, III <hr/> PRINTED NAME	<u>Vice President</u> <hr/> TITLE

ATTACHMENT 3.2.6

DESIGN-BUILD PROJECT FOR ROUTE 29 SOLUTIONS, CONTRACT ID C00077383DB80

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
The Lane Construction Corporation:		
PARENT COMPANY	Lane Industries Incorporated	90 Fieldstone Court Cheshire CT 06410
AFFILIATE	Lane Worldwide Infrastructure, Inc.	90 Fieldstone Court Cheshire CT 06410
AFFILIATE	Lane Infrastructure, Inc.	90 Fieldstone Court Cheshire, CT 06410
AFFILIATE	Lane International, B.V.	Prins Bernhardplein 200 1097 JB Amsterdam, the Netherlands
AFFILIATE	Lane Mideast Contracting, LLC	P.O. Box 35243 Abu Dhabi, UAE Makeen Tower Corner of 9th and 10th Streets
AFFILIATE	Lane Mideast, Qatar, LLC	Grand Hamad Street Bin Al Sheikh Bldg. 3 rd Floor Doha, Qatar
SUBSIDIARY	Lanecon Corporation	90 Fieldstone Court Cheshire, CT 06410
JOINT VENTURE (51% PARTNER)	Virginia Guardrail Partners	90 Fieldstone Court Cheshire, CT 06410

ATTACHMENT 3.2.6

DESIGN-BUILD PROJECT FOR ROUTE 29 SOLUTIONS, CONTRACT ID C00077383DB80

Affiliated and Subsidiary Companies of the Offeror

JOINT VENTURE (35% PARTNER)	Fluor-Lane 95, LLC	6700 Las Colinas Blvd. Irving, TX 75039
JOINT VENTURE (20% PARTNER)	AGL Constructors	929 West Adams Street Chicago, IL 60607
JOINT VENTURE (25% PARTNER)	Gemma-Lane Liberty Partners	769 Hebron Avenue Glastonbury, CT 06033
JOINT VENTURE (25% PARTNER)	Gemma-Lane Patriot Partners	769 Hebron Avenue Glastonbury, CT 06033
TRADE NAME	Civil Wall Solutions, A Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410
TRADE NAME	Cold River Materials, A Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410
TRADE NAME	Prestress of the Carolinas, A Division of the Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410
TRADE NAME	Senate Asphalt, A Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410
TRADE NAME	Sunquip, A Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410
TRADE NAME	Sunrise Materials, A Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410
TRADE NAME	Virginia Paving Company, A Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410
TRADE NAME	Virginia Sign and Lighting Company, Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410

ATTACHMENT 3.2.6

DESIGN-BUILD PROJECT FOR ROUTE 29 SOLUTIONS, CONTRACT ID C00077383DB80

Affiliated and Subsidiary Companies of the Offeror

TRADE NAME	Wardwell Contracting, A Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410
TRADE NAME	White Brothers, A Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410
Corman Construction, Inc.:		
PARENT COMPANY	CG Enterprises, Inc.	12001 Guilford Road, Annapolis Junction, MD 20701
AFFILIATE (SISTER)	Corman Marine Construction, Inc.	711 East Ordnance Road, Suite 715, Baltimore, MD 21226
AFFILIATE (JOINT VENTURE)	CK Constructors, A Joint Venture	c/o Corman Construction, Inc., 12001 Guilford Road, Annapolis Junction, MD 20701
AFFILIATE (JOINT VENTURE)	Intercounty Constructors Joint Venture	c/o Granite Construction Northeast, Inc., 120 White Plains Road, Suite 310, Tarrytown, NY 10591
AFFILIATE (JOINT VENTURE)	MD 200 Constructors, A Joint Venture	c/o Kiewit Infrastructure South Co., 450 Dividend Drive, Peachtree City, GA 30269
AFFILIATE (JOINT VENTURE)	Wagman, Corman, McLean Joint Venture	c/o GA & FC Wagman, Inc., 3290 North Susquehanna Trail, York, PA 17406
AFFILIATE (JOINT VENTURE)	Corman-Wagman, A Joint Venture	c/o Corman Construction, Inc., 12001 Guilford Road, Annapolis Junction, MD 20701



Debarment Sheets

LANE

AND

 **CORMAN**
CONSTRUCTION

In association with:

RK&K

ATTACHMENT NO. 3.2.7(a)

**CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS**

Project: **Design-Build Project for** Route 29 Solutions
Contract ID: C00077383DB80

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

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

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

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

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

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

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


Signature

August 27, 2014
Date

Senior National Pursuit Manager
Title

The Lane Construction Corporation
Name of Firm

ATTACHMENT NO. 3.2.7(a)

**CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS**

Project: **Design-Build Project for** Route 29 Solutions
Contract ID: C00077383DB80

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

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

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

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

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

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

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

Allee 8/28/14 Vice President
Signature Date Title

Corman Construction, Inc.
Name of Firm

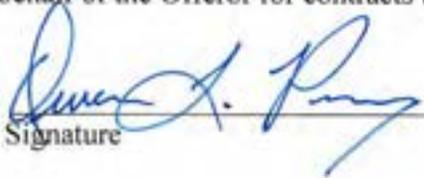
ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project: **Design-Build Project for** Route 29 Solutions
Contract ID: C00077383DB80

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

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



Signature

August 15, 2014

Date

Director, Transportation

Title

RK&K

Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

| Project: **Design-Build Project for** Route 29 Solutions
Contract ID: C00077383DB80

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

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

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

	8/15/14	Senior Vice President
Signature	Date	Title

Whitman, Requardt & Associates, LLP
Name of Firm

ATTACHMENT NO. 3.2.7(b)

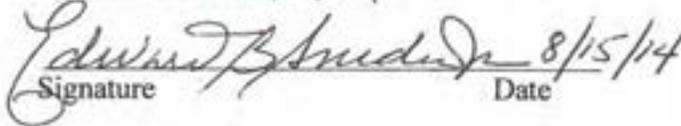
**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project: **Design-Build Project for** Route 29 Solutions
Contract ID: C00077383DB80

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

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

Edward B. Snider, Jr., P.E.


Signature _____ Date 8/15/14

President
Title

Rinker Design Associates, P.C.
Name of Firm

ATTACHMENT NO. 3.2.7(b)

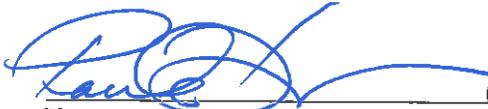
**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

| Project: Design-Build Project for Route 29 Solutions
Contract ID: C00077383DB80

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

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

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



Signature

08/19/14
Date

Senior Vice President
Title

Schnabel Engineering Consultants, Inc.
Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

| Project: Design-Build Project for Route 29 Solutions
Contract ID: C00077383DB80

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

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

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



Signature

8/15/2014

Date

President

Title

CES Consulting LLC

Name of Firm



Offeror's VDOT Prequalification Certificate

LANE

AND

 **CORMAN**
CONSTRUCTION

In association with:

RK&K

Fwd: New Joint Venture/"Lane/Corman JV"/Joint Venture Binding Agreement and Supporting Prequalification Documentation for Route 29 Solutions Design Build RFQ

From : Virginia S. Finley <VSFinley@laneconstruct.com>

Subject : Fwd: New Joint Venture/"Lane/Corman JV"/Joint Venture Binding Agreement and Supporting Prequalification Documentation for Route 29 Solutions Design Build RFQ

To : Judith A. Schneider <JASchneider@laneconstruct.com>, Mary E. Shoemaker <MEShoemaker@laneconstruct.com>, Pollard Angie <apollard@rkk.com>

Ginny Finley
Sent from my iPhone
703.772.6256

Begin forwarded message:

From: "Prequalification (VDOT)" <Prequalification@VDOT.Virginia.gov<mailto:Prequalification@VDOT.Virginia.gov>>
Date: August 6, 2014 at 10:47:49 AM EDT
To: "Virginia S. Finley" <VSFinley@laneconstruct.com<mailto:VSFinley@laneconstruct.com>>, "Prequalification (VDOT)" <Prequalification@VDOT.Virginia.gov<mailto:Prequalification@VDOT.Virginia.gov>>
Cc: "suzanne.lucas@VDOT.virginia.gov<mailto:suzanne.lucas@VDOT.virginia.gov>" <suzanne.lucas@VDOT.virginia.gov<mailto:suzanne.lucas@VDOT.virginia.gov>>, "Daoulas, John C., P.E." <John.Daoulas@VDOT.Virginia.gov<mailto:John.Daoulas@VDOT.Virginia.gov>>, "Roby, Jeffrey A., P.E." <Jeffrey.Roby@VDOT.Virginia.gov<mailto:Jeffrey.Roby@VDOT.Virginia.gov>>, "McDonough, Rich" <ramcdonough@laneconstruct.com<mailto:ramcdonough@laneconstruct.com>>, "Donald E. Bryson" <DEBryson@laneconstruct.com<mailto:DEBryson@laneconstruct.com>>, Louis Robbins <lrobbins@CormanConstruction.com<mailto:lrobbins@CormanConstruction.com>>, "jsines@cormanconstruction.com<mailto:jsines@cormanconstruction.com>" <jsines@cormanconstruction.com<mailto:jsines@cormanconstruction.com>>
Subject: RE: New Joint Venture/"Lane/Corman JV"/Joint Venture Binding Agreement and Supporting Prequalification Documentation for Route 29 Solutions Design Build RFQ

The Joint Venture # is JV067

Thank-you for your firm's inquiry.

Suzanne Lucas

State Prequalification Supervisor

Construction Division

Virginia Department of Transportation

1401 East Broad Street

Richmond, Virginia 23219

(804)-786-2941

Email: Prequalification@VDOT.Virginia.gov<mailto:Prequalification@VDOT.Virginia.gov>

Webpage: <http://www.virginia.gov/business/const/prequal.asp>

-----Original Message-----

From: Virginia S. Finley [mailto:VSFinley@laneconstruct.com]

Sent: Tuesday, August 05, 2014 11:29 AM

To: Prequalification (VDOT)

Cc: suzanne.lucas@VDOT.virginia.gov<mailto:suzanne.lucas@VDOT.virginia.gov>; Daoulas, John C., P.E. A., P.E. (VDOT); McDonough, Rich; Donald E. Bryson; Louis Robbins;

jsines@cormanconstruction.com<mailto:jsines@cormanconstruction.com>

Subject: Re: New Joint Venture/"Lane/Corman JV"/Joint Venture Binding Agreement and Supporting Prequalification Documentation for Route 29 Solutions Design Build RFQ

Great!

Thank you for status feedback, Suzanne.

Ginny Finley
The Lane Construction Corporation

Sent from my iPhone
703.772.6256

On Aug 5, 2014, at 10:47 AM, "Prequalification (VDOT)"

<Prequalification@VDOT.Virginia.gov<mailto:Prequalification@VDOT.Virginia.gov><mailto:Prequalifica wrote:

I received the hard copy today and will process by tomorrow.

Thank-you for your firm's inquiry.

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

Email:

Prequalification@VDOT.Virginia.gov<mailto:Prequalification@VDOT.Virginia.gov><mailto:Prequalificat
Webpage: <http://www.virginiadot.org/business/const/prequal.asp>

From: Virginia S. Finley [mailto:VSFinley@laneconstruct.com]
Sent: Friday, August 01, 2014 3:41 PM
To: Prequalification (VDOT);
suzanne.lucas@VDOT.virginia.gov<mailto:suzanne.lucas@VDOT.virginia.gov><mailto:suzanne.lucas@VDOT.v
Cc: Daoulas, John C., P.E. (VDOT); Roby, Jeffrey A., P.E. (VDOT); McDonough, Rich; Donald E. Bryson
jsines@cormanconstruction.com<mailto:jsines@cormanconstruction.com><mailto:jsines@cormanconstructi
Subject: New Joint Venture/"Lane/Corman JV"/Joint Venture Binding Agreement and Supporting Prequal
for Route 29 Solutions Design Build RFQ
Importance: High

ATT: VDOT Prequalification Office

Attached please find the Joint Venture Binding Agreement and Supporting Prequalification Documenta
application of a new Joint Venture pursuing the below procurement as stipulated in the:
VDOT Request for Qualifications
A Design-Build Project
Route 29 Solutions
Albemarle County, Virginia
State Project Nos.
US 29 Rio Road Grade Separated Intersection (0029-002-091) US 29 Widening (0029-002-135) Berkmar D
002-900) Federal Projects US 29 Rio Road Grade Separated Intersection US 29 Widening Contract ID N
AD DATE: July 24, 2014

Included in the supporting documentation are visible copies of the Driver's Licenses of the respec
representing the Joint Venture members. Additionally, I have included each of our firms' (Lane's a
SCC licensures as well each of our current VDOT Prequalification numbers.

**** The Prequalification Number to be issued for this Lane/Corman JV needs to be received by Augu
included in the Statement of Qualifications being submitted by this team to meet the August 28th d
how this Prequalification Number will be provided to our team.

Thank you,
Ginny

Virginia S. Finley | Business Development and Marketing The LANE Construction Corporation

14500 Avion Parkway, Suite 200 | Chantilly, VA 20151 | * 703.225.7609 | ***** 703.772
vsfinley@laneconstruct.com<mailto:vsfinley@laneconstruct.com><mailto:vsfi
| www.laneconstruct.com<<http://www.laneconstruct.com>><<http://www.laneconstruct.com/>>

Note:

This message is for the named person's use only. It may contain confidential, proprietary or lega
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error, please immediately delete it and all copies of it from your system, destroy any hard copie
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are not the intended recipient. LANE INDUSTRIES and any of its subsidiaries each reserve the right
communications through its networks.

Any views expressed in this message are those of the individual sender, except where the message s
sender is authorized to state them to be the views of any such entity.

TRANSPORT - E22
LSPPREQ

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
PREQUALIFIED VENDORS SORTED BY VENDOR NAME
THIS LIST INCLUDES ALL PREQUALIFIED LEVELS
AS OF 07/18/2014
- L -

07/18/2014
2:01 PM
PAGE 240

=====
L002
THE LANE CONSTRUCTION CORPORATION
PREQ. EXP : 06/30/2015

--PREQ ADDRESS -----	WORK CLASSES (LISTED BUT NOT LIMITED TO)
90 FIELDSTONE COURT	002 - GRADING
CHESHIRE, CT 06410-1212	003 - MAJOR STRUCTURES
PHONE : 203-235-3351	004 - ASPHALT CONCRETE PAVING
FAX : 203-237-4260	006 - PORTLAND CEMENT CONCRETE PAVING
	007 - MINOR STRUCTURES
	045 - UNDERGROUND UTILITIES

BUSINESS CONTACT: CAIOLA, VINCENT JAMES
EMAIL: VAPREQUAL@LANECONSTRUCT.COM

-----DBE INFORMATION-----

DBE TYPE : N/A
DBE CONTACT: N/A
=====

=====
C097
CORMAN CONSTRUCTION, INC.
PREQ. EXP : 03/31/2015

--PREQ ADDRESS ----- WORK CLASSES (LISTED BUT NOT LIMITED TO)
12001 GUILFORD ROAD 002 - GRADING
ANNAPOLIS, MD 20701-1201 003 - MAJOR STRUCTURES
PHONE : 301-953-0900 007 - MINOR STRUCTURES
FAX : 301-953-0384 045 - UNDERGROUND UTILITIES

BUSINESS CONTACT: PENA, KENNETH JOHN
EMAIL: BHULME@CORMANCONSTRUCTION.COM

-----DBE INFORMATION-----

DBE TYPE : N/A
DBE CONTACT: N/A

=====
C1140
CORMAN MARINE CONSTRUCTION, INC.
PREQ. EXP : 03/31/2015

--PREQ ADDRESS ----- WORK CLASSES (LISTED BUT NOT LIMITED TO)
12001 GUILFORD RD 030 - PILE DRIVING AND CAISSONS
ANNAPOLIS JUNCTION, MD 20701-1201 054 - MARINE CONSTRUCTION
PHONE : 301-953-0900 082 - SHORING AND SHEETING
FAX : 301-953-0384

BUSINESS CONTACT: HULME, BONNIE
EMAIL: BHULME@CORMANCONSTRUCTION.COM

-----DBE INFORMATION-----

DBE TYPE : N/A
DBE CONTACT: N/A



COMMONWEALTH OF VIRGINIA



CERTIFICATE OF QUALIFICATION

CORMAN CONSTRUCTION, INC.

Vendor Number: C097

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

PREQUALIFIED

Your firm specializes in the noted Classification(s):

GRADING; MAJOR STRUCTURES; MINOR STRUCTURES; UNDERGROUND UTILITIES

Issue Date: March 31, 2014

This Rating and Classification will Expire: March 31, 2015



Suzanne FR Lucas, State Prequalification Officer



Don E. Sillies, State Contract Officer

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



Surety Letter

LANE

AND

 **CORMAN**
CONSTRUCTION

In association with:

RK&K

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

August 18, 2014

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

RE: **LANE/Corman JV**
Request for Qualifications
DESIGN-BUILD PROJECT FOR ROUTE 29 SOLUTIONS, Albemarle County, Virginia
State Project Nos. US 29 Rio Road Grade Separated Intersection (0029-002-091),
US 29 Widening (0029-002-135), Berkmar Drive Extension (9999-002-900)
Federal Project Nos. US 29 Rio Road Grade Separated Intersection (NHPP-002-7(045)), US 29 Widening (STP-5104(166))
Contract ID Number: C00077383DB80; Estimated Value of Project: \$185,000,000.00

To Whom It May Concern:

This letter will serve to confirm that LANE/Corman JV is a highly regarded and valued client of the sureties, Zurich American Insurance Company (A.M. Best Financial Strength Rating of A+/Superior and Financial Size Category XV), Fidelity and Deposit Company of Maryland (A.M. Best Financial Strength Rating of A+/Superior and Financial Size Category XV) and Liberty Mutual Insurance Company (A.M. Best Financial Strength Rating of A/Excellent and Financial Size Category XV), the 'co-sureties'. Each surety company is licensed to conduct surety business in the Commonwealth of Virginia, and each surety company holds a Certificate of Authority as listed in the Department of the Treasury's Listing of Approved Sureties (Department Circular 570) dated July 1, 2014.

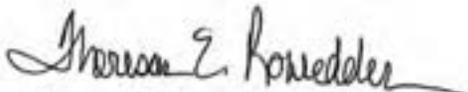
As the sureties for LANE/Corman JV, we advise that LANE/Corman JV is capable of obtaining 100% Performance Bond and 100% Labor and Materials Payment Bond in the amount of the anticipated cost of construction, and said bonds will cover the Project and any warranty periods as provided for in the Contract 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 JV and its co-sureties at the time a request for bonds is made. We assume no liability to third parties or to you by issuance of this letter, should bid or final bonds not be issued.

Should you need additional assurance regarding the technical ability or bonding capacity of LANE/Corman JV, please do not hesitate to contact this office.

Sincerely,

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



Theresan E. Rowedder
Attorney-in-Fact

All Risk Surety
One Tower at Street
23rd Floor
Boston MA 02110
(617) 621-1000

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

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Maryland, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Maryland (herein collectively called the "Companies"), by **THOMAS O. MCCLELLAN, 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 **Kevin A. WHITE, Mark P. HERENDEEN, Jean CORREIA, Maria CHAVES, Theresan E. ROWEDDER, Bryan HUFT, Jeffrey HENDRICKS 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 30th day of May, A.D. 2013.

ATTEST:

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



By: *Eric D. Barnes*
Assistant Secretary
Eric D. Barnes

Thomas O. McClellan
Vice President
Thomas O. McClellan

State of Maryland
City of Baltimore

On this 30th day of May, A.D. 2013, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **THOMAS O. MCCLELLAN, Vice President, and ERIC D. BARNES, Assistant 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 say, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

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

Maria D. Adamski

Maria D. Adamski, Notary Public
My Commission Expires: July 8, 2015



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

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

Certificate No. 6281567

American Fire and Casualty Company
The Ohio Casualty Insurance Company

Liberty Mutual Insurance Company
West American Insurance Company

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint Brian Driscoll; Bryan Huff; Jane Gilson; Jean Correia; Jeffrey Hendricks; Kevin A. White; Maria Chaves; Mark P. Herendeen; Theresan E. Rowedder

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 11th day of September 2013



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

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

STATE OF WASHINGTON ss
COUNTY OF KING

On this 11th day of September, 2013, before me personally appeared Gregory W. Davenport, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, 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 Seattle, Washington, on the day and year first above written.



By: KD Riley
KD Riley, Notary Public

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

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

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

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes Gregory W. Davenport, 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, David M. Carey, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 18th day of August, 2014.



By: David M. Carey
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.



DPOR and SCC Registrations

LANE

AND

 **CORMAN**
CONSTRUCTION

In association with:

RK&K

ATTACHMENT 3.2.10

DESIGN-BUILD PROJECT FOR ROUTE 29 SOLUTIONS, CONTRACT ID C00077383DB80

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	F025447-6	Foreign Corporation	Active	90 Fieldstone Court Cheshire, CT 06410	Class A Contractor Classifications BLD/HH	2701011871	01-31-2016
Corman Construction, Inc.	F046798-7	Foreign Corporation	Active	12001 Guilford Road Annapolis Junction, MD 20701	Class A Contractor Classifications H/H	2701014794	10-31-2015
Rummel, Klepper & Kahl, LLP (RK&K)	K000417-8	LLP	Active	2100 East Cary Street, Suite 309 Richmond, VA 23223	ENG	0411000271	02-29-2016
				2901 South Lynnhaven Road, Suite 300 Virginia Beach, VA 23452	ENG	0411000667	02-29-2016
				721 Lakefront Commons, Suite 203 Newport News, VA 23606	ENG	0411000443	02-29-2016
				10306 Eaton Place, Suite 240, Fairfax, VA 22030	ENG	0411000577	02-29-2016
				81 Mosher Street Baltimore, MD 21217	ENG	0407002860	12-31-2015
				900 Ridgefield Drive, Suite 350 Raleigh, NC 27609	ENG	0411001046	02-29-2016

ATTACHMENT 3.2.10

DESIGN-BUILD PROJECT FOR ROUTE 29 SOLUTIONS, CONTRACT ID C00077383DB80

SCC and DPOR Information

Whitman Requardt & Associates, LLP	K000382-4	LLP	Active	9030 Stony Point Pkwy, Suite 220 Richmond, VA 23235	ENG	0411000133	02-29-2016
				801 South Caroline Street Baltimore, MD 21231	ARC, ENG, LS, LA	0407001676	12-31-2015
Rinker Design Associates, PC	02270627	Corporation	Active	9385 Discovery Boulevard, Suite 200 Manassas, VA 20109	ENG, LS	0405000502	12-31-2015
				9385 Discovery Boulevard, Suite 200 Manassas, VA 20109	Real Estate Appraisal	4008001684	02-28-2015
				927 Maple Grove Drive Suite 105 Fredericksburg, VA 22407	ENG, LS	0410000156	02-29-2016
				927 Maple Grove Drive Suite 105 Fredericksburg, VA 22407	Real Estate Appraisal	4008001739	04-30-2016
Schnabel Engineering, Consultants, Inc.	07126741	Corporation	Active	West Cary Street Richmond, VA 23220	ENG	0411000700	02-29-2016
CES Consulting, LLC	S3416007	LLC	Active	13991 Virginia Cedar Court Gainesville, VA 20155	ENG	0407005783	12-31-2015

ATTACHMENT 3.2.10

DESIGN-BUILD PROJECT FOR ROUTE 29 SOLUTIONS, CONTRACT ID C00077383DB80

SCC and DPOR Information

DPOR INFORMATION FOR INDIVIDUALS (RFQ Sections 3.2.10.3 and 3.2.10.4)						
Business Name	Individual's Name	Office Location Where Professional Services will be Provided (City/State)	Individual's DPOR Address	DPOR Type	DPOR Registration Number	DPOR Expiration Date
Rummel, Klepper & Kahl, LLP (RK&K)	Owen Lee Peery, PE	Richmond, VA	2100 East Cary Street, Suite 309 Richmond, VA 23223	Professional Engineer	0402046882	10-31-2015
Rummel, Klepper & Kahl, LLP (RK&K)	Gary Sebastian Johnson, PE, DBIA	Richmond, VA	3808 Ivory Court Richmond, VA 23233	Professional Engineer	0402033863	09-30-2015
Rummel, Klepper & Kahl, LLP (RK&K)	Barry L. Brandt, PE	Fairfax, VA	554 Charington Drive Severna Park, MD 21146	Professional Engineer	0402048084	09-30-2014
Rinker Design Associates, PC	James M. Moore	Manassas, VA	3514 Delashmutt Drive, Haymarket, VA 20169	Certified Real Estate Appraiser	4001000502	02-29-2016
Schnabel Engineering Consultants, Inc.	James J. Seli, PE	Richmond, VA	10221 Uppingham Court Richmond, VA 23235	Professional Engineer	0402014957	07-31-2016
CES Consulting, LLC	Avtar Singh, PE	Gainsville, VA	13991 Virginia Cedar Court Gainesville, VA 20155	Professional Engineer	0402035169	01-31-2015



SCC Licenses

LANE

AND

 **CORMAN**
CONSTRUCTION

In association with:

RK&K

Commonwealth of Virginia



STATE CORPORATION COMMISSION

Richmond, July 24, 1972

This is to Certify, that The Lane Construction Corporation
a corporation organized under the laws of Connecticut
having complied with all the requirements of law, is
hereby authorized to transact business in the State of
Virginia in so far as not in conflict with and subject to
the laws of the State.

State Corporation Commission

Attest:

Jessie W. Brady

First Assistant *Clerk of the Commission*



SCC eFile > Entity Search > Entity Details Login | Create an Account



SCC eFile
Business Entity Details

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THE LANE CONSTRUCTION CORPORATION

SCC eFile

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Business Entities

DCC or Tax Liens

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Additional Services

General

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

Principal Office

90 FIELDSTONE COURT
CHESHIRE CT06410

Registered Agent/Registered Office

CT CORPORATION SYSTEM
4701 COX ROAD, SUITE 285
GLEN ALLEN VA 23060
HENRICO COUNTY 143
Status: Active
Effective Date: 01/01/2013

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Corman Construction, Inc.

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CORMAN CONSTRUCTION, INC.

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Business Entities

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Additional Services

General

SCC ID: F0467987
Entity Type: Foreign Corporation
Jurisdiction of Formation: DE
Date of Formation/Registration: 11/2/1984
Status: Active
Shares Authorized: 1000

Principal Office

12001 GULFORD ROAD
ANNAPOLIS JUNCTION MD20701

Registered Agent/Registered Office

CT CORPORATION SYSTEM
4701 COX ROAD, SUITE 285
GLEN ALLEN VA 23060
HENRICO COUNTY 143
Status: Active
Effective Date: 10/4/2013

Select an action

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Commonwealth of Virginia



State Corporation Commission

CERTIFICATE OF FACT

I Certify the Following from the Records of the Commission:

On September 25, 2001, a statement of registration as a foreign registered limited liability partnership was filed in this office by Rummel, Klepper & Kahl, LLP, a Maryland limited liability partnership.

This certificate of registration is in effect as of this date.

Nothing more is hereby certified.



*Signed and Sealed at Richmond on this Date:
January 24, 2013*

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

CIS0357

Commonwealth of Virginia



STATE CORPORATION COMMISSION

Richmond, March 24, 2006

This is to Certify that the statement of registration of

Rummel, Klepper & Kahl, LLP
(Date of registration - September 25, 2001)

a partnership registered as a limited liability partnership under the laws of MARYLAND, was admitted to record in this office and that the partnership is registered to transact business in Virginia as a foreign Registered Limited Liability Partnership, subject to all laws applicable to the partnership and its business.



State Corporation Commission

Attest:

Joel H. Peck
Clerk of the Commission



COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION

Office of the Clerk

June 23, 2014

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

RECEIPT

RE: RUMMEL, KLEPPER & KAHL, LLP

ID: K000417 - 8

DCN: 14-06-23-0501

Dear Customer:

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

The annual continuation report was filed on June 23, 2014.

If you have any questions, please call (804) 371-9733 or toll-free in Virginia, 1-866-722-2551.

Sincerely,

Joel H. Peck
Clerk of the Commission

GPACCEPT
CIS0313

P.O. Box 1197, Richmond, VA 23218-1197
Tyler Building, First Floor, 1300 East Main Street, Richmond, VA 23219-3630
Clerk's Office (804) 371-9733 or (866) 722-2551 (toll-free in Virginia) www.scc.virginia.gov/cik
Telecommunications Device for the Deaf-TDD/Voice: (804) 371-9206

Commonwealth of Virginia



State Corporation Commission

CERTIFICATE OF FACT

I Certify the Following from the Records of the Commission:

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

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

Nothing more is hereby certified.



*Signed and Sealed at Richmond on this Date:
June 24, 2014*

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

Commonwealth of Virginia



STATE CORPORATION COMMISSION

Richmond, August 10, 2000

This is to Certify that the statement of registration of

Whitman, Requardt & Associates, LLP

a limited liability partnership registered under the laws of MARYLAND; was this day admitted to record in this office and that the partnership is registered to transact business in Virginia as a foreign Registered Limited Liability Partnership, subject to all laws applicable to the partnership and its business.



State Corporation Commission

Attest:

Joel H. Beck

Clerk of the Commission



COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION

Office of the Clerk

June 4, 2014

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

RECEIPT

RE: WHITMAN, REQUARDT & ASSOCIATES, LLP
ID: K000382 - 4
DCN: 14-06-03-0592

Dear Customer:

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

The annual continuation report was filed on June 4, 2014.

If you have any questions, please call (804) 371-9733 or toll-free in Virginia, 1-866-722-2551.

Sincerely,

Joel H. Peck
Clerk of the Commission

GPACCEPT
CIS0363

P.O. Box 1197, Richmond, VA 23218-1197
Tyler Building, First Floor, 1300 East Main Street, Richmond, VA 23219-3630
Clerk's Office (804) 371-9733 or (866) 722-2551 (toll-free in Virginia) www.ecc.virginia.gov/clerk
Telecommunications Device for the Deaf-TDD/Voice: (804) 371-8206

Rinker Design Associates, PC (RDA)

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Business Entities
DCC or Tax Liens
Court Services
Additional Services

General

SCC ID: 02270627
Entity Type: Corporation
Jurisdiction of Formation: VA
Date of Formation/Registration: 2/24/1982
Status: Active
Shares Authorized: 20000

Principal Office

9385 DISCOVERY BOULEVARD
SUITE 200
MANASSAS VA20109

Registered Agent/Registered Office

JOHN S WISSACKAS
ODIN FELDMAN & PITTLEMAN PC
1775 WIEHLE AVENUE STE 400
RESTON VA 20190
FAIRFAX COUNTY 129
Status: Active
Effective Date: 8/27/2012

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Schnabel Engineering Consultants, Inc.

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Schnabel Engineering Consultants, Inc.

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Business Entities
DCC or Tax Liens
Court Services
Additional Services

General

SCC ID: 07126741
Entity Type: Corporation
Jurisdiction of Formation: VA
Date of Formation/Registration: 8/12/2009
Status: Active
Shares Authorized: 10000

Principal Office

9800 JEB STUART PARKWAY, STE 200
GLEN ALLEN VA23059

Registered Agent/Registered Office

CT CORPORATION SYSTEM
4701 COX ROAD, SUITE 285
GLEN ALLEN VA 23060
HENRICO COUNTY 143
Status: Active
Effective Date: 10/4/2013

Select an action

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Screen 101 of 11/100



Business Entity Details



CES Consulting, LLC

General

SCC ID: 53416007
Entity Type: Limited Liability Company
Jurisdiction of Formation: VA
Date of Formation/Registration: 10/14/2010
Status: Active

Principal Office

13991 VIRGINIA CEDAR COURT
GAINESVILLE VA20155

Registered Agent/Registered Office

AVTAR SINGH
13991 VIRGINIA CEDAR COURT
GAINESVILLE VA 20155
PRINCE WILLIAM COUNTY 176
Status: Active
Effective Date: 1/4/2013

Select an action

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

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Additional Services



DPOR Firm Licenses

LANE

AND

 **CORMAN**
CONSTRUCTION

In association with:

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LANE

**DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA**

9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

EXPIRES ON
01-31-2016

NUMBER
2701011871

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

**THE LANE CONSTRUCTION CORPORATION / SENATE
ASPHALT
VA PAVING COMPANY / VA SIGN AND LIGHTING
COMPANY
90 FIELDSTONE COURT
CHESHIRE, CT 06410**



Gordon N. Dixon
Gordon N. Dixon, Director

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Corman Construction, Inc.

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COMMONWEALTH OF VIRGINIA**

9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

EXPIRES ON
10-31-2015

NUMBER
2701014794

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

**CORMAN CONSTRUCTION INC
12001 GUILFORD RD
ANNAPOLIS JUNCTION , MD 20701-0160**



Gordon N. Dixon
Gordon N. Dixon, Director

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COMMONWEALTH OF VIRGINIA
9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

EXPIRES ON 02-28-2016

NUMBER 0411000271

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

PROFESSIONS: ENG

RUMMEL KLEPPER & KAHL LLP
RK&K
2100 EAST CHRYST
SUITE 309
RICHMOND, VA 23225



Nick A. Christian
Nick A. Christian, Interior Director

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Telephone: (804) 367-8500

EXPIRES ON 02-29-2016

NUMBER 0411000667

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

PROFESSIONS: ENG

RUMMEL KLEPPER & KAHL LLP
2901 S. LYNNHAVEN RD
SUITE 300
VIRGINIA BEACH, VA 23452



Nick A. Christian
Nick A. Christian, Interior Director

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Telephone: (804) 367-8500

EXPIRES ON 02-29-2016

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BUSINESS ENTITY BRANCH OFFICE REGISTRATION

PROFESSIONS: ENG

RUMMEL KLEPPER & KAHL LLP
RK & K
721 LAKEFRONT COMMONS
SUITE 203
NEWPORT NEWS, VA 23606



Nick A. Christian
Nick A. Christian, Interior Director

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EXPIRES ON: 02-29-2016

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Telephone: (804) 367-8500

NUMBER: 0411000577

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

PROFESSIONS: ENG

RUMMEL KLEPPER & KAHL LLP
RK&K
10306 EATON PL STE 240
FAIRFAX, VA 22030



Nick A. Christon
Nick A. Christon, Director

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EXPIRES ON: 12-31-2015

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NUMBER: 0407002860

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

PROFESSIONS: ENG

RUMMEL KLEPPER & KAHL LLP
81 MOSHER ST
BALTIMORE, MD 21217



Geordan N. Dixon
Geordan N. Dixon, Director

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NUMBER: 0411001046

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AND LANDSCAPE ARCHITECTS
BUSINESS ENTITY BRANCH OFFICE REGISTRATION

PROFESSIONS: ENG

RUMMEL KLEPPER & KAHL LLP
900 RIDGEFIELD DR STE 350
RALEIGH, NC 27609



Nick A. Christon
Nick A. Christon, Director

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PROFESSIONS: ENG

WHITMAN REQUARDT AND ASSOCIATES
9030 STONY POINT PKWY STE 220
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Gerden N. Dixon
Gerden N. Dixon, Director

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AND LANDSCAPE ARCHITECTS
BUSINESS ENTITY REGISTRATION

PROFESSIONS: ARC, ENG, LS, LA

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


Gerden N. Dixon
Gerden N. Dixon, Director

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AND LANDSCAPE ARCHITECTS
PROFESSIONAL CORPORATION REGISTRATION

PROFESSIONS: ENG, LS

RINKER DESIGN ASSOCIATES PC
9385 DISCOVERY BOULEVARD
SUITE 200
MANASSAS, VA 20109


Gerden N. Dixon
Gerden N. Dixon, Director

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4008 001684

REAL ESTATE APPRAISER BOARD
BUSINESS REGISTRATION

RINKER DESIGN ASSOCIATES PC
9385 DISCOVERY BOULEVARD SUITE 200
MANASSAS VA 20109



Gordon N. Dixon
Gordon N. Dixon, Director

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02-29-2016

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0410000156

BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS
PROFESSIONAL CORPORATION BRANCH OFFICE REGISTRATION
PROFESSIONS: ENG, LS

RINKER DESIGN ASSOCIATES PC
927 MAPLE GROVE DR STE 105
FREDERICKSBURG, VA 22407



Gordon N. Dixon
Gordon N. Dixon, Director

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Telephone: (804) 367-8500

EXPIRES ON
04-30-2016

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APPRAISAL BUSINESS REGISTRATION

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927 MAPLE GROVE DR STE 105
FREDERICKSBURG, VA 22407



Nick A. Christner
Nick A. Christner, Interim Director

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Schnabel Engineering Consultants, Inc.

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BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS AND LANDSCAPE ARCHITECTS BUSINESS ENTITY BRANCH OFFICE REGISTRATION		
PROFESSIONS: ENG		
SCHNABEL ENGINEERING CONSULTANTS, INC ONE CARY STREET RICHMOND, VA 23220		 <i>Nick A. Christner</i> Nick A. Christner, Interim Director
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CES Consulting, LLC

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BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS AND LANDSCAPE ARCHITECTS BUSINESS ENTITY REGISTRATION		
PROFESSIONS: ENG		
CES CONSULTING LLC 13991 VIRGINIA CEDAR COURT GAINESVILLE, VA 20155		 <i>Gordon N. Dixon</i> Gordon N. Dixon, Director
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DPOR Individual Licenses

LANE

AND

 **CORMAN**
CONSTRUCTION

In association with:

RK&K

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COMMONWEALTH OF VIRGINIA**
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Telephone: (804) 367-6500

EXPIRES ON
10-31-2015

NUMBER
0402046882

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

OWEN LEE PEERY
2100 EAST CARY STREET
SUITE 309
RICHMOND, VA 23223



Gordon N. Dixon
Gordon N. Dixon, Director

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Telephone: (804) 367-6500

EXPIRES ON
09-30-2015

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0402030863

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

GARY SEBASTIAN JOHNSON
3626 IVORY CT
RICHMOND, VA 23233



Gordon N. Dixon
Gordon N. Dixon, Director

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9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-6500

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0402048264

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

BARRY L BRANDT
554 CHARINGTON DR
SEVERNA PARK, MD 21146



Gordon N. Dixon
Gordon N. Dixon, Director

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Rinker Design Associates, PC



Schnabel Engineering Consultants, Inc.



CES Consulting, LLC





Attachment 3.3.1

Key Personnel Resumes

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CONSTRUCTION

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ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.				
a. Name & Title: Wallace Alphin, Senior Project Manager				
b. Project Assignment: Design Build Project Manager				
c. Name of Firm with which you are now associated: The Lane Construction Corporation				
<p>d. Years experience: With this Firm 6 Years With Other Firms 25 Years Please list chronologically (most recent experience 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 experience, please list the experience for those years you have worked. Project specific experience shall be included in Section (g) below):</p> <p>Senior Project Manager, The Lane Construction Corporation (2008–Present): Mr. Alphin has more than 31 years of construction experience in both highways and bridges. As DBPM, he has been responsible for overall design progress, construction, quality management, and contract administration for VDOT Design Build projects. He directs and leads construction projects to ensure all activities are completed on time, within budget, and in accordance with contract specifications. He ensures each project meets LANE and VDOT safety, financial, and environmental objectives. He manages and provides the necessary resources required for fast delivery of urban Design-Build projects. He addresses project issues, communicates design progress to owners, and adheres to project schedules. He regularly interacts with the Design Manager, Construction Managers, VDOT, and all other involved stakeholders (including adjacent projects) regarding the progress of design, construction, schedule, budget, QC and safety. He is responsible for field operations, means and methods of construction, project staffing, and safety. He directs project development with the designer, construction operations, budget reviews, estimating for bids, and change orders.</p> <p>Vice President of Land Development, Equity Homes, LLC (2003-2008): As VP of Land Development, Mr. Alphin oversaw the Land Development Departments in VA, MD and DE. He managed multiple design teams and consultants to obtain jurisdictional plan/plat approval; obtained bonding and permitting; issued proposal requests to vendors; analyzed bids; and issued subcontracts. He supervised construction and was responsible for project design, construction quality, and contract administration. He coordinated design and installation of project amenities, provided maintenance of common areas until release to Owners, and maintained budgets for all acquisition projects.</p> <p>Vice President of Engineering, APAC – Northern Virginia Division (1999-2003): Mr. Alphin was responsible for the complete oversight and management of the Division’s estimating, project management, and survey departments. He developed extensive knowledge in VDOT design and specification requirements, local Northern Virginia public facility regulations, and plan interpretation. He was responsible for all highway and site development projects; including estimating, contracts administration, subcontractor management, and resource allocation. Mr. Alphin’s completed projects include major arterial highways in congested urban areas where he was responsible for project design, quality management, and contract administration for construction.</p> <p>SUMMARY OF RELEVANT EXPERIENCE</p> <table border="0"> <tr> <td> <ul style="list-style-type: none"> ▪ 31 years experience ▪ VDOT D-B Projects ▪ DBPM experience on two of VDOT’s largest projects </td> <td> <ul style="list-style-type: none"> ▪ Successful, on-time delivery of projects ▪ Urban/Suburban interchange construction </td> <td> <ul style="list-style-type: none"> ▪ Complex maintenance of traffic ▪ Roadway widening and rehabilitation </td> </tr> </table>		<ul style="list-style-type: none"> ▪ 31 years experience ▪ VDOT D-B Projects ▪ DBPM experience on two of VDOT’s largest projects 	<ul style="list-style-type: none"> ▪ Successful, on-time delivery of projects ▪ Urban/Suburban interchange construction 	<ul style="list-style-type: none"> ▪ Complex maintenance of traffic ▪ Roadway widening and rehabilitation
<ul style="list-style-type: none"> ▪ 31 years experience ▪ VDOT D-B Projects ▪ DBPM experience on two of VDOT’s largest projects 	<ul style="list-style-type: none"> ▪ Successful, on-time delivery of projects ▪ Urban/Suburban interchange construction 	<ul style="list-style-type: none"> ▪ Complex maintenance of traffic ▪ Roadway widening and rehabilitation 		
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Virginia Polytechnic Institute and State University, Blacksburg, VA/BS/1983/Civil Engineering				
f. Active Registration: Year First Registered/ Discipline/VA Registration #: VDOT Erosion & Sediment Control Contractor Cert. (#1-04552); OSHA 10-Hour Certif. (#002413185)				
<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 specific responsibilities and authorities 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 at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)</p>				
VDOT I-95 Express Lanes, Fairfax, Prince William, Stafford Counties, VA (\$725M) (Design-Build)				
Name of Firm: The Lane Construction Corporation	Project Role: Deputy Project Director (DBPM)			
Beginning Date: 2012	End Date: 2014			
<p>I-95 Express Lanes constructs 29 miles of highway, thus creating a seamless, direct line to I-495. The Project adds capacity to the existing HOV Lanes and improves two existing HOV lanes for six miles. The 8.3-mile reversible two-lane extension of the heavily travelled HOV lanes helps to alleviate some of the worst traffic in the region. Mr. Alphin oversees all design and construction activities on this VDOT D-B \$725M project. He manages and directs project construction; and is in charge of cost, staffing, quality management, contract management, and scheduling for all field operations. The Project consists of similar elements, including structural bridge work, asphalt mill and overlay, widening, shoulder reconstruction, signing systems, and an 8.3-mile roadway</p>	<p>Relevance to the Project</p> <ul style="list-style-type: none"> ✓ Major VDOT DB Project ✓ Complex Bridge & Roadway Construction ✓ Construction of 8.3 mile extension ✓ Increase Traveler Safety ✓ Successful PR Program 			

extension (with major clearing, earthwork, and bridge flyovers). I-95 Express Lanes will help maintain travel speeds, make travel times more predictable, and increase safety. **Similar to the Route 29 Solutions project**, the I-95 Express Lanes includes fast track design and urban construction of roadways, bridges, and ramps with extensive MOT and Traffic Management Plans (TMP). Innovative design solutions and construction techniques that have been utilized will add to Route 29. His responsibilities included interaction with businesses, public outreach meetings, and meeting required DBE goal of 29%.

VDOT I-495 Express Lanes, Fairfax County, VA (\$1.5B) (Design-Build)

Name of Firm: The Lane Construction Corporation **Project Role:** Design Build Project Manager

Beginning Date: 2008 **End Date:** 2012

As a DBPM of the award-winning VDOT project, he was responsible for oversight of all design and construction activities in Area 4. Construction on the \$1.5B Design-Build project consisted of four new managed traffic lanes (two in each direction) on the inside existing lanes of the Capital Beltway, the reconstruction of ramps, urban interchanges, frontage roads, overpasses and underpasses, bridges, and other necessary crossings. Area 4 encompassed the final stage of the Springfield Interchange project and included four flyover bridges and three single and multi-span bridges connecting I-495 to I-95/I-395.

- Relevance to the Project**
- ✓ Innovative Design & Construction Solutions
 - ✓ Comprehensive Public Relations
 - ✓ Fast Paced Construction
 - ✓ Increased Mobility & Safety

Identical to the role of DBPM for Route 29 Solutions, he coordinated with the designer, oversaw and directed project construction and quality of all workmanship and materials. He was in charge of cost, staffing, and scheduling; prepared status reports; ensured plans adhered to contract specifications; and led and directed the work of others. Like Route 29 Solutions, I-495 Express Lanes had extensive MOT and TMP (Type C), complex design and construction of bridges and ramps requiring a comprehensive public communications campaign. Similar scope elements included: a fast paced construction schedule; a challenging work environment in a heavily travelled corridor; the construction of roadways, bridges, and structures; and regular coordination with adjacent projects to include the other 3 Areas of the I-495 Express lanes Project overall. The Project was completed one month early and received the CMAA 2013 Construction Management Award for Project Achievement; the 2013 ENR Best Project Award for Excellence in Safety; 2013 ENR Award of Merit for Highway/Bridge; and VDOT's Prime Contractor of the Year Award for Excellence in the DBE Program.

VDOT Route 234 Bypass, City of Manassas, VA (\$60M) (Design-Build)

Name of Firm: APAC Virginia **Project Role:** Vice President of Engineering

Beginning Date: 1999 **End Date:** 2002

Responsible for oversight of all construction activities on the \$60M Route 234 Bypass Infrastructure Improvement project, which ran from Balls Ford Road to the existing Route 234. Responsible for organizing and leading a inter-disciplinary team in developing and implementing project deliverables, with an emphasis on quality management, productivity, and consistency. Provided technical direction and management of personnel. Provided a framework for planning, communications, reporting, procedures, and contract administration.

- Relevance to the Project**
- ✓ Construction of Flyover Interchanges & Bridges
 - ✓ Increased Capacity & Mobility
 - ✓ Expansive Utilities Coordination

Similar to the Route 29 Solutions project, Route 234 Bypass included two flyover interchanges at Route 28 and nine additional bridges over Gateway Boulevard, the Norfolk-Southern Railroad, Route 28, and Lucasville Road. Also included in the scope of work was the relocation of a 24-inch sanitary main, a 24-inch water main, and the installation of a regional stormwater management facility. The Team had to excavate 3.4 million cubic yards of rock and soil to prepare for the construction of the four-lane divided highway.

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

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment.

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.				
a. Name & Title: Avtar Singh, PE, CCM, PMP, Associate DBIA – President				
b. Project Assignment: Qualilty Assurance Manager				
c. Name of Firm with which you are now associated: CES Consulting, LLC				
d. Years experience: With this Firm <u>3.7</u> Years With Other Firms <u>17</u> Years Please list chronologically (most recent experience 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 experience, please list the experience for those years you have worked. Project specific experience shall be included in Section (g) below): Consultant Project/Quality Manager – CES Consulting, LLC (Jan. 2011 - present): Tasked to oversee Quality management for bridge and highway projects per VDOT/FHWA guidelines. Works to ensure conformance with contract/intent, works with designer of record for review and approval; reviews/negotiates work orders and assists design engineers to expedite field changes. Coordinates traffic management with adjacent projects/TOC to ensure miminal disruptions. Reviews baseline schedules and ensure final project quality / closeout. Responsible for quality inspection documentation, correct payments and handling all stakeholder concerns. Manages QA staff of up to 2 managers and 40 inspectors. Area Construction Engineer (ACE) – Virginia Department of Transportation (Jan. 2005 - Dec. 2010): As VDOT ACE, managed over 28 road and bridge construction projects with a total value of \$230 million. As the Responsible Charge Engineer, he managed Quality Assurance staff of two construction managers and over 35 inspectors with up to eight concurrent projects. Responsible for managing/mentoring Quality Assurance staff, providing schedule analysis and claims reviews, providing technical expertise for field/design issues on ongoing projects and upcoming planned projects. Responsible for public outreach through seminars, public speaking engagements and multiple political representatives. Project Construction Quality Engineer – NXL Construction Services (Aug. 2004 - Dec. 2004): As consultant Project Construction Engineer, worked exclusively to manage quality assurance of VDOT bridge and highway projects throughout the Commonwealth as assigned. Provided day to day quality management/inspection of bridge and roadway projects, documentation of work and final project closeouts. Project Engineer – NXL Construction Services (Aug. 199 - Dec. 2004): Provided quality assurance inspection for VDOT road and bridge projects throughout the Commonwealth. Responsible for project documentation, field inspection, materials testing and resolve field change issues. SUMMARY OF RELEVANT EXPERIENCE <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; border: none;"> <ul style="list-style-type: none"> ▪ Expertise in challenging projects </td> <td style="width: 33%; border: none;"> <ul style="list-style-type: none"> ▪ Concurrent Project Management </td> <td style="width: 33%; border: none;"> <ul style="list-style-type: none"> ▪ Thorough Knowledge of VDOT/FHWA Standards </td> </tr> </table>		<ul style="list-style-type: none"> ▪ Expertise in challenging projects 	<ul style="list-style-type: none"> ▪ Concurrent Project Management 	<ul style="list-style-type: none"> ▪ Thorough Knowledge of VDOT/FHWA Standards
<ul style="list-style-type: none"> ▪ Expertise in challenging projects 	<ul style="list-style-type: none"> ▪ Concurrent Project Management 	<ul style="list-style-type: none"> ▪ Thorough Knowledge of VDOT/FHWA Standards 		
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: George Washington University, District of Columbia - Certificate in Management/2009/Project Management Queen’s University, Kingston, Canada - M.Sc./1994/Structural Engineering Queen’s University, Kingston, Canada - B.Sc./1992/Civil Engineering				
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 2011/Professional Engineer/VA (#0402035169); Also registered in MD and DC				
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 specific responsibilities and authorities 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 at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)				
VDOT I-95 Widening Project, Dumfries, VA (\$42M)				
Name of Firm: CES Consulting, LLC	Project Role: Quality Manager			
Beginning Date: March 2013	End Date: March 2015			

<p>Quality Manager on this \$42 million 7 mile long I-95 widening project. This project has included roadway widening, installation of drainage pipes, extensive ITS/TMS work, overhead signs and extensive coordination with concurrent Express Lanes construction in the same project footprint. This project has required a corridor wide (from I-95 in Alexandria to Spotsylvania) Traffic Management System for all lane closures, incident management and teamwork to minimize inconveniences to motorists during construction. Responsible for project quality management of 1 VDOT CM and 9 CEI Staff, oversight of all testing, documentation and payment of work on site, working with FHWA/Design Engineer/Contractor to resolve field construction issues. Enforces VDOT specifications/standards and ensuring that all Non Conforming Work is properly documented, remediated and closed out.</p>		<p>Relevance to the Project</p> <ul style="list-style-type: none"> ✓ Roadway Widening ✓ Extensive MOT operations ✓ Compressed schedule
VDOT I-66 HOV Widening from 234 Business to 234 Bypass, Manassas, VA (\$40M+)		
Name of Firm: CES Consulting, LLC		Project Role: Responsible Charge Engineer
Beginning Date: March 2005		End Date: August 2006
<p>Responsible Charge Engineer (on site) for widening of 3 miles of I-66 with extensive MOT traffic shifts, deep box culverts, extensive shoring, drainage and TMS work. Managed a staff of 15 QA inspectors; served as technical source for field and design issues, oversight of all testing, documentation and payment of work on site. Coordinate/meet with design engineers to seamlessly integrate plans for future tie-in projects to current project. Apply lessons learned to future proposed projects; designed plan MOT sequencing for next project was changed based on lessons learned. Enforce VDOT specifications/standards and ensuring that all Non Conforming Work is properly documented, remediated and closed out. Extensive MOT coordination.</p>		<p>Relevance to the Project</p> <ul style="list-style-type: none"> ✓ Concurrent projects ✓ Extensive materials testing ✓ Apply lessons learned
VDOT I-66 HOV Widening from 234 Bypass to Route 29, Gainesville, VA (\$103M)		
Name of Firm: VDOT		Project Role: Responsible Charge Engineer
Beginning Date: June 2006		End Date: Sept. 2009
<p>Responsible Charge Engineer (on site) for widening of 2.8 miles of I-66 (2 new lanes each direction) and construction of 5 new bridges along with storm sewer, jack/bore, waterline, lighting and TMS work. Project was completed on time/on budget while reconstructing three new bridges slated for retrofit only. Managed \$14.6 million Quality Assurance / Control budget and staff of over 20 managers/inspectors; served as technical source for field and design issues; partnered with the contractor to accelerate work, review and negotiate change orders to build new bridges and work with design engineers to expedite design (construction was allowed to proceed prior to full design plans as part of partnering approach between contractor, owner and designer); schedule analysis and review and final project closeout. There were no claims on the project and project success was attributed to complete trust between the contractor/owner aspiring to the same goals of successful project delivery. Extensive public outreach with local HOAs, shopping centers, local hospitals, school board and schools, PWC parks and local civic organizations (Lions Clubs, town mayors, Rotary Club, scouts, etc.).</p>		<p>Relevance to the Project</p> <ul style="list-style-type: none"> ✓ Complex interchange ✓ Extensive technical issues ✓ Added scope/Same duration
VDOT University Boulevard Overpass, Gainesville, VA (\$18M)		
Name of Firm: VDOT		Project Role: Responsible Charge Engineer
Beginning Date: June 2007		End Date: June 2009
<p>Responsible Charge Engineer for construction of \$18 million of steel girder bridge and 1.3 miles of roadway over I-66. Bridge construction and approach roadway was built on new alignment. Responsible for day to day to project management Quality Control/assurance staff of 1 VDOT CM and 5 construction inspectors. Worked with contractor to expedite design reviews, reviewed contractor schedules and worked to expedite work as possible. Used extensive but convenient detours to allow installation of steel girders over I-66 to ensure public safety and project staff safety.</p>		<p>Relevance to the Project</p> <ul style="list-style-type: none"> ✓ Greenfield construction ✓ Bridge construction ✓ Extensive earthwork
VDOT Route 234 Widening Project (Dumfries and Manassas), Prince William County, VA (\$37M)		
Name of Firm: VDOT		Project Role: Responsible Charge Engineer
Beginning Date: June 2005		End Date: July 2007
<p>Responsible Charge Engineer for construction of \$37 million project to widen 6.9 miles of Route 234 (primary road) from 2 lanes to 4 lanes with turning lanes, extensive drainage, waterline and sewer line work. Roadway widening included use of CTA, extensive undercut, lime stabilization and cut to fill earthwork. Managed quality assurance staff of two VDOT CMs, 15 inspection/office staff and worked to ensure that all field issues were resolved without impact to schedule and budget. Worked extensively with supervisors offices/multiple HOAs to provide outreach on upcoming work and lane closures.</p>		<p>Relevance to the Project</p> <ul style="list-style-type: none"> ✓ Roadway widening ✓ Stakeholder concerns ✓ Schedule acceleration
<p>* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.</p>		
<p>h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment.</p>		
<p>Assignment: I-95 Widening Role: Quality Manager Duration of Assignment: March 2015 (completion)</p>		

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.				
a. Name & Title: Owen L. Peery, PE – Director, Transportation				
b. Project Assignment: Design Manager				
c. Name of Firm with which you are now associated: RK&K				
d. Years experience: With this Firm <u>26</u> Years With Other Firms <u>5</u> Years Please list chronologically (most recent experience 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 experience, please list the experience for those years you have worked. Project specific experience shall be included in Section (g) below): Director, Transportation, RK&K (1999 – Present): Mr. Peery leads RK&K’s transportation efforts throughout Virginia and has been the project manager and/or the lead project engineer for a large number of transportation and civil engineering projects. His responsibilities include management of in-house engineering and administrative staff, client and owner/agency coordination, the direction of design by in-house staff and subconsultant personnel, public interaction including public hearings and workshops, and the management of budgets and schedules. Mr. Peery’s specific design experience includes the layout and design of urban and rural interstates, roadways, streets, interchanges, at-grade intersections, civil-site plan coordination and design, drainage and stormwater design, erosion and sediment control quantities, estimates and specifications. His specialized experience is in the design of urban and freeway, interstate facilities and the extensive inter-agency, stakeholder, utility and owner coordination required with urban improvements. He has also been RK&K’s Design Manager on several design-build projects and assisted VDOT preparing Design-Build and P3 contract documents. The majority of his work has been widening and rehabilitation of existing facilities. Mr. Peery has managed approximately 150 VDOT projects or assignments over the past 15 years. Additionally, he was a former member of the Engineering Consultant Leadership Committee (ECLC) of the VTCA.				
SUMMARY OF RELEVANT EXPERIENCE <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; border: none;"> <ul style="list-style-type: none"> ■ 31 years of transportation experience ■ 24 years of design management experience ■ Design Manager for Major VDOT Design-Build Projects ■ Public Outreach Management </td> <td style="width: 33%; border: none;"> <ul style="list-style-type: none"> ■ Over 150 VDOT projects ■ Urban / Suburban interchange design ■ Roadway widening and rehabilitation ■ Roadway on new alignment </td> <td style="width: 33%; border: none;"> <ul style="list-style-type: none"> ■ Complex maintenance of traffic ■ Coordinates multidisciplinary engineering teams and services ■ Expertise in roadway improvement projects ■ Safety improvement projects </td> </tr> </table>		<ul style="list-style-type: none"> ■ 31 years of transportation experience ■ 24 years of design management experience ■ Design Manager for Major VDOT Design-Build Projects ■ Public Outreach Management 	<ul style="list-style-type: none"> ■ Over 150 VDOT projects ■ Urban / Suburban interchange design ■ Roadway widening and rehabilitation ■ Roadway on new alignment 	<ul style="list-style-type: none"> ■ Complex maintenance of traffic ■ Coordinates multidisciplinary engineering teams and services ■ Expertise in roadway improvement projects ■ Safety improvement projects
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e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Virginia Military Institute, Lexington, VA - BS/1983/Civil Engineering				
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 2009/Professional Engineer/VA (#0402 046882);1994/Professional Engineer/MD/(#20474)				
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your specific responsibilities and authorities 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 at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)				
VDOT I-64 Widening & Route 623 Interchange Improvements, Goochland and Henrico Counties, VA (\$33M) (Design-Build)				
Name of Firm: RK&K	Project Role: Design Manager			
Beginning Date: Oct. 2013	End Date: est. Fall 2015 (design approval/NTP Aug. 2014)			
This D-B project involves the widening of I-64 from a four-lane divided freeway, to a six-lane divided freeway and improvements to the I-64/Route 623 Interchange. The project begins at approximately 0.99 Miles West of Route 623 and ends approx. 0.38 Miles West of Route 271. The project length is approximately 4.52 miles. The additional through lanes will be constructed to the inside of I-64 in both directions. The interchange improvements will include upgrading the existing traffic signal, widening the I-64 westbound ramp to Route 623 to provide an additional turn lane, adding a left turn lane on Route 623 southbound to I-64 eastbound, and widening the I-64 eastbound off ramp to Route 623 to provide an additional turn lane. Mr. Peery, as Design Manager, was responsible for coordinating all design disciplines, including subconsultants, and ensuring the overall project design was in conformance with the contract. He was also responsible for overseeing the design QA/QC program.	Relevance to the Project ✓ <i>Design Manager on Major Interstate D-B Project</i> ✓ <i>Managed Large Multi-discipline team</i> ✓ <i>Fast-track Design</i>			

Route 250 Bypass Interchange at McIntire Road, Charlottesville, VA (\$30M)	
Name of Firm: RK&K	Project Role: Design Project Manager
Beginning Date: March 2006	End Date: November 2012
Design Project Manager responsible for overall design including planning, environmental documentation, preliminary engineering, final engineering public outreach and coordination between federal, state and local. This project was one of the largest in VA under VDOT's First Cities (LAP) Initiative with VDOT and FHWA oversight. Work has included roadway design; interchange layout and design; bridge design; environmental studies; traffic data collection and analysis; drainage design, stormwater management and hydraulics, and landscape and hardscape design. The initial phase of the project was the preparation of NEPA documentation to secure the appropriate level of environmental documentation for the proposed improvements. This included performing extensive interchange alternatives analysis to avoid and minimize impacts to 4(f) and Section 106 properties. Mr. Peery, in conjunction with the City's project manager, led a City Council-selected Steering Committee through this process which included the analysis of 14 interchange alternatives, including roundabout alternatives. Public outreach has been so critical to this process that, under Mr. Peery's direction, RK&K is maintaining a project web site that contains all project information, is linked to the City and VDOT web sites, and is updated nearly real-time providing information and updates to the community.	Relevance to the Project <ul style="list-style-type: none"> ✓ <i>Urban/Suburban Interchange on Primary Arterial</i> ✓ <i>Replaced At-Grade Intersection</i> ✓ <i>Complex MOT</i> ✓ <i>Extensive Public Outreach</i>
VDOT I-81 Exit 14, Abington, VA (\$34M)	
Name of Firm: RK&K	Project Role: Design Manager
Beginning Date: Aug. 2011	End Date: June 2015
Mr. Peery, as Design Project Manager, is responsible for all aspects of the planning, development and design on this project. He was also responsible for overseeing the design QA/QC program. The improvements are being developed as a phased contract and will reconfigure the intersection to improve traffic operations and will also realign the mainline of I-81 for approximately one mile on each side of the interchange. Additional improvements include raising the grade on I-18 to provide additional vertical clearance over Jonesboro Road, the realignment of Dennison Drive and the widening of Jonesboro Road through the interchange. As part of Phase 1 services, RK&K performed the traffic analysis, developed the IJR and developed conceptual interchange designs. Following selection of a recommended alternative, RK&K developed the roadway, TMP/MOT, traffic engineering, drainage and stormwater designs to public hearing stage. Mr. Peery leads this multi-discipline team which is now providing Phase 2 services to refine the following design elements: roadway, drainage, stormwater, sign, signal, pavement markings, detailed TMP, Work Zone Traffic Impact Analysis, Right of Way Only plans, special design retaining wall, construction schedule, contract time determination report, quantities/summaries and TRNS.PORT estimate.	Relevance to the Project <ul style="list-style-type: none"> ✓ <i>VDOT project</i> ✓ <i>Reconstruction of Urban Freeway Interchange</i> ✓ <i>Complex MOT</i>
VDOT Route 11 Widening (West Main Street), Roanoke County, VA (\$30M)	
Name of Firm: RK&K	Project Role: Design Manager
Beginning Date: May 2006	End Date: Oct. 2013
Design Manager responsible for preliminary and final plans that included 2.2 miles of Route 11 widening 3-lanes to 6-lanes with a single span bridge. He led the overall design and coordination of project, including the design QA/QC program. Oversaw all design and subconsultant activities to include all roadway and associated designs on this urban collector. Work included roadway design, updating plans, hydraulics and drainage design, stormwater management, erosion control, river mechanics and scour, traffic data and analysis, roundabout design, signal design, TMP and MOT plans, quantities, internal QC reviews and estimates.	Relevance to the Project <ul style="list-style-type: none"> ✓ <i>Widening Urban/Suburban Primary Arterial</i> ✓ <i>Complex MOT and</i> ✓ <i>Extensive Coordination with Utilities and First Responders</i>
VDOT Route 29/250 Interchange (Best Buy Ramp), City of Charlottesville, VA (\$13M)	
Name of Firm: RK&K	Project Role: Design Manager
Beginning Date: Sept. 2011	End Date: Nov. 2014
The primary purpose of this VDOT project is to improve traffic operations and reduce delays along southbound U.S 29 (Emmet Street) and westbound U.S. 250 Bypass. The proposed improvements the addition of one southbound lane along U.S 29 by widening in the median and an additional lane along the westbound entrance ramp onto the U.S. 250 Bypass by widening to the outside of the existing ramp. As part of the environmental review a preliminary noise study has been performed and potential locations for noise barriers have been identified along the eastbound and westbound lanes of the U.S. 250 Bypass between Route 29 and Barracks Road. Mr. Peery, as Design Manager, was responsible for coordinating all design disciplines, including subconsultants, and ensuring the overall project design was in conformance with the contract. He was also responsible for overseeing the design QA/QC program. * On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.	Relevance to the Project <ul style="list-style-type: none"> ✓ <i>Extensive Work with Regional Traffic Model</i> ✓ <i>Route 29 Widening and Signal Improvements</i> ✓ <i>Route 29 Corridor Coordination</i>
h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment.	

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.				
a. Name & Title: Barry M. Bernstein, Project Manager				
b. Project Assignment: Construction Manager				
c. Name of Firm with which you are now associated: The Lane Construction Corporation				
d. Years experience: With this Firm <u>30</u> Years With Other Firms <u>0</u> Years Please list chronologically (most recent experience 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 experience, please list the experience for those years you have worked. Project specific experience shall be included in Section (g) below): Project Manager, The Lane Construction Corporation (1999 – Present) Mr. Bernstein has more than 30 years of experience in the construction industry and is responsible for managing project construction efforts including quality control activities. His responsibilities include overseeing daily construction, managing subcontractors, coordinating with the QAM, and ensuring all materials used and work performed are in compliance with specifications. He is responsible for project cost, staffing, subcontractors and scheduling. He has served as Project Manager and Construction Manager on several D-B projects in Northern Virginia and the greater Washington, DC metro area. He is familiar with VDOT projects, including bridge and roadway construction, utility relocations, shared-use paths, maintenance of traffic methods & regulations, signage and lighting, retaining walls, and other heavy civil construction elements. SUMMARY OF RELEVANT EXPERIENCE <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> <ul style="list-style-type: none"> ▪ 30 years experience ▪ Highway, Bridge & Structures ▪ Full time, onsite Construction Manager of VDOT D-B Projects </td> <td style="width: 33%; vertical-align: top;"> <ul style="list-style-type: none"> ▪ Expert in roadway widening & rehabilitation ▪ Expert in urban roadway improvement projects </td> <td style="width: 33%; vertical-align: top;"> <ul style="list-style-type: none"> ▪ Expert in complex interchange construction ▪ DEQ RLD Certified ▪ VDOT ESCCC Certified </td> </tr> </table>		<ul style="list-style-type: none"> ▪ 30 years experience ▪ Highway, Bridge & Structures ▪ Full time, onsite Construction Manager of VDOT D-B Projects 	<ul style="list-style-type: none"> ▪ Expert in roadway widening & rehabilitation ▪ Expert in urban roadway improvement projects 	<ul style="list-style-type: none"> ▪ Expert in complex interchange construction ▪ DEQ RLD Certified ▪ VDOT ESCCC Certified
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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 specific responsibilities and authorities 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 at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)				
VDOT I-95 Express Lanes, Fairfax, Prince William, and Stafford Counties, VA (\$725M) (Design-Build)				
Name of Firm: The Lane Construction Corporation	Project Role: Construction Manager			
Beginning Date: 2012	End Date: 2014			
I-95 Express Lanes DB includes an 8.3-mile roadway extension 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) includes 7 new bridges, 3 bridge rehabilitations, sound walls, guard rails, earthwork, asphalt paving, overhead sign structures, and miles of conduit and cable. SWM and environmental concerns were a challenge and included the successfully completed Swan’s Creek Revitalization. Mr. Bernstein has played an active role in the PR communications plan and public outreach, also a key element to Route 29 success. This project is 85% completed/scheduled for early delivery. His responsibilities on this project have been the same as those assigned for this role on the Route 29 Solutions project including verification that all work meets contract requirements and “approved for construction” plans and specs. As Construction Manager for Area 1, he has been responsible for coordination and scheduling of subcontractors, design coordination and constructability review, oversight of crew and work conditions, VDOT coordination, safety and equipment, contract compliance, and costing. He is onsite full time on this Project through construction completion. He coordinates with Lead Designer for constructability reviews of numerous design packages and manages Project construction. He holds specific authorities to immediately halt any and or all portions of	Relevance to the Project <ul style="list-style-type: none"> ✓ <i>Innovative design and construction techniques</i> ✓ <i>Successful public communications</i> ✓ <i>Extensive MOT/TMP in congested corridor</i> ✓ <i>DBE requirements currently exceeded by 35%</i> 			

work deemed necessary, negotiate with VDOT regarding changes to the scope of work and other matters, subcontractor management and personnel changes. The Project requires extensive coordination with 3rd parties, including utilities, railroads, and several government agencies. This Project, located in one of the most congested corridors in the country, has also involved extensive MOT measures, which Mr. Bernstein has managed for Area 1 in coordination with his counterparts on adjacent projects. Substantial completion is set for December 2014; he is ready to fill the role of CM for Route 29 Solutions.

VDOT Sudley Manor/Linton Hall Road, Prince William County, VA (\$25.4M) (Design-Build)

Name of Firm: The Lane Construction Corporation	Project Role: Construction Manager
Beginning Date: 2005	End Date: 2007

Mr. Bernstein managed the construction process for the \$25.4M Sudley Manor Linton Hall D-B for LANE contracted portions. Elements of the Project included roadway construction and widening; construction of intersection, an extension to an existing roadway, and asphalt paving/milling. Relocation and installation of utilities; bridges and structures over significant challenges, environmental, landscaping, drainage, grading, construction management, and engineering functions; earthwork, SWM, storm drain, water and sanitary sewer, and underdrain were all factors.

- Relevance to the Project**
- ✓ VDOT Design Build
 - ✓ Roadway & Bridge
 - ✓ Construction & widening
 - ✓ Complex Utilities relocation

Mr. Bernstein was responsible for planning, directing, and coordination of all construction activities, including project budget control and management of all subs. He directed and managed project development and coordinated with the Lead Designer for all engineering and construction matters including constructability reviews. He reviewed project status reports and worked to ensure all designs adhered to contract specifications. He defined scope, goals, and deliverables and estimated resources (manpower and materials) needed to achieve project goals. As Construction Manager, he was in charge of the overall project and weekly scheduling, means and methods of construction, and coordination with PWC, VDOT and adjacent projects. During the project, Mr. Bernstein oversaw completion of single span steel girder twin bridges over existing Norfolk Southern Railroad and four mechanically stabilized earth (MSE) retaining walls.

MSHA Arena Drive Interchange, Prince Georges County, MD (\$29.3M) (Design-Build)

Name of Firm: The Lane Construction Corporation	Project Role: Construction Manager
Beginning Date: 2007	End Date: 2010

This \$29.3M project involved widening I-495/95 at Arena Drive to Glenarden Pkwy overpass and was designed to fill in two miles of median with new lane and median shoulders in each direction. Arena Drive Interchange required widening of two existing ramps and closure of three existing loop ramps. Similar to US 29 Widening and Berkmar Drive Extension Elements, the project included roadway widening, bridge and ramp structures, comprehensive MOT, asphalt paving and milling, TMP and traffic control devices, QA/QC, safety, 3rd party coordination, engineering inspections, and construction project management.

- Relevance to the Project**
- ✓ Roadway widening
 - ✓ D-B in congested urban corridor
 - ✓ Limited impacts to travelling public
 - ✓ Project provided increased safety

On-site for the duration of construction, Mr. Bernstein's role was identical to his proposed role on Route 29 Solutions. He had overall responsibility for planning, directing, and coordination of project budget, construction, scheduling and coordination of subcontractors. He directed, managed project progress, and coordinated with Lead Designer including constructability reviews. He held specific authorities to immediately halt any and or all portions of work deemed necessary, negotiate on LANE's behalf with MSHA regarding changes to the scope of work and other matters, subcontractor management and personnel changes.

WMATA Blue Line Extension to Largo, Largo, MD (\$246M) (Design-Build)

Name of Firm: The Lane Construction Corporation	Project Role: Construction Manager
Beginning Date: 2002	End Date: 2004

The construction of the Largo Line consisted of double box cut and cover structure along with more than 10,000 feet of retained cut structure and multiple span viaduct aerial structures connecting with the approaches to the two new in-line stations at Morgan and Largo Center. Similar to the Rio Road Extension Project Element, support of excavation (SOE) was a major project component for the Blue Line Extension project. The SOE for the cut and cover section required 64,000 lineal feet of soldier piles, 10,000 feet of cut and cover tunnel, more than 454,000 square feet of wood lagging and 124,000 square feet of steel sheeting.

- Relevance to the Project**
- ✓ Significant Bridge Structures
 - ✓ Comprehensive PR
 - ✓ Busy Urban Corridor
 - ✓ Innovative Design
 - ✓ Extensive MOT, TMP

Mr. Bernstein's role was identical to his proposed role on Route 29 Solutions. He was responsible for planning, directing, and coordinating the project budget and construction. He managed the project schedule and coordination of subcontractors, as well as oversight of schedule. He held specific authorities to immediately halt any and/or all portions of work deemed necessary, negotiate on LANE's behalf with the owner regarding changes to the scope of work and other matters, subcontractor management and personnel changes. Mr. Bernstein was on site full time for the duration of construction operations and was responsible for managing the construction process, including QC activities for materials and work to meet "approved for construction" plans and specifications.

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

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment.

Assignment: I-95 Express Lanes | Role: Construction Manager | Duration of Assignment: December 2014 (completion)

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.				
a. Name & Title: Gary S. Johnson, PE, DBIA – Director of Structures and Director of Design Build				
b. Project Assignment: Lead Structural Engineer				
c. Name of Firm with which you are now associated: RK&K				
d. Years experience: With this Firm <u>4</u> Years With Other Firms <u>17</u> Years Please list chronologically (most recent experience 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 experience, please list the experience for those years you have worked. Project specific experience shall be included in Section (g) below): Director of Structures and Director of Design Build – RK&K (Sept. 2010-present): As the Director of Structures and the Director of Design Build, Mr. Johnson is responsible for all bridge design and design-build projects in Virginia. He has more than 20 years of project management, design and construction inspection experience in structures, roadways, and mass transit stations. His extensive project management experience, formal training (MBA) and hands-on participation in inspection (NBIS), design and construction engineering assignments afford him in-depth knowledge of project requirements. Additionally, his experience with design-build projects has developed his full understanding of the implementation of bridge plans and projects through construction. He is a former member of the VTCA Engineering Consultant Leadership Committee and a current member of the VTCA/VDOT Design-Build Committee. Mid-Atlantic Unit Manager – T.Y. Lin International (May 2005-Sept. 2010): Project Manager and Lead Structural Engineer for dozens of bridge projects. Oversaw staff of 20 structural engineers. Served as Engineer of Record on bridge replacement projects. Served as Principal in Charge for design-build projects in Virginia, North Carolina and Washington DC. Director of Virginia Operations – Ammann & Whitney (June 1999-May 2005): Project Manager and Lead Structural Engineer for projects throughout Massachusetts, Pennsylvania and Virginia. Served as Engineer of Record on bridge replacement and rehabilitation projects. Focused on rehabilitation of bridges damaged from over height loads and emergency response. SUMMARY OF RELEVANT EXPERIENCE <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> <ul style="list-style-type: none"> ▪ 20 years of transportation experience ▪ 20 years of bridge design experience </td> <td style="width: 33%; vertical-align: top;"> <ul style="list-style-type: none"> ▪ Masters in Business (MBA) ▪ DBIA Professional </td> <td style="width: 33%; vertical-align: top;"> <ul style="list-style-type: none"> ▪ Coordinates multidisciplinary engineering services ▪ Expertise in roadway improvements projects </td> </tr> </table>		<ul style="list-style-type: none"> ▪ 20 years of transportation experience ▪ 20 years of bridge design experience 	<ul style="list-style-type: none"> ▪ Masters in Business (MBA) ▪ DBIA Professional 	<ul style="list-style-type: none"> ▪ Coordinates multidisciplinary engineering services ▪ Expertise in roadway improvements projects
<ul style="list-style-type: none"> ▪ 20 years of transportation experience ▪ 20 years of bridge design experience 	<ul style="list-style-type: none"> ▪ Masters in Business (MBA) ▪ DBIA Professional 	<ul style="list-style-type: none"> ▪ Coordinates multidisciplinary engineering services ▪ Expertise in roadway improvements projects 		
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Virginia Commonwealth University, Richmond, VA – MBA/2003/Management University of New Hampshire, Durham, NH - BSCE/1993/Civil Engineering				
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 1999/Professional Engineer/VA (#0402033863); 2010/DBIA Professional (#125387); 2010/NBIS Certified Bridge Inspection Team Leader				
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 specific responsibilities and authorities 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 at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)				
VDOT I-64 Widening & Route 623 Interchange Improvements, Goochland/ Henrico, VA (\$33M) (Design-Build)				
Name of Firm: RK&K	Project Role: Lead Structural Engineer			
Beginning Date: Oct. 2013	End Date: est. Fall 2015			
This project involves the widening of 4.5 miles of Interstate 64 from a four-lane divided freeway to a six-lane divided freeway and improvements to the I-64/Route 623 Interchange. It also includes two mainline bridge replacements. The interchange improvements include upgrading the existing traffic signal, widening the I-64 westbound ramp to Route 623 to provide an additional turn lane, adding a left turn lane on Route 623 southbound to I-64 eastbound, and widening the I-64 eastbound off ramp to Route 623 to provide an additional turn lane. Mr. Johnson	Relevance to the Project <ul style="list-style-type: none"> ✓ <i>Design-Build</i> ✓ <i>Virginia Project</i> ✓ <i>Bridge Design</i> ✓ <i>Retaining Walls</i> ✓ <i>Experience with Corman</i> 			

leads the design of the bridges for this project, as well as multiple retaining walls required for the project. During the proposal process, Mr. Johnson led the decision to provide VDOT new bridges in place of the rehabilitation of 60 year old bridges that were called for in the RFP. The end benefit to VDOT are new bridges that will require significantly less maintenance over the next 75 years, as compared to rehabilitated structures.		
NCDOT US 158 Over Yadkin River, Mocksville, NC (\$17M)		(Design-Build)
Name of Firm: T.Y. Lin International	Project Role: Lead Structural Engineer/ Project Manager	
Beginning Date: June 2008	End Date: Sept. 2010	
<p>This project includes roadway widening that included a nine-span bridge structure with a length of 1150 feet. The superstructure span arrangement consists of three, 3-span units made continuous for live load utilizing 72" Modified Bulb Tee girders. The substructure consists of three column bents founded on drilled shaft foundations. As the lead Structural Engineer and Project Manager on this project, Mr. Johnson led a multi-member, multi-disciplined project team (including utilities, roadway, right-of-way, environmental, structures, and hydraulics) from proposal development through construction. Complicating the project was extensive right-of-way negotiations, complex maintenance of traffic, complex hydraulic analysis, and an aggressive schedule.</p>		<p>Relevance to the Project</p> <ul style="list-style-type: none"> ✓ Design-Build ✓ Bridge Design ✓ Roadway Widening
DDOT New York Avenue, Washington, DC (\$18M)		(Design-Build)
Name of Firm: T.Y. Lin International	Project Role: Project Design Manager/Structural Eng.	
Beginning Date: June 2008	End Date: Feb. 2010	
<p>This is a major bridge replacement project in downtown Washington DC consisting of multi-span steel plate girders founded on multi-column piers constructed integrally with railroad crashwalls. The overall project was complicated by a significant substructure skew. Maintenance of Traffic during construction was the main driving force of the project and it was a deciding factor on bridge type and construction methods. Coordination with the railroad and overall MOT drove the most applicable structural alternatives. Mr. Johnson worked closely with the client, railroad, and contractor to arrive at the most feasible bridge replacement options. Superstructure Options investigated by Mr. Johnson and his team included precast concrete, steel box girders, and concrete segmental construction. Working with the available budget, an overall project, consisting of a staged steel plate girder superstructure, was developed and delivered to a satisfied client.</p>		<p>Relevance to the Project</p> <ul style="list-style-type: none"> ✓ Design-Build ✓ Bridge Design ✓ Roadway Widening
The Bridges at Lancer Park for Longwood University, Farmville, VA (\$8M)		(Design-Build)
Name of Firm: T.Y. Lin International	Project Role: Lead Structural Engineer/ Project Manager	
Beginning Date: Oct. 2008	End Date: July 2010	
<p>This project for Longwood University included the design of two new bridge structures and associated approaches and ramps. The first structure, a 140 foot long through truss, completed the proposed West Third Street entrance into Lancer Park by spanning the Rails and Trails corridor, which is an old railroad corridor. The second structure is a pedestrian bridge and crosses West Third Street. Mr. Johnson's responsibilities included coordination with the Virginia Bureau of Capital Outlay Management (BCOM), Department of Conservation and Recreation (DCR), VDOT and the Town of Farmville. This project also included a presentation before the Art and Architecture Review Board (AARB). Mr. Johnson was responsible for every aspect of this project: from concept to final construction acceptance.</p>		<p>Relevance to the Project</p> <ul style="list-style-type: none"> ✓ Design-Build ✓ Bridge Design ✓ Concept Developments ✓ Roadway Improvements ✓ Virginia Project
VDOT Middle Ground Boulevard Extension, Newport News, VA (\$38M)		(Design-Build)
Name of Firm: T.Y. Lin International (sub to RK&K)	Project Role: Structure Project Manager	
Beginning Date: Sept. 2009	End Date: Sept. 2010	
<p>As part of a Staff Services contract for VDOT Innovative Project Delivery Division, Mr. Johnson developed preliminary structural plans depicting the location and a concept (TS&L plans and report) for the bridge over the CSX Railroad in order to identify ROW requirements. He also played an integral role in estimating construction costs. The Extension of Middle Ground Blvd. is from approximately 0.120 miles east of Route 143 (Jefferson Ave.) to approx. 0.077 miles west of Rt. 60 (Warwick Blvd.) in Newport News. The proposed improvements cover a distance of approximately 1.20 miles and include a new bridge over the CSX Railroad. Mr. Johnson coordinated roadway engineers, railroad, and utility designers to arrive at a cost-effective design.</p>		<p>Relevance to the Project</p> <ul style="list-style-type: none"> ✓ Design-Build ✓ Bridge Design ✓ Virginia Experience
* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.		
h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment.		

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.	
a. Name & Title: Barry Brandt, PE, PTOE – Director, Traffic	
b. Project Assignment: Lead Traffic Engineer	
c. Name of Firm with which you are now associated: RK&K	
d. Years experience: With this Firm <u>23</u> Years With Other Firms <u>1</u> Years Please list chronologically (most recent experience 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 experience, please list the experience for those years you have worked. Project specific experience shall be included in Section (g) below): Director, Traffic – RK&K (1999-present) Mr. Brandt is a member of RK&K's transportation department with specialized expertise in traffic engineering, signing and lighting. His extensive engineering experience includes design of traffic control devices (signals, signing, pavement marking, lighting and ITS devices) and performance of traffic engineering studies (signal warrants, intersection capacity and operations, arterial analyses, freeway studies, and traffic impact studies). He supervises all signing and lighting projects, including conceptual signing options, sign panel design, preparation of plans and details, estimating project costs, preparation of contract specifications, and review of shop drawings. He oversees all striping projects, including freeways, arterials, city streets, parking lots, and pedestrian walkways. Mr. Brandt has vast experience leading projects with multiple technical phases along with balancing issues such as project budgets, schedules, and unique requirements. In recognition of his service, he was awarded the "Outstanding Public Service Award" from MD State Highway Administration (SHA) in recognition of his performance of traffic control device design and development of the electrical and lighting design training programs.	
SUMMARY OF RELEVANT EXPERIENCE <ul style="list-style-type: none"> ■ 24 years of transportation experience ■ Specialized experience in traffic engineering practices, including traffic impact studies; intersection/interchange, capacity, sensitivity, and queuing analyses; users cost studies; and trip generation/distribution ■ Proficient with: A Policy on Geometric Design of Highways and Streets; the Highway Capacity Manual (HCM) software for interchange analysis, signalized and unsignalized intersection analysis; Manual on Uniform Traffic Control Devices (MUTCD); IES RP-8 Standard Recommended Practice for Roadway Lighting; National Electrical Code; AASHTO Roadside Design Guide; and other applicable guidelines pertaining to traffic signal, roadway lighting and ITS design ■ Leads RK&K's Intelligent Transportation Systems (ITS) practice, including electronic toll collection (ETC) design, ITS and electrical design ■ Leads the design, implementation, configuration management, and continued function of ITS projects and systems, including traffic surveillance equipment (CCTV, traffic detectors), traveler information equipment (dynamic message signs, hazard advisory radio), environmental sensor/RWIS stations 	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: University of Maryland, Baltimore, MD - MS/1991/Civil Engineering University of Maryland, Baltimore, MD - BS/1990/Civil Engineering	
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 2010/Professional Engineer/VA (#0402048084); 1999/Professional Traffic Operations Engineer (#115)	
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 specific responsibilities and authorities 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 at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)</p>	
NCDOT R-2823, Rocky Mount Northern Connector, Nash County, NC (\$31.9M) (Design-Build)	
Name of Firm: RK&K	Project Role: Lead Traffic Engineer
Beginning Date: June 2008	End Date: Aug. 2011
Responsible for signal design plans, ITS communications cable routing plans, including two CCTV cameras, ITS/signal project special provisions, and utility make ready plans. Included four final signal designs, four temporary signal designs and over seven miles of 24 SMFO fiber routing including coordinating with the City of Rocky Mount for the interconnection of the two CCTV cameras back to the Traffic Regional Transportation Management Center (TRTMC). The connector is a 4.9-mile, 4-lane new location facility with a raised 30-foot grassed median, partial control of access, and signalized intersections. The Team submitted a technical design score of 92% and the lowest cost proposal.	Relevance to the Project ✓ <i>Traffic analysis/design for:</i> <i>- design-build project</i> <i>- urban highway widening, extension and improvements</i> <i>- interchange/intersection improvements</i> ✓ <i>Traffic analysis/design for corridor-wide improvements</i>

NCDOT U-4763B, Triangle Parkway, Durham and Wake Co., NC (\$137.4M)		(Design-Build)
Name of Firm: RK&K	Project Role: Lead Traffic Engineer	
Beginning Date: Aug. 2008	End Date: July 2012	
Responsible for preliminary design and cost estimates including: signal design plans, ITS communications cable routing, including CCTV cameras, ITS \ signal project special provisions, dynamic message signs, loop detection, infrastructure connecting toll plazas, and utility make ready plans. This 3.4-mile, North Carolina Turnpike Authority (NCTA) Design-Build Toll Road is the first operating toll road in North Carolina. The Parkway is a six-lane divided, controlled access facility with a 46-foot median. The Team submitted the highest technical design score of 92.8% and the lowest cost proposal.	Relevance to the Project ✓ <i>Traffic analysis/design for:</i> - <i>design-build project</i> - <i>urban highway widening, extension and improvements</i> - <i>interchange/intersection improvements</i> ✓ <i>Traffic analysis/design for corridor-wide improvements</i>	
NCDOT I-4744, I-40 Widening and Signing Wake Co., NC (\$49M)		(Design-Build)
Name of Firm: RK&K	Project Role: Lead Traffic Engineer	
Beginning Date: Aug. 2009	End Date: June 2011	
Responsible for preliminary design and construction cost for signal design plans, ITS communications cable routing plans, CCTV cameras, ITS \ signals. This 6.2-mile project consists of widening I-40 from a four-lane divided roadway to a six-lane divided facility. The project included the installation of new CCTV cameras and relocated a DMS to increase traffic management capabilities. Fiber optic cable was installed to create a connection directly from the project into the Traffic Regional Transportation Management Center (TRTMC). The Team submitted a technical design score of 93%.	Relevance to the Project ✓ <i>Traffic analysis/design for:</i> - <i>design-build project;</i> - <i>urban highway widening, extension and improvements;</i> - <i>interchange and/or intersection improvements</i> ✓ <i>Traffic analysis/design for corridor-wide improvements</i>	
Woodrow Wilson Bridge Project General Engineering Consultant (GEC), VA, MD, and DC (\$2.52B)		
Name of Firm: RK&K	Project Role: Lead Traffic Engineer	
Beginning Date: March 1998	End Date: Feb. 2014	
Responsible for preliminary signing plans to upgrade Capital Beltway (I-95/495) by replacing the existing bridge over the Potomac River and reconstructing interchanges with VA 241, US 1, I-295 and MD 210. Provided traffic analysis, engineering and design, including on-site analysis, design and construction efforts. The WWB Project corridor extends more than 7 ½ miles and includes four interchanges along I-95/I-495, containing daily traffic volumes of nearly 200,000. Lead GEC Team member coordinating the design of traffic control device plans for the River Crossing, I-295 interchange, MD 210 interchange, and National Harbor access road contracts. Developed conceptual signing plans for the ultimate completion of all SHA contracts. Reviewed all traffic control device design plans to insure consistency with project-wide plans and compliance with FHWA and SHA standards and criteria. Effort included coordinating design of seven new traffic signals, many requiring interim phases to accommodate construction sequencing; removal of two signals; and construction of signal interconnect. Developed conceptual signing plans for VA 241 interchange. Reviewed traffic signal, signing/markings, lighting and ITS plans for the US 1 and VA 241 interchanges. Developed of temporary signal plans on US 1 to accommodate construction sequencing, including signal timing and operations. (Client: VDOT, SHA, DDOT and FHWA)	Relevance to the Project ✓ <i>Traffic analysis/design for:</i> - <i>design-build project</i> - <i>urban highway widening, extension and improvements</i> - <i>interchange/intersection improvements</i> - <i>corridor-wide improvements</i>	
DDOT Frederick Douglass/S. Capitol Street Design-Build Project, Washington, DC (\$32M)		
Name of Firm: RK&K	Project Role: Lead Traffic Engineer	
Beginning Date: Aug. 2006	End Date: June 2008	
Managed design for traffic signals, signing, pavement markings, traffic signals, communication and roadway lighting for project to lower the roadway profile to improve access to DC Nationals Ballpark along with future development in the S. Capitol Street corridor. Signal design included vehicular signal heads, countdown pedestrian heads, decorative poles, DDOT controllers, and other related equipment. Communications plans included provision of copper communication cable to connect traffic signals onto the City's network. Signing included guide, regulatory and warning signing, including ped signing to accommodate stadium patrons. Lighting included roadway lighting fixtures specified into the Design-Build RFP, meeting all IES photometric criteria. The circuit design met all voltage drop and NEC criteria.	Relevance to the Project ✓ <i>Traffic analysis/design for:</i> - <i>design-build project</i> - <i>local roadway widening, extension and improvements</i> - <i>interchange/intersection improvements</i> - <i>bridge relocation/ improvements</i>	
* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.		
h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment.		

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.				
a. Name & Title: James J. Seli, PE – Senior Vice President				
b. Project Assignment: Lead Geotechnical Engineer				
c. Name of Firm with which you are now associated: Schnabel Engineering Consultants, Inc.				
d. Years experience: With this Firm <u>35</u> Years With Other Firms <u>0</u> Years Please list chronologically (most recent experience 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 experience, please list the experience for those years you have worked. Project specific experience shall be included in Section (g) below):				
<p>Senior Vice President, Schnabel Engineering (1999-present) Mr. Seli is a Senior Reviewer and Project Manager responsible for geotechnical engineering. His geotechnical engineering experience includes bridges, highway, rail, dams and lagoons, piers, bulkheads, dry docks, power generation facilities, buildings and parking decks, heavy industrial projects, water treatment facilities, water lagoons, and municipal waste landfills. Mr. Seli's work includes extensive experience with driven pile foundations in the coastal plain, including the use of wave equation analyses and high strain dynamic pile testing with signal matching. He also has extensive experience dealing with highly compressible soils under earth embankments and heavily loaded industrial and port facilities, and with the stability of natural and manmade slopes.</p>				
<p>SUMMARY OF RELEVANT EXPERIENCE</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> <ul style="list-style-type: none"> ■ 25 years of transportation experience ■ 25 years of bridge design experience ■ Experience with similar geographic conditions that exist in the Charlottesville region </td> <td style="width: 33%; vertical-align: top;"> <ul style="list-style-type: none"> ■ Masters in Engineering – Civil Engineering </td> <td style="width: 33%; vertical-align: top;"> <ul style="list-style-type: none"> ■ Coordinates multidisciplinary engineering services ■ Expertise in roadway improvements projects ■ Expertise in bridge foundations ■ Expertise in retaining structures </td> </tr> </table>		<ul style="list-style-type: none"> ■ 25 years of transportation experience ■ 25 years of bridge design experience ■ Experience with similar geographic conditions that exist in the Charlottesville region 	<ul style="list-style-type: none"> ■ Masters in Engineering – Civil Engineering 	<ul style="list-style-type: none"> ■ Coordinates multidisciplinary engineering services ■ Expertise in roadway improvements projects ■ Expertise in bridge foundations ■ Expertise in retaining structures
<ul style="list-style-type: none"> ■ 25 years of transportation experience ■ 25 years of bridge design experience ■ Experience with similar geographic conditions that exist in the Charlottesville region 	<ul style="list-style-type: none"> ■ Masters in Engineering – Civil Engineering 	<ul style="list-style-type: none"> ■ Coordinates multidisciplinary engineering services ■ Expertise in roadway improvements projects ■ Expertise in bridge foundations ■ Expertise in retaining structures 		
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Virginia Polytechnic Institute and State University, Blacksburg, VA - MS/1984 /Civil Engineering Virginia Polytechnic Institute and State University, Blacksburg, VA - BS/ 1979/Civil Engineering Virginia Commonwealth University, Richmond, VA - Post-Baccalaureate Certificate/1995/Information Systems				
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 1984/Professional Engineer/VA (#0402014957)				
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your specific responsibilities and authorities 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 at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)				
VDOT Martin Luther King (MLK) Expressway Extension, Portsmouth, VA (\$750M) (Design-Build)				
Name of Firm: Schnabel Engineering	Project Role: Geotechnical Senior Reviewer			
Beginning Date: July 2010	End Date: Dec. 2016			
Mr. Seli provides senior review for the geotechnical engineering study for the extension of an existing expressway. The project includes 1.5 miles of new expressway and a new interchange with I-264. The project site is underlain by thick layers of highly compressible organic soils. Recommendations were provided for concrete piles, H-piles and micropiles for support of the bridge structures. Recommendations were also provided for design of approach embankments over the soft soils, including the use of prefabricated vertical drains and surcharging, lightweight aggregate and expanded polystyrene (geofoam), and pile-supported embankments.				
<p>Relevance to the Project</p> <ul style="list-style-type: none"> ✓ VDOT Project ✓ Design-Build ✓ Roadway Extension 				
VDOT Odd Fellows Road at Route 460 Bypass Interchange, Lynchburg, VA (\$32M)				
Name of Firm: Schnabel Engineering	Project Role: Geotechnical Senior Reviewer			
Beginning Date: May 2013	End Date: Oct. 2013			

<p>Mr. Seli provided senior review for the geotechnical engineering study for a new interchange on US Route 460. Project includes a two-span bridge over Route 460, sliver fills to support widening Route 460, and embankments up to 30 ft high for support of interchange ramps. Services included subsurface exploration within an active highway corridor, including traffic control and work during restricted hours, slope stability analyses of existing and proposed slopes, evaluation of rock excavation requirements, foundation recommendations for the proposed bridge, and development of parameters to support pavement design.</p>		<p>Relevance to the Project</p> <ul style="list-style-type: none"> ✓ VDOT Project ✓ Roadway Improvements
VDOT I-95, Atlee-Elmont Interchange, Hanover County, VA (\$40M)		
Name of Firm: Schnabel Engineering		Project Role: Project Manager
Beginning Date: October 1997		End Date: January 2005
<p>Mr. Seli provided geotechnical design of 10 bridges and approach embankments. The project included bridges up to 700-ft long, mechanically stabilized earth walls, and embankments up to 50-ft high in low-lying areas with difficult soil conditions.</p>		<p>Relevance to the Project</p> <ul style="list-style-type: none"> ✓ VDOT Project ✓ Bridge Design/Widening
VDOT Route 460 Bridge over Buffalo Creek, Farmville, VA (\$2.9M)		(Design-Build)
Name of Firm: Schnabel Engineering		Project Role: Geotechnical Senior Reviewer
Beginning Date: February 2007		End Date: Nov. 2008
<p>Mr. Seli provided review for this design-build effort to replace the 200-ft long bridge. Project included subsurface exploration that required traffic control for exploration along an active highway corridor and difficult access to the area along the stream banks. Engineering recommendations supporting the design of the bridge included H-pile foundations driven to rock, settlement analysis of widened approach embankments, and pavement design for approach pavements. During construction, Mr. Seli analyzed data from dynamic testing of piles and developed final foundation installation requirements, and reviewed the results of construction observation and testing services.</p>		<p>Relevance to the Project</p> <ul style="list-style-type: none"> ✓ VDOT Project ✓ Design-Build ✓ Bridge Design
City of Chesapeake, Dominion Boulevard Improvements, Chesapeake, VA (\$350M)		
Name of Firm: Schnabel Engineering		Project Role: Geotechnical Project Manager
Beginning Date: November 2004		End Date: January 2016
<p>Mr. Seli provided geotechnical engineering services for a new 6,000-ft long, 95-ft high bridge over the intercostal waterway, 3.5 miles of roadway widening, and three interchanges. Geotechnical recommendations were developed in accordance with AASHTO LRFD specifications. Recommendations included the use of prefabricated vertical drains (PVD) and surcharges to accommodate embankment settlements and project schedule constraints. Recommendations for the use of pile supported embankments were also provided where PVDs and surcharging could not support the sequence of construction. Bridge foundation recommendations included 12, 14, and 24-inch square concrete piles, and 36-inch diameter concrete cylinder piles. Mr. Seli provided recommendations for numerous MSE and soil nailed walls. He is currently providing construction support with submittal review and consultation on RFI issues.</p>		<p>Relevance to the Project</p> <ul style="list-style-type: none"> ✓ Bridge Design ✓ Roadway Improvements ✓ Virginia Experience
<p>* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.</p>		
<p>h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment.</p>		

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.
a. Name & Title: John A. Myers – Utility Coordinator
b. Project Assignment: Lead Utility Coordination Manager
c. Name of Firm with which you are now associated: Rinker Design Associates
d. Years experience: With this Firm <u>2</u> Years With Other Firms <u>13</u> Years Please list chronologically (most recent experience 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 experience, please list the experience for those years you have worked. Project specific experience shall be included in Section (g) below): Utility Coordinator, Rinker Design Associates (Jan. 2013-present) As a Utility Coordinator at RDA, Mr. Myers is responsible for the complete utility coordination process of all design build projects RDA performs, as well as many locality projects that choose to include utility coordination in the scope of work for the design of the project. Reviews initial project areas and acquires utility records for the project area, which he then works with the roadway designer to develop the project to account or mitigate any major utility issues. Develops underground utility investigations to be performed and analysis the results from such investigations. As the project moves forward he develops preliminary relocation alignments to better aide the utility companies during the engineering of the relocations to better meet the schedule needs of the project, and preliminary easements for public hearing plans. Performs conflict analysis of all utility companies on the project site and calculation relocation cost responsibilities using VDOT form UT-9. Conducts Utility Field Inspection meetings per the VDOT utility manual to discuss the project with the utility companies involved and begin their design of relocations. Coordinates final easements being shown on the plans with the utility companies, and determines the laebel nomenclature of the easements based on any prior rights of the involved utility company. Reviews submitted P&E packages from the utility companies for completeness per the VDOT utility manual and ensures the designed relocation is clear of conflicts with the proposed roadway work, and recommends the package for authorization. The years of experience at the Virginia Department of Transportation in the different facets of utility relocations (roadway in plan, field relocations and relocation design), gives Mr. Myers the ability to identify conflicts and construction problems very early and provides more options for mitigation and avoidance of possible problems. This allows RDA to resolve and mitigate utility problems before they escalate into major items. Regional Utility Coordinator, Virginia Department of Transportation (2007 - Jan 2013) Regional Utility Coordinator for the Northern Virginia Region of VDOT RW & utilities section. Responsilbe for all aspects of the entire utility relocation coordination process as specified by the VDOT Utilities Manual for projects throughout the region. Specialized in projects with highly complex or congested utility relocation corridors utilizing 3D mapping with CAD to help coordinate the multiple utility relocations and conflicts with the proposed roadway features. Utility Construction Manager, Virginia Department of Transportation (2005-2007) Construction Manager for the utility inspection section for the NOVA district of VDOT working under the then named C.U.R.E. section. Managed multiple utility inspectors covering multiple projects throughout the district. Responsible for reviewing and approving the daily utility inspection sreports (UT-7) as per the VDOT Utility Manual, creation of the digital as builts for all relocation projects and problem solving issues that arise during construction of utility relocation construction and as liason with public relations,traffic sections or other needed areas to coordinate project needs during relocations. While in this position was nominated for a Governor’s Award for Excellence for creating the digital as-building system through the use of CAD to accurately record relocated utility locations for use during roadway construction projects. Constructon/Utility Inspector – Virginia Department of Transportation (April 1999 - 2005) Field Inspector for the NOVA district of the Virginia Department of Transportation. Responsible for ensureing that daily activites of roadway contractors and utility companies met state plans and standards and documented work performed. Exposed to the full gambit of roadway construction activites as well as all utility relocation methods and practices. SUMMARY OF RELEVANT EXPERIENCE <ul style="list-style-type: none">▪ 15 years of transportation experience▪ 13 years of combined field and coordination experience in the utility field▪ Developed good working relationships with all area utility companies▪ Highly experienced in all aspects of utility relocation per the VDOT Utility Manual▪ Track record of multiple high complex relocation projects.
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Shepherd University – Shepherdstown, WV – No Degree Received
f. Active Registration: Year First Registered/ Discipline/VA Registration #: Not Applicable

- g. Document the extent and depth of your experience and qualifications relevant to the Project.
1. *Note your specific responsibilities and authorities for each project, not those of the firm.*
 2. *Note whether experience is with current firm or with other firm.*
 3. *Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.*
- (List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)**

Route 29 @ Gallows Road, Falls Church, VA

Name of Firm: Virginia Department of Transportation	Project Role: Utility Coordinator
Beginning Date: January 2007	End Date: December 2012 (Relocations Complete)
Utility Coordinator for this large scale project. Worked with over 14 different communications companies to coordinate a joint duct bank due to lack of working space. Coordinated multiple private development plans, aerial relocations, gas relocation and multiple water authorities with the roadway plans and utility relocations work. Considered one of the most complicated and congested utility relocations projects ever performed by VDOT.	Relevance to the Project <ul style="list-style-type: none"> ✓ <i>Verify Conflicts</i> ✓ <i>Review of Relocation Designs</i> ✓ <i>Determine Cost Responsibility</i>

Route 50 / Courthouse Road, Arlington County, VA

Name of Firm: Virginia Department of Transportation	Project Role: Utility Coordinator
Beginning Date: September 2006	End Date: March 2011 (Relocations Complete)
Utility Coordinator for this complex high capacity interchange and undergrounding project. Over \$3 million worth of utility relocations and County participated undergrounding were performed. A major electric line and multiple communication lines were undergrounded, including a vital 911 service line that could not be taken out of service. Complex and difficult project due to the high volume of existing utilities to deal with as well as a large unknown box culvert found during relocations.	Relevance to the Project <ul style="list-style-type: none"> ✓ <i>Modified Designs based on field conditions.</i> ✓ <i>Review of Relocation Designs</i> ✓ <i>Authorize Plan & Estimates</i>

Stringfellow Road Widening, Fairfax, VA

Name of Firm: Virginia Department of Transportation	Project Role: Utility Coordinator
Beginning Date: July 2010	End Date: February 2013 (Relocations Complete)
Utility Coordinator for this extremely long widening project. Utility relocation in excess of \$23 Million dollars spanning 2 miles of roadway including 2 major petroleum lines, aerial power and communications as well as multiple underground communications and cable television lines.	Relevance to the Project <ul style="list-style-type: none"> ✓ <i>Plan & Estimate Review</i> ✓ <i>Modify Designs based on field conditions</i> ✓ <i>Roadway Widening</i>

Prince William County Parkway, Prince William County, VA (Design-Build)

Name of Firm: Virginia Department of Transportation	Project Role: Utility Coordinator
Beginning Date: January 2013	End Date: October 2014
Utility Coordinator for VDOT Locally Administered Design Build project to widen a highly popular commuter route in a medium density area of the Prince William County. Mr. Myers coordinated the relocation of Dominion Virginia Power and Comcast Aerial lines as well as underground Verizon facilities, Washington Gas, Prince William Service Authority water facilities as well as 2 private companies (Dale Service Authority and Virginia American Water). The project was broken into 2 phases to gain roadway crews faster access to some work areas. The private utility companies' lack of knowledge of the VDOT policies and requirements made for an extra challenge to the coordination of the project.	Relevance to the Project <ul style="list-style-type: none"> ✓ <i>Design-Build Project</i> ✓ <i>Review of Plans and Estimates</i> ✓ <i>Coordination of utility relocation work with on going field construction activities.</i>

George Mason University Campus Drive, Fairfax, VA (Design-Build)

Name of Firm: Rinker Design Associates	Project Role: Utility Coordinator
Beginning Date: January 2013	End Date: March 2014 (Relocations Complete)
This project was a VDOT Design/Build project to build a grade separated intersection and other improvements to the roadways within the Fairfax Campus of George Mason University. Mr. Myers has been involved in the utility design work since project inception. Project consisted of aerial power and cable television, gas, water, and a large underground Verizon ductbank as well as interparcel underground electric for multiple lighting and service connections.	Relevance to the Project <ul style="list-style-type: none"> ✓ <i>Design-Build Project</i> ✓ <i>Review of Plans and Estimates</i> ✓ <i>Coordination of utility relocation work with on going field construction activities.</i>

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

- h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment.

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.				
a. Name & Title: Christopher S. Reed, CSI – Director of Special Projects, Transportation				
b. Project Assignment: Public Relations Manager				
c. Name of Firm with which you are now associated: Rinker Design Associates, PC				
d. Years experience: With this Firm <u>7</u> Years With Other Firms <u>40</u> Years Please list chronologically (most recent experience 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 experience, please list the experience for those years you have worked. Project specific experience shall be included in Section (g) below): Director of Special Projects, Rinker Design Associates, PC (2006 – Present) Mr. Reed provides senior oversight to Project Managers on projects to assist in Public Involvement Programs and VDOT and municipality coordination. He provides corporate management for the day to day operations of the Right-of-Way Acquisition and Construction Management Sections. He also develops Public Relations Plans, manages external project communication with citizens and stakeholders, along with the media and general public. Mr. Reed has extensive experience working with the Culpeper District Communications Office and the Charlottesville region. Program Manager, Virginia Department of Transportation (1999 –2006) <i>Urban Program Manager</i> in the Northern Virginia District provided VDOT support for funding of the Urban Program. Coordinated locally administered projects with City and Town staff. Presented project information to Councils and assisted localities in presenting projects to citizens. <i>Project Manager</i> providing VDOT oversight and technical responsibility for the design of interchanges in Virginia and Maryland. <i>District Location & Design Engineer</i> in the Culpeper District. Responsible for all Roadway Design in the Culpeper District. This included management of the in-house design staff and consultant designs. <i>District Location & Design Engineer</i> in the Northern Virginia District. Responsible for all Roadway Design in the District including the representation of VDOT at citizen meetings, Board of Supervisors and Council meetings. While serving at VDOT in these roles, Mr. Reed gained extensive experience in Public Involvement Plans in order to effectively deal with public expectation and developed public outreach solutions to address those expectations while complying with Design and Construction Standards. SUMMARY OF RELEVANT EXPERIENCE <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; vertical-align: top;"> <ul style="list-style-type: none"> ■ Over 46 years’ experience in Transportation Project Design and Construction </td> <td style="width: 33%; vertical-align: top;"> <ul style="list-style-type: none"> ■ Extensive experience in Public Involvement </td> <td style="width: 33%; vertical-align: top;"> <ul style="list-style-type: none"> ■ Extensive experience in working with elected officials and Citizen Groups </td> </tr> </table>		<ul style="list-style-type: none"> ■ Over 46 years’ experience in Transportation Project Design and Construction 	<ul style="list-style-type: none"> ■ Extensive experience in Public Involvement 	<ul style="list-style-type: none"> ■ Extensive experience in working with elected officials and Citizen Groups
<ul style="list-style-type: none"> ■ Over 46 years’ experience in Transportation Project Design and Construction 	<ul style="list-style-type: none"> ■ Extensive experience in Public Involvement 	<ul style="list-style-type: none"> ■ Extensive experience in working with elected officials and Citizen Groups 		
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: West Virginia Institute of Technology, Montgomery, WV - BS/1970/Mathematics West Virginia Institute of Technology, Montgomery, WV - Continuing Education/1970-1977/Civil Engineering University of Virginia, Charlottesville, VA - Continuing Education/1980-1987/Civil Engineering Miscellaneous Seminars on Contract Management, Project Management, Risk Management, Law, Estimating and Specification Preparation, Land Acquisition, 1980-Present				
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 1978/Construction Specifications Institute/ N/A				
g. Document the extent and depth of your experience and qualifications relevant to the Project. <ol style="list-style-type: none"> 1. <i>Note your specific responsibilities and authorities 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 at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)				
VDOT Woodrow Wilson Bridge Reconstruction Project, Fairfax County/City of Alexandria (\$2.1B)				
Name of Firm: VDOT	Project Role: Program Manager			
Beginning Date: Sept. 1998	End Date: June 2001			

<p>This effort included the development of the Public Involvement Plan and the formation of three (3) Stakeholder Working Groups for the construction of the Route 1 Interchange, Telegraph Road Interchange (a Corman project), and improvements to Jones Point Park and Freeman's Cemetery in Alexandria, Virginia. In addition, detailed communication plans to work with the media, interstate notifications to the travelling public and local Stakeholders, was developed. Mr. Reed managed and worked with team members to develop the guidelines for forming these groups and developing the goals and objectives for their success. He met with each of these groups and presented recommendations and results to elected officials at the Federal, State and Local levels. He worked directly with VDOT's Chief Engineer and the Secretary of Transportation to implement 85% of the recommendations from these Stakeholder Groups.</p>		<p>Relevance to the Project ✓ Successfully developed and provided a Public Involvement Program on a complex and controversial project identical to which is required in this RFQ.</p>
VDOT Fairfax County Parkway, Fairfax County		(Design-Build)
Name of Firm: VDOT	Project Role: Program Manager	
Beginning Date: Oct. 2003	End Date: June 2006	
<p>Mr. Reed was assigned the last segment of the Fairfax County Parkway to move forward as a VDOT Design-Build project. Mr. Reed was required to re-visit the entire Public Hearing process. He formed a Stakeholder Group to work through design issues on the Fairfax County Parkway Interchange at the Engineering Proving Grounds on Fort Belvoir. This needed to be "Fast-Tracked" and weekly meetings were held in the Fairfax County Supervisor's Office. VDOT modified the design to minimize impacts to the adjacent citizens. In addition, Mr. Reed worked directly with Fort Belvoir, Pentagon Staff, the Assistant Secretary to the Army, County Supervisors and State Delegates to resolve issues concerning mitigation of contaminated soil on the Fort Belvoir property.</p>		<p>Relevance to the Project ✓ Developed a successful strategy to meet the needs of a diverse group of stakeholders similar to the requirements of this RFQ</p>
VDOT Route 50 Traffic Calming, Loudoun County, VA		(Design-Build)
Name of Firm: VDOT	Project Role: Project Manager	
Beginning Date: May 2005	End Date: June 2006	
<p>NOVA District Administrator required Mr. Reed to assume the Route 50 Traffic Calming Project and work with Citizen Task Force to get the project to construction. Mr. Reed administered public outreach efforts by managing the Citizen Task Force expectations. Efforts included resolving conflicts between their desires and meeting specific project design and construction standards. The first phase of this was completed in Upperville, the second phase was the Design-Build project for the round-a-bouts of Route 50 and Route 15. The third phase has been completed in Aldie and the last phase in Middleburg is awaiting funding. Mr. Reed successfully worked with this very publicly visible project to move it forward so that Federal Funding secured by Congressman Frank Wolf would not be lost.</p>		<p>Relevance to the Project ✓ Successfully dealt with a very sensitive and highly visible project to meet the expectations of the stakeholders</p>
VDOT I-495 Express Lanes, Fairfax County, VA		(Design-Build)
Name of Firm: ATCS/RDA	Project Role: Lead Highway Engineer	
Beginning Date: Oct. 2008	End Date: Feb. 2010	
<p>Most recently, while serving as part of the General Engineering Consultant Team for the I-495 Express Lanes, VDOT's Project Manager requested that Mr. Reed assist in participating in two (2) specific areas. He was required to be the lead for VDOT on a Stakeholder Panel to address re-forestation of the areas of woodland impacted by the widening of the Capital Beltway and secondly, to represent the Project to determine how to best address the construction of Noise Walls on the Project. Mr. Reed successfully interacted with the LANE team, a diverse group of citizens, Fairfax County staff, and State and Local elected officials. The project was completed on-time and the goals of the Stakeholder Panels were met.</p>		<p>Relevance to the Project ✓ Provided technical guidance to the Stakeholder Panels to insure project goals were achieved and citizen expectations were met where feasible.</p>
* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.		
h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment.		



Attachment 3.4.1(a)

Lead Contractor - Work History Form

LANE

AND

 **CORMAN**
CONSTRUCTION

In association with:

RK&K

ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 2 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)*	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 Contract Value**	
I-495 EXPRESS LANES Fairfax County, Virginia DESIGN-BUILD (ROADWAY PROJECT)	HNTB	Name of Client./ Owner: Virginia Department of Transportation Phone: 540.829.7500 Project Manager: John Lynch, P.E. Phone: 540.829.7512 Email: John.Lynch@vdot.virginia.gov	12/20/2012	11/16/2012	\$1,346,560	\$1,481,670	\$642,000

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

Similar Scope of Work:	PROJECT SCOPE	<p>Construction of four new managed/HOV traffic lanes (two in each direction) inside of the existing lanes on the Capital Beltway. Work included the reconstruction of ramps, interchanges, frontage roads, bridge over and underpasses, and pedestrian crossings. The Project encompassed the replacement of more than \$260M of aging infrastructure, including 12 interchanges and 58 bridges. Construction of the Project required close coordination with VDOT, MWAA, WMATA, local jurisdictions, businesses, community associations, and the traveling public. Although only a 35% Fluor-Lane LLC CJV member, LANE provided nearly all of the project supervision and workforce, plus all asphalt paving. <i>Only LANE of Fluor-Lane LLC will be a team member on the Route 29 Solutions project.</i></p> <p>RELEVANT PROJECT ELEMENTS</p> <p>Roadway: The I-495 Express Lanes project, a VDOT MegaProject, is one of the largest roadway projects constructed in the Commonwealth. Similar to the US 29 Widening Project Element, the I-495 Express Lanes project widened the existing roadway by constructing two new lanes in each direction on a 14-mile stretch from the Springfield Interchange to just north of the Dulles Toll Road (approximately 56 lane miles). Likewise, the Express Lanes has similar scope elements to the US 29 Rio Road Grade Separated Intersection, including the major construction of grade separated intersections, roadway widening, and major bridge/ramp construction. The team constructed three new access points and upgraded 12 key interchanges that increased capacity and mobility, improved driver safety and removed operational deficiencies, with minimal impact to the traveling public, residences, and businesses. The project relieves traffic congestion for one of the busiest regions in the nation.</p> <p>Bridge and Structures: Like the Berkmar Drive bridge, the construction of the Westpark and Jones Branch Connector bridges transformed local travel in Tysons area; shoppers, employees, and residents now have access to Tysons and Tysons Corner Mall without traveling on Route 123 or Route 7, alleviating local traffic to/from McLean and Vienna. LANE also widened Westpark Drive bridge by 29', adding two extra lanes and a shared use path.</p> <p>Maintenance of Traffic: A key challenge on the I-495 Express Lanes project was accommodating extreme volumes of commuter, residential, and commercial vehicular traffic. The contract required the project to maintain the existing traffic during construction; affecting every phase of the planning, design, and construction of the Express lanes, feeder roads, and shared use paths. By conducting extensive traffic studies and through close coordination with VDOT and the local jurisdictions, our team produced a number of innovative designs, carefully planned lane shifts, and construction phasing sequences that helped to minimize disruption during construction. Additionally, the alignment of many of the existing bridges over the Beltway could not be shifted so new replacement bridges were built on the same footprint as the old structures.</p> <p>Schedule: The challenge from the start was to complete the project in five construction seasons. LANE tightly controlled schedules and improved the sequence of construction where possible. For example, the original concept called for three-stage replacement of bridges over the Beltway, but the team was able to plan and execute several bridge replacements in two stages. Only one bridge (Route 7) was constructed in three phases. Additionally, daytime lane closures could not start until after 9:30 a.m. and all four lanes of traffic were required to be open again at 3:30 p.m. Overnight closures were similarly restricted and exceptions were rare – primarily for steel erection – where short-duration total closures were permitted. Despite the tight time constraints, the team was still able to complete the project one month early.</p> <p>Shared Use Paths: To increase mobility and improve safety, every new non-interstate bridge provided shared use paths for bicycles and pedestrian access. The shared use paths were constructed to expand access for pedestrians to the entire metro region; provide easy access to a vast array of shopping and entertainment venues; encourage high-density, transit-oriented development around metro stations in keeping with local land use plans; offers a viable, dependable alternative to automobile travel; and promotes walking, biking and healthy lifestyles.</p> <p>Collective Team Member Experience: LANE engaged the services of Route 29 Solutions teammate, WR&A for their geotechnical experience and expertise. The WR&A team provided geotechnical investigations for the drilled shaft bridge foundations and performed QA reviews for all geotechnical reports for the project prior to the submission to VDOT. This added level of quality ensured VDOT received the most accurate, concise information which produced faster turnaround times for approvals. Route 29 Solutions teammate, RDA, provided TMP and Survey for the Team.</p> <p>Safety: The I-495 Express Lanes project has been the recipient of numerous awards including a safety award for more than 5,000,000 manhours without a lost time incident in September 2012. Despite working alongside traffic in a limited area, with many key activities like bridge demolition and steel erection occurring at night, the construction team achieved a Total Recordable Incident Rate (TRIR) of 0.69, which ranks the project among the best heavy civil projects in the nation.</p> <p>Economic Impact: The construction of the I-495 Express Lanes generated and supported more than 16,000 jobs and generated nearly \$3.5 billion of economic impact state-wide.</p>	
<ul style="list-style-type: none"> • Design-Build • Roadways • Survey • Structures and Bridges • Environmental • Geotechnical • Hydraulics • Stormdrain and SWM • Milling and Overlaying Existing Pavement • Demolition of Structures • Guardrail • Retaining Walls • Traffic Control Devices • Signs, Sign Structures, and Foundations • Transportation Management Plan • Traffic Maintenance and Management • Right-of-Way • Utilities • Stakeholder Coordination • Public Hearing and Public Involvement • QA/QC • Construction Engineering and Inspection • Project Management and Coordination with other Active Construction Projects Within the Vicinity of the Project Site 	EVIDENCE OF PERFORMANCE		
Personnel on Project:	<p>Wallace Alphin (LANE) Angel Lebron (LANE) Mike Leitch (LANE) Wayne Lindsey (LANE) Doug Russell (LANE) Chris Reed (RDA) John Maddox (WR&A)</p>		

“Project was built over four years under traffic as high as 200,000 vpd and achieved 5 million safe work hours as of September 2012 without a losttime incident, making it among the safest heavy civil projects ever built in the U.S.” - *Public Works Financing Newsletter, 12/2012*

*The project was completed one month ahead of schedule. The team worked hard to expedite both the design and construction schedules which resulted in early completion.

**The contract value was increased by the Owner as a result of increased scope – betterments outside the scope of the original contract with VDOT, changes at the request of the Concessionaire (CBE), additional bridge work related to WMATA’s extension of the Silver Line to Dulles, and improvements for MWAA in the Dulles Toll Road/Access Road interchange with I-495.

Project Parameters	Project Example	
Delivering Multiple Projects Concurrently	During construction of the project, a tight footprint in a congested corridor, extensive night work, an aggressive delivery schedule, and volume of work per month required to meet the substantial completion date were major challenges, all similar to the Route 29 Solutions project. The D-B team's approach to the project was to subdivide the corridor into four separate management teams, each having their own office, area manager, and field engineering and craft supervisors. By doing this, the project was sub-divided into more manageable segments allowing each team to manage the coordination of the environmental activities in their area and providing updates for the public outreach program. A central project office provided management oversight of the four construction teams as well as project support. Constant discussions between the four project management teams and the project schedulers ensured that the project schedule was followed, and that the schedule was updated to reflect actual approaches to the work and to account for the coordination with stakeholders and environmental activities. LANE staff also had to coordinate construction with concurrent projects in the footprint, including among others, the \$2.5B D-B construction of a 13-mile long extension of the WMATA Silver Line Metrorail.	
Urban Corridor		The Capital Beltway (I-495) was originally envisioned as primarily a bypass for long-distance eastern seaboard traffic to avoid driving directly through Washington, DC. However, the explosive growth both of housing and business in the Washington suburbs following the Beltway's completion quickly made the Beltway the area's "main street" for local traffic as well. Similar to Route 29 in Charlottesville, yet on a larger scale, numerous large shopping malls, community colleges, sports and concert stadiums, and corporate employment centers were purposely built adjacent to the Beltway, and these added greatly to the traffic, as has the passenger growth of regional airports accessed by the Beltway. I-495 Express Lanes cross several streets and busy state routes, and included interchange reconstruction on the nation's 4th ranked busiest highway, requiring intensive MOT planning and coordination to keep the congested traffic moving throughout construction. "As the primary self-perform entity in the Flour-Lane Joint Venture, Lane has demonstrated outstanding ability to complete construction on time under these heavy traffic conditions," wrote Tim Steinhilber (General Manager, Capital Beltway Express, LLC) in an October 27, 2010 letter of recommendation for LANE. According to the FHWA <i>Sources of Congestion Report</i> the "Corridor ranks in the top ten most congested highways in the U.S and No. 1 on the East Coast."
Innovative Design Solutions and Construction Techniques	LANE is well-versed in delivering additional scope with limited funds through the ATC process or other innovative means. On the I-495 Express Lanes Project, ATCs combined with reduction in the originally approved Record of Decision regarding ROW and length of the project saved VDOT over \$500 million in overall project cost . The challenge from the start was to complete the project in five construction seasons. Our team tightly controlled schedules and improved the sequence of construction where possible. For example, the original concept called for three-stage replacement of bridges over the Beltway, but we were able to plan and execute several bridge replacements in two stages. Only the Route 7 bridge was constructed in three phases. The work was planned for a five-day week, with Saturdays being used as make-up days for bad weather. There was little need for extensive overtime, in part because the weather cooperated! One of the significant challenges for this project was not starting daytime lane closures until after 9:30 am and having all four lanes of traffic open again at 3:30 pm. Overnight closures were similarly restricted and exceptions were rare – primarily for steel erection, where short-duration total closures were permitted. There was a significant utility coordination effort, both in relocation of existing utilities and the installation of new services for lighting and toll facilities. Lane fulfilled this requirement by not reducing traffic capacity during construction.	
Design-Build Experience	LANE realizes that D-B projects allow construction to begin more quickly, making improvements a reality faster, and shortening disruptive construction periods for drivers and communities. D-B projects also allow design changes to be made and implemented more quickly in a real-world setting, rather than on paper. On the I-495 Express Lanes project, LANE utilized these benefits for the accelerated construction plans for three key Beltway Interchanges at Little River Turnpike, Gallows Road and Idylwood Road. Work on these key interchanges was re-sequenced and an accelerated construction plan was developed to complete each of these bridges in a shortened time period. These accelerated construction plans allowed crews to complete bridge construction significantly earlier, lessening the impacts for surrounding communities and drivers.	
Limiting Impacts		A key challenge on the I-495 Express Lanes project was accommodating extreme volumes of commuter, residential and commercial vehicular traffic. The contract required the project to maintain the existing traffic and pedestrian access during construction; affecting every phase of the planning, design and construction of the Express lanes, feeder roads and shared use paths. By conducting extensive traffic studies and through close coordination with VDOT and the local jurisdictions, our team produced a number of innovative designs, carefully planned lane shifts, and construction phasing sequences that helped to minimize disruption during construction. Additionally, the alignment of many of the existing bridges over the Beltway could not be shifted so new replacement bridges were built on the same footprint as the old structures. To reduce the impacts on the public, much of the work was performed at night. An aggressive five day work schedule was implemented with Saturday make-up days incorporated in case of inclement weather. The only overnight lane closures that occurred were for structural steel erection and demolition of the existing bridge.
Communication Strategies	More than 2000 public outreach meetings were conducted and, in coordination with VDOT, the Team kept the public involved through various media methods: project website, routine newsletters, and brochure mailings to residents and business. One example of the success of this approach was the closure of South Bound I-495 Bridge at Chain Bridge Road, Tysons Corner. The planned demolition and reconstruction of the new bridge had the potential to disrupt traffic for more than 100,000 residents and business employees in the area. The team blanketed the area with early notification of the weekend closure/detour options using the project website, media announcements, email, telephone calls, postcards, and door-to-door outreach. When the work was completed, not a single complaint was received from businesses, motorists, or area residents.	
Risks	Construction of Idylwood Road Bridge, which had an existing ADT of more than 15,000 vehicles, was scheduled to take <u>two years</u> to rebuild. After the nearby Oak Street bridge was rebuilt and opened for motorists, the original construction plan entailed closing one lane of the Idylwood Road Bridge and installing temporary traffic signals to alternate one-way traffic across the bridge while the other side was reconstructed. Each side of the bridge would have taken a year to complete for a total duration of two years. A new plan was developed to rebuild it in six months . While the Oak Street bridge (the detour route for Idylwood Road bridge) was under construction, LANE and our partner developed an alternate construction plan for the \$20M Idylwood Road Bridge. After the new Oak Street bridge opened to motorists, the alternate plan would close Idylwood Road Bridge completely for six months to allow construction crews to rebuild the entire bridge simultaneously to shorten the construction duration. Our team held a public information session on the two plans for the Idylwood Road Bridge and sent out 5,000 direct mail invitations with information on the two plans. The direct mail provided information for residents to submit comments if they couldn't make the information session. 91% of the comments submitted by nearby residents were in support of the alternate six month plan.	
Complex Utility Relocation	There was a significant utility coordination effort, both in relocation of existing utilities and the installation of new services for lighting and toll facilities. Two high voltage transmission lines ran in a corridor parallel to the main alignment of the project, crossing several arterial roads that were associated with the project. At one arterial there was insufficient clearance between the transmission line sag and the road surface. The transmission line had to be raised by installing an insert in one supporting tower. More than 102,000 linear feet of utilities, owned by 15 utility owners were relocated including water, sanitary sewer, electric, and telecommunications. In total, over 175 utility conflicts were identified and resolved.	
DBE Program		Our team subcontracted over 40% of the project to DBE and SWaM firms (more than 280), totaling nearly \$550M. LANE received the 2013 Prime Contractor of the Year Award from VDOT for outstanding performance and participation in the DBE Program. In a February 2012 news release, then-Virginia Governor Bob McDonnell stated the following: "The 495 Express Lanes commitment to small, women, and minority-owned businesses is the largest in Virginia's history for a single transportation project. In these challenging economic times, it is more important than ever to support businesses in our local communities. The Virginia Department of Transportation and [the team's] partnership to foster small-business participation in the 495 Express Lanes construction can be a model for other governments embarking on large, multiyear infrastructure improvements."

- * If actual contract completion date is different from the original contract completion date (i.e. early or late), please explain under Section (h) above. If early completion was due to an incentive please provide details.
- ** If actual contract value is different from the original contract value (i.e. more or less), please explain under Section (h) above.
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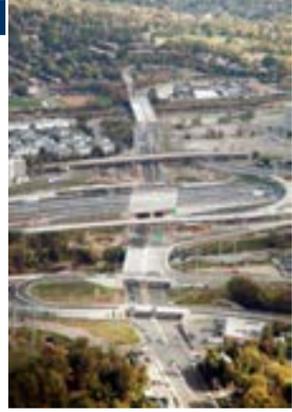
ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 2 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)*	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 Contract Value**	
RECONSTRUCTION OF TELEGRAPH ROAD & ASSOCIATED BRIDGES Alexandria, VA (BRIDGE PROJECT)	Dewberry and Davis	Name of Client./ Owner: Virginia Department of Transportation Deputy Project Manager: Jamal Masumi Phone: 703.259.2215 / 571.237.2696 (Cell) Email: Jalal.masumi@vdot.virginia.gov	06/30/2013	06/27/2013	\$236,393	\$267,910	\$267,910 Joint Venture 100% Responsible Corman 55% / Kiewit 45%

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

Similar Scope of Work:	PROJECT SCOPE		<p><i>“To the people who worked on the Telegraph Road interchange: Thank you for the great design and elegant construction of the interchange with the Beltway, Kings Highway, Huntington, Duke and Eisenhower. I feel like you have given me back an hour a day, 15 days of my life every year that I am not sitting in the back up trying to go north on Telegraph in the morning and south in the evening. When I consider the number of people who drive through that interchange, it is plain to see that your work has made a tremendous impact on the quality of life around here. You should be proud.”</i></p> <p align="right">-A Local Resident</p>
<ul style="list-style-type: none"> • Design-Build elements (MSE & sound wall requirements) • Roadways • Survey • Structures and Bridges • Environmental • Geotechnical • Hydraulics • Stormdrain and SWM • Milling and Overlaying Existing Pavement • Demolition of Structures • Guardrail • Retaining Walls • Traffic Control Devices • Signs, Sign Structures, and Foundations • Transportation Management Plan • Utilities • Stakeholder Coordination • Project Management and Coordination with other Active Construction Projects Within the Vicinity of the Project Site 	RELEVANT PROJECT ELEMENTS		

CK Constructors, a Joint Venture (Corman Construction affiliate) was the Lead Contractor on this fast-track project that was the final major undertaking of the Woodrow Wilson Bridge replacement project. The JV (Corman was the Lead partner), was responsible for construction, including structures and highways, MOT, environmental permits and protection, public relations, coordination with adjacent contracts, utility protection/relocation, managed third-party stakeholders, and assisted in the Woodrow Wilson Bridge community outreach program. *Only Corman Construction, CK Constructors' lead, will be a team member on the Design-Build Route 29 Solutions project.*

Project scope included reconstruction of 2.5 miles of I-95/I-495 and Telegraph Road for traffic to enter and exit Virginia by crossing the new Woodrow Wilson Bridge and a widening/reconstruction connecting the Woodrow Wilson Bridge project with new HOT lane projects (**under construction by LANE**). There were 11 new bridges and five flyover ramps totaling 380,000 SF of bridge deck, 4 signaled intersections, and 17 interchanges. Extensive tie-back walls support existing and new structures and roads where 18,000 SF of tie-back system was installed for support of excavation. Constructed 2 express lanes, 4 local lanes in each direction, auxiliary lanes and 6 roadway ramps for the interchange. Improvements included utility relocations from Duke Street on the north to Lenore Lane to the south. The new grade-separated interchange provides access to eastbound Huntington Ave. and North Kings Highway from the Beltway Outer Loop and southbound Telegraph Road, through elevated ramps over Telegraph Road, opposed to signalized intersections, to refine traffic flow and provide easier/safer pedestrian access.

Bridges/Structures: **9 New Bridges:** **B601**-1,783 LF steel girder flyover I-95; **B603**-600 LF steel girder flyover Telegraph Rd westbound I-95; **B618**-341 LF Concrete girder at I-95/495 over Cameron Run; **B619**-220 LF steel girder at I-95/495 over Telegraph Road; **B620**-247 LF concrete girder at Telegraph Road over Cameron Run; **B621**-1,636 LF steel girder flyover I-95; **B672**-166 LF Steel girder over Telegraph Rd; **B673**- 90 LF steel girder over ramp; and **B674**-181 LF steel girder over Telegraph Rd. **1 Bridge Repair:** **B617**-127 LF two concrete girder bridge widening westbound 1 lane I-95 over Eisenhower Connector. **1 Bridge Widening:** **B622**-500 LF steel girder over metro and CSX.

Collective Team Member Experience: Corman was the lead contractor in a joint venture and RK&K was the lead GEC partner in a joint venture.

Maintenance of Traffic: Maintaining traffic involving an ADT of 160,000 was the most critical aspect of the project's success. Traffic flow issues were mitigated before they became problematic. Six lanes; three in each direction of I-95, was maintained throughout construction. The project team constructed a section of roadway, switched traffic to the new lanes and began improvements to the old roadway. Since traffic control and safety were major concerns, much of the construction was completed at night and during off-peak travel. The project team revised MOT plans, greatly reducing the original design of six phases to three phases and from 12 lane shifts to six. This positioned the team to meet all major incentive interim milestones while improving public travelling conditions.

Schedule: There was an aggressive schedule as it was linked with existing traffic patterns and other Woodrow Wilson Bridge projects that had to be accommodated while working over water, rail systems and on the Capital Beltway, considered one of the busiest roads in the country. **Project was substantially completed 112 days early in 8/25/12** which was well ahead of the required 12/15/12 completion date and 17 days less than the full incentive date.

Safety: The interchange improves local and interstate traffic flow in a highly-congested area and eliminates complex mergers for safer and more efficient travel through connecting bridges and ramps. It expands 2 ½ miles of lanes on I-495 to tie into the corridors through and local lane configuration. This configuration continues for 7.5 miles on the Capital Beltway, from Telegraph Road in Virginia to MD 210 in Maryland. Over 1.7 Million manhours with a 2.04 RIR and .45 LTIR.

Shared Use Paths: Telegraph Road is a connector to Eisenhower Avenue, just west of I-95. The new interchange also allows east to west bicycle and pedestrian access to Eisenhower Avenue. It gives bikers a safe, clean connection to the Mt. Vernon Bike Trail, located a few miles north of the interchange.

Project Benefits: New and improved bridges, retaining noise walls, traffic lights and drainage systems - Smoother traffic flow – Improved walking paths – Safer pedestrian access to the bridge

EVIDENCE OF PERFORMANCE

All six incentive interim milestones were achieved and the final incentive milestone of substantial completion was met 112 days early and 17 days less than the full incentive date. Final project completion was three days ahead of schedule.

“Scoring 95.3% for a project of the enormity and complexity of our VB 236 contract [the largest VDOT construction contract awarded to-date] is a truly significant positive achievement. It reflects our meeting the partnering mission statement commitments. I would like to extend my sincere appreciation to the VDOT/PCC/CKC partnership team for their steadfastness and resolve. I congratulate the team for having met the challenges in achieving this score, and thank them again. Let's keep up the good work.”...Jalal Masumi, VDOT Deputy Project Manager

AWARDS: 2013 VTCA Transportation Engineering Overall Winner Award; 2012 Northern Virginia Transportation Alliance (entire WWB project); 2009 ASCE Maryland Outstanding Large Project (entire WWB project); 2008 AASHTO Award Grand Prize (entire WWB project).

* Initial completion date was 6/30/13, but project was completed three days ahead of schedule.
 ** Original contract value was \$236,393,188; actual contract value was \$267,910,003.51 due to incentives and owner authorized changes (unforeseen utility relocation and MOT safety upgrades).

Project Parameters	Project Example	
Delivering Multiple Projects Concurrently		<p>The Telegraph Road Interchange, the southernmost of four newly-constructed interchanges, is the final component of a \$2.5 billion project to reconstruct Woodrow Wilson Bridge corridor where Corman held three other Woodrow Wilson Bridge contracts. Extensive planning, coordination and cooperation among all adjacent projects was a key to overall Woodrow Wilson Bridge project success.</p> <p>This project had an aggressive schedule as it was linked with existing traffic patterns and other Woodrow Wilson Bridge projects that had to be accommodated while working over water, rail systems and on the Capital Beltway, considered one of the busiest roads in the country. To successfully execute a project of this magnitude, incentive interim milestones had to be met before continuing onto the next section. All six incentive interim milestones were achieved and the project was substantially completed 112 days early in 8/25/12 which was well ahead of the required 12/15/12 completion date and 17 days less than the full incentive date. Final project completion was three days ahead of schedule.</p>
Urban Corridor	<p>Project was located in the Interstate 95 corridor which is a vital commuter route for Washington DC area and east coast travelers. The construction played a key role in the Woodrow Wilson Bridge replacement project.</p> <p><i>“Recognizing the professional and responsible discharge of functions by project members of the CK Constructors joint venture, the role played by Corman as the lead entity deserves due credit. Their outstanding performance to steer and keep the project in check with parameters of budget, schedule, and quality as measured by the Department metric is commendable. The challenges of reconstructing an interstate interchange in a very congested urbanized setting, constrained by construction over a live stream in the south and over railroad lines on the north have thus far been successfully met. The contract is on schedule, has met all six possible incentive interim milestone dates, and is slated to meet the final incentive milestone of substantial completion in December 2012.....Jalal Masumi, Deputy Project Manager, VDOT</i></p>	
Innovative Design Solutions and Construction Techniques	<p>Revised MOT plans, greatly reducing the original design of six phases to three and from 12 lane shifts to six. This positioned the team to meet all major interim milestones and their corresponding incentives, while improving public travelling conditions. Team partnering identified and resolved issues early in the planning stages. Other construction techniques included using Corman in-house custom gang overhang, deck edge and fall protection systems, staying within 50% allowable survey tolerances using GPS controls for layouts, and using combo ground and air erection of structural girders.</p>	
Design-Build Experience	<p>Project encompassed design-build MSE and sound wall requirements which were designed per VDOT specifications and special provisions. The Corman JV reviewed the designs and submitted to VDOT for approval. The Corman JV, along with our suppliers, designed 11 MSE retaining walls and 1.6 miles of sound absorptive barriers. In addition, we worked with the Owner on solutions to design issues and partnered to overcome conflicts that threatened to delay the project.</p>	
Limiting Impacts		<p>The Corman JV re-phased the project to control traffic flow disruption and minimize commuter impacts. There was multiple stages and phases to complete the work while maintaining traffic. We worked with the Owner and eliminated treacherous traffic patterns and unnecessary shifts. This kept traffic in familiar lane patterns for extended periods of time as opposed to traffic configurations that would have added to confusion and gridlock.</p> <p>Progress meetings were held every week with the owner and partnering meetings took place every other month. There was extensive coordination with adjacent projects, local residents, and utility companies which were handled by Corman and VDOT’s general engineering consultant (GEC). There was daily onsite coordination and weekly meetings at GEC offices discussed work plans and public information. Also coordinated work with the City of Alexandria, hotels, retail stores, local city police, fire, and other emergency responders. Since traffic control and safety were major concerns, much of the construction was completed at night and during off-peak traveling.</p>
Communication Strategies	<p>While the potential for miscommunication exists within a single organization, the potential multiplies significantly with a multi-organizational team, each with its own processes. Professionalism at its best, along with can-do attitude, fostered open lines of communication among the major stakeholders: VDOT, Federal Highway Administration (FHWA), the Corman JV, the Designer of Record, third party owners (especially WMATA and CSX railroads), the City of Alexandria, Fairfax County, and PCC (GEC). The project held regularly scheduled meetings including Weekly Progress Meetings, Bi-weekly Partnering Meetings, Monthly Schedule Update Meetings, Monthly Railroad Coordination Meetings, and Project Update Meetings with Local Governments and the Public. Standard weekly project status reports kept everyone informed.</p> <p>The Corman JV managed third-party stakeholders and assisted in the Woodrow Wilson Bridge community outreach program with VDOT’s GEC. We also coordinated with the City of Alexandria, Fairfax County, adjacent properties, local residents, utility companies, hotels, retail stores, police, fire, and other emergency responders.</p>	
Risks	<p>Risks on a project of this magnitude were numerous, from drilling 70-inch diameter 70 feet deep caissons within WMATA’s and CSX’s rail zone of influence, to managing pedestrian and vehicular traffic throughout the project, to erecting steel girders over roads, railroads and waterways. To keep the project moving, we developed a risk assessment and management matrix that addressed level of risk, responsible personnel, specific safety, work plan, and QA/QC plan.</p>	
Complex Utility Relocation		<p>The project relocated high voltage transmission lines, electric and communication duct banks, high mast, conventional and tunnel system lighting, modified/installed traffic signals, constructed new and extended multi-cell culverts, maintained existing and implemented new storm water conveyance and retention systems. Modified water, sewer and gas lines, via jack and bore, directional drilling and cut and cover methods. A key element was an upgrade to the ITS infrastructure throughout the corridor while maintaining existing system during construction without interruptions.</p> <p>At the start of the project, it was apparent utilities were relocated into the path of the proposed work. Alternate schedules and work areas were developed to keep the project on track. Features included notification of possible conflicts of existing/new utilities and proposed new work/field operations; coordination between project operations/staff and other utility contractors working in the area; coordination with utility owners; and coordination/management of utility subcontractors. As a result, the original schedule was maintained with extensive relocations coordinated with the schedule.</p>
DBE Program	<p>MBE: 15% / Acquired 16.5% . Strategies included indentifying DBE/MBEs, determining their capabilities, and customizing work packages to maximize participation and selecting portions of work that could be performed by DBE/MBEs to achieve goals. Project ended with achieving 1.5% over the DBE goal.</p>	

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ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 2 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)*	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 Contract Value**	
I-95 EXPRESS LANES Fairfax, Prince William and Stafford Counties,VA DESIGN-BUILD (ROADWAY PROJECT)	HNTB/ HDR	Name of Client./ Owner: VDOT Phone: 571.483.2651 Project Manager: Charlie Warraich, PE Phone: 571.273.8229 Email: H.S.Warraich@VDOT.Virginia.gov	03/30/2015	3/30/2015	\$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.

Similar Scope of Work:	PROJECT SCOPE	
<ul style="list-style-type: none"> • Design-Build • Roadways • Survey • Structures and Bridges • Environmental • Geotechnical • Hydraulics • Stormdrain and SWM • Milling and Overlaying Existing Pavement • Demolition of Structures • Guardrail • Retaining Walls • Traffic Control Devices • Signs, Sign Structures, and Foundations • Transportation Management Plan • Traffic Maintenance and Management • Right-of-Way • Utilities • Stakeholder Coordination • Public Hearing and Public Involvement • QA/QC • Construction Engineering and Inspection • Project Management and Coordination with other Active Construction Projects Within the Vicinity of the Project Site 	RELEVANT PROJECT ELEMENTS	
Personnel on Project:	EVIDENCE OF PERFORMANCE	
Wallace Alphin (LANE) Ben McKenna (LANE) Barry Bernstein (LANE) Mike Leitch (LANE) Angel Lebron (LANE) Wayne Lindsey (LANE) Chris Reed (RDA) Ken Prince (LANE) Doug Russell (LANE) Steve Seay (RDA)	<p>LANE, as a Construction Joint Venture (CJV) member, shared responsibility for the design and construction of the \$722 million I-95 Express Lanes project. The project creates approximately 29 miles of Express Lanes on I-95 from Alexandria, VA at the northern terminus to Rte 610, Stafford, VA at the southern terminus. The scope of work includes a 9-mile roadway extension that consists of major clearing and earthwork, an extensive ITS and signing system, sound walls, asphalt mill and overlay, shoulder reconstruction, and, additionally, structural bridge work (29 bridges and rehabilitated flyovers including 9 new structures). Although only a 35% Fluor-Lane 95, LLC CJV member, LANE is providing nearly all of the project supervision and workforce for the CJV performed work; plus, all of the asphalt paving, soundwall construction and some roadway signage. <i>Only LANE of Fluor-Lane 95, LLC will be a team member on the Route 29 Solutions project.</i></p> <p>Roadway: A new 9-mile reversible, two-lane extension of the existing HOV lanes from Dumfries to Garrisonville Road in Stafford County is being constructed to alleviate the worst traffic bottleneck in the region. This new construction in the median of the roadway provides new access points to serve Virginia-based destinations, including Tysons Corner, City of Alexandria, Arlington County, and major military sites. The project includes construction of 2 new lanes and extensive utility coordination and relocation.</p> <p>Expedited Project Delivery: This project involves an expedited design and construction schedule. The CJV contracted two design leads to fast track the design to meet schedule deliverables. This fast track design started in March 2012 and measurable construction commenced August 2012, approximately four months following start of the design. The LANE/Corman Team is structured in a similar way (RK&K supported by WR&A and RDA) to ensure the fast track schedule for Route 29 Solutions is met.</p> <p>Project and Team Organization: The I-95 Express Lanes project was structured as one contract encompassing two projects. The design of this contract is divided into six (6) geographical segments, identified as 1, 2S, 2N, 3S, 3N, and 4. Construction is divided into two areas, Areas 1 (Segments 1, 2S, and 2N) and Area 2 (Segments 3S, 3N, and 4). Similar to the Route 29 Solutions project, by breaking up the project into Areas, the managers have been able to focus on critical work items and develop phased plans to sequence work efforts to meet the aggressive schedule while meeting strict requirements for maintenance of traffic. Current teammates on the Route 29 Solutions project, RDA, provided TMP and MOT services on this project as part of the D-B team.</p> <p>Structures/Bridges: Nine new bridges have been constructed along the project corridor to date. The new bridges include two each with steel curved girders, two each two span flyovers near Garrisonville Road and Joplin Road, three single span bridges with steel girders over Aquia and Chopawamsic Creeks and Russell Road, one two-span concrete girder bridge over Joplin Road and replacement of the existing Telegraph Road bridge across I-95 with a new two-span steel girder bridge.</p> <p>Safety: As of March 31, 2014, this project has recorded over 2,350,000 safe work hours with zero (0) Lost Work Day Cases. The current project OSHA Recordable Incident Rate is 0.44, well below the industry average of 3.6.</p> <p>Environmental: Beginning in January 2013, the D-B team led the efforts to restore Swan's Creek—a tributary to the Potomac River and Chesapeake Bay—by installing erosion and sediment controls, placing stone along the creek bed, and micro-grading to allow for habitats and improvements to the overall water quality. The stream, which was identified more than seven years ago by Prince William County officials, had been severely eroded and degraded. With the completed restoration, the stream is now feeding higher quality water into the region's waterways. In addition, nearly 7,500 new trees and shrubs were planted near Swan's Creek as part of the stream restoration effort. Project leaders worked with Prince William County to determine the highest stream improvement priority, resulting in the restoration of Swan's Creek.</p> <p>Project Benefits: Additional capacity Support of 11,800 jobs Faster travel options Congestion relief for Northern VA Safety - Less stop and go traffic Positive environmental impact</p>	
	<p>VDOT Program Manager, H.S. Warraich observes that, compared with the five-year I-495 project [delivered one month early], "I-95 has moved at warp speed." – <i>ENR</i>, August 11, 2014.</p> <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." - Governor Terry McAuliffe.</p> <p>"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." - Sean T. Connaughton, [former] Virginia Secretary of Transportation.</p>	

***The contract 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 (to name a few).

Project Parameters	Project Example	
Delivering Multiple Projects Concurrently	I-95 Express Lanes is a Virginia MegaProject with multiple segments and components. During construction of the project, a tight footprint in a congested corridor, extensive night work, an aggressive delivery schedule, and volume of work per month required to meet the substantial completion date have been major challenges, all similar to the Route 29 Solutions project. By breaking up the project into two (2) Areas, managers were able to focus on critical work items and develop phased plans to sequence work efforts to meet the aggressive schedule while meeting strict requirements for maintenance of traffic. Additionally, the team is responsible for contacting other contractors regarding their anticipated schedules to complete the associated projects or key milestones of the associated projects they are/will be working on. LANE coordinated with over 14 other contracts during construction. 	
Urban Corridor	Similar to Route 29, the I-95 Corridor is part of the National Highway System and a Corridor of Statewide Significance. This I-95 Express Lanes Project presents numerous site entrance and egress challenges and very tight work areas due to the heavy traffic conditions—particularly during morning and afternoon rush hours. The I-95/I-395 project corridor carries average daily traffic volumes of nearly 250,000 vehicles per day on one of the most heavily travelled and congested urban corridors in the United States requiring extensive MOT. The D-B team has helped mitigate this challenge by working closely with their designers and VDOT to establish Maintenance of Traffic (MOT) plans and have developed an extensive orientation and training program for supervisors and workers to assist in the implementation of these MOT programs.	
Innovative Design Solutions and Construction Techniques		The team established an electronic survey control network that was utilized to provide high quality corrections for Robotic Controlled Paving. This process utilizes 3D models installed in a computer module that is installed on the asphalt paving machine. Several Trimble robotic total stations are set up on control stations at approximate 500' intervals along the paving sections. Throughout the paving process the total stations continuously locate a prism target that is mounted on the screed of the paving machine. The horizontal and vertical locations are also continuously sent back to the computer module on the paving machine via a radio connection. The computer module then processes this data and makes adjustments to the paving machine screed based on these locations. This process has allowed for a high quality (+/-0.25") and consistent final paving product while assuring quantity yields are very close to design volumes. A similar process was utilized in some areas for subgrade preparation, using a fine grade control system that was set up for wireless Robotic controlled grading.
Design-Build Experience	Key to the successful delivery of a design-build project is the strong working relationship formed among the team. Many key members of our I-95 team will be assigned to the Route 29 Solutions project, which assures VDOT a seamless transition from one successful D-B project to another. The I-95 Express Lanes Project is slated for completion in March 2015 and is currently more than 85% complete; personnel will be readily available at that time to work on the Route 29 Solutions project.	
Limiting Impacts	This project presents numerous site entrance and egress challenges and very tight work areas due to the heavy traffic conditions—particularly during morning and afternoon rush hours. The I-95/I-395 project corridor carries average daily traffic volumes of nearly 250,000 vehicles per day. The team has helped mitigate this challenge by working closely with the designers and VDOT to establish Maintenance of Traffic (MOT) plans and have developed an extensive orientation and training program for supervisors and workers to assist in the implementation of these MOT programs.	
Communication Strategies	A dynamic public information program has been implemented which provides advance information notification to VDOT and to the public. This has been facilitated through meetings, website access, email blasts, flyers, and door to door calls promoting awareness of construction operations and lane closures promoting better travel planning through the corridor. To date, the team has held over 415 public meetings and the project site has had visits from former Governor McDonnell and VDOT Secretary of Transportation Aubrey Layne as well as accolades from current Governor Terry McAuliffe.	
Risks	The biggest risk on the I-95 Express Lanes project is the project schedule. The team had 1,009 days to design and construct this fast track D-B project. The team received NTP on March 27, 2012 and it was imperative that construction start in the first season in order to finish by December 31, 2014. Release for Construction design plans typically take at least one year to develop, review, and approve prior to construction commencing. In order to mitigate any design resource limitations and meet this fast track schedule, the team decided to employ two design firms to deliver 123 design packages in order to start construction early. Over 100 design professionals in addition to VDOT design review members were collocated at the project office facility to collaborate and fast track the design deliverables. Routine and robust constructability sessions were held weekly. The team received construction plans and started appreciable construction activities on August 1, 2012, only 4 months after NTP. The team mobilized approximately 1,500 workers and SWaM and DBE subcontractors to construct this segmented multi-phased project. Crews worked day and night, 7 days per week to meet schedule milestones. The project is currently more than 89% complete and ahead of schedule.	
Complex Utility Relocation	Extensive utility relocation efforts including past identification and data gathering, review of design concepts against existing utilities (pavement, structures, and signs), determination of mitigation measures, and ongoing coordination with numerous utility companies for both aerial and underground facilities took place during the first year of the project.	
DBE Program	As of June 2014, the project had generated more than \$169M into the local economy through DBE and SWaM businesses. Currently, at total value of \$193M has been committed to more than 131 DBE/SWaM firms, which will exceed the team's DBE/SWaM project goals of \$189M. Additionally, the team has surpassed the On the Job Training Program goal of 24 trainees set by VDOT. To date, 31 trainees have graduated the program. "The project has also benefited jobs and business opportunities, particularly for women- and minority-owned businesses as well as small businesses." - Governor Terry McAuliffe	

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Attachment 3.4.1(c)

Lead Designer - Work History Form

LANE

AND

 **CORMAN**
CONSTRUCTION

In association with:

RK&K

ATTACHMENT 3.4.1(c)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 2 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 Completion Date (Original)	e. Construction Contract Completion Date (Actual or Estimated)*	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)**	
US 13/ US 158 WIDENING FROM US 158 / NC 43 TO US 158 Hertford and Gates Counties, NC (DESIGN-BUILD)	E.V. Williams	Name of Client.: North Carolina Dept. of Transportation Phone: 919.707.6610 Project Manager: Teresa Bruton, PE Phone: 919.707.6610 Email: tbruton@ncdot.gov	12/2014	12/2015	\$58,500	\$58,500	\$5,300

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.

Similar Scope of Work:	PROJECT SCOPE	
<ul style="list-style-type: none"> • Design-Build • Complex Traffic Issues • Bridge Widening / Replacement • Utility Coordination • Structures and Bridges • Environmental • Geotechnical • Hydraulics • Stormdrain and SWM • Milling and Overlaying Existing Pavement • Demolition of Structures • Guardrail • Retaining Walls • Traffic Control Devices • Signs, Sign Structures, and Foundations • Transportation Management Plan • Traffic Maintenance and Management • Right-of-Way • Utilities • Stakeholder Coordination • Public Hearing and Public Involvement • QA/QC • Construction Engineering and Inspection • Project Management and Coordination with other Active Construction Projects Within the Vicinity of the Project Site 	RELEVANT PROJECT ELEMENTS	
Personnel on Project:		
Tommy Peacock, PE (RK&K) Joe Rauseo, PE (RK&K) Barry Brandt, PE (RK&K)		

The RK&K Raleigh office, with assistance from the RK&K Richmond office, partnered with the contractor and served as the Lead Designer for this design-build project that included widening approximately 7.1 miles of US 13/US 158 from US 158/NC 45 near Winton in Hertford County to the US 158 Bypass in Tarheel in Gates County. A major bridge water crossing was part of this project.



The project required the design and construction of a four-lane divided facility with a 30-foot to 46-foot median width. A major bridge was provided over the Chowan River and dual bridges were provided on US 13 over US 158 and over Buckhorn Creek. An interchange was provided at the US 158 / NC 45 intersection. Directional crossovers with median U-Turns was provided to improve the safety and traffic flow along this US 13 / US 158 corridor.

As Lead Designer, RK&K was responsible for bridge design, roadway design, obtaining permits, providing right-of-way acquisition, utility coordination and relocation, and construction.

Utilities: With numerous utilities present, we engaged a full-time utility coordinator to ensure timely relocation of all local and transmission lines. This allowed the utility relocations to occur in a timely and seamless manner for construction to stay ahead of schedule.

Verification of client-supplied surveys is essential. On this project, taking the time up front to perform this verification promoted minimization of design and construction errors and proved quite beneficial. Unforeseen conditions in the field that could have led to design changes that may have impacted the project schedule were avoided utilizing this process. RK&K has continued to apply this 'lessons learned' methodology to all of their design-build projects.

MOT Plans: Engaging the contractor interactively in the preparation of the maintenance of traffic plans during design ensures that the contractor will understand and support the maintenance of traffic plan and will execute it appropriately in construction. This lessons-learned was implemented on this project.

Roadway Elements: From beginning of project south of US 158/NC 45 to bridge over the Chowan River (1.6 mile): The Team added two lanes with a 30-foot median width along the east side of US 13. Reconstruction of the US 158/NC 45 intersection provided an interchange with three ramps and one loop (southeast quadrant) and dual bridges on US 13 over US 158. From Chowan River to Shoups Landing Road (SR 1131) (0.6 miles): The Team added two lanes along east side of existing roadway with a 30-foot median. This section of Roadway includes massive undercutting of existing earth material due to adjacent swamp. Shoups Landing Road (SR 1131) to US 158 Bypass at Tarheel (5.6 miles): The Team added two lanes with 46-foot median along the east and west side of existing Roadway. The project ended by transitioning to the existing two-lane, two-way US 13 roadway approximately 600 feet north of US 158.

Bridge over the Chowan River: The Team designed and constructed a new bridge along east side of the existing 1,121-foot long, 40-foot wide bridge with a 30-foot median in accordance with the latest edition of the AASHTO LRFD Bridge Design Specifications and the AASHTO Guide Specifications and Commentary for Vessel Collision Design of Highway Bridges. The existing 16-span bridge was retained and rehabilitated. The new bridge was 1,121 feet long and 36 feet wide. Prestressed AASHTO Type IV girders were utilized as well as 77" Bulb Tees with 135 foot spans. The AASHTO Type IV girders utilized 32 0.6" low lax strands with a final concrete strength of 6,300 psi and a release concrete strength of 5,000 psi. The 77" bulb Tees utilized 58 0.6" low lax strands with a final concrete strength of 9,000 psi and a release strength of 7,000 psi. Precast concrete beams were selected for long-term durability as well as reduced future maintenance needs, as compared to a steel superstructure. Special attention was given to the camber of these long-span beams in order to provide a smooth riding surface. Initial deflections, as well as creep & shrinkage, were all accounted for in the analysis. The design of the foundations and piers were complicated by the requirement to design for a vessel impact. The vessel impact analysis necessitated the need for 24" prestressed concrete piles to be battered in 4 directions for the piers. The abutments had a more conventional analysis and construction and are supported on steel H piles. The design scour elevation was lower than anticipated, and there was a hard limestone layer fairly shallow, which resulted in a small amount of soil for the concrete piles to be driven into. As a result, an analysis was performed to show that the pile groups acting like a table top sitting on that hard layer were stable and acceptable for design requirements and overall performance of the bridge.



EVIDENCE OF PERFORMANCE

Excellent Technical Score: With an innovative design approach and aggressive schedule, RK&K D-B Team received an impressive proposal technical score of 92.

Utility Relocation: Because of the numerous utilities, number of utility owners, and project terrain; providing a full time, aggressive, but respectful utility coordinator was essential for the utility relocation process for this project. Many compliments were received from the owner and contractor for this effort and performance by RK&K.

Design Submittals: Very few of the design submittals resulted in comments that were deemed "Revise and Resubmit". The majority of submittals resulted in "Comments as Noted" which is attributed to our excellent staff and allowed the design process to proceed very quickly. This was critical to obtaining the environmental permit in a timely manner so construction could begin as scheduled.

* An extension of project limits was requested by the Owner and the schedule was subsequently extended by the Owner.

Project Parameters	Project Example
Delivering Multiple Projects Concurrently	While providing final design and coordination for the US 13/158 project, the RK&K design team performed simultaneous design and coordination for three major D-B projects including I-73 (\$176.5M, 9.4 miles, 15 bridges), Monroe Bypass (\$367.7M, 19.7 miles, 37 bridges), and Macy Grove Road (\$38.8M, 0.9 mile, 3 bridges). All projects were managed by the same team members and delivered on time and on budget.
Urban Corridor	Although this project is classified as a rural arterial, it does have major urban components which include over 11 major intesections, bike lanes, 50 driveways to residences and businesses, and multiple concrete islands and u-turning movements at intersections. The project also has a high percentage of truck volume and a park and ride lot for commuters. The south end of the project connects to the town of Winton, NC and the north end connects south of City of Suffolk, Virginia.
Innovative Design Solutions and Construction Techniques	An innovative design concept was utilized to handle the significant vessel impact that could occur from any angle. The vessel impact analysis called for 24" prestressed concrete piles battered in four directions at the piers which resulted in extreme pier stiffness could have lead to excessive loads being transferred from the bridge superstructure. RK&K's design concept relieved the stress by the use of elastomeric bearings. The use of elastomeric bearings lessened the transfer of longitudinal and lateral loads from the superstructure to the substructure and foundations, thus resulting in an efficient design.
Design-Build Experience	The Team that delivered this project is known as a leader in North Carolina's D-B arena. Teaming with various local and nationally recognized heavy highway and bridge contractors, RK&K has assisted the North Carolina Department of Transportation and North Carolina Turnpike Authority with some of their most challenging transportation assignments. With a resume of 16 Design-Build projects totaling over \$960 million, including 90 miles of roadway and 138 bridges, RK&K has a proven reputation for innovative design. From serving as Lead Designer for one of North Carolina's first ever design-build projects (Ruin Creek Road) to designing the state's first operational toll facility (Triangle Parkway) and designing North Carolina's largest design-build project (Monroe Connector/Bypass), RK&K's North Carolina D-B experience is unparalleled by other design firms. RK&K personnel who have been proposed for this Route 29 Solutions Project (noted in the text box on the previous page), have been integrally involved in this US 13/ US 158 Widening Design-Build project as well as have been active members of the Lead Design team on the I-64 Widening and Route 623 Improvement D-B project with Corman Construction.
Limiting Impacts	Because a significant portion of the project is adjacent to a swamp and the Chowan River flood plain, studies to minimize impacts to wetlands and flood plain were performed. Reductions to wetlands included the addition of retaining walls and steepening fill slopes. Retaining walls included soil reinforced walls as well as pile panel walls. The steep fill slopes included rock plating and fabric for slope stability. Flood plain modeling was performed to achieve a required "no-rise" for the 100-year storm. Designers and modelers worked together to optimally set the grade to provide a "no-rise" while providing a roadway adequate subgrade.
Communication Strategies	The communication strategy for this project was multifaceted consisting open dialogue between the Engineer (Lead Designer), Contractor, and Owner. In addition to a project kick-off partnering meeting, monthly meetings were scheduled from start of design until the approval of RFC plans. These meetings included all engineering discipline leaders for discussion of design and brain-storming dialogue. Other important communication included meetings with all utility owners to for the pupose of updating all parties on design progress and construction sequencing. In addition to monthly construction meetings, a project web-site was set up to keep the public aware of construction progress.
Risks	Project risks included major undercutting of existing organic soil adjacent to the Chowan River, relocation of 12" transmission gas line, and minimizing environmental impacts. The area of major undercut was extensively studied with several soil improvement methods considered, however because of excellent borrow material located adjacent to the project the undercut areas were successfully undercut and back-filled. The relocation of the gas line required multiple coordination meetings with the gas line owner and their engineer and resulted in a seamless, quick, and successful relocation. Wetlands impacts were minimized with the use of retaining walls and steep soil reinforced slopes. The NEPA permit was obtained as scheduled allowing the contractor to start construction as planned.
Complex Utility Relocation	The US 13/158 project required extensive utility relocation relocation and associated permitting. RK&K's utility engineers and roadway engineers worked seamlessly to minimize conflicts with all of the existing utilities as well as minimize impacts to the vast wetlands within the project corridor. Existing utilities along the project included sanitary sewer, gas, power, telephone, cable, and communication. Some of the major required utility relocations included approximately 4.4 miles of water main, 4.8 miles of 12" transmission gas line, and 5,000' of bored AT&T line line with a portion under the Chowan River.
DBE Program	The project had a DBE goal of 6%. Through extensive outreach and a dedication to the DBE program, the actual percentage was 8% overall for the project. This was achieved through both design and construction elements.

* If actual contract completion date is different from the original contract completion date (i.e. early or late), please explain under Section (h) above. If early completion was due to an incentive please provide details and if design was a factor in achieving the incentive.

** If actual contract value is different from the original contract value (i.e. more or less), please explain under Section (h) above and if design was a factor.

*** For multiple phase projects, only single phase of construction (or single contract) will be considered as a Project. If additional phases are shown under the same Work History Form, only the first phase (or contract) listed will be evaluated.

ATTACHMENT 3.4.1(c)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 2 PAGE PER PROJECT)

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					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)**	
ROUTE 250 BYPASS INTERCHANGE AT MCINTIRE ROAD Charlottesville, VA	General Excavation, Inc.	Name of Client: City of Charlottesville Phone: 434.970.3182 Project Manager: Jeannette Janiczek Phone: 304.558.9721 Email: janiczek@charlottesville.org	06/2015	06/2015	\$20,377	\$20,377	\$5,900

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.

Similar Scope of Work:	PROJECT SCOPE	<p>The Route 250 Bypass project is one of the largest projects undertaken to date as part of the Virginia Department of Transportation (VDOT) First Cities Initiative / Locally Administered Project (LAP). As prime consultant, RK&K provided complete planning, engineering, and construction management services on a new grade separated interchange on the Route 250 Bypass at the intersection of McIntire Road. The design was led by RK&K as the prime consultant out of their Richmond, VA office with engineering and planning support from RK&K's Fairfax, Virginia Beach, and Baltimore offices.</p> <p>This project was developed in three phases under one contract and although not procured as a D-B contract, the three phases emulate the role, responsibilities, and services of a Lead Designer on such. Phase I services included development of Conceptual Alternatives, Detailed Alternatives and a Preferred Alternative through Public Hearing and completion of the Environmental Documents. Phase II services included final design and assisting the City with bidding and procurement of the project. Phase III services continue and consist of construction management and inspection as well as construction engineering working in coordination with the contractor. Project elements have included environmental/NEPA documentation, Public Involvement, Traffic Data Collection and Analysis, Roadway Design, Structural Design, Traffic Engineering Design, Hydraulic and Hydrologic Analysis and Design, Graphic/Computer Renderings, and Project Website Hosting. Under the First Cities Initiative / LAP, all work has been performed for the City of Charlottesville and closely coordinated with VDOT and the Federal Highway Administration (FHWA).</p>	 
<ul style="list-style-type: none"> • Roadways • Grade Separations (Interchange) • Survey • Bridge, Retaining Walls and Structures • Environmental • Geotechnical • Hydraulics • Stormdrain and SWM • Milling and Overlaying Existing Pavement • Traffic Control Devices • Signs, Sign Structures, and Foundations • Transportation Management Plan • Maintenance of Traffic, TMP • Right-of-Way • Utilities • Stakeholder Coordination • Extensive Public Outreach • QA/QC • Construction Engineering and Inspection 	RELEVANT PROJECT ELEMENTS		
Personnel on Project:		<p>Interchange Design: Major features of this design include complete roadway reconfiguration and reconstruction, new roadway construction, a single span–semi-integral abutment bridge, two box culverts including stream diversions, extensive utility relocations, and multiple retaining walls. In addition, the RK&K Team prepared landscaping planting plans and cultural resource mitigation commitments. The roadway design was optimized to limit right-of-way requirements, avoid parkland and historic property acquisition, to best-fit the roadway profiles to the existing topography and provide a grade separation at this urban intersection.</p> <p>Traffic: A key element in the development of the interchange concepts was the incorporation of context sensitive solutions to the safety, congestion, and connectivity. Several of the interchange concepts that were developed incorporated modern roundabouts instead of traffic signals at the ramp termini along McIntire Road. RK&K performed traffic engineering analyses using SIM Traffic and SIDRA based on projected 2035 design year traffic volumes as well as several interim years to determine the most appropriate configuration for the interchange.</p> <p>Environmental: The Environmental Assessment and Draft Section 4(f) Evaluation were completed in September 2007. To streamline document preparation, the first draft of the document was submitted as four separate chapters: Purpose and Need (completed in Summer 2006), Alternatives, Environmental Consequences, and Comments and Coordination. Successive drafts of the entire document were reviewed by the City, VDOT Culpeper District, VDOT Central Office and FHWA via email. The use of Microsoft Word “track changes” by all reviewers substantially reduced comment interpretation time by the project team. Our project team also prepared an individual Draft Section 4(f) Evaluation that included the intended pursuit of two de minimis determinations. Our project team worked closely with VDOT, FHWA, and Virginia Department of Historic Resources (VDHR) to complete the Section 106 consultation process. The effort involved oversight of the historic property evaluation of National Register eligibility; coordination with consulting parties at several high-profile meetings; drafting the determination of effect for FHWA; preparing formal correspondence for the City of Charlottesville, VDOT, FHWA and VDHR / the Advisory Council on Historic Preservation; and drafting the MOA and facilitating its development. In addition, RK&K also prepared a Revised Environmental Assessment and Revised Section 4(f) Evaluation. The request for FONSI was prepared following approval of the Revised Environmental Assessment. Environmental permit drawings were developed for impacts to Schenks</p>	

Branch and development of the project SWPPP with associated VSMP permit forms.

Hydraulics and Hydrologics: Hydrology calculations were conducted for a 2.8 acres lake that was incorporated into the road plans. The final report included an independent hydrologic analysis of the 425-acre watershed, storm event routing of the proposed lake, and HEC-2 analysis of the lake outfall at Schenks Branch. Final results were then incorporated with the plans including modification of lake parameters and outfall structure to attain the proper lake performance desired during storm events. A Hydrologic and Hydraulic Analysis and scour analysis was conducted for a new bridge over Schenks Branch and for replacement of a double 8’x8’ box culvert beneath Route 250. Urban stormwater management practices were implemented using a combination of measures to minimize impacts to right-of-way and historic features. These included a combination of manufacturers filtering devices along with a stormwater management pond. E&S plans were also developed in multiple phases in conjunction with the TMP. This included the bridge construction and complex narratives addressing installation of temporary and permanent drainage and erosion control measures during all stages of roadway construction.

Structures: The Route 250 Bridge Bypass Structure over McIntire Road was examined for various span lengths and superstructure styles to lower project costs. The final solution was a single span bridge utilizing steel plate girders to provide a lighter, thinner and more transparent structure which will serve as the gateway to downtown Charlottesville. The design for a bridge type weighed the cost estimates with the overall requirements for aesthetics and durability. The abutments were generally aligned with McIntire Road and were set parallel to each other in

order to simplify the framing of the bridge. While they were skewed with respect to the superstructure, the fact that they were parallel to each other facilitated the design and construction of the structure. Every effort was made to eliminate or minimize the use of joints on the structure; semi-integral abutments were selected and designed.

EVIDENCE OF PERFORMANCE

The City of Charlottesville has demonstrated RK&K’s exceptional performance on this project by their continued desire to have the RK&K Team lead the design and construction management of this project. The initial contract for the planning and design was phased. After completing the Phase I planning effort, the City requested that RK&K continue into Phase II design and later into Phase III construction management, thereby leading this project from “cradle to grave.” Further exemplifying RK&K’s performance, the project is currently on budget and ahead of schedule.

Project Parameters	Project Example
Delivering Multiple Projects Concurrently	While performing final design on the Route 250 Interchange project, RK&K’s project manager and roadway design teams performed simultaneous designs on seven VDOT on-call design contracts with well over 100 assignments. Also during that same time frame this same team concurrently designed the following projects: Main Street Improvements in Blacksburg / \$8M; Givens Lane in Blacksburg / \$7.3M; Route 11/460 Corridor Widening (West Main Street) in Roanoke County / \$33M; Riverland Road Improvements in Roanoke / \$3.2M; 10th Street Corridor Improvements in Roanoke / \$18M; 13th Street Improvements in Roanoke / \$27M and I-95 Shoulder Widening in Prince William County / \$42M; totaling the design of over \$150M of construction, including this 250 Interchange project.
Urban Corridor	This project is on an urban corridor, the Route 250 Bypass, and is transforming a major at-grade intersection to a grade separated intersection / interchange while maintaining traffic of more than 40,000 VPD traveling through the construction zone. The construction limits include the entrance to a shopping center, the only ingress and egress point for an entire neighborhood, an adjacent existing interchange which required upgrading as a result of this project, the single entrance to CARS, the primary rescue squad for all of Charlottesville and Albemarle County and other connecting streets and driveways. Construction of the grade separation and the associated bridge is taking place right in the middle of traffic as there was no room for detours and temporary roadways.
Innovative Design Solutions and Construction Techniques	An innovative design concept for this project had to do with accommodating an existing waterline and its interaction with a proposed abutment. Conventional construction pile driving would have resulted in unacceptable levels of vibrations being put on the utility. In addition, the utility owner desired a wide easement with no piles in the easement. To solve this issue, an innovative design concept of a major grade beam coupled with pre-drilling the adjacent piles was utilized. The major grade beam allowed for spanning over the easement while the pre-drilling of the top 15 feet of the piles physically lowered the pile driving vibrations to below the elevation of the utility, thus removing the vibrations on the utility.
Design-Build Experience	RK&K is performing construction management and inspection during construction and several elements of our management of the project are very reflective of a D-B project. RK&K has worked with the contractor to help keep the project ahead of schedule. For example: Due to weather and other factors, utilities and the construction of a box culvert were delaying the start of one of the abutment walls of the interchange bridge. To move the bridge up in the schedule, RK&K’s design and construction management teams worked with the contractor to develop a change in phasing and a major change to MOT to allow traffic to be moved to temporary lanes and provide room for construction of the abutment.
Limiting Impacts	This project had to minimize impacts and footprint due to many constraints. Most significantly, a portion of the project will directly impact a City park that was found to be eligible for the historic register so minimizing impacts to the park and surrounding neighborhoods were a major part of the Purpose and Need for the project. Additionally, other historic features existed in all other quadrants of the project, thereby enforcing the need to have minimal impacts and footprint from the project. All total, this grade separation is being constructed where there was previously an urban intersection; the design that was developed required the displacement of only one private residence and no businesses.
Communication Strategies	The communication and outreach program was much more extensive than most projects. There were nearly 40 official public outreach opportunities during the planning and design that included Citizen Information Meetings, Public Hearings, City Council Meetings, Board of Architectural Review, Planning Commission, MPO Meetings and Steering Committee Meetings. Along with this, a project web site has been maintained throughout the project by RK&K. Individuals can use the web site to sign up for email and / or Twitter updates. During construction, we continually update project status and send out important notices including lane closures, temporary detours and other time-sensitive information.
Risks	<p>Environmental: This was an extremely controversial project which required construction in one of the City’s oldest parks. Historic resources bordered the project in all four quadrants of the interchange. These factors put a high level of scrutiny on the Environmental Assessment, which project opponents challenged throughout project development threatening to stop the project through a federal law suit. The sound basis of purpose and need and RK&K’s careful management of the design and information regarding the project led to successful culmination of the environmental process and dismissal of the suit in favor of the project.</p> <p>Geotechnical: Our geotechnical investigations found a layer of compressible, wet soils well below the structural fill locations that could lead to settlement during construction. The potential for settlement was mitigated by developing a backfill strategy that included settlement plates and continual monitoring until the predicted settlement had taken place. This strategy was accounted for in the construction schedule.</p> <p>MOT: Maintenance of traffic was complex and multi-phased to allow for the construction of a grade separation right in the middle of an urban intersection. Additionally, all four lanes of the Route 250 Bypass were required to remain open at all times with only very short term lane closures at night or during off-peak hours. Our maintenance of traffic and TMP plan had to account for the traveling public to move through and around the work on the bridge while allowing for adequate room to perform the construction of the project. This required many phases of work as box culverts and bridge elements had to be built in small phases, allowing traffic to be relocated or shifted. Our designs also took into account support for excavation and contractor equipment and materials so that we could be sure the project could be constructed in this limited right of way.</p> <p>Reach Steering Committee Consensus: Our project team worked with a steering committee throughout the development of alternatives and the selection of the preferred alternative. This committee was appointed by City Council and included some proponents as well as opponents of the project. This project would fail and not move forward if clear direction had not been reached from the steering committee and a recommendation provided to City Council on the preferred alternative. In the face of significant public opposition to this project, RK&K’s Project Manager, Owen Peery, along with the City’s Project Manager led the steering committee through the evaluation of 15 interchange alternatives to the point where two very similar interchanges were recommended to City Council for a final decision. RK&K’s ability to effectively lead this committee led to a final consensus and avoided a negative outcome which would have derailed this project.</p>
Complex Utility Relocation	 <p>RK&K performed an alignment study and design of a replacement 30” gravity interceptor sewer and Schenks Branch. The alignment traversed through a major City Park, and was adjacent to several historic properties. The 2,700 feet of 30” sewer replaced an aged and undersized 21-inch concrete and clay sewer paralleling the creek. The sewer replacement required bypass pumping, multiple encased crossings of Schenks Branch 400 feet of pipe under the existing Route 250 Bypass and Limited Access Right-of-Way. Alignment studies were prepared in order to select the optimum alignment and account for future system extensions upstream into the sewershed. The design effort involved five bored and jacked casing pipes. Gas distribution mains also needed to be relocated. This involved design and constructability coordination with the contractor to relocate approximately 1-1/4 miles of high and medium pressure natural gas distribution mains and the design of a gas regulator station. In order for this relocation to occur, we coordinated with affected utilities throughout the project limits. For the natural gas design, RK&K prepared plans and profiles, sized the gas regulator equipment, designed the associated piping, and developed the plan for the building that houses the regulator station. RK&K developed specifications for the new gas regulator building and supplemental materials and installation specifications for the natural gas piping and regulator station construction.</p>
DBE Program	The DBE participation goal for the project was 10 percent. RK&K utilized seven subconsultant firms to achieve this goal to provide services in the areas of landscape design, structural design, surveys, archeology, noise analysis, traffic counts, public outreach, and construction inspection.



- * If actual contract completion date is different from the original contract completion date (i.e. early or late), please explain under Section (h) above. If early completion was due to an incentive please provide details and if design was a factor in achieving the incentive.
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Attachment 3.4.1(d)

Sub-Consultant - Work History Form

LANE

AND

 **CORMAN**
CONSTRUCTION

In association with:

RK&K

ATTACHMENT 3.4.1(d)

SUB-CONSULTANT - WORK HISTORY FORM

(LIMIT 2 PAGE PER PROJECT)

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MD 237 CHANCELLORS RUN ROAD FROM MD 235 TO PEGG ROAD St. Mary's County, MD DESIGN-BUILD	The Lane Construction Corporation	Name of Client: Maryland State Highway Administration (MSHA) Phone: 410.545.8814 Project Manager: Mr. Jeff Folden Phone: 410.545.8814 Email: jfolden@sha.state.md.us	11/2010	10/2011	\$37,596	\$37,757	\$3,022

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.

Similar Scope of Work	<p>PROJECT SCOPE Whitman, Requardt and Associates, LLP (WR&A) was the prime design firm for this D-B project responsible for preparing final engineering design documents and approvals for the dualization of 2.88 miles of MD 237 from MD 235 to Pegg Road in St. Mary's County, Maryland. The project was designed in the WR&A Baltimore, Maryland office. The project widened MD 237 from a two-lane open section roadway to a four-lane divided highway incorporating pedestrian and bicycle facilities.</p> <p>RELEVANT PROJECT ELEMENTS Roadway Reconstruction – Existing two-lane open roadway was completely reconstructed to a four-lane closed-section divided roadway with left turn lanes at select intersections. The reconstructed roadway incorporated 5' bike lanes, a raised landscape median, and 5' pedestrian walkways throughout the entire limits of the project. Improved horizontal and vertical geometrics were enacted to meet current design criteria including raising the roadway profile 12' for a 2,200 LF vertical realignment at a major stream crossing for replacement of undersized pipes with a twin-cell box culvert. Intersection Reconstruction – Sixteen intersecting side streets required reconstruction including two with complete realignments. With adjacent properties having direct access, over 65 driveways and entrances were reconstructed. Hydraulic Analysis and Stormwater Management (SWM) – The new closed storm drain system consisted of over 13,500 LF of drainage pipes. Eight new SWM ponds were constructed, initially constructed as sediment traps then converted to landscaped SWM facilities as construction progressed. Noise Analysis and Noise Barrier Design – Three noise walls, totaling over 1,700 LF were installed adjacent to residential communities. Noise walls were supported on reinforced concrete drilled shafts. The noise walls consisted of reinforced concrete posts and panels with a simulated brick finish. Geotechnical and Pavement Analysis/Design – Foundation design was provided for the noise walls and twin-cell box culvert. A temporary fabric wall was designed to maintain traffic at the culvert replacement to accommodate the raised roadway grade while maintaining traffic on the existing pavement. Roadway geotechnical and pavement design services included designing new roadway cuts/fills and new pavement using Falling Weight Deflectometer testing of existing pavement to remain and new pavement subgrade. The first use by MSHA of bank run gravel as the pavement base course was recommended by WR&A and approved by MSHA on this project. Local sources of bank run material were tested and accepted for use on the project. Drainage Culvert Replacement – Undersized culverts at a significant stream crossing were replaced with a twin-cell box culvert to eliminate flooding and closing of the existing roadway. A temporary pipe was installed for construction of the culvert and a stone stream grade control structure was designed and constructed to promote fish passage while maintaining upstream hydrology needed for the preservation of existing wetlands. The new box culvert was supported on 'H' piles with one cell passing the normal flow and a second cell used as an animal passage and floodplain overflow. A circular overflow culvert was also installed to provide additional capacity for major storm events. Utility Relocation Design and Coordination – Utility relocation consisted of designing and installing over 10,000 LF of 12" ductile iron water pipe, 6,000 LF of 6" and 8" gas line, 350 feet of sanitary sewer with grinder pumps and coordination with utility companies for the relocation of aerial electric, telephone and cable television. Maintenance of Traffic – Extensive multi-phase maintenance of traffic plans were implemented to maintain traffic along all roadways and access to driveways/entrances. The project was divided into four distinct construction zones based upon maintaining drainage within each zone. Temporary cross-overs from newly constructed pavement to the existing pavement were necessary as each portion of the project was completed. The MOT plan resulted in maintaining the two travel lanes for the duration of construction and access at every intersection and 65 driveways. Traffic Control Devices – Traffic Engineering services included the design and installation of five new traffic signals, signal interconnect, relocation of school flasher, new signing and pavement markings, and new intersection lighting. Environmental Compliance – Construction occurred in an environmentally sensitive area requiring MSHA to retain an Independent Environmental Monitor (IEM) throughout the project duration as a permit condition. Close coordination with the IEM was required to maintain the project within the strict permit conditions for turbidity and pH. The WR&A/LANE D-B Team developed an innovative system to dewater the work area for the box culverts and achieve the environmental compliance for the project. Public Involvement – A public meeting was held to continue MSHA's public involvement campaign and to inform the community of the final design elements and upcoming construction activities. Public information materials and advanced notification of traffic impacts were provided to MSHA by the WR&A and LANE Design-Build Team on a continual basis to keep the public informed throughout construction.</p>
Key Personnel on Project	<p>Ken Prince (LANE) Doug Russell (LANE)</p>



Partnering During Design and Construction – WR&A participated in a partnering agreement with MSHA and affected stakeholders, which set goals and objectives during the early stages of work. Subsequent monthly meetings were held to ensure goals and objectives were being met by discussing the project progress, quality, resolve issues, and current/future schedule. The partnering was critical to both the utility relocations and environmental compliance for the project. Having the utility companies involved in the partnering process provided the opportunity to resolve issues well in advance of construction.

*The Construction Notice to Proceed was delayed by 11 months by MSHA for right-of-way acquisitions to be completed by MSHA. The WR&A/ LANE D-B Team completed the project on schedule and under budget.

**Owner directed change orders increased the contract value.

EVIDENCE OF PERFORMANCE

The project design avoided the historic Ebenzer Cemetery by utilizing remote sensing to determine the location of existing grave sites within the right-of-way. A focus of the design was to minimize impacts to St. Mary's County Regional Park, a Section 4(f) resource.

Project Parameters	Project Example
Delivering Multiple Projects Concurrently	WR&A during the design and construction of the MD 237 Design-Build project, was also providing engineering services to LANE on two other design build projects in the region on the \$29.5M I-95/495 Arena Drive Interchange Design-Build project as the lead engineer and I-495 Express Lanes Design-Build project supporting geotechnical, utility and tolling facility design. Providing engineering services on three Design-Build projects simultaneously with LANE demonstrates WR&A and LANE's ability to deliver multiple projects on VDOT's schedule.
Urban Corridor	The MD 237 project is located in an urban area similar to the Route 29 corridor. The project design is an urban four-lane divided typical section with bike and pedestrian facilities. The corridor included 16 intersections and 65 driveways requiring extensive coordination to facilitate maintenance of traffic. The project required extensive utility design and coordination efforts along the entire project length that had to be carefully considered during the design of the storm drainage system and stormwater management facilities.
Innovative Design Solutions and Construction Techniques	 <p>During the design, the WR&A/LANE D-B Team identified an opportunity to treat runoff entering the project's most sensitive resource, Jarboesville Run. The runoff discharging from the sump in MD 237 at the location of the culvert crossing could not be treated in the adjacent stormwater management facilities due to elevation change, and the project's concept stormwater management scheme did not propose any water quality treatment for this runoff. Our Team successfully tailored the maintenance of stream flow plan for the crossing so that a diversion channel could be converted to vernal pools and vegetated with riparian buffer plantings in order to provide water quality enhancements for over an additional acre of pavement that would have otherwise discharged, untreated, directly into the stream.</p>
Design-Build Experience	<p>MD 237 is a prime example of WR&A's design build experience with LANE and highlights our success on urban Design-Build projects in the region. WR&A's multi-discipline staff provides our Design-Build partners a well-integrated Team that effectively evaluates risks during the bidding phase of the project. Once awarded a project having the roadway, bridge, utility, geotechnical, etc. staff under the complete control of the Design Manager promotes schedule acceleration and a design that minimizes the risk to the Design-Build Team and the Owner. The lessons learned by WR&A on MD 237 have proven essential to WR&A and Corman's current success on the VDOT Fall Hill Avenue Design-Build project, an urban project with extensive utilities similar to the Route 29 Solution projects. Having already worked with both contractors (LANE and Corman) on Design-Build projects stimulates a rapid project start-up, a working partnering relationship, and ultimately benefits to the project itself in expeditious, innovative delivery.</p> 
Limiting Impacts	The design developed by the WR&A/LANE D-B Team minimized right-of-way impacts to the properties along the corridor by shifting the horizontal and vertical alignments of the roadway to utilize existing right-of-way and avoid extensive utility relocation. The maintenance of traffic required the phased construction of the twin-cell box culvert, while minimizing the impacts to the stream and adjacent wetlands. An integral part of the design was stream restoration using stone control structures to promote fish passage.
Communication Strategies	The WR&A/LANE D-B Team established a formal partnering plan for the project with MSHA. This provided the project team with the ability to identify potential issues and risks early in the process and utilize a formal approach to resolve all items in a timely fashion that ensured the success of the project. A major element of the communication process included regularly informing the property owners along the project of the status of the job and providing motorists with current information on changes in traffic patterns and operations. The program built on the prior efforts by MSHA during the environmental and preliminary design phases of the project.
Risks	 <p>The MD 237 project included several major risk elements; Utilities, Right-of-Way, Hydraulic Analysis of the culvert crossing, environmental compliance and maintenance of traffic. The WR&A/LANE Design-Build Team managed these risks by jointly defining each risk and the potential impacts to the project. Based on the team members' expertise from both design and construction they were able to successfully manage the risks. The maintenance of traffic was the critical risk that had the high potential to be impacted by other elements of the project. Ensuring each major traffic shift was achieved on the aggressive schedule was key to the success of the project. Extensive coordination with the proposed utility relocations and storm drainage system was required to avoid and minimize impacts to the existing utilities and properties. LANE also cleared areas in advance of roadway construction to accelerate the power line relocations.</p>
Complex Utility Relocation	The MD 237 project required extensive utility coordination and design. The project included the relocation of both overhead and underground dry utilities that were factored into each phase of construction. This required close coordination with each of the utility owners as well as the flexibility exercised by LANE to clear portions of the project early in the construction for utility relocations along the corridor. The in-plan utility relocation was constructed by LANE providing greater control of the utility risk.
DBE Program	The DBE participation goal for the project was 30%, which the WR&A/LANE Design-Build Team exceeded by having a total DBE Participation percentage of 30.45%.

* If actual contract completion date is different from the original contract completion date (i.e. early or late), please explain under Section (h) above. If early completion was due to an incentive please provide details and if design was a factor in achieving the incentive.

** If actual contract value is different from the original contract value (i.e. more or less), please explain under Section (h) above and if design was a factor.

*** For multiple phase projects, only single phase of construction (or single contract) will be considered as a Project. If additional phases are shown under the same Work History Form, only the first phase (or contract) listed will be evaluated.