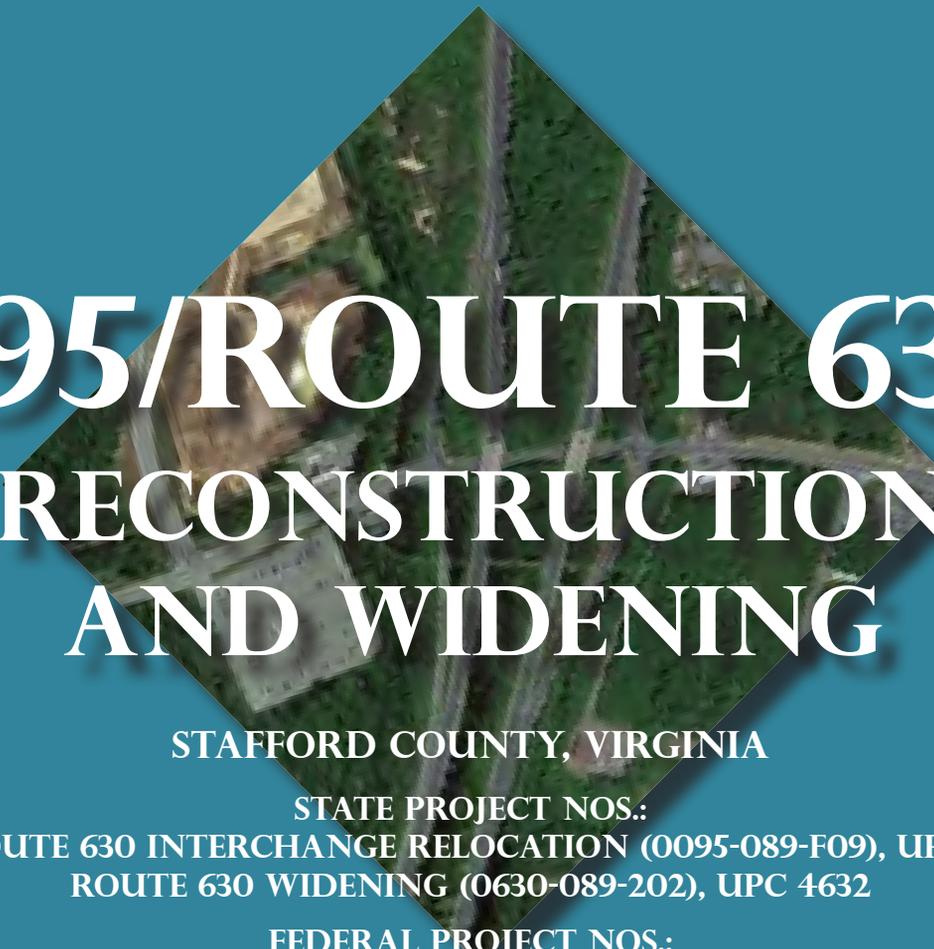


STATEMENT OF QUALIFICATIONS



I-95/ROUTE 630 RECONSTRUCTION AND WIDENING

STAFFORD COUNTY, VIRGINIA

STATE PROJECT NOS.:

I-95/ROUTE 630 INTERCHANGE RELOCATION (0095-089-F09), UPC 13558
ROUTE 630 WIDENING (0630-089-202), UPC 4632

FEDERAL PROJECT NOS.:

I-95/ROUTE 630 INTERCHANGE RELOCATION (NH-095-2)
ROUTE 630 WIDENING (STP-089-6)

CONTRACT ID NUMBER: C00013558DB83



PREPARED FOR:



SUBMITTED BY:





February 2, 2016

Mr. John Daoulas, P.E.
Alternate Project Delivery Office
Virginia Department of Transportation
1401 East Broad Street
Richmond, Virginia 23219

RE: I-95/Route 630 Reconstruction and Widening

State Project Nos.: I-95/Route 630 Interchange Relocation (0095-089-F09), UPC 13558

Route 630 Widening (0630-089-202), UPC 4632

Federal Project Nos.: I-95/Route 630 Interchange Relocation (NH-095-2)

Route 630 Widening (STP-089-6)

Contract ID Number: C00013558DB83

Dear Mr. Daoulas:

The Lane Construction Corporation (LANE) is pleased to present this Statement of Qualifications for the above referenced project to the Virginia Department of Transportation (VDOT). LANE is nationally ranked as the #1 Highway Contractor by *Engineering News-Record (ENR)* and specializes in high quality roadway and bridge construction. LANE has a long and successful history of project completion in Virginia having completed nearly 150 projects worth over \$2.4B in the Commonwealth alone.

As a leader in the Design-Build method (nationally ranked as the 44th Top Design-Build Firm by *ENR*) LANE has constructed more than 70 projects worth more than \$3B in Design-Build projects during the last decade. LANE's teaming and leadership experience enables us to deliver the innovative and technically sound results that VDOT and Virginia residents expect and deserve.

LANE is the Offeror and will be the overall authority on the project as well as the Lead Contractor. We have teamed with Rinker Design Associates, PC (RDA) as the Lead Designer. LANE and RDA have a history of teaming together and are currently delivering VDOT the I-66/Route 15 DDI in Prince William County and the Route 29 Solutions D-B in Albemarle County. Together, we provide VDOT with a reputable team that has completed projects of this size and scope on time and on budget as evidenced in our collective project experiences.

LANE and RDA, in conjunction with additional hand-selected design and construction specialty firms, are experienced with VDOT processes and procedures and will provide design and construction for the I-95/Route 630 Reconstruction and Widening project. We are confident in our team structure and experience, and have elaborated on our distinctive qualifications in the subsequent sections.

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

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

The Lane Construction Corporation

14500 Avion Parkway, Suite 200, Chantilly, VA 20151 USA T 703.222.5670 F 703.222.5960

LaneConstruct.com

An Equal Opportunity Employer M/F/D/V

3.2.3 Offeror's Principal Officer Information: Mr. David J. Rankin is the principal officer of The Lane Construction Corporation.

David J. Rankin, Senior Vice President
14500 Avion Parkway, Suite 200
Chantilly, VA 20151
Tel: (704) 553-6500 Fax: (703) 222-5960
Email: DJRankin@laneconstruct.com

3.2.4 Offeror's Corporate Structure: LANE was founded in 1890 and was incorporated in the State of Connecticut on April 5, 1902. LANE will undertake the financial responsibility for the project and has no known liability limitations. LANE's pre-qualification status/capabilities with VDOT are well in excess of the requirements of this project. The co-sureties will furnish a single 100% performance bond and a single 100% payment bond.

3.2.5 Lead Contractor and Lead Designer: The full legal name of the Offeror is: The Lane Construction Corporation. LANE will serve as the prime/general contractor responsible for overall construction of the project and will serve as the legal entity who will execute the contract with VDOT. The full legal name of the Lead Designer is: Rinker Design Associates, PC. RDA will serve as the lead design firm responsible for the overall design of this Project under contract to LANE.

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

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

3.2.8 Offeror's VDOT Prequalification Evidence: Evidence from VDOT's online Prequalified List (L002/Active) is included in the Appendix and verifies that LANE is prequalified for this SOQ submission.

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

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

3.2.11 DBE Statement: LANE supports the Disadvantaged Business Enterprise (DBE) program and is committed to meeting the 15% goal for the design and construction of this project utilizing Virginia certified DBE companies.

3.2.12 Hiring Development Plan: LANE is committed to the development of a Hiring Development Plan and to achieve a minimum 75% for local worker and/or veteran new hire participation in accordance with Attachment 3.2.12 (VDOT Special Provision For Local Hiring Program For Design-Build Projects).

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

Respectfully submitted,



Robert E. Watt
Pursuit Manager
The Lane Construction Corporation

3.3 OFFEROR'S TEAM STRUCTURE

3.3 | OFFEROR'S TEAM STRUCTURE

LANE The Lane Construction Corporation (LANE) will serve as the Lead Contractor of the D-B team for the I-95/Route 630 Reconstruction and Widening (I-95/Route 630) project and will be responsible for managing the project, supervising construction, and self-performing the major work elements. LANE was named the 2015 Top Contractor by *ENR MidAtlantic* and is ranked #44 in Top D-B Firms by *ENR*. Our proven heavy civil experience in bridge and roadway construction and more than 70 D-B projects ranging in scope and value from \$13M to \$1.5B demonstrates LANE's ability to tackle the region's most challenging infrastructure projects.

Construction Subconsultants

Additionally under subcontract to LANE are the following highly qualified subconsultants:

- CES (Quality Assurance)
- ECS Mid-Atlantic, LLC (AMRL Certified QC Lab)



Rinker Design Associates, PC (RDA), as the Lead Designer, will provide overall project management for all design activities. RDA is a Virginia-based firm with over 100 employees with offices in Manassas, Fredericksburg, and Richmond. They are an award-winning Virginia-Certified Small Business (DSBSD Certification #652784) and have served as the lead designer on thirteen (13) D-B projects in the past ten (10) years and have supported another five (5) over the same timeframe.

Design Subconsultants

Under subcontract to RDA are the following highly qualified subconsultants:

- KCI (Structures)
- RK&K (Traffic and Environmental)
- ECS Mid-Atlantic, LLC (Geotechnical)

LANE and RDA have a long history of teaming together on important D-B projects in the Commonwealth. Two recent projects include LANE's I-66/Route 15 DDI D-B project in Prince William County where RDA is the Lead Designer and the Route 29 Solutions D-B project where RDA led the Route 29 Widening portion of the project and provided engineering support to RK&K on the other portions. Both projects' designs are complete and construction activities have begun. LANE and RDA were also teamed together on the \$726M I-95 Express Lanes project which was completed ahead of schedule. **We are staffing the I-95/Route 630 project with the same leadership team and core design staff from our I-66/Route 15 project. We believe this team structure and the similar project scope and complexity, will provide VDOT the highest level of confidence that the LANE Team is the right team for this project.**

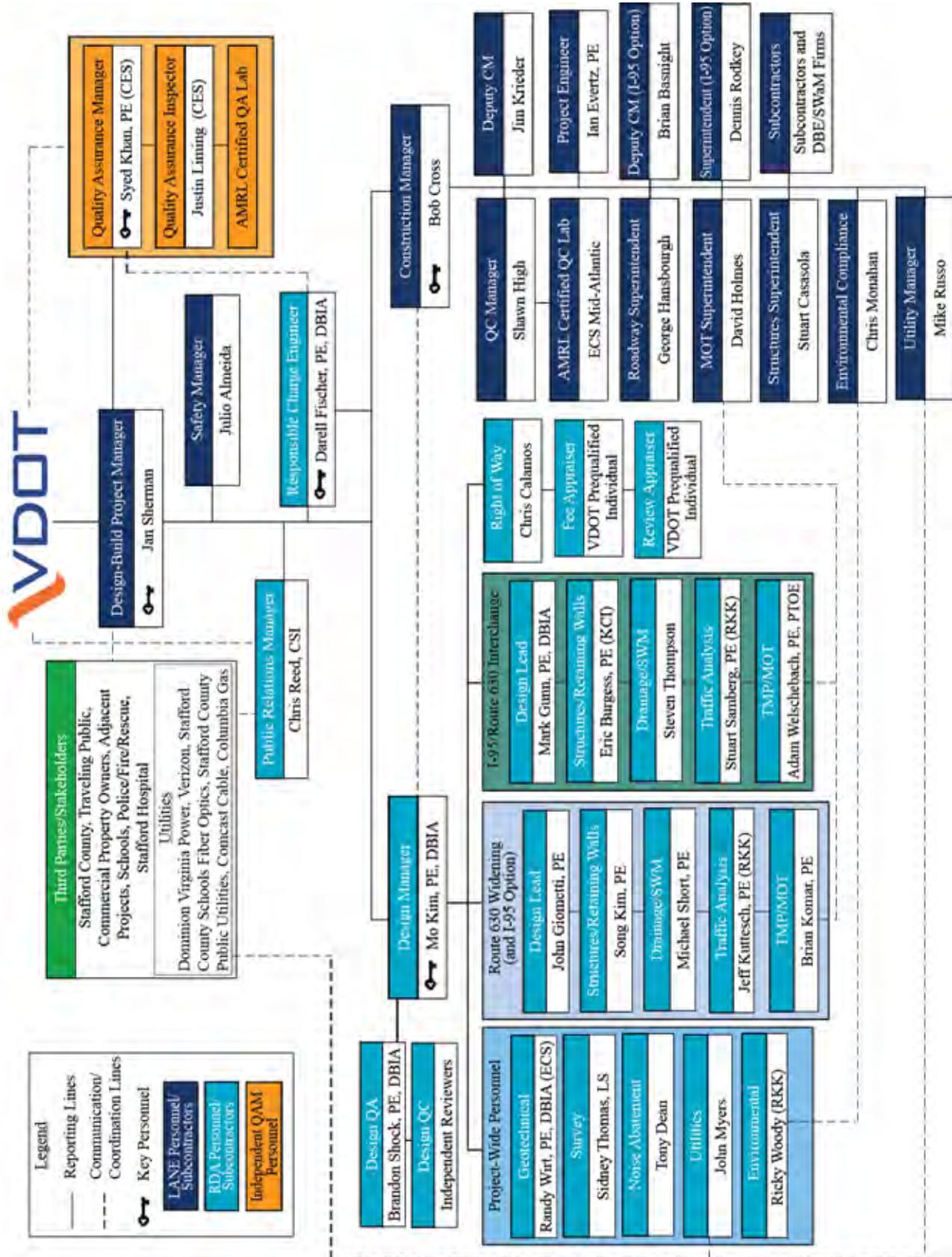
3.3.1 Qualifications of Key Personnel

All of the proposed Key Personnel have noteworthy experience on transportation projects similar to the roles they will serve on the I-95/Route 630 project. Information regarding their experience can be found in Attachment 3.3.1 in the Appendix.

Name	Position	Company
Jan Sherman	D-B Project Manager	LANE
Darell Fischer, PE, DBIA	Responsible Charge Engineer	RDA
Syed Khan, PE	Quality Assurance Manager	CES
Mo Kim, PE, DBIA	Design Manager	RDA
Robert (Bob) Cross	Construction Manager	LANE

3.3.2 Organizational Chart

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



Reporting Relationships of Key Personnel

D-B Project Manager (DBPM), Mr. Jan Sherman (LANE) will report to VDOT and serve as VDOT's central point of contact. He will facilitate communication among team members, VDOT and adjacent projects, monitor design efforts to proactively eliminate potential constructability issues prior to breaking ground, and delegate resources to deliver the project on time. It will be his responsibility to work with the Team to ensure that the design complies with the owner's specifications. Mr. Sherman's management from design through construction will include weekly design and construction meetings to discuss how the Team will construct the project. Additionally, he is responsible for construction quality management, contract administration, and coordination of public outreach and public meetings.

R Added Value: Mr. Sherman is currently the DBPM on two DDI projects for VDOT (only three DDIs have been or are being constructed in the Commonwealth). The nearly complete I-581 Valley View Interchange (*included in Work Histories*) and the I-66/Route 15 Interchange (with RDA as Lead Designer). Additionally, Mr. Sherman is currently responsible for all warranty matters on the \$726M I-95 Express Lanes project (*included in Work Histories*) which included major roadway widening and numerous interchange reconstructions in the same region as this project.

Responsible Charge Engineer (RCE), Mr. Darell Fischer, PE, DBIA will report to the DBPM, communicate regularly with VDOT, the DM and CM, and will supervise, direct, and control both design and construction teams. He will be fully integrated among the project team and will accept full professional responsibility for engineering decisions relating to the final product. Mr. Fischer will answer questions/inquiries relevant to engineering decisions relating to design and/or construction and has authority to shut down the project if warranted. Mr. Fischer is a PE in Virginia.

R Added Value: Mr. Fischer has served as the Design Manager on six (6) VDOT D-B projects over the past five (5) years, three of which are interchanges: I-581 / Elm Avenue Interchange (*included in Work Histories*), Rolling Road / Franconia-Springfield Interchange, and I-95 at Temple Avenue Interchange. His involvement on each of these projects has been from initiation to construction completion. Mr. Fischer collaborates with the various contractors throughout both design and construction to ensure that the appropriate design is properly implemented in the field.

Quality Assurance Manager (QAM), Mr. Syed Khan, PE (CES) will report directly to the DBPM on all quality issues. Any item of work failing to meet minimum standards will be rejected and corrected immediately. Construction personnel have no authority over QA inspection staff. Mr. Khan will keep VDOT informed on the status of quality of construction and issues/resolutions/solutions through weekly reports and progress meetings. As QAM, Mr. Khan will hold the authority to shut down the job if quality issues warrant. **Quality Assurance Inspector, Mr. Justin Liming (CES)**, will report directly to the QAM, and will be assigned to the project on a full-time basis for the duration of the project. The AMRL Certified QA laboratory will report to Mr. Khan.

R Added Value: Mr. Khan has been providing quality assurance and quality control services on a variety of D-B and D-B-B projects ranging from \$1M to \$5B. He has extensive experience working on complex interchange and roadway widening projects and has worked on VDOT projects for over 20 years including the I-95 corridor.

Design Manager, Mr. Mo Kim, PE, DBIA (RDA) will report directly to the DBPM. Mr. Kim, a Virginia PE, will maintain close communication with the RCE, and CM and will ensure the overall project design is completed in accordance with the requirements of the Contract Documents. All design, ROW, and permitting disciplines report directly to Mr. Kim. He will provide VDOT with design plans for review and approval. Mr. Kim is also responsible for establishing oversight of the QA/QC program for all design disciplines of the project which will be performed by qualified, independent staff personnel.

Mr. Kim will be supported by two design leads. Mr. John Giometti, PE will lead the Route 630 widening efforts and, should VDOT exercise the option, the I-95 widening efforts. Mr. Mark Gunn, PE, DBIA will lead the DDI design in an identical role that he filled on the I-66/Route 15 DDI project.

R Added Value: Mr. Kim served in this same role (Design Manager) on the DDI design for the I-66/Route 15 Interchange Reconstruction (*included in Work Histories*) with LANE. As a result, Mr. Kim is currently working with our proposed DBPM and CM in identical roles. Mr. Kim has also been the Design Manager on several Park & Ride facilities, including the revamped facility at I-95 / Route 234 / US Route 1.

Construction Manager, Mr. Bob Cross (LANE) will report directly to the DBPM and will be on-site *full-time* for the duration of the project. His daily duties include: safety, coordination of all project personnel including subcontractors, and execution of the construction QC program. He holds ultimate responsibility for managing the construction schedule with his staff engineers and coordinating regularly with adjacent projects underway. He will coordinate daily meetings with the QA Lead Inspector, and QC Manager to discuss all ongoing construction activities. He will also review all construction QC reports and lab results. Mr. Cross is currently working on the I-66/Route 15 DDI project and will be available prior to the start of I-95/Route 630 construction. Mr. Cross currently holds a DEQ RLD Certification and a VDOT ESCCC, as required.

Mr. Cross will be supported by Deputy CM, Mr. Jim Krieder. Our construction team will also be augmented by Mr. Brian Basnight (Deputy CM) and Mr. Dennis Rodkey (Superintendent) if the I-95 widening option is awarded.

R Added Value: Mr. Cross has served as a Construction Manager on numerous roadway widening and intersection projects in Virginia. He is currently working with proposed DBPM, Jan Sherman, DM, Mo Kim, and RDA staff on the I-66/Route 15 DDI Interchange project (*included in Work Histories*). Mr. Cross was also a Construction Manager on the I-95 Shoulder Widening project.

Other Functional Relationships

The LANE Team also includes the following recognized specialists whom we deem critical to this Project, albeit non-key personnel as defined by the RFQ; their relevant qualifications are summarized below.

Name/Position	Yrs Exp	D-B	Roadway Widening	DDI Exp.	Complex MOT	Park & Ride	Worked with LANE
<i>Other pertinent design disciplines that will report directly to Mr. Kim, PE (DM) include:</i>							
Mark Gunn, PE, DBIA/ Interchange Design	19	●	●	●	●	●	●
John Giometti, PE/Widening Design	25	●	●	●	●	●	●
Song Kim, PE/Structures	23	●	●		●	●	●
Eric Burgess, PE/Structures	16	●	●		●	●	●
Steven Thompson/Drainage	29	●	●	●	●	●	●
Michael Short/Drainage	10	●	●		●	●	●
Jeff Kuttesch/Traffic Analysis	11	●	●	●	●	●	●
Stuart Samberg/Traffic Analysis	10	●	●	●	●	●	●
Brian Komar/MOT	18	●	●		●	●	●
Adam Welschenbach/MOT	12	●	●	●	●	●	●
John Myers/Utilities	16	●	●	●	●	●	●
Randy Wirt/Geotechnical	15	●	●	●	●	●	●

Name/Position	Yrs	D-B	Roadway Widening	DDI Exp.	Complex MOT	Worked with RDA
<i>Other pertinent construction disciplines that will report directly to Mr. Cross (CM) include:</i>						
Jim Kreider/Deputy Const. Manager	10	●	●	●	●	●
Mike Russo/Utility Manager	14	●	●		●	●
David Holmes/MOT Superintendent	8	●	●		●	●
Stu Casasola/Structures Superintendent	15	●	●	●	●	●
George Hansbrough/Roadway Superintendent	27	●	●		●	●
Chris Monahan/Environmental	14	●	●	●	●	●
Brian Basnight/Deputy Const. Mgr (I-95 Option)	26	●	●		●	●
Dennis Rodkey/Superintendent (I-95 Option)	42	●	●	●	●	●

Design and Construction Team Interaction

The LANE Team ascribes to the DBIA paradigm that “integrated development of the design and construction program is the cornerstone of D-B delivery and this methodology optimizes opportunities for collective excellence.” Put into practice, our design team will interface with our construction team and vice versa throughout the life of the contract.

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

To ensuring a successful project, the LANE Team’s extensive D-B experience has shown that regularly scheduled discipline coordination meetings throughout project execution are critical. These focused meetings, which are led by the RCE and coordinated through the DBPM, serve as a conduit for disseminating project-critical information and is the central point of decision-making and communication among all involved in the project. These regular, open forums of discussion among team members (both design and construction) and VDOT to address respective project elements serve to clearly define project criteria, ensure VDOT’s intentions are being met, address corridor-wide safety and constructability issues, and provide consistency in design before becoming schedule-critical.

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

Construction Support During Design. *Construction staff are engaged to ensure designs are constructable and tailored to support the most efficient execution strategy.*

Construction Support During Design	Benefit
Critical input in development of work packaging and D-B strategy	Incorporates construction expertise to develop most efficient construction sequence and schedule logic
Advising design team on self-performance vs. subcontracting of specific construction elements	Enables tailoring of design/ construction documentation to construction delivery
Providing input on construction means and methods to design packages	Ensures practical designs that support planned construction approaches
Constructability, operability and pricing reviews of design documents	Ensures design documents are implementable and will achieve intended purpose

Design Support During Construction. *Engineering staff continue to support construction to ensure design intent is achieved.*

Design Support During Construction	Benefit
Preparation of subcontractor statements of work	Ensures translation of design requirements into subcontractor statements of work
Assignment of design engineer(s) on-site, as required	Provides assistance in interpretation of design requirements and responding to field changes
Providing support due to field changes requiring design changes	Ensures consistency of design changes with intent of original design
Providing and verifying final as-built drawings	Provides correlation between original design, design changes, and as-built construction

3.4 EXPERIENCE OF OFFEROR'S TEAM

3.4 | EXPERIENCE OF OFFEROR’S TEAM

LANE and RDA have individually performed more than \$2B in D-B projects for VDOT over the past 8 years. As a Team, we have performed in excess of \$900M. This experience, together and individually, but specifically in D-B projects, is critical to the success that we will deliver to the Department on this project.

The table below is comprised of the six (6) Work Histories that our Team is submitting and demonstrates the relevant features that each project shares with the I-95/Route 630 project.

	Design-Build	Proposed Key Personnel Involved	Extensive MOT	Complex Interchange	Coordination with VDOT	Interstate Project	Heavily Traveled Corridor	Stakeholder/Public Involvement	Roadway Widening	ROW Acquisition Services	Complex Utilities	Bridges/Structures
I-66/Route 15												
29 Solutions												
I-85 Widening												
I-581 Valley View												
I-95 Express Lanes												
I-581/Elm Avenue												

The projects listed above exemplify most of the key elements of the I-95/Route 630 project, such as innovation, complexity, and congestion. However, another key element on the project that our Team has extensive experience is the design and construction of **Park & Ride facilities** to accommodate commuters, ride share and bus services. LANE constructed similar facilities at Dulles International Airport and numerous locations throughout Northern Virginia. By the same token, RDA designed the Park & Ride lot located adjacent to the I-95 interchange with Route 234 in Prince William County. This facility was redesigned and expanded from 343 spaces to 852 spaces and to provide improved bus service accommodations.

The **Diverging Diamond Interchange (DDI)** has become an effective solution for some of the most heavily traveled and congested intersections. In addition to the two (2) DDIs LANE is currently constructing in Virginia (with RDA on the I-66/Route 15 DDI), LANE has also completed two (2) additional DDIs in North Carolina. Constructing DDIs over interstate traffic is no simple task, however, LANE’s experience and lessons learned on these projects will be instrumental to the success of the I-95/Route 630 project.



LANE and RDA both specialize in **interstate widening** projects. LANE has been ENR’s Top Highway Contractor for the past three years, which demonstrates our success in executing complex interstate projects. Additionally, LANE and RDA were both involved in the \$726M I-95 Express Lanes project.

3.4.1 Work History Forms

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

3.5 | PROJECT RISKS

The LANE Team has carefully considered the key elements of work for the I-95/Route 630 project to determine the three most relevant and critical Project Risks *for our Team to mitigate* for the success of this Project. In making our assessment, we considered numerous potential risks to the project including: geotechnical conditions, utilities, existing pavement condition, TMP/MOT, agency/stakeholder coordination, public relations, permitting, Stormwater Management, and ROW acquisitions. Each of these risk items could have a major impact on the project if not properly assessed and mitigated. We have concluded **Transportation Management Plan/Maintenance of Traffic, Utilities, and Geotechnical Conditions** are the three most critical risks to be mitigated for the success of this project. The table below highlights experience successfully mitigating these three risks on some of the recent projects LANE and RDA have worked on together.

LANE/RDA Projects	Contract Value (\$M)	Design-Build	Risk #1 TMP/MOT		Risk #2 Utilities		Risk #3 Geotech.	
			Extensive Sequencing	Access Management	Conflict Avoidance through Design	Concurrent Utility Relocations	Slope Stability	Acidic Soils
I-95 Express Lanes*	726							
I-66/Route 15*	36							
29 Solutions*	117							
Sudley Manor/Linton Hall	25							

**included in our Work Histories*

RISK NO. 1 – TRANSPORTATION MANAGEMENT PLAN AND MAINTENANCE OF TRAFFIC

Risk Identification: The construction of this project will impact a broad spectrum of public, private and nearby government including a hospital, fire station, residential, commercial, education and an already overstressed I-95. Each will be affected in a unique way and have different challenges and concerns the Project Team must address. Development and implementation of an appropriate TMP is critical to ensure constructability and to safely maintain efficient traffic flow during construction. Maintenance of traffic has a direct impact on motorists, businesses, schools, emergency services, and commuters. Of paramount importance will be the safety of each of these stakeholders, as well as, the safety of construction workers, VDOT representatives, and inspection staff. As with any re-alignment through a highly traveled corridor, we realize the importance of providing access to all the affected stakeholders mentioned above. A primary focus of the LANE Team will be to facilitate a smooth transition for the commuter lot users during the shift from the existing lot to the new lot.

Why the TMP/MOT Risk is Critical and the Impacts to the Project: Unsafe conditions, confusion or mixed messages, and limited access for adjacent businesses and residents will result in inefficient and possibly unsafe traffic flows, driver frustration, and could easily result in an overall public perception problem. In addition to impacts to the project schedule and cost, the negative perception may lead to additional involvement from VDOT to respond to the concerns and issues.

The RFQ design through both the widening portion and the interchange portion of the project constructs the new roadways across and on top of the existing roadways and ramps. In many of these cases, there are vertical differences of up to seven (7) feet which causes constructability concerns and may necessitate the need for temporary retaining walls, detours and temporary pavements. As with all TMP’s, public safety is paramount. However, this project is further complicated by the significant number of first responders (i.e. Stafford Fire & Rescue, Stafford Hospital, Police, etc.) and area schools that must travel through the project at varying times of the day. Furthermore, the

proximity of the Stafford County Complex and the local VDOT Area Headquarters adds a layer of visibility and increased expectations which must be met. With many military and local/federal government officials using it daily, the Rt. 1/I-95 corridor is without doubt one of the most traveled and important corridors in the U.S. Each of these stakeholders will have differing goals and concerns. However, they all want to move through the project with the least amount of delay.

If VDOT elects to exercise the I-95 widening option this will add another layer of risk to what is described above. Depending on final design and alignment of the 4th lane, extensive MOT measures could be required. It appears on the roll plots provided that the new 4th lane will be adjacent to the existing inside lane which would necessitate extensive MOT efforts including temporary barrier, night time operations, lane closures, temporary emergency pull-offs and potential shoulder strengthening to name a few. If indeed the new lane would be built adjacent to the existing, it will be critical to plan and execute this work in an efficient manner that has no or minimal impacts to the I-95 SB traffic flows and provides for first responder access at all times. Since there are no typical sections provided it is impossible to ascertain what amount of risk and appropriate mitigations will be needed at this time.



The 29 Solutions project involves a variety of MOT strategies including the bifurcated roadway shown above.

Risk Mitigation Strategy: The LANE Team will develop and implement a safe, strategic TMP and open communication between the locality, adjacent businesses, and the public with our construction staff to in order to mitigate concerns and rectify any deficiencies or issues immediately. The LANE Team will have minimal, if any, impacts on the existing I-95 traffic flows associated with the 630 interchange. However, should the Department exercise their option to widen the I-95 southbound lanes, we would develop an incident management plan to ensure safe, responsive, and efficient work zones and MOT implementation. Lane is well versed in this type of heavy MOT work, however, without any typical sections to show exactly where this 4th lane would be it is impossible to ascertain the level of risk and appropriate mitigations.

Our mitigation approach can be categorized into three areas: Access Management, Public Relations, and Implementation.

Access Management: To maintain access for local residents and businesses, design solutions will be analyzed at each location to provide safe and cost effective solutions. The number of access points well exceeds 80, each of which will be analyzed for safety to include sight distance for left turns and cross overs. RDA provided a similar approach on their Stringfellow Road widening project as well as the Route 29 Solutions project. Consideration will be given to building up driveways, installing temporary driveways, consolidating entrances, and providing additional signage for access. In addition to the businesses and residents, access and availability will be maintained to 545 parking spaces related to the commuter lot to ensure that there is no lost capacity until replacement capacity can be provided elsewhere. As a result, the LANE Team will advance the construction of the new commuter lot to provide either wholesale or transitional facilities prior to impacting the existing lot.

Public Relations: The LANE Team will communicate with adjacent businesses, residents, hospital, fire department, police, local government agencies, VDOT, and the traveling public. Our Team is providing this same service and approach – with the same Public Relations Manager (PRM), Chris Reed – on

On LANE’s I-495 Express Lanes project, over 2000 public outreach meetings were conducted and, in coordination with VDOT, the Team kept the public involved through various media methods: project websites, routine newsletters, and brochure mailings to residents and businesses.

the Route 29 Solutions project which has similar challenges with access, congestion and public awareness. A comprehensive public outreach plan will be developed by the LANE Team and will include at minimum the following items:

- Hold public meetings to share our TMP, construction schedule, design concept, commuter lot transition plan, and communication plan.
- Provide advanced warning for each TMP phase shift and an opportunity for residents or commuters to make inquiries.
- Provide a line of communication (hotline) for the public during construction to express concerns.
- Facilitate the development of an emergency response plan.
- Inform all project stakeholders about construction progress and related impacts.
- Commuter lot windshield flyers
- Keep local businesses and residents informed about how the project will impact their travel via the Free Lance Star newspaper, and radio stations WFLS and WBQB.
- Initiate a formal partnering with VDOT, Stafford County, first responders and Stafford Hospital to review the TMP, construction schedules, incident response plans, and changing traffic patterns before implementation.

Implementation: In order to ensure success, mitigation strategies must be properly implemented. The LANE Team has proven success in developing, implementing and adjusting TMP's on regionally significant projects. RDA recently adjusted the TMP design for a large roadway widening project in Northern Virginia (Stringfellow Road) during construction. Changes resulted from differing field conditions that afforded a safer means of providing the same or better service.

- The RCE along with LANE's MOT Coordinator and the TMP design lead will collaborate to ensure safety and constructability issues are resolved at the design stage, ensure the proposed TMP is implemented per plan, and make continuous adjustments to accommodate feedback from stakeholders and incidents that resulted in unexpected confusion and/or congestion. This integrated approach of providing a single point of contact, the RCE, responsible throughout all aspects of the project will provide accountability and continuity.
- The LANE Team approach to MOT is to look at constructability issues first and design second. Evaluating critical areas affecting constructability such as intersections and vertical grade changes will result in a design that will minimize temporary pavement, unsafe or confusing traffic shifts, temporary shoring, and retaining walls. This approach was very effective in significantly reducing cost as well as unsafe driving conditions in the recently approved design for the Route 29 widening in Albemarle County (see work history). Route 29 will be widened from four to six lanes and sub-standard vertical geometry corrected; accomplished mostly within existing right of way with minimal temporary pavement and shoring. The lineal feet of retaining wall was reduced by at least 90% from the VDOT RFP plans. These lessons learned will be applied to the I-95/Route 630 project to bring value to VDOT. Where right of way has been acquired and utilities relocated, our team will evaluate, through an iterative process, adjustments to the design in conjunction with construction phasing to find a solution that meets the goals.

Role of VDOT and other Agencies: Our proposed public outreach, communication plan, and partnering initiatives will help stakeholders identify the LANE Team as their point of contact should issues arise. These strategies will minimize the need for additional effort by VDOT and Stafford County; reducing their role to TMP review/approval, evaluation of work zone analyses, and attendance of the traffic update meetings referenced above.

RISK NO. 2 - UTILITIES

Risk Identification: Utilities are a major risk with most roadway improvement projects. Unlike a typical D-B project the relocation of utilities prior to the D-B design being advanced creates additional constraints on potential innovation and creative solutions. There are numerous utilities that will have been relocated along Route 630 that may still be in conflict depending on the MOT required to build this portion of the project. These

already relocated utilities will now have prior rights. This could potentially have negative impacts on Project schedule, costs and could cause safety issues. Finally, the relocation of facilities impacted by the interchange portion of the project may further impact those utilities that were previously relocated as part of the widening project, complicating the cost prorate and schedule.

If there is a way to avoid the utility then there is zero impact – project cost or schedule. However, in the overwhelming likelihood that avoidance is not possible, utility owner and stakeholder communication and coordination of relocations is the key in mitigating impacts to the project.

Why the Utilities Risk is Critical and the Impacts to the Project: Utility relocations are anticipated throughout the project which will impact cost and schedule. However, how and why they are a risk is somewhat different depending on which UPC we are evaluating. This differentiation is primarily due to the Pre-Award relocation of private utilities located in the widening portion of the Project and these are elaborated on below.

Route 630 Widening – The fact that the Department is relocating the private utilities along the widening portion of the project but not the public utilities (with the exception of Stafford County Schools Fiber Optics) presents itself as more of a traditional Design-Bid-Build (D-B-B) project. However, the design must still be completed and integrated with the interchange portion of the project as well as align to the efficiencies of the D-B process and the vision that our team has for the project as a whole. Specific concerns related to the widening portion of the project are discussed below:



The Stringfellow Road widening project included major copper cables and overhead power.

- The RFQ notes that utility relocations will be nearing completion at the time of award up to approximate Station 195+00. As a result, there will be over 1,400 feet of the widening portion of the project where utilities will still need to be relocated (as well as the interchange portion). These constraints cause points of conflict with the utility companies as it relates to prior rights, cost sharing, and allocation of resources to a project that was previously relocated less than a year prior.
- There is a high risk that utilities will be subject to second adjustments due to the phasing of this project. Under VA Code, second adjustments are 100% project cost and NOT subject to pro-rates. Determination of the extents of where “second adjustment” are applicable and where pro-rates are applicable will be a concern.
 - The corridor has several communication and CATV lines being relocated. These types of facilities typically relocate from splice point to splice point. Based on the plans provided, it is anticipated that additional impacts to these facilities will be encountered along the 1,400-foot section identified above. The result may cause these utilities to relocate a second time, depending on the location of splice points, through large portions or possibly the entire project – at project cost.
 - Utilities that will relocate up to approximate Station 195+00 are at risk to relocate a second time through the transition area back to their current locations. This portion of the relocation (and potentially much more) will be 100% project cost.
- Depending on a number of factors, there is a possibility that one or more utility companies may still be relocating their facilities when our relocations are scheduled to start. Some relocations are dependent on other relocations being completed and out of the way (i.e. they are done in series vs. parallel). Furthermore, there are some utility companies that are historically slow and/or over taxed for the resources they have.
- The potential for impacts to unaffected portions or even a second relocation of Stafford County Fiber Optics may be time sensitive to ensure that the work can take place during the summer months.

- Drain fields are impacted throughout the project and will be replaced by a proposed sewer line. Initial research leads us to believe there will be long runs of force main (including grinder pumps) needed to replace these drainfields. Construction of these new sewer facilities must be complete as first order of business to allow for construction that will impact the drainfields. Unknown invert elevations, pipe alignments and overall system configuration all lend themselves to placing additional risk on the D-B Team.
- Large copper cables are located on the existing pole line which will require extensive splicing time. Quite often, based on other local D-B projects our Team has completed, the original estimates of the time needed for splicing provided by the utility companies vary significantly to the actual production achieved in the field and, as a result, run longer than originally forecasted.

Route 630 & I-95 Interchange Reconstruction – The interchange portion of this project is primarily on new location but crosses existing roadways/ramps and other facilities which could create impacts to utilities and in turn impacts to the project cost and schedule. Through our thorough evaluation of the data provided, the following concerns are worthy of discussion.

- Proposed building demolitions/relocations – utilities could potentially be relocated to the areas where the demolitions are to occur, which means that the utilities cannot move until the buildings are down. This process can be a time consuming process and is a risk to the project schedule.
- The project impacts three gas stations which increases a possibility of encountering contaminated soils. If encountered, these soils will need to be remediated prior to any utilities placing their facilities in these areas. Furthermore, utility companies will stop work and demobilize if they find contaminated materials not previously remediated. In turn, this will cause project delays and costs to remediate as well as the need to reschedule the utilities to complete their relocations.
- As noted above, relocation of large copper cables, which will be impacted within this portion of the project as well as the widening, require extensive splicing time and seldom stay on schedule which could in turn impact the Project schedule.
- PEG bandwidth, a very small fiber optic carrier newer to this area is within the project limits and has assets that are in conflict. Given their recent integration into the region, we have no prior experience working with them in the D-B arena and therefore their responsiveness and cooperation is unknown and presents a risk.

Risk Mitigation Strategy: The LANE Team’s mitigation approach includes early and continuous coordination with impacted utility assets commencing at the proposal phase and continuing throughout design development and construction. Included in this effort will be weekly Utility Task Force meetings to define relocations required, potential conflicts, schedule for relocations, and required reimbursement through the utility agreement process. The

The LANE Team’s Lead Utility Coordination Manager (John Myers) has extensive experience with similar issues and solutions: I-66 / Route 15 DDI and 29 Solutions (both with LANE), Stringfellow Road, Gallows Road, Prince William Parkway, Garrisonville Road, etc.

LANE Team has extensive local knowledge and experience and with the exception of PEG, we have worked with these same utility owners in the Project Vicinity many times before, developing valuable relationships with key individuals. Furthermore, both LANE and RDA have permanent assets close to the project site to facilitate field meetings and on-site resolutions. At NTP, we will meet with PEG to familiarize us with them and vice versa. For all other utilities, we will draw upon our existing relationships to help provide a seamless and efficient relocation process. There are several factors which will be critical to ensuring success. Our up-front environmental investigations will go beyond what is required to ensure that contaminated soils are addressed early. An integrated approach between the design and construction staff will facilitate schedule enhancements to accelerate ROW acquisition packages where demolition or remediation may create challenges for our utility partners. Finally, our design lead will provide the utility companies with preliminary designs to facilitate preparation of P&Es and gain trust and cooperation. The best way to gain good will from utility companies is to avoid them. In many cases, we hope to design around utility impacts as we did on the Route 29 Solutions project where a costly DVP distribution line was avoided. However, if relocations cannot be avoided, having

the right people in place is critical. The assigned Lead Utility Coordination Manager, John Myers, has been working with these local utilities for many years, most recently on the 29 Solutions D-B project.

Role of VDOT and other Agencies: Traditionally, LANE prides themselves on striving to keep VDOT's role in the utility relocation process as an "oversight only" role. VDOT would be expected to review relocation P&Es as they are received and approve LANE to authorize the work to be performed. However, with the early relocations occurring on a portion of this project, should problems beyond our team's control arise with the previously relocated utilities, we may ask for additional input and participation from VDOT in dealing with the affected utility company.

RISK NO. 3- GEOTECHNICAL CONDITIONS

Risk Identification: Given the uncertainty of the "unknown," geotechnical constraints are always in consideration when discussing risks. Couple that with the geotechnical challenges this region has and geotechnical conditions are an obvious risk. The entire project site sits at the western edge of the Coastal Plain Physiographic Province. This province is characterized by repeated marine depositional and erosional events that occurred during periods of moving shorelines. Various formations of different geologic age are represented at the site. The formations often have discontinuous strata. The soils types within each formation are highly variable and highly plastic soils are common. Furthermore, random locations contain iron sulfide minerals and are potentially acid-producing soils when exposed. In light of our Team's extensive local experience in these soils and the known conditions present, Geotechnical Conditions are our third Critical Risk that will need to be mitigated for a successful Project.

Why the Geotechnical Risk is Critical and the Impacts to the Project: For this project, we see the geotechnical conditions along the alignment as a major risk factor that will affect safety, schedule, and cost. The design and construction of safe cut and fill slopes is the primary geotechnical concern. Other geotechnical issues include workability of fill materials, suitability of subgrades, soft soil accumulations in swales and high acidity levels present in the soils which could negatively impact the establishment of post-construction vegetative growth. These risks are subdivided below to better describe the impact they will have on the project.

Slope Stability: Given the rolling topography of the site, numerous cut and fill slopes are required. Highly plastic soils within the Potomac Formation, are known to have low strength, impacting slope stability. This could require slopes to be laid back as much as 6:1. There are several potential impacts stemming from this condition, primarily; the need for increased material quantities and right of way, additional utility impacts, or costly structural measures. Highly plastic soils can be difficult to work with, particularly when they are wet which could easily impact the Project schedule. Furthermore, highly plastic soils are potentially expansive and are poor materials for subgrades or use as wall backfill which could necessitate the need for further mitigations by our Team.

Low-lying and unidentified wetland areas, in particular near Courthouse Road, have the potential for having high water tables and soft, compressible soil accumulations. Placement of fills over such areas present slope stability and settlement risks.

Because there are significant quantities of highly plastic soils throughout the project limits as well as unsuitable soils which cannot be quantified (complicated by potentially undefined wetlands), the LANE Team considers these items to be a significant risk to the project.

Acid-Sulfate Soils: The soils at the site are recognized as potentially acidic. LANE, having constructed the I-95 bridges over Courthouse Rd. (Route 630) and large portion of the I-95 Express Lanes, has first-hand experience with this issue. These soils contain iron sulfide minerals and in an undisturbed state below the water table, acid-sulfate soils are generally not acidic. However, once the soils are drained, excavated, or exposed to air by a lowering of the water table, these sulfides react with oxygen to form sulfuric acid. This acid is proven to cause a variety of adverse impacts to structures and can be extremely prohibitive to the establishment of vegetation for slope protection and other coverings.

The problem at this site is that the locations of acid-sulfate soils are random. Cut slopes are often more problematic (poor vegetative growth and subsequent erosion) as they are exposed in-situ soils whereas fills are or can be easily neutralized through blending processes.

Risk Mitigation Strategy: Understanding these risks and developing rational exploration and design strategies are key tools that will be employed to mitigate these risks. The first step in mitigating most risks is having the right people/companies involved. The LANE Team includes ECS Mid-Atlantic, LLC (ECS) as the geotechnical consultant. ECS, located a few miles away from the project site, has considerable design experience in this geology. ECS's experience, along with LANE's and RDA's, will be essential to the successful management and mitigation of this risk.

Slope Stability: Mitigation starts with a comprehensive subsurface investigation and a sound understanding of the strength of each substratum. The focus of the investigation should be concentrated on areas having significant cut and fill slopes. Per Chapter 3 of VDOT's MOI, frequency for borings may need to be increased. Determination of the long-term strength of the critical strata, notably the highly plastic soils, through a thorough QC, boring and laboratory testing program will be essential.

With knowledge of the soil strength and adequate subsurface characterization, numerous design methodologies can be employed to strengthen and steepen slopes, including but not limited to, zoning of materials, groundwater control, toe strengthening, reinforcement, shear keys, walls, etc. Proper evaluation and understanding of soil strength combined with reasonable but effective design will mitigate the risk of slope failure.

RDA recently dealt with marine clay stability issues on their Heritage Center Parkway D-B project at the Marine Corp Museum located along I-95 in Prince William County where cuts were laid back at 4:1 slopes to mitigate potential failures.

Furthermore, due to mass grading operations it will not be possible to exclude all highly plastic materials from being placed in compacted fills. Our Team will mitigate this by employing a well-planned and effective QA/QC program which will monitor sources, blending efforts, and actual placement – thereby mitigating potential negative effects. Subgrades for pavements require the use of low plasticity soils. There is a fairly good source of low-plasticity soils at the site – most of which are located at higher elevations. The design team will work closely with LANE constructability personnel to develop a balanced earthwork plan. One element of this plan will define the limits of optimal borrow areas. These cuts and fills will then be analyzed through our specialized software (TILOS and P6) to ensure adequate quantities of suitable subgrade material will be available when the roadway subgrade is being constructed, thereby providing for seamless Project phasing and sequencing. Undercutting subgrades in cut sections will be required, but with a well-defined QA/QC program that defines the decision process for undercutting, the risk of pavements being constructed over highly plastic materials will be eliminated. These mitigation measures also minimize the potential for delays in the overall Critical Path for the project at the early earthwork stages.

Finally, an important part of our exploration will be to investigate low lying areas – swales, potential wetlands, etc. Once identified, appropriate strategies, ranging from removal to in-situ ground improvement such as wick drains and/or surcharging, can be developed to minimize settlement, stability and schedule risks.

Acid-Sulfate Soils: Identification of the potential of the soils to cause adverse impacts is determined by pH and acid-base accounting tests (EPA Pub. 600/2-78-054). Locally, soil treatment is required when the calcium carbonate (lime) demand exceeds 4.0 tons per 1,000 tons of soil as determined by acid-base accounting. The best approach is to target planned cut slopes during the field exploration for testing. The presence of highly acidic soils in newly constructed slopes can be detrimental to the establishment and growth of protective vegetation which in turn can lead to erosion and ultimately slope failure. As discussed above, our QA plan will include additional testing, particularly of low-chroma soils observed during construction in cut sections. Spot tests of fill materials will also be made during construction to determine if, and the extent of, any lime treatment required.

Role of VDOT and other Agencies: For the geotechnical risks described herein, it is the D-B Team's responsibility to identify and mitigate the risk without requiring the support or services of outside agencies or key project stakeholders. With this understanding we do not anticipate the need for outside support other than normal VDOT approvals.

ATTACHMENT 3.1.2
SOQ CHECKLIST

ATTACHMENT 3.1.2

I-95/Route 630 Reconstruction and Widening; Contract ID No. C00013558DB83
STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

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

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

ATTACHMENT 3.1.2

I-95/Route 630 Reconstruction and Widening; Contract ID No. C00013558DB83

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15-page limit?	SOQ Page Reference
Evidence of obtaining bonding	NA	Section 3.2.9	no	Page 2

SCC and DPOR registration documentation (Appendix)	Attachment 3.2.10	Section 3.2.10	no	
Full size copies of SCC Registration	NA	Section 3.2.10.1	no	Appendix Attachment 3.2.10.1
Full size copies of DPOR Registration (Offices)	NA	Section 3.2.10.2	no	Appendix Attachment 3.2.10.2
Full size copies of DPOR Registration (Key Personnel)	NA	Section 3.2.10.3	no	Appendix Attachment 3.2.10.3
Full size copies of DPOR Registration (Non-APELSCIDLA)	NA	Section 3.2.10.4	no	N/A
DBE statement within Letter of Submittal confirming Offeror is committed to achieving the required DBE goal	NA	Section 3.2.11	yes	Page 2
Local and Veteran Hiring statement within Letter of Submittal confirming Offeror is committed to achieve the required local worker and veteran new hire participation goal	Attachment 3.2.12	Section 3.2.12	yes	Page 2

ATTACHMENT 3.1.2

I-95/Route 630 Reconstruction and Widening; Contract ID No. C00013558DB83

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15-page limit?	SOQ Page Reference
Offeror's Team Structure				
Identity of and qualifications of Key Personnel	NA	Section 3.3.1	yes	Page 3
Key Personnel Resume – DB Project Manager	Attachment 3.3.1	Section 3.3.1.1	no	Appendix Attachment 3.3.1
Key Personnel Resume – Responsible Charge Engineer	Attachment 3.3.1	Section 3.3.1.2		Appendix Attachment 3.3.1
Key Personnel Resume – Quality Assurance Manager	Attachment 3.3.1	Section 3.3.1.3	no	Appendix Attachment 3.3.1
Key Personnel Resume – Design Manager	Attachment 3.3.1	Section 3.3.1.4	no	Appendix Attachment 3.3.1
Key Personnel Resume – Construction Manager	Attachment 3.3.1	Section 3.3.1.5	no	Appendix Attachment 3.3.1
Organizational chart	NA	Section 3.3.2	yes	Page 4
Organizational chart narrative	NA	Section 3.3.2	yes	Pages 4-7
Experience of Offeror's Team				
Lead Contractor Work History Form	Attachment 3.4.1(a)	Section 3.4	no	Appendix Attachment 3.4.1(a)
Lead Designer Work History Form	Attachment 3.4.1(b)	Section 3.4	no	Appendix Attachment 3.4.1(b)

ATTACHMENT 3.1.2

I-95/Route 630 Reconstruction and Widening; Contract ID No. C00013558DB83

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15- page limit?	SOQ Page Reference
Project Risk				
Identify and discuss three critical risks for the Project	NA	Section 3.5.1	yes	Pages 9-15

ATTACHMENT 2.10
FORM C-78-RFQ

ATTACHMENT 2.10**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION**RFQ NO. C00013558DB83PROJECT NOS.: 0095-089-F09 and 0630-089-202**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 10/27/2015
(Date)
2. Cover letter of RFQ Addendum No. 1 01/14/16
(Date)
3. Cover letter of _____
(Date)



SIGNATURE

February 2, 2016
DATE

Robert E. Watt
PRINTED NAME

Pursuit Manager
TITLE

**ATTACHMENT 3.2.6
AFFILIATED AND SUBSIDIARY COMPANIES
OF THE OFFEROR**

ATTACHMENT 3.2.6

I-95/Route 630 Reconstruction and Widening; Contract ID No. C00013558DB83

Affiliated and Subsidiary Companies of the Offeror

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

The Offeror does not have any affiliated or subsidiary companies.

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

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

ATTACHMENT 3.2.6

I-95/Route 630 Reconstruction and Widening; Contract ID No. C00013558DB83

Affiliated and Subsidiary Companies of the Offeror

JOINT VENTURE (30% PARTNER)	Skanska-Granite-Lane	295 Bendix Road, Suite 400 Virginia Beach, VA 23452
JOINT VENTURE (30% PARTNER)	I4 Leasing, LLC	295 Bendix Road, Suite 400 Virginia Beach, VA 23452
JOINT VENTURE (35% PARTNER)	Fluor-Lane 95, LLC	6700 Las Colinas Blvd. Irving, TX 75039
JOINT VENTURE (20% PARTNER)	AGL Constructors	929 West Adams Street Chicago, IL 60607
JOINT VENTURE (25% PARTNER)	Gemma-Lane Liberty Partners	769 Hebron Avenue Glastonbury, CT 06033
JOINT VENTURE (25% PARTNER)	Gemma-Lane Patriot Partners	769 Hebron Avenue Glastonbury, CT 06033
JOINT VENTURE (51% MANAGING PARTNER)	Lane-Abrams Joint Venture	3001 Meacham Boulevard, Suite 215 Fort Worth, TX 76137
JOINT VENTURE (60% MANAGING PARTNER)	Lane-Corman, A Joint Venture	90 Fieldstone Court Cheshire, CT 06410
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

ATTACHMENT 3.2.6

I-95/Route 630 Reconstruction and Widening; Contract ID No. C00013558DB83

Affiliated and Subsidiary Companies of the Offeror

TRADE NAME	Senate Asphalt, A Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410
TRADE NAME	Virginia Paving Company, A Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410
TRADE NAME	Virginia Sign and Lighting Company, Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410

ATTACHMENT 3.2.7(a)
DEBARMENT FORM- PRIMARY COVERED
TRANSACTIONS

ATTACHMENT NO. 3.2.7(a)

**CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS**

**I-95/Route 630 Reconstruction and Widening; Contract ID No.:
C00013558DB83**

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.

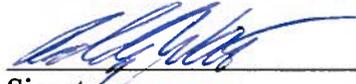
b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under 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.

 January 12, 2016 Pursuit Manager
Signature Date Title

The Lane Construction Corporation
Name of Firm

ATTACHMENT 3.2.7(b)
DEBARMENT FORM- LOWER TIER COVERED
TRANSACTIONS

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

**I-95/Route 630 Reconstruction and Widening; Contract ID No.:
C00013558DB83**

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

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

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

	<u>01/04/16</u>	<u>PRINCIPAL</u>
Signature	Date	Title
<u>CES CONSULTING LLC</u>		
Name of Firm		

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

**I-95/Route 630 Reconstruction and Widening; Contract ID No.:
C00013558DB83**

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.

 12/31/15 Vice President
Signature Date Title

DMY Engineering Consultants Inc.
Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

**I-95/Route 630 Reconstruction and Widening; Contract ID No.:
C00013558DB83**

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

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

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

<u>J. Randy Wirt</u>	<u>12/29/2015</u>	<u>Chief Engineer</u>
Signature	Date	Title

ECS Mid-Atlantic, LLC
Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

**I-95/Route 630 Reconstruction and Widening; Contract ID No.:
C00013558DB83**

- 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.

W. Meek K 01/04/2016
Signature Date

Vice President
Title

KCI Technologies, Inc.

Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

**I-95/Route 630 Reconstruction and Widening; Contract ID No.:
C00013558DB83**

- 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

11/11/2015

Date

Director of Transportation

Title

Rinker Design Associates, P.C.

Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

**I-95/Route 630 Reconstruction and Widening; Contract ID No.:
C00013558DB83**

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.

 1-4-15 DIRECTOR
Signature Date Title

RK+k LLP.
Name of Firm

**ATTACHMENT 3.2.8
VDOT PREQUALIFIED SUPPORTING
DOCUMENTATION**



COMMONWEALTH OF VIRGINIA



CERTIFICATE OF QUALIFICATION

THE LANE CONSTRUCTION CORPORATION

Vendor Number: **L002**

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

PREQUALIFIED

Your firm specializes in the noted Classification(s):

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

Issue Date: June 30, 2015

This Rating and Classification will Expire: June 30, 2016

Handwritten signature of Suzanne FR Lucas in black ink.

Suzanne FR Lucas, State Prequalification Officer

Handwritten signature of Don E. Silies in blue ink.

Don E. Silies, Director of Contracts

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

**ATTACHMENT 3.2.9
SURETY LETTER**

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

December 18, 2015

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

RE: **The Lane Construction Corporation
Request for Qualifications
I-95/Route 630 Interchange Relocation (0095-089-F09), UPC 13558; Route 630 Widening (0630-089-202), UPC 4632;
Federal Project Nos. I-95/Route 630 Interchange Relocation (NH-095-2); Route 630 Widening (STP-089-6)
Contract ID Number: C00013558DB83
Estimated Contract Price: \$95,000,000.00**

To Whom It May Concern:

This letter will serve to confirm that The Lane Construction Corporation 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, 2015.

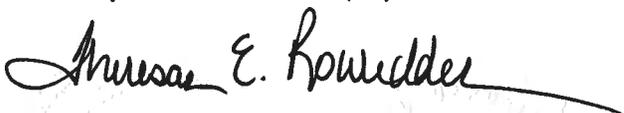
As the sureties for The Lane Construction Corporation, we advise that The Lane Construction Corporation is capable of obtaining 100% Performance Bond and 100% Labor and Materials Payment Bond in the amount of the anticipated cost of construction, and said bonds will cover the Project and any warranty 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 The Lane Construction Corporation 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 The Lane Construction Corporation, 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

Aon Risk Services
One Federal Street, 20th Floor
Boston, MA 02110
860-830-1769

**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 26th day of August, A.D. 2015.

ATTEST:

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



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

Thomas O. McClellan
Vice President
Thomas O. McClellan

State of Maryland
County of Baltimore

On this 26th day of August, A.D. 2015, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **THOMAS O. MCCLELLAN, Vice President, and ERIC D. BARNES, Secretary**, of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, depose and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

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

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

EXTRACT FROM BY-LAWS OF THE COMPANIES

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

CERTIFICATE

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

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

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

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

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

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies, this 10th day of DECEMBER, 2015.



Michael Bond, Vice President

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

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

Certificate No. 6999610

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 Huft; Gregory J. Steele; 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 28th day of May, 2015.

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

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

STATE OF PENNSYLVANIA ss
COUNTY OF MONTGOMERY

On this 28th day of May, 2015, before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Insurance Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

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



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

By: Teresa Pastella
Teresa Pastella, Notary Public

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

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

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

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

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

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

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 18th day of DECEMBER, 2015.



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

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

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

ATTACHMENT 3.2.10
SCC AND DPOR INFORMATION

ATTACHMENT 3.2.10

I-95/Route 630 Reconstruction and Widening; Contract ID No. C00013558DB83

SCC and DPOR Information

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

SCC & DPOR INFORMATION FOR BUSINESSES (RFQ Sections 3.2.10.1 and 3.2.10.2)							
Business Name	SCC Information (3.2.10.1)			DPOR Information (3.2.10.2)			
	SCC Number	SCC Type of Corporation	SCC Status	DPOR Registered Address	DPOR Registration Type	DPOR Registration Number	DPOR Expiration Date
The Lane Construction Corporation	F0254476	Foreign Corporation	Active	90 Fieldstone Court Cheshire, CT 06410	Contractor Class A	2701011871	01-31-2016
				90 Fieldstone Court Cheshire, CT 06410	Business Entity Registration	0407002174	12-31-2017
Rinker Design Associates, P.C. (RDA)	0227062-7	Professional Corporation	Active	9385 Discovery Blvd, Ste 200, Manassas, VA 20109	Professional Corporation (ENG, LS)	0405000502	12-31-2017
					Real Estate Appraisal Business	4008001684	02-28-2017
				927 Maple Grove Dr, Ste 105 Fredericksburg, VA 22407	Prof. Corp. Branch Office (ENG, LS)	0410000156	02-29-2016
					Real Estate Appraisal Business	4008001739	04-30-2016
				4301 Dominion Blvd, Ste 100 Glen Allen, VA 23060	Prof. Corp. Branch Office (ENG)	0410000220	02-29-2016
					Real Estate Appraisal Business	4008001801	04-30-2016
KCI Technologies, Inc.	F059869-0	Foreign Stock Corporation	Active	3014 Southcross Blvd Rock Hill, SC 29730	Business Entity Branch Office (ENG)	0411000956	02-29-2016
Rummel, Klepper & Kahl, LLP (RK&K)	K0004178	Limited Liability Partnership	Active	2100 East Cary St, Ste 309 Richmond, VA 23223	Business Entity Branch Office (ENG)	0411000271	02-29-2016
				2901 S. Lynnhaven Rd, Ste 300 Virginia Beach, VA 23452	Business Entity Branch Office (ENG)	0411000667	02-29-2016
				721 Lakefront Commons, Ste 203 Newport News, VA 23606	Business Entity Branch Office (ENG)	0411000443	02-29-2016
				12600 Fair Lakes Cir, Ste 300 Fairfax, VA 22030	Business Entity Branch Office (ENG)	0411000577	02-29-2016

ATTACHMENT 3.2.10

I-95/Route 630 Reconstruction and Widening; Contract ID No. C00013558DB83

SCC and DPOR Information

				900 Ridgefield Dr., Ste 350 Raleigh, NC 27609	Business Entity Branch Office (ENG)	0411001046	02-29-2016
ECS Mid-Atlantic, LLC	S1208216	Limited Liability Corporation	Active	915 Maple Grove Dr, Ste 100 Fredericksburg, VA 22407	Business Entity Branch Office (ENG)	0411000383	02-29-2016
				2119-D North Hamilton St Richmond, VA 23230	Business Entity Branch Office (ENG)	0411000384	02-29-2016
DMY Engineering Consultants, Inc.	07688955	Corporation	Active	45662 Terminal Dr, Ste 110 Dulles, VA 20166	Business Entity (ENG)	0407005631	12-31-2017
CES Consulting, LLC	S3416007	Limited Liability Corporation	Active	13991 Virginia Cedar Ct, Gainesville, VA 20155	Business Entity Registration	0407005783	12-31-2017

ATTACHMENT 3.2.10

I-95/Route 630 Reconstruction and Widening; Contract ID No. C00013558DB83

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
Rinker Design Associates, P.C.	Darell Fischer, P.E., DBIA	Glen Allen, VA	14101 Spring Gate Terrace Midlothian, VA 23112	Professional Engineer	0402023296	06-30-2016
Rinker Design Associates, P.C.	C. Mo Kim, P.E., DBIA	Manassas, VA	12530 Brenmill Lane Manassas, VA 20112	Professional Engineer	0402032943	07-31-2017
CES Consulting, LLC	Syed R. Khan, P.E.	Gainesville, VA	43744 Paramount Pl. Chantilly, VA 20152	Professional Engineer	0402031057	07-31-2017

ATTACHMENT 3.2.10.1
SCC SUPPORTING DOCUMENTATION



THE LANE CONSTRUCTION CORPORATION

SCC eFile

[SCC eFile Home Page](#)
[Check Name](#)
[Distinguishability](#)
[Business Entity Search](#)
[Certificate Verification](#)
[FAQs](#)
[Contact Us](#)
[Give Us Feedback](#)

Business Entities

UCC or Tax Liens

General

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



Rinker Design Associates, P.C.

SCC eFile

[SCC eFile Home Page](#)
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[Distinguishability](#)
[Business Entity Search](#)
[Certificate Verification](#)
[FAQs](#)
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[Give Us Feedback](#)

Business Entities

UCC or Tax Liens

General

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



KCI Technologies, Inc.

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

Business Entities

UCC or Tax Liens

General

SCC ID: F0598690
Entity Type: Foreign Corporation
Jurisdiction of Formation: DE
Date of Formation/Registration: 12/19/1988
Status: Active
Shares Authorized: 1000

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 the Clerk's Office of the Commission by Rummel, Klepper & Kahl, LLP, a Maryland 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:
January 12, 2016*



Joel H. Peck

Joel H. Peck, Clerk of the Commission



ECS - Mid-Atlantic, LLC

SCC eFile

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

Business Entities

General

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



DMY ENGINEERING CONSULTANTS INC.

SCC eFile

SCC eFile Home Page
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Contact Us
Give Us Feedback

Business Entities

UCC or Tax Liens

General

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



CES Consulting, LLC

SCC eFile

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

Business Entities

General

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

ATTACHMENT 3.2.10.2
DPOR SUPPORTING DOCUMENTATION
FOR EACH OFFICE

The Lane Construction Corporation


Department of Professional and Occupational Regulation

[Home](#) > [License Lookup](#) > [License Lookup & Disciplinary Actions](#)

[License Lookup](#) | [Online Renewal & Services](#) | [Boards](#) | [Professions & Occupations](#) | [Forms & Applications](#) | [Fair Housing Office](#) | [Community Associations](#) | [File a Complaint](#)

[License Search](#) | [Advanced License Search](#) | [Disciplinary Action Search](#)

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

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


Department of Professional and Occupational Regulation

[Home](#) > [License Lookup](#) > [License Lookup & Disciplinary Actions](#)

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[License Search](#) | [Advanced License Search](#) | [Disciplinary Action Search](#)

[License Details](#) 

Name	THE LANE CONSTRUCTION CORPORATION / SENATE ASPHALT
DBA Name	VA PAVING COMPANY / VA SIGN AND LIGHTING COMPANY
License Number	2701011871
License Description	Contractor
Firm Type	Corporation
Rank 	Class A
Address	90 FIELDSTONE COURT, CHESHIRE, CT 06410
Specialties 	Commercial Building (CBC) Highway / Heavy (H/H) Residential Building (RBC)
Initial Certification Date	1972-10-12
Expiration Date	2016-01-31

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

EXPIRES ON
12-31-2017

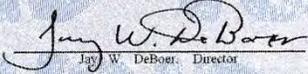
NUMBER
0405000502

**BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS**
PROFESSIONAL CORPORATION REGISTRATION

PROFESSIONS: ENG, LS

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




Jay W. DeBoer, Director

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

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

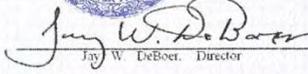
EXPIRES ON
02-28-2017

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

NUMBER
4008001684

REAL ESTATE APPRAISER BOARD
APPRAISAL BUSINESS REGISTRATION

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



Jay W. DeBoer, Director

ALTERATION OF THIS DOCUMENT, USE AFTER EXPIRATION, OR USE BY PERSONS OR FIRMS OTHER THAN THOSE NAMED MAY RESULT IN CRIMINAL PROSECUTION UNDER THE CODE OF VIRGINIA.

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
02-29-2016

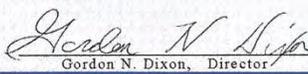
9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

NUMBER
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, Director

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9960 Mayland Dr., Suite 400, Richmond, VA 23233
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NUMBER
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REAL ESTATE APPRAISER BOARD
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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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0410000220

BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
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PROFESSIONAL CORPORATION BRANCH OFFICE REGISTRATION

PROFESSIONS: ENG

RINKER DESIGN ASSOCIATES PC
4301 DOMINION BOULEVARD, SUITE 100
GLEN ALLEN, VA 23060



Nick A. Christner
Nick A. Christner, Interim Director

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04-30-2016

9960 Mayland Dr., Suite 400, Richmond, VA 23233
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NUMBER
4008001801

REAL ESTATE APPRAISER BOARD
APPRAISAL BUSINESS REGISTRATION

RINKER DESIGN ASSOCIATES P C
4301 DOMINION BOULEVARD
SUITE 100
GLEN ALLEN, VA 23060



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Nick A. Christner, Interim Director

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AND LANDSCAPE ARCHITECTS
BUSINESS ENTITY BRANCH OFFICE REGISTRATION

PROFESSIONS: ENG

KCI TECHNOLOGIES INC
3014 SOUTHCROSS BLVD
ROCK HILL, SC 29730


Nick A. Christner
Nick A. Christner, Interim Director

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9960 Mayland Dr., Suite 400, Richmond, VA 23233
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EXPIRES ON
02-29-2016

NUMBER
0411000271

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

PROFESSIONS: ENG

RUMMEL KLEPPER & KAHL LLP
RK&K
2100 EAST CARY ST
SUITE 309
RICHMOND, VA 23223


Nick A. Christner
Nick A. Christner, Interim Director

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Telephone: (804) 367-8500

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

PROFESSIONS: ENG

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


Nick A. Christner
Nick A. Christner, Interim Director

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9960 Mayland Dr., Suite 400, Richmond, VA 23233
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NUMBER
0411000443

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
721 LAKEFRONT COMMONS
SUITE 203
NEWPORT NEWS, VA 23606



Nick A. Christner
Nick A. Christner, Interim Director

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EXPIRES ON
02-29-2016

9960 Mayland Dr., Suite 400, Richmond, VA 23233
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
12600 FAIR LAKES CIR, STE 300
FAIRFAX, VA 22030



Jay W. DeBoer
Jay W. DeBoer, Director

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COMMONWEALTH OF VIRGINIA

EXPIRES ON
02-29-2016

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

NUMBER
0411001046

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

PROFESSIONS: ENG

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



Nick A. Christner
Nick A. Christner, Interim Director

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COMMONWEALTH OF VIRGINIA

EXPIRES ON

02-29-2016

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

NUMBER

0411000383

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

PROFESSIONS: ENG

ECS-MID-ATLANTIC LLC
915 MAPLE GROVE DR
STE 100
FREDERICKSBURG, VA 22407-6935



Nick A. Christner
Nick A. Christner, Interim Director

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DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
02-29-2016

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

NUMBER
0411000384

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

PROFESSIONS: ENG

ECS MID-ATLANTIC LLC
2119-D NORTH HAMILTON ST
RICHMOND, VA 23230



Nick A. Christner
Nick A. Christner, Interim Director

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DMY Engineering Consultants, Inc.

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

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

EXPIRES ON

12-31-2017

NUMBER

0407005631

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AND LANDSCAPE ARCHITECTS
BUSINESS ENTITY REGISTRATION

PROFESSIONS: ENG



DMY ENGINEERING CONSULTANTS INC
45662 TERMINAL DRIVE
SUITE 110
DULLES, VA 20166



Jay W. DeBoer
Jay W. DeBoer, Director

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



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License Details

Related Licenses



Name	CES CONSULTING LLC
License Number	0407005783
License Description	Business Entity Registration
Firm Type	LLC - Limited Liability Company
Rank	Business Entity
Address	13991 VIRGINIA CEDAR COURT, GAINESVILLE, VA 20155
Initial Certification Date	2010-11-05
Expiration Date	2017-12-31

ATTACHMENT 3.2.10.3
DPOR SUPPORTING DOCUMENTATION
FOR KEY PERSONNEL



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- Records & Documents
- News & Information

License Search Advanced License Search Disciplinary Action Search

License Details Related Licenses

Name	FISCHER, DARELL LEE
License Number	0402023296
License Description	Professional Engineer License
Rank	Professional Engineer
Address	MIDLOTHIAN, VA 23112
Initial Certification Date	1992-06-25
Expiration Date	2016-06-30

The license information in this application was last updated at Tue Jan 05 02:50:18 EST.

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- Community Associations

License Search Advanced License Search Disciplinary Action Search

License Details Related Licenses

Name	KIM, CHUN M
License Number	0402032943
License Description	Professional Engineer License
Rank	Professional Engineer
Address	MANASSAS, VA 20112
Initial Certification Date	1999-07-14
Expiration Date	2017-07-31



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Professions & Occupations

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Air Housing Office

Community Associations

License Search

Advanced License Search

Disciplinary Action Search

License Details

Name	KHAN, SYED R
License Number	0402031057
License Description	Professional Engineer License
Rank	Professional Engineer
Address	CHANTILLY, VA 20152
Initial Certification Date	1997-05-01
Expiration Date	2017-07-31

ATTACHMENT 3.3.1
KEY PERSONNEL RESUMES

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.	
a. Name & Title: JAN SHERMAN, ASSISTANT DISTRICT MANAGER	
b. Project Assignment: DESIGN BUILD PROJECT MANAGER	
c. Name of Firm with which you are now associated: THE LANE CONSTRUCTION CORPORATION	
d. Employment History: With this Firm 17 Years With Other Firms 0 Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): The Lane Construction Corporation, 2001-Present: Mr. Jan Sherman has over 15 years of construction experience on a wide assortment of projects ranging in value from several thousand to over \$200M. His project experience includes asphalt plant operations; asphalt runway, taxiway, and apron construction; bridge, structure, and parking lot construction; cut and cover pedestrian tunnels; and trail construction. The scopes of his projects have included bridge replacement, roadway widening and rehabilitation, dirt and rock excavation, blasting, excavation support, micro-piles, caissons, underground utilities, storm drainage, reinforced structural concrete, architectural concrete, concrete pavement, asphalt pavement, milling, traffic control, site electrical, interior electrical, mechanical, plumbing, terrazzo, precast concrete, elevators, escalators, moving walkways and various finishes. Throughout his career with LANE, Mr. Sherman has performed as an Estimator, Foreman, QC Technician, QC Manager, Project Engineer, Project Manager, and currently Assistant District Manager. His responsibilities have included the management of office & field personnel, adherence to corporate safety policies, contract administration, submittals, requests for information, payment requisitions, project scheduling, procurement, change order negotiations, management of resources and costs, and subcontractor coordination.	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Clarkson University, Potsdam, NY/ B.S./1998/ Civil Engineering	
f. Active Registration: Year First Registered/ Discipline/VA Registration #: N/A	
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.) * On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.	
VDOT, I-66 Route 15 Interchange Reconstruction, Prince William County, VA (DESIGN-BUILD)	
Name of Firm: The Lane Construction Corporation	Project Role: Design-Build Project Manager
Beginning Date: 2014	End Date: 8/2017 (est)
Specific Responsibilities: As DBPM for this project, Mr. Sherman is responsible for the overall project design and construction. He supervises and manages the design, construction, quality management, contract administration and other services required by the contract, including the procurement and timely delivery of all materials, equipment, services and labor. Mr. Sherman ensures all contract obligations are met and successfully avoids and/or resolves disputes in accordance with contract documents. He is responsible for overseeing the construction and field personnel as well as permitting, erosion control, lighting, signing and pavement marking, traffic control, right-of-way and utility relocation. Mr. Sherman also coordinates public outreach and public meetings.	
Project Relevance: The I-66/Route 15 Interchange Reconstruction project involves reconstructing the interchange of Route 15 over I-66. The project includes: diverging diamond interchange (DDI), widening of Route 15 and Route 55, construction of a new service road, and replacement of northbound and southbound bridges carrying Route 15 over I-66. Mr. Sherman is currently working with RDA and proposed DM, Mr. Kim on this project.	
VDOT, I-581 Valley View Interchange Phase II, Roanoke, VA (DESIGN-BUILD)	
Name of Firm: The Lane Construction Corporation	Project Role: Design-Build Project Manager
Beginning Date: 2012	End Date: 9/2016 (est)
Specific Responsibilities: As DBPM Mr. Sherman is responsible for overall construction, quality and safety programs, ensured all requirements and specifications were delivered, contract administration, directed and managed project development and constructability reviews with the designers, defining project scope, goals and deliverables, collaborated with senior management and stakeholders, public outreach and public meetings, estimating resources, supervised the procurement and furnishing of all materials, equipment, services and labor necessary for project completion, scheduled project timelines and milestones, supervised team members, and developed best practices and tools for project execution and management.	

Project Relevance: This \$39 million D-B project, includes the construction of a new DDI at I-581 and Valley View Boulevard. This will be accomplished by the addition of the southbound exit and northbound entry ramps serving I-581/U.S. Route 220 north of the interchange and accompanying auxiliary lanes along I-581/U.S. Route 220 to the Hershberger Road interchange. The existing southbound entry and northbound exit ramps will be adjusted and lengthened to facilitate the other improvements. Valley View Boulevard and the bridge over I-581/U.S. Route 220 will be widened to provide two through lanes in each direction, dual left turn lanes for both the northbound and southbound movements to I-581 through the interchange and a right turn lane onto the northbound I-581/U.S. Route 220 entry ramp. The project also includes the partial demolition of the existing structure; widening and repair of the existing bridge substructure and superstructure; construction of retaining and mechanically stabilized earth (MSE) walls required for the bridge structure, ramps, auxiliary lanes, and Valley View Boulevard widening; acquisition of right-of-way and limited access line revisions; utility relocations; milling and repaving of the existing pavement; installation of two new traffic signals and reconstruction of the existing traffic signals; roadway lighting replacement; complete interchange lighting including the underbridge; installation of new and revised signs and pavement markings along I-581, Valley View Boulevard, and the ramps; installation and extension of the drainage system and ditches; ESS control; stormwater management; installation of a new pedestrian bridge along I-581.

VDOT, I-495 Express Lanes, Fairfax County, VA (DESIGN-BUILD)

Name of Firm: The Lane Construction Corporation	Project Role: Project Manager
Beginning Date: 2010	End Date: 2012

Specific Responsibilities: As the Project Manager on this D-B project, Mr. Sherman was responsible and accountable for oversight of construction activities, assisting in estimating quantities, reviewing design and construction plans, quality management, contract administration in Area 2. In addition, he assisted with the maintenance and updating of the project CPM schedule using Primavera Scheduling software as well as scheduling and assuring continued inspection of all materials and construction for conformance to the contract plans and specifications. **Mr. Sherman worked with proposed CM, Bob Cross on this project.**

Project Relevance: This \$1.5B D-B project involved two new lanes which were constructed in each direction on a 14-mile stretch of I-495 from the Springfield Interchange to just north of the Dulles Toll Road. Area 2 of the Express Lanes encompasses the I-495 interchange at I-66, new ramp access at Route 29, W&OD Trail and overpasses south of Route 7 interchange. Construction of the new interchanges in Area 2 required close coordination with homeowners, WMATA, NVRPA and both vehicular & pedestrian foot traffic through the work areas. Unique to Area 2, an active HOV ramp from I-66 to the beltway was maintained throughout the majority of the project, requiring innovative traffic management and alternate means of construction to build the entire interchange. As one of the more congested interchanges along the beltway, construction was performed in a manner to minimize impacts to the traveling public. The project encompassed the replacement of more than \$260 million of aging infrastructure, including more than 50 bridges and overpasses. Similar to the proposed I-95/Route 630 project included MOT, bridge/structure replacement, roadway widening, survey, QA/QC, hydraulics, and public involvement/relations and all associated project management functions.

VDOT, I-66 Corridor Improvements, Arlington County, VA

Name of Firm: The Lane Construction Corporation	Project Role: Project Manager
Beginning Date: 2013	End Date: 2016

Specific Responsibilities: As PM, Mr. Sherman was responsible for directing and managing the project management team, coordinating with and monitoring contract progress with VDOT and subcontractors (including adherence to contractual requirements and specifications), and overseeing the overall safety and quality control programs. He ensured that project resources (manpower, materials and equipment) are available in a timely manner to the project.

Project Relevance: This \$23M project consisted of widening the Interstate to gain an additional lane between the 66 WB ramp at the Lee Highway intersection and the Dulles Access Road ramp. The work is located on the inside and outside shoulder of WB I-66 within Fairfax and Arlington Counties. The main work associated with the project involves widening the existing roadway, widening two bridges. Once the roadway was widened, the entire affected roadway was completely milled and overlaid with surface asphalt, followed by the installation of new pavement markings.

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. **N/A. Mr. Sherman is not required on-site full-time.**

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.	
a. Name & Title: DARELL L. FISCHER, P.E., DBIA / ASSISTANT DIRECTOR OF TRANSPORTATION / GENERAL MANAGER, RICHMOND OFFICE / PRINCIPAL	
b. Project Assignment: RESPONSIBLE CHARGE ENGINEER	
c. Name of Firm with which you are now associated: RINKER DESIGN ASSOCIATES, P.C.	
d. Employment History: With this Firm <u>9</u> Years With Other Firms <u>21</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): Rinker Design Associates, P.C., 2007–Present, Assistant Director of Transportation/General Manager, Richmond Office/Principal. Mr. Fischer is responsible for allocating, overseeing, and managing all designs performed/managed in the Richmond Office, and all sub-consultants on those projects. Design elements managed include roadway design, hydrology/hydraulic analysis, traffic analysis and design, construction plan preparation, R/W acquisition, utility coordination/design, environmental permitting/environmental compliance, and structural design. Furthermore, his duties include development and implementation of the design QA/QC programs for design-build projects and coordination with clients to ensure goals are met and quality is achieved. Mr. Fischer is responsible for staffing projects; hiring sub-consultants; negotiating contracts with clients, contractors, and sub-consultants; and project scheduling to ensure on-time/on-budget performance. From 2007 and 2011, Mr. Fischer performed the same duties and roles for RDA’s Transportation group in the Fredericksburg Office prior to opening the Richmond Office in early 2011. Johnson, Mirmiran & Thompson, Inc., 2001–2007, Vice President/Branch Manager. Mr. Fischer was responsible for obtaining the work, executing the work and ensuring the quality of all work produced by the Richmond Office of JMT, oversight of all disciplines of work to include: roadway, drainage, structures, survey, construction inspection and environmental. He was responsible for contractual obligations with clients and subconsultants as well as project management on many key projects. Additional responsibilities of office operations included: hiring, firing, raises, evaluations, dispute resolution, resource allocation, manpower projections and marketing.	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Virginia Polytechnic Institute and State University, Blacksburg, VA / B.S. / 1986 / Civil Engineering	
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 1992 / PE / #023296	
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.) * On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.	
VDOT, I-581 Elm Avenue Interchange Improvements, City of Roanoke, VA (DESIGN-BUILD)	
Name of Firm: Rinker Design Associates, P.C.	Project Role: Design Manager
Beginning Date: 2012	End Date: 2015
Specific Responsibilities: As Design Manager, Mr. Fischer was responsible for the design, management and QA/QC for complete roadway construction plans, as well as coordinating and addressing RFI’s and Shop Drawing Reviews. Mr. Fischer’s project responsibilities included design oversight of TMP, utility coordination/design, bridge reconstruction/widening design, and geotechnical analysis. He was responsible for coordinating with the contractor (during design and during construction), VDOT, the City of Roanoke, and utility companies to ensure that the design requirements of the contract were met and to expedite the design and associated services. During construction, Mr. Fischer provided field engineering decisions to assist the contractor in addressing differing conditions as well how to correct non-conforming construction elements. This input and integration into construction included MOT elements, drainage features, retaining walls along ramps, and fill slopes in confined spaces. In several cases, the field coordination resulted in plan revisions to better align with the field conditions and best means and methods of construction. Worked with Mo Kim, Adam Welschenbach, Tony Dean, Steven Thompson Project Relevance: Similar to the I-95/Route 630 project, this \$20.4M D-B project consisted of the development of roadway widening along a congested corridor, on- and off-ramps to an interstate, and shoulder improvement along the interstate approach. The TMP complexity on this project required significant integration of the roadway and bridge designers, as it encompassed both bridge widening and the adjacent roadway and interchange ramp work. This included field adjustments to simplify construction, minimize traffic disruption and expedite schedule. As a value added feature and to accommodate adequate taper lengths, the project design reconstructed medians and roadway beyond the project limits to simplify the construction sequencing. The extensive	

coordination with the regional hospital (and an adjacent medical facility) provides a direct understanding of the issues that we will encounter on the I-95/Route 630 project.

VDOT, Middle Ground Boulevard Extension, City of Newport News (DESIGN-BUILD)

Name of Firm: Rinker Design Associates, P.C.	Project Role: Design Manager
Beginning Date: 2011	End Date: 2015

Specific Responsibilities: As Design Manager, Mr. Fischer was responsible for the design management and design QA/QC for complete construction plans to include: roadway and drainage design; traffic engineering; TMP/MOT; E&S; environmental permitting; bridge design oversight; and geotechnical analysis coordination. Responsibilities also included utility coordination and oversight/management of subconsultants. Mr. Fischer worked directly with the construction staff to develop the TMP to address specific sequencing needs and construction means and methods. Additionally, Mr. Fischer addressed RFI's to direct the contract on how to ensure that the design intent and contract requirements were met. Mr. Fischer's field integration included pre and post construction input regarding issues related to drainage, TMP, signing, marking, geotechnical/materials, and sanitary force main construction. **Worked with Brandon Shock, Steve Thompson, and Tony Dean**

Project Relevance: This \$32.5M D-B project consisted of the development of roadway design on new alignment and the widening of highly congested, urban roadways (Warwick Boulevard and Jefferson Avenue). The plans were developed in work packages (similar to how we anticipate developing the I-95/Route 630 project) so that the contractor could initiate construction prior to final approval, providing schedule flexibility. The TMP design along the congested roadways presented unique challenges to ensure driver and construction personnel safety – identical challenges that we will encounter on the I-95/Route 630 project. Environmental permitting was accelerated and acquired in five months to begin construction ahead of schedule. Right of way acquisition and Utility relocations were also performed by RDA

VDOT, Rolling Road/Franconia-Springfield Parkway Interchange Improvements, Fairfax County, VA (DESIGN-BUILD)

Name of Firm: Rinker Design Associates, P.C.	Project Role: Design Manager
Beginning Date: 2013	End Date: 2015

Specific Responsibilities: As Design Manager, Mr. Fischer oversaw and directed the design of the project to include: roadway, drainage, structures, traffic, utilities, and surveys. Mr. Fischer oversaw the development of a complex TMP/MOT plan to reconstruct the loop ramp and parkway widenings that included widening to both sides of traffic. He developed drainage strategies to minimize the need for reconstructing existing facilities in excellent shape by redirecting water to a proposed SWM that provided over-management. He also successfully implemented an approach to deal with dual HUC codes on the project to satisfy current drainage criteria. Finally, Mr. Fischer and his team developed design alternatives that allowed the contractor to save money while providing VDOT the same (if not better) finished product. During construction, Mr. Fischer has reviewed shop drawings associated with signal submittal, sign panels, and lighting construction. He has addressed numerous RFI's (informally and formally) to ensure that the contract documents/requirements are achieved. He has directed design change efforts to implement the contractor's means and methods and to facilitate cost saving measures. **Worked with Brandon Shock, Adam Welschenbach, and Tony Dean.**

Project Relevance: This D-B project consisted of the design and reconstruction of the Rolling Road interchange with Fairfax County Parkway. Interchange improvements included ramp and loop reconstruction under traffic similar to the I-95/Route 630 interchange and capacity enhancements. Additionally, Rolling Road, Fairfax County Parkway, and Franconia-Springfield Parkway were widened for capacity. Utility and Right-of-Way avoidance allowed the project to transition from design to construction without reservation.

VDOT, Route 36 Improvements, Prince George County, VA (DESIGN-BUILD)

Name of Firm: Rinker Design Associates, P.C.	Project Role: Design Manager
Beginning Date: 2008	End Date: 2012

Specific Responsibilities: As Design Manager, Mr. Fischer directed the development of all design efforts and oversaw the QA/QC for the design. Mr. Fischer was responsible for coordinating with the contractor, VDOT, and each utility company to ensure the design requirements of the contract were met and the schedule was expedited. Environmental compliance included reanalysis and testing of the potential for naturally occurring hazard materials and VOCs, evaluation of drainage outfalls, and creative solutions to mitigate both issues. In the development of the TMP design, Mr. Fischer integrated with the construction team to develop an approach that worked with their means, methods, and sequencing preferences. As construction progressed, he met with the contractor regularly to ensure that the design was implemented smoothly. As questions arose, the contractor readily contacted Mr. Fischer for input and guidance to ensure that requirements were being met. **Worked with Brandon Shock, Adam Welschenbach, and Steve Thompson.**

Project Relevance: This D-B project consisted of widening of two primary routes (Route 36 and Route 144) that provide access to the Fort Lee military base. These capacity improvements included both shoulder and curb and gutter construction through different portions of the project. Improvements also included the reconfiguration of the intersection of the two primary routes to minimize/eliminate inadvertent vehicular access to Fort Lee and to more efficiently direct traffic. Other project features included construction of several SWM facilities and a coordinated signal system of 5 new signals. A key to success was the minimization of utility impacts and efficient relocation of those that could not be avoided.

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. **N/A. Mr. Fischer is not required onsite full-time.**

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.
a. Name & Title: SYED R. KHAN, PE, PMP, DBIA QUALITY ASSURANCE MANAGER
b. Project Assignment: QUALITY ASSURANCE MANAGER
c. Name of Firm with which you are now associated: CES CONSULTING, LLC.
d. Employment History: With this Firm 3 Years With Other Firms 31 Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): Mr. Khan has more than 30 years' experience that includes Quality Assurance, Quality Control, Design Management and Construction Management. <u>CES Consulting, LLC, Quality Assurance Manager, 2013-Present:</u> Mr. Khan manages all Design-Build Projects for CES Consulting. In addition, Mr. Khan's experience covers implementation of all Quality Control and Quality Assurance Programs. As Quality Assurance Manager (QAM) his responsibilities included Quality Control Management, Coordinating of Daily Inspection Activities, Recording and Reporting of Non Conformance Reports (NCR), Managing Rectification of NCR (s), Overseeing and Managing Project Quality Control or Quality Assurance Documents. <u>Area Manager/OC Manager for Parsons Brinkerhoff, Qatar Local Roads and Drainage Program, 2011 - 2013</u> Mr. Khan was responsible for overseeing Quality Assurance Management as well as coordinating the design management, construction contract procurement, construction management, handing over and overseeing the defect liability period and final handing over of roads and drainage projects. He lead all coordination efforts with other functional groups in the program management organization such as design specialists, project controls, contract management, claims specialists, construction supervision staff and the client for delivering the projects. The program required coordination with various other major programs and government agencies such as Ministry of Municipal Affairs, Ministry of Environment, President's Executive Office and Central Planning Office of Qatar. The construction value of the projects supervised by him was approximately \$500 Million. <u>Deputy Director for Yas Island (Quality Control) 2007 - 2011</u> Responsible for the development of Infrastructure projects at Yas Island, Mr. Khan was directly responsible for the design, procurement, and Quality Control Management of the following transportation and utilities projects on Yas Island: A 15 mile, 10-lane freeway with several interchanges, roads and waterway crossings connecting Yas Island to Mina Zayed via Saadiyat Island, Design & Construction of an underwater tunnel (0.8 miles long) connecting Yas Island to Raha Beach; and construction of all internal roads, surface parking lots, and multilevel parking structures. The total value of the projects supervised by Mr. Khan was approximately \$1 Billion. <u>Senior Construction Manager, Parsons Transportation Group, Transportation Improvement Program, 2001 - 2007</u> The projects under the program included construction of highways, interchanges, new bridges, widening of existing bridges, roadway widening, and installation of drainage pipes, extensive ITS/TMS work and overhead signs. In addition, from 2005 to 2007, he worked on the construction of Terminal Building at Abu Dhabi Airport which was a Design-Build project. Mr. Khan managed CEI Staff, for the oversight of all testing, documentation and payment of work on site, working with FHWA/Design Engineer/Contractor to resolve field construction issues. He enforced specifications/standards and ensured that all Non-Conforming Work was properly documented through NCR and remediated and closed out. AS RE, Mr. Khan also ensured that all work orders, pay estimates & project closeouts are done as per Quality Control and Quality Assurance procedures. The total value of projects managed under the program is approximately \$400 Million.
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: State University of New York at Buffalo/ MS/ 1989/ Construction Management NED University of Engineering & Technology, Pakistan/ BS/ 1981/ Civil Engineering
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 1995/ PE/ #31057 Certified Construction Manager, CCM; PMP; DBIA; VDOT Certifications: Pavement Marking (2018); Asphalt Field Levels I & II (2018); Others: DCR/DEQ Erosion & Sediment Control (2017); Intermediate Work zone Traffic Control (2017); Nuclear Gauge Safety (2016); ACI Concrete Field (2018); OSHA 10-hour
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.) * On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.

VDOT, I-66 Spot 2 Improvements, Fairfax County, VA			
Name of Firm:	CES Consulting, LLC	Project Role:	Senior Construction Manager
Beginning Date:	2013	End Date:	3/2016
<p>Specific Responsibilities: As Senior Construction Manager for this \$33 Million project, Mr. Khan oversees all aspects of office engineering and inspection efforts related to the Quality Assurance compliance with contract requirements. Mr. Khan is managing the Project Quality Management Team, VDOT and Consultant Staff. He is responsible for the oversight of all testing, documentation and payment of work on site, working with FHWA/Design Engineer/Contractor to resolve field construction issues. Additionally he enforces VDOT specifications/standards and ensuring that all non-conforming work is properly documented, remediated and closed-out.</p> <p>Project Relevance: The I-66 Spot 2 Improvements project includes roadway and bridge widening, storm drainage, sound walls, utilities relocations (including sensitive government fiber optic cable), retaining walls, maintenance of traffic, stakeholder coordination, public outreach, storm water management, overhead signs, extensive MOT (through multiple phased construction, interstate corridor lighting), ITS communication equipment/duct bank installation and relocation, close coordination with WMATA (Adjacent Construction Manual compliance).</p>			
Local Roads and Drainage Program Maintenance, Qatar			
Name of Firm:	Parsons Brinkerhoff	Project Role:	Area Manager/Quality Control Manager
Beginning Date:	2011	End Date:	2013
<p>Specific Responsibilities: As Area Manager/Quality Control Manager, Mr. Khan was responsible for managing and overseeing Quality Assurance Management. He lead all coordination efforts with other functional groups in the program such as design specialists, project controls, contract management, claims specialists, construction supervision staff and the client for delivering the projects. Mr. Khan supervised the development of Quality Assurance Program that included a detailed narrative, record keeping documents for Quality Assurance Tests, Recording and Closing out of all Non-Conformance Items and generating NCR Reports. He worked with multiple contractors to ensure that the quality of work was uniform across all contracts, specifications/standards were followed across all contracts, and payments were made as per contract terms and conditions.</p> <p>Project Relevance: This \$500 Million project included construction of roads and drainage works using multiple contractors. The project scope varied from construction of new roads, new storm water drainage system, widening and upgrading of the existing roadway and drainage system, construction of new highways, bridges and interchanges. The project also included public outreach, traffic maintenance and management, extensive stake holder coordination, pedestrian and bike access, environmental compliance, extensive landscaping of public areas along the roads and highways.</p>			
Yas Island Development, Abu Dhabi, UAE			DESIGN-BUILD
Name of Firm:	Aldar Development	Project Role:	Quality Assurance Manager
Beginning Date:	2007	End Date:	2011
<p>Specific Responsibilities: Mr. Khan was responsible for the Quality Control Management of all the transportation and utilities projects on Yas Island. His responsibilities included supervising a team of five QA Managers and several Inspectors in the development of Program Quality Assurance Program, Developing Uniform testing and reporting documents, procedure for rectification of non-conforming work through NCR and NCR Reporting. In addition, he assured compliance with contract documents for all work orders, pay estimates & project closeouts.</p> <p>Project Relevance: This \$1 Billion program included Design-Build projects for the construction of a fifteen 15-mile (ten lanes) freeway and an underwater tunnel (0.8 Miles long). The subsea tunnel links Yas Island to the mainland and provides a three-lane, two-way traffic tunnel plus the provision for a future metro line. The project included construction of bridges, tunnels, retaining walls, overhead sign structures, extensive ITS facilities, traffic management, all internal roads including complex intersections, roundabouts, new roadway construction, shared-use paths, multi-modal accommodations, surface parking lots, and multilevel parking structures.</p>			
Abu Dhabi Transportation Program, Abu Dhabi, UAE			DESIGN-BUILD
Name of Firm:	Parsons Transportation Group	Project Role:	Senior Construction Manager
Beginning Date:	1997	End Date:	2007
<p>Specific Responsibilities: As part of the PMC Team responsible for management of several D-B projects such as Terminal 2, Terminal 3, quick baggage transfer, new hard stands, and the refurbishment of the cargo terminal at the Abu Dhabi International Airport to cater for three million passengers per year. Mr. Khan's responsibilities included oversight of quality control and QC Managers, coordination with stakeholders, overseeing the commissioning and operation activities, overseeing the as-built drawings preparation, and project close out activities. As Senior CM, Mr. Khan also managed construction of several roads and highways projects including Al-Ain Road Interchange, Al-Fallah Street Road Widening, and Access Road to Breakwater developments.</p> <p>Project Relevance: The scope of these projects included construction of bridges, tunnels, retaining walls, overhead sign structures, maintenance of traffic, utilities relocation, ITS infrastructure, CCTV systems, storm water systems, and new roadway. In addition, landscaping of the VIP route and two adjacent projects was also included. I was responsible for the direct supervision and overseeing of construction works, associated utilities works, CCTV, and Traffic Control Systems.</p>			
<p>h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. N/A. Mr. Khan is not required on-site full-time.</p>			

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.	
a. Name & Title: C. MO KIM, P.E., DBIA / DIRECTOR OF TRANSPORTATION	
b. Project Assignment: DESIGN MANAGER	
c. Name of Firm with which you are now associated: RINKER DESIGN ASSOCIATES, P.C.	
<p>d. Employment History: With this Firm <u>22</u> Years With Other Firms <u>1</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below):</p> <p>Rinker Design Associates, P.C., 2003–Present, Director of Transportation. As Principal-In-Charge, Mr. Kim is responsible for overseeing and managing all elements of roadway design, hydrology and hydraulics, and construction plans and providing overall direction of RDA’s Transportation Department. His duties include Quality Control and Quality Assurance (QA/QC) for all professional services and oversight of all subconsultant work, placing strong emphasis on constructability reviews and best value solutions for design-build (D-B) projects and providing hands-on, integrated techniques. Mr. Kim is a DBIA professional, and he has served on the Board of Directors for the ASHE, Potomac Section for nearly eight consecutive years.</p> <p>Rinker-Detwiler and Associates, P.C., 2001-2003, Project Manager. As primary Point of Contact on numerous roadway improvement projects, Mr. Kim was responsible for managing all aspects of design and performing IGRDS to Geopak migration for the firm. He was Project Manager/Lead Designer on several VDOT L&D projects, performing geometric layouts, drainage design, stormwater management, flood studies, maintenance of traffic, value engineering, and quality control. He was also responsible for providing bid assistance, construction support, and review of shop drawings as the Engineer of Record.</p>	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: University of Virginia, Charlottesville, VA / B.S. / 1993 / Civil Engineering	
f. Active Registration: Year First Registered/Discipline/VA Registration #: 1999 / PE / #032943	
<p>g. Document the extent and depth of your experience and qualifications relevant to the Project.</p> <ol style="list-style-type: none"> 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> <p>(List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)</p> <p>* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.</p>	
VDOT, I-66 / Route 15 Diverging Diamond Interchange (DDI) Improvements, Haymarket, VA (DESIGN-BUILD)	
Name of Firm: Rinker Design Associates, P.C.	Project Role: Design Manager
Beginning Date: 2013	End Date: 2016
<p>Specific Responsibilities: As Design Manager, Mr. Kim was responsible for the design, management, and QA/QC for complete roadway construction plans as well as the supplemental IMR and public outreach associated with the introduction of the DDI design. Mr. Kim’s project responsibilities included design oversight of roadway, TMP, utility coordination/design, bridge reconstruction/widening design, environmental permitting, landscaping, signage and signals, and geotechnical analysis. Mr. Kim was responsible for ensuring that the proposed DDI design innovation conformed to the Contract Documents. His close coordination with LANE, VDOT, Town of Haymarket, Prince William County, utility companies, and adjacent property owners ensured that the design requirements of the contract were met. With the project under construction, Mr. Kim works is integrated with the project team reviewing shop drawings, ensuring adherence to specifications, and answering RFIs. <i>The Project Team consists of Jan Sherman, Mark Gunn, John Myers, Adam Welschenbach, Tony Dean, and Steven Thompson.</i></p> <p>Project Relevance: This \$36M D-B project involves the development of the first proposed DDI in Northern Virginia, accompanied by significant traffic volumes and widening along Route 55 in the Town of Haymarket. The TMP on this project was complex and required significant integration of the roadway and bridge designers, as it encompasses complete bridge reconstruction and the widening of adjacent roadway and interchange ramp work. This project also included the extension of the Limited Access Line resulting in additional total acquisitions of property to ensure access to other property owners nearby.</p>	
VDOT, I-581 / Elm Avenue Interchange Improvements, Roanoke, VA (DESIGN-BUILD)	
Name of Firm: Rinker Design Associates, P.C.	Project Role: Design QA/QC Lead
Beginning Date: 2012	End Date: 2015
<p>Specific Responsibilities: As Design QA/QC Lead, Mr. Kim was responsible for QA/QC for multi-discipline construction plans. His duties and responsibilities included the review of roadway widenings, structural bridge plans and ramp improvements. His project responsibilities also included the review of open and closed storm drain systems, SWM, TMP, signals, and utility coordination/design. Acted as design QA/QC manager to review the overall submissions and provide review guidance on all design elements for both RDA and subconsultants. Also responsible for coordinating with the Design Manager to ensure that the contractor</p>	

had the largest available time to construct the project efficiently and under budget. *Mr. Kim worked closely with Darell Fischer, Adam Welschenbach, Tony Dean, and Steven Thompson.*

Project Relevance: This \$20.4M D-B project consisted of the development of roadway widening along Elm Avenue, on- and off-ramps for I-581/Route 220, and shoulder improvements along I-581/Route 220 approach. This Interstate Interchange project involved the development of a complex TMP and access management of the Roanoke Hospital adjacent to the project. The project also included ROW impacts and mitigation to a commuter park and ride facility operated by the City of Roanoke.

James Madison Highway (Route 15) PPTA, Haymarket, VA (DESIGN-BUILD)

Name of Firm: Rinker Design Associates, P.C.	Project Role: Design Manager & Engineer of Record
Beginning Date: 2007	End Date: 2010

Specific Responsibilities: As Design Manager and Engineer of Record, Mr. Kim was responsible for the oversight of all disciplines encompassed under the design elements of work including QA/QC for all design services and work being performed by subconsultants (including work being performed by subconsultants), which included two bridges. He was responsible for executing timely design while meeting VDOT and AASHTO design criteria. He was also responsible for facilitating coordination meetings between the various stakeholders on the project and overseeing the CEI efforts for construction QC, ensuring design intent was carried out in the field. Although this project was a Prince William County-administered project, his responsibilities as the Design Manager included close coordination with VDOT for ultimate acceptance and maintenance of a quality product. *Mr. Kim worked closely with Mark Gunn, Darell Fischer, Tony Dean, Adam Welschenbach, and Steven Thompson.*

Project Relevance: This \$56.4M D-B project consisted of complete roadway and bridge construction for the widening the existing two-lane roadway to a four-lane divided roadway for 2.2 miles of US Route 15, 0.3 miles of Waterfall Road, 0.7 miles of Old Carolina Road, and 0.3 miles of Heathcote Boulevard. Project limits were from the I-66/Route 15 interchange on the south to the Route 15/Route 234 intersection on the north, including construction of bridge structures over Little Bull Run Creek and Catharpin Creek and a major box culvert at the tributary to Catharpin Creek. The project widened Route 15 from two lanes to four lanes using an Urban Principal Arterial typical.

VDOT, Stringfellow Road (Route 645) Widening, Fairfax, VA (DESIGN-BID-BUILD)

Name of Firm: Rinker Design Associates, P.C.	Project Role: Project Manager
Beginning Date: 2005	End Date: 2015

Specific Responsibilities: As Project Manager, Mr. Kim provided engineering services for this 2.02-mile project for right of way and construction plans including roadway design, hydraulic design, traffic engineering design (including traffic data collection and analysis), sign, signal, pavement marking, lighting plans and ITS, retaining wall design, permit sketches, coordination of utility design and supplemental survey data with roadway design and construction coordination and support. He was responsible for administering the contract and overseeing all elements of the professional engineering design services. He served as the primary point of contact for VDOT and was responsible for all aspects of design quality and oversight of personnel and subconsultants. He provided extensive stakeholder coordination and was responsible for developing a best-value solution to the geometric design due to heavy utility impacts and Fairfax County stewardship. *The Project Team consisted of Mark Gunn, John Myers, Adam Welschenbach, Tony Dean, and Steven Thompson.*

Project Relevance: This \$36M D-B-B project consisted of widening the existing two-lane roadway to a four-lane divided roadway with on-road bicycle lanes, sidewalks and trails. The project passes through a densely populated residential corridor with several public facilities including a library, schools and parks, as well as several stream crossings. In addition, the corridor had major utilities including a newly installed 24 inch water main, several large aviation fuel lines, as well as numerous other overhead and underground utilities. Roadway design required various avoidance strategies regarding utilities, parks and schools. As a result, the proposed alignment crisscrossed the existing alignment thereby complicating the TMP. In addition to the alignment challenges, the TMP also provided for pedestrian access during construction to facilitate the numerous pedestrian receptors (e.g., schools, ball fields, library, etc.). RDA prepared and participated in frequent meetings with VDOT, Fairfax County, the public, and other stakeholders to create a partnering approach focused on resolving challenges. Finally, RDA prepared detailed utility relocation information plans depicting as-built information in plan, profile, and cross section views.

Route 234 / Route 1 Park and Ride Expansion, Prince William County, VA (DESIGN-BID-BUILD)

Name of Firm: Rinker Design Associates, P.C.	Project Role: Project Manager
Beginning Date: 2008	End Date: 2009

Specific Responsibilities: Mr. Kim served as Project Manager to design the expansion of an existing VDOT Park and Ride facility at the intersection of Route 234 and Route 1 in Dumfries, Virginia. Mr. Kim performed a site evaluations and parking/access study to determine a preferred lot layout. Working with County staff, Mr. Kim led the development of three layouts and provided an analysis and cost estimate for each option, allowing the County to select an alternative for final design. In the final design phase, Mr. Kim was responsible for the design, management and QA/QC of complete construction plans. He was also responsible for coordinating field revisions and ensuring the proper stakeout of the revised facilities for the contractor. *Mr. Kim worked closely with Mark Gunn, Darell Fischer, Mr. Tony Dean, Adam Welschenbach, and Steven Thompson.*

Project Relevance: This \$5M D-B-B project consisted of providing an expanded park and ride facility adjacent to the I-95 corridor just off the Dumfries Exit. Final design included traffic analyses including traffic counts, an operational analysis of the Park and Ride entrance as well as the adjacent intersections on Route 1 and Route 234, and a traffic signal warrant analysis. Construction plans included signal modifications, parking lot design, lighting plans, turn lane improvements on Route 1 and Route 234, pedestrian improvements, drainage and stormwater management design, construction sequencing plans, final cost estimates, and complete bid documents and specifications. The final expansion increased the number of parking spaces from 343 to 852, including 36 bicycle slots.

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. **N/A. Mr. Kim is not required on-site full-time.**

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.	
a. Name & Title: ROBERT CROSS, CONSTRUCTION MANAGER	
b. Project Assignment: CONSTRUCTION MANAGER	
c. Name of Firm with which you are now associated: THE LANE CONSTRUCTION CORPORATION	
<p>d. Employment History: With this Firm 9 Years With Other Firms 39 Years</p> <p>Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below):</p> <p>The Lane Construction Corporation, 2006-Present: Mr. Cross is a Senior Superintendent with nearly 40 years of experience in the heavy construction industry including both roadway and site development construction. He performs constructability reviews of design drawings; develops and maintains project schedule, and coordinates contractor/ subcontractor activities. Oversees all Quality Control activities on the project site to include both materials used and work performed and ensures that these meet contract requirements and the “approved for construction” plans and specifications.</p> <p>Moore Brothers, 2005-2006: Mr. Cross was General Superintendent on the I-66 HOV project between Route 234 and the Prince William Parkway interchanges. Supervised all aspects of construction including highway widening, geotechnical work, hydraulics, hydrology and erosion control, permitting, and utility coordination. Additionally, he performed quality control activities to ensure contract requirements were met and that approved for construction plans and specifications were met.</p> <p>Archer Western Contractors, 2003-2005: Mr. Cross was General Superintendent on the Springfield Interchange Project. He performed constructability reviews of design drawings; developed and maintained project schedule; coordinated contractor and subcontractors’ activities. He supervised all aspects of construction including quality control assessments and measures.</p> <p>Shirley Contracting Company, LLC, 2001-2003: Mr. Cross was General Superintendent who implemented and enforced corporate safety policies; performed constructability reviews of design drawings; developed and maintained project schedule; coordinated with contractor and subcontractor activities.</p>	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Northern Virginia Community College, Annandale, VA / Coursework Langley High School, McLean, VA / 1972	
f. Active Registration: Year First Registered/ Discipline/VA Registration #: VDOT Erosion and Sediment Control Contractor Certification (“ESCCC”), Expiration: 1/27/2017 Virginia DEQ RLD Certification, Expiration: 1/11/2019	
<p>g. Document the extent and depth of your experience and qualifications relevant to the Project.</p> <ol style="list-style-type: none"> 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> <p>(List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)</p> <p>* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.</p>	
VDOT, I-66 Route 15 Interchange Reconstruction, Prince William County, VA (DESIGN-BUILD)	
Name of Firm: The Lane Construction Corporation	Project Role: Construction Manager
Beginning Date: 2014	End Date: Present
<p>Specific Responsibilities: As Construction Manager on this project, Mr. Cross is responsible for managing the entire construction process. He coordinates subcontractors’ schedules, creates progress schedules to maintain cost-effectiveness, and communicates effectively with quality control for inspections and daily routines. He is responsible and accountable for planning, scheduling, cost, D-B conformance and quality control (QC). He coordinates with and monitors contract progress with VDOT and subcontractors (including adherence to contractual requirements and specifications), and oversees the overall safety and quality control programs.</p> <p>Project Relevance: The I-66/Route 15 Interchange Reconstruction project (the first DDI in Northern Virginia) involves reconstructing the interchange of U.S. Route 15 (James Madison Highway) over Interstate 66 (I-66). The project includes: complex interchange (DDI), roadway widening (Route 15 and Route 55), construction of a new service road, and replacement of northbound and southbound bridges carrying Route 15 over I-66.</p>	
VDOT, I-495 Express Lanes, Fairfax County, VA (DESIGN-BUILD)	
Name of Firm: The Lane Construction Corporation	Project Role: Construction Manager/Superintendent
Beginning Date: 2009	End Date: 2013

Specific Responsibilities: As the Construction Manager/Superintendent on this project, Mr. Cross was responsible and accountable for coordinating with design team members, supervising engineering, survey, and QC staff, developing and maintaining the project schedule, tracking and evaluating the project schedule and cost, scheduling subcontractors' activities and on-site engineering calculations and drawings. He devised and implemented hazard analysis and safety procedures for crews and equipment, provided training for job engineers assigned as subordinates, and works with the designer and owner to ensure materials used and work performed met contract requirements, design plans, and specifications.

Project Relevance: Mr. Cross was responsible for the roadway construction and elements of the 495 Interstate widening and improvements as part of this \$1.5 billion PPTA project. Two new lanes were constructed in each direction on a 14-mile stretch outside the existing lanes of I-495, from the Springfield Interchange to just north of the Dulles Toll Road. The project encompassed the replacement of more than \$260 million of aging infrastructure, including more than 50 bridges and overpasses. The project also included the installation of a large stormwater management wet pond with an earthen dam above the Chain Bridge Road interchange. Similar to the proposed I-95/Route 630 Reconstruction and Widening this project included MOT, bridge/structure replacement, roadway widening, survey, QA/QC, hydraulics, and public involvement/relations.

VDOT, I-95 Shoulder Widening, Fairfax, Prince William & Stafford Counties, VA

Name of Firm: The Lane Construction Corporation	Project Role: Construction Manager
Beginning Date: 2013	End Date: 2014

Specific Responsibilities: Mr. Cross' role as Construction Manager for the I-95/Route 630 project is similar to the role he held on the I-95 Shoulder Widening project. Mr. Cross was responsible for the management of the construction process which included the QC program, project schedules, cost control, subcontractor coordination, work plans, and specific means/methods for carrying out the work. He was responsible for ensuring the materials used and work performed met contract requirements and the "approved for construction" plans and specifications. Mr. Cross had extensive involvement with the MOT plans and implementation, relocation, adjustments.

Project Relevance: This \$32M project is approximately 7 miles in length and work on this contract include 100,000 cy of excavation, 170,000 tons of asphalt paving, 10 miles of guardrail, and major maintenance of traffic (MOT) activities. Other activities include pavement markings, erosion and sediment (E&S) control and monitoring measures, demolition, eleven overhead sign structures, installation of concrete retaining walls, temporary and permanent drainage.

VDOT, I-66 Roadway Widening, Prince William County, VA

Name of Firm: Moore Brothers	Project Role: Construction Manager/Superintendent
Beginning Date: 2005	End Date: 2006

Specific Responsibilities: As Construction Manager/Superintendent, Mr. Cross supervised all aspects of construction for this major project which included roadway widening, bridge reconstruction, geotechnical work, hydraulics, hydrology, erosion control, permitting, and utility coordination. In addition, he made recommendations for means and methods of construction budgets and personnel issues. He supervised structure construction that included bridges, retaining walls and shoring for support of excavation.

Project Relevance: This \$37 million project involved a 4-mile reconstruction and widening of the existing I-66 interstate highway from Route 234 business to Route 234 bypass, a critical project in the expansion of I-66 and the extension of HOV lanes.

VDOT, Springfield Interchange Project, Phases VI & VII, Springfield, VA

Name of Firm: Archer Western Construction	Project Role: Construction Manager/Superintendent
Beginning Date: 2003	End Date: 2005

Specific Responsibilities: As Construction Manager/Superintendent, Mr. Cross implemented and enforced corporate safety policies; performed constructability reviews of design drawings; developed and maintained project schedule; coordinated with contractor and other subcontractors' activities.

Project Relevance: Part of a multi-phased mega project valued at \$676 million, this complex interchange project (convergence of I-95, I-495 and I-395 south of Washington, DC) under some of the heaviest traffic conditions in the country included bridge structures and excavation. Work included the widening of ramps and reconstruction of the existing interstate with additional median lanes. He was an integral member of the team charged with the development and successful implementation of extensive MOT measures.

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. **Current Assignment:** I-66/Route15 Interchange Reconstruction **Role:** Construction Manager. **Duration of Assignment:** Mr. Cross will be available on-site full-time at the start of construction for the I-95/Route 630 project.

ATTACHMENT 3.4.1(a)
LEAD CONTRACTOR WORK HISTORY FORMS

ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

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

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

<p align="center">Similar Scope of Work:</p> <ul style="list-style-type: none"> • Design-Build • Roadways • Survey • Structures and Bridges • Environmental • Geotechnical • Hydraulics • Stormdrain and SWM • 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 	<p align="center">PROJECT SCOPE</p> <p>The widening of the heavily traveled Interstate 85 (I-85) was needed to accommodate additional traffic and reduce congestion. This \$145 million DB project included the widening of approximately seven miles of I-85 from four to eight lanes starting south of Bruton Smith Boulevard/Concord Mills Boulevard to north of NC 73. LANE (as Lead Contractor) removed the existing deteriorated pavement and replaced it with eight lanes of new pavement. Improvements to area roads and interchanges were also performed, including two diverging diamond intersections and a super street. Similar to the I-95 corridor, this I-85 project included many tourist attractions including the popular Charlotte Motor Speedway and Concord Mills Mall (North Carolina's No. 1 visitor attraction) which are both accessed by this route. Specific project related elements included; major roadway widening, two (2) diverging diamond interchanges (DDI), shoulder strengthening, work in high ADT counts, structures, MOT, ITS, drainage/ hydraulics/SWM, geotechnical (poor soils mitigations), earthwork, permitting, demolition, noise walls and pavement markings/signage.</p> <p align="center">RELEVANT PROJECT ELEMENTS TO I-95/ROUTE 630 PROJECT</p> <p>Roadway Widening: Like the I-95/Route 630 project, the I-85 Widening project involved the widening of two major thoroughfares: Poplar Tent Road and State Route 73 (Davidson Highway). Both roadways involved the widening to the east and west of the newly constructed DDIs over I-85.</p> <p>Diverging Diamond Interchanges: This project involved the construction of two (2) DDIs over the heavily traveled corridor of I-85.</p> <p>Innovative MOT: Our Team's ability to collaborate and devise innovations was exemplified on this project in a major way. The majority of the new roadway capacity was constructed in the existing 70-foot median, which had the potential to create difficult access for construction equipment and personnel. The need for an innovative work zone traffic control and access plan was particularly critical due to the severe state of deterioration of existing facilities and a high Average Daily Traffic count of 118,000 vehicles. Unimpeded access to the existing median was critical to improve safety, minimize impacts to traffic, reduce stress on existing infrastructure, accelerate the project schedule, and save costs. Lane staff determined that the construction of a temporary bridge with direct median access would solve their needs for unimpeded access. This concept was developed by LANE on previous D-B projects utilizing an existing bridge and a temporary access ramp – Lane used a temporary ramp off an existing bridge for direct median access on the I-95 Widening at Dumfries, VA for VDOT that greatly increased safety, schedule and other impacts. <i>LANE was able to accelerate the schedule during the proposal phase by 11 months ahead of the owner's schedule.</i> The I-85 temporary bridge was the first time a dedicated temporary bridge was constructed along with temporary access ramps. The safety improvements resulting from this concept were significant. The need to haul 40,000 loads of material across interstate traffic into the median was completely eliminated. Thousands of trips by construction and NCDOT inspection staff were also made safely and without entering traffic. The project won several major awards including the 2012 TransOvation Award from the American Road & Transportation Builders Association (ARTBA) and the 2012 Asphalt Operations Safety Innovation Award from the National Asphalt Paving Association (NAPA).</p> <p>Schedule: By leveraging the efficiency afforded by the access bridge and ramp system, LANE provided the NCDOT and FHWA with a very aggressive schedule and highly competitive cost proposal. Utilizing this concept, LANE was able to submit a project completion date 11 months earlier than the required final completion and a bid price \$8.5 million below the engineers' estimate at bid time. To our knowledge, this was only the fourth time a temporary median access ramp has been implemented in the US, <i>all implemented by LANE.</i></p> <p>Safety: The safety improvements resulting from this concept are significant. The need to haul 40,000 loads of material across interstate traffic into the median has been completely eliminated and, while hauling is critical, thousands of trips by construction and NCDOT inspection staff have also been made safely and without entering traffic.</p> <p>Utility Coordination: The LANE Team's responsibilities included coordinating the relocation of multiple major utilities. These included power distribution (two separate owners), natural gas transmission and distribution, water, sanitary sewer, and extensive communication utilities. To successfully resolve the utility conflicts, LANE utilized a utility coordination subconsultant and also assigned a LANE engineer to that task exclusively.</p> <p>Multiple Stakeholders: LANE coordinated with several stakeholders including two (2) municipalities, over 60 business owners, six (6) utility owners, and multiple local residential communities.</p> <p>Right of Way: The D-B team was responsible for acquiring the right of way necessary to construct the project and relocate utilities. Both scopes were very extensive, requiring 96 acquisitions.</p> <p>Environmental: This project involved 2,000 feet of street and wetland impacts. The permit modification application was completed ahead of schedule and subsequently approved by the USACE.</p> <p align="center">EVIDENCE OF PERFORMANCE</p> <p>"The I-85 Widening project is a success story that is a result of LANE's people, effective project management, and proactive change management. LANE is committed to the delivery of a quality project that will meet the needs of the community. The project would not have been successful without LANE's willingness to partner with NCDOT and work together towards a common goal." -Davis Diggs, PE, District Engineer, NCDOT Division 10</p> <p>*For a project with multiple phases or multiple contracts, only one phase or one contract will be considered. If additional phases or contracts are shown under the same Work History Form, only the first phase or contract listed will be evaluated.</p>	
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ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime design consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
I-581 Valley View Interchange Phase 2 Roanoke, VA (DESIGN-BUILD)	STV Incorporated	Name of Client/ Owner: Virginia Department of Transportation Phone: 540.378.5083 Project Manager: Bobby Phlegar, P.E. Phone: 540.378.5083 Email: r.phlegar@vdot.virginia.gov	9/2016	9/2016 (Est.)	\$38,475	\$39,452 (Owner added scope)	\$39,452

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

<p>Similar Scope Elements:</p> <ul style="list-style-type: none"> • Design-Build • Diverging Diamond Interchange • Work performed in Urban/Commercial Area • Roadway Widening/Bridge Reconstruction • Extensive Utility Relocation • Public Involvement/Relations • MOT/Phasing • Pedestrian Accommodations • Coordination with VDOT and multiple stakeholders • Environmental • Geotechnical • ROW • Hydraulics • Stormdrain and SWM • Demolition of Structures • Retaining Walls • Traffic Control Devices • Signs, Sign Structures, and Foundations • TMP • QA/QC • Survey • Project Management and Coordination with other Active Construction Projects Within the Vicinity of the Project Site 	<p>PROJECT SCOPE</p> <p>LANE is constructing a new diverging diamond interchange (DDI) at I-581 and Valley View Boulevard in Roanoke, VA. This \$39M project includes the addition of the southbound exit and northbound entry ramps serving I-581/U.S. Route 220 north of the interchange and accompanying auxiliary lanes along I-581/U.S. Route 220 to the Hershberger Road interchange. The existing southbound entry and northbound exit ramps will be adjusted and lengthened to facilitate the other improvements. Valley View Boulevard and the bridge over I-581/U.S. Route 220 will be widened to provide two through lanes in each direction, dual left turn lanes for both the northbound and southbound movements to I-581 through the interchange and a right turn lane onto the northbound I-581/U.S. Route 220 entry ramp.</p> <p>The project also includes the partial demolition of the existing structures; maintenance of existing traffic flows; TMP; widening and repair of the existing bridge substructure and superstructure; construction of cantilever and mechanically stabilized earth (MSE) retaining walls required for the bridge structure, ramps, auxiliary lanes, and Valley View Boulevard widening; acquisition of right-of-way and limited access line revisions; utility relocations; milling and repaving of the existing pavement; installation of two new traffic signals and reconstruction of the existing traffic signals; roadway lighting replacement; complete interchange lighting including the underbridge; installation of new and revised signs and pavement markings along I-581, Valley View Boulevard, and the ramps; installation and extension of the drainage system and ditches; ESS control; stormwater management; installation of a new pedestrian bridge along I-581 and relocation of sections of Lick Run Greenway; landscaping; and construction of a sound barrier wall along I-581.</p>	
<p>Proposed Personnel on Project:</p> <p>Jan Sherman (LANE) Chris Monahan (LANE)</p>	<p>RELEVANT PROJECT ELEMENTS</p> <p>Diverging Diamond Interchange: LANE is constructing the 2nd DDI in the Commonwealth (as well as the 3rd DDI: I-66/Rt. 15 with RDA as the Lead Designer). LANE's experience constructing DDIs with VDOT in the Commonwealth is unmatched by any other contractor and the lessons learned will prove to be a valuable asset to the LANE Team on the I-95/Route 630 project.</p> <p>Best Value Innovation: The LANE Team provided VDOT a best value, innovative design concept (the DDI) which greatly improved traffic flow, safety for both pedestrians and vehicles, reduced ROW, minimized environmental impacts and saved a significant amount of time and money on the project.</p> <p>MOT: The Walmart located adjacent to the project is one of the busiest Walmart stores in the country. MOT was extremely critical not only to keep traffic moving, but to ensure that none of the local businesses were impacted.</p> <p>Environmental: The original design concept called for the relocation of a stream due to construction impacts. The DDI interchange proposed by LANE eliminated the need for stream relocation.</p> <p>Pedestrian Accommodations: The LANE Team proposed a Value Engineering proposal which provided VDOT a dedicated pedestrian/shared use path bridge crossing that avoided pedestrians interfacing with live vehicular traffic at the crosswalk points of the I-581 on and off ramps and to and from Valley View Bld. This dedicated pedestrian bridge greatly improves pedestrian safety and improves vehicular traffic flow and operations.</p> <p>ROW: The original design concept called for the displacement of five private properties. The DDI interchange proposed by the LANE team eliminated the need for any displacement and saved VDOT over \$3M in ROW costs.</p> <p>Roadway: The original project scope called for milling and resurfacing of a 5-foot-wide strip in both directions over a two-week period, where all quantities that were taken out at night had to be replaced by morning. The LANE Team proposed to shut down a single lane in each direction to mill and pave the entire 5-foot-wide strip in a single construction stage, which saves both time and money.</p>	

*For a project with multiple phases or multiple contracts, only one phase or one contract will be considered. If additional phases or contracts are shown under the same Work History Form, only the first phase or contract listed will be evaluated.

ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

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					Original Contract Value	Final or Estimated Contract Value	
I-95 EXPRESS LANES Fairfax, Prince William and Stafford Counties, VA DESIGN-BUILD	HDR/HNTB	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	12/30/2014	12/14/2014	\$691,147	\$726,194	\$326,850

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

<p align="center">Similar Scope of Work:</p> <ul style="list-style-type: none"> • Design-Build with RDA as Team Member • Roadways • Traffic Maintenance and Management • Bridges/Structures • Survey • Environmental • Geotechnical • Hydraulics • Stormdrain and SWM • Demolition of Structures • Guardrail • Traffic Control Devices • Signs, Sign Structures, and Foundations • Transportation Management Plan • 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 	<p align="center">PROJECT SCOPE</p> <p>LANE, as a Construction Joint Venture (CJV) member, shared responsibility for the design and construction of the \$726M I-95 Express Lanes project. The project created approximately 29 miles of Express Lanes in the median of I-95 from Alexandria to Stafford. The scope of work included a 9-mile roadway extension that consisted of maintenance of traffic, poor soils mitigations, shoulder reconstruction, asphalt mill and overlay, structural bridge work, major clearing and earthwork, drainage, an extensive ITS and signing system, and sound walls. LANE provided nearly all of the project supervision and workforce for the work; plus, all of the asphalt paving, soundwall construction and a significant portion of the roadway signage.</p>	
<p align="center">Proposed Personnel on Project:</p> <p>Jan Sherman (LANE) David Holmes (LANE) Mo Kim (RDA) Adam Welschenbach (RDA) Chris Monahan (LANE) Bill Missell (RDA) Brian Basnight (LANE) George Hansbrough (LANE)</p>	<p align="center">RELEVANT PROJECT ELEMENTS TO I-95/ROUTE 630</p> <p>LANE/RDA Team: LANE and RDA partnered together to provide complete design services for the 95 Express Lanes project. Our team's collaborative effort in developing a comprehensive TMP for the corridor, design adjustments to avoid utilities, and expedited utility relocations where avoidance was not feasible ensured that the project stayed on schedule.</p> <p>Safety: The project recorded nearly 4,000,000 man hours worked with 0 Lost Time Accidents. The project OSHA Recordable Incident Rate was 0.44, well below the industry average of 3.6.</p> <p>Roadway: Similar to the I-95/Route 630 project, LANE performed pavement widenings as well as new pavement in the median of an existing high ADT count Virginia interstate. Additionally, LANE performed shoulder strengthening operations on existing shoulders adjacent to this traffic. Extensive asphalt mill and overlays were also executed. As lane closures were needed for various reasons including overhead steel erection, LANE and RDA devised many innovative ways to keep traffic flowing on existing roadways as well as temporary pavements, some of which were on poor soils that required amendments. 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.</p> <p>Structures/Bridges: Nine (9) new bridges were constructed along the project corridor. The new bridges included: two curved steel girders, two double span flyovers, three single span bridges with steel girders, one two-span concrete girder bridge and a two-span steel girder bridge. LANE also widened and/or rehabilitated 29 bridges. All of these involved keeping existing traffic moving while performing the work.</p> <p>MOT: The I-95 Express Lanes project presented numerous work zone ingress/egress challenges and very tight work areas due to the heavy traffic and median work zone conditions. The I-95 project corridor carries an ADT of nearly 250,000 vehicles per day. The LANE Team mitigated this challenge by working with construction and engineering personnel to devise the best MOT schemes and develop efficiencies; over 1,000 MOT plan sheets were developed and approved. The need for an innovative work zone traffic control and access plan was particularly critical on this project due to the severe deterioration of some of the mainline and surrounding road pavements. Unimpeded access to the existing median was necessary to improve safety, minimize impacts to traffic, reduce stress on existing infrastructure, and accelerate the project schedule.</p> <p>Public Involvement: A dynamic public information program was implemented which provided advance information notifications to VDOT and 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 in order to provide better travel planning through the corridor. The team held over 415 public meetings and the project site had visits from former Governor McDonnell and VDOT Secretary of Transportation Aubrey Layne as well as accolades from current Governor Terry McAuliffe.</p> <p>Expedited Project Delivery: 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. Our Team was able to deliver 123 design packages by implementing over-the-shoulder reviews to help get early approval were able to begin construction within 4 months of NTP. We were able to complete the project 1 month early. In all, the Team completed 29 miles in 29 months!</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 which had been severely eroded and degraded—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. With the completed restoration, the stream now feeds higher quality water into the region's waterways. In addition, nearly 7,500 new trees and shrubs were planted as part of the restoration effort.</p>	

EVIDENCE OF PERFORMANCE

"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.
 "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.

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ATTACHMENT 3.4.1(b)
LEAD DESIGNER WORK HISTORY FORMS

ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
I-66/Route 15 Interchange Reconstruction Prince William County, VA DESIGN-BUILD	The Lane Construction Corporation	Name of Client./ Owner: VDOT Phone: 703.259.2960 Project Manager: Christiana Briganti-Dunn, P.E. Phone: 703.259.2960 Email: christiana.briganti@VDOT.Virginia.gov	12/8/2017	12/8/2017 (Est.)	\$36,194	\$ 37,029	\$2,570

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.

<p align="center">Similar Scope of Work:</p> <ul style="list-style-type: none"> • Design-Build with LANE • Roadways • Bridges/Structures • Interchanges • Environmental • Geotechnical • Right-of-Way • Hydraulics • Stormdrain and SWM • Demolition of Structures • Pedestrian Accommodations • Retaining Walls • Traffic Control Devices • Signs, Sign Structures, and Foundations • Transportation Management Plan • Traffic Maintenance and Management • Utilities • Stakeholder Coordination • Public Involvement/Communications • QA/QC • Survey • Project Management and Coordination with other Active Construction Projects Within the Vicinity of the Project Site 	<p align="center">PROJECT SCOPE</p> <p>Rinker Design Associates, P.C. (RDA) provided professional engineering services from their Manassas Office serving as the Lead Designer for LANE's I-66/Route 15 Interchange Reconstruction D-B project for VDOT. This \$37M D-B project will reconstruct the I-66/Route 15 Interchange to relieve congestion, enhance public safety, operations and capacity, and accommodate forecasted traffic demand in the project area. RDA designed the reconstructed interchange as a diverging diamond interchange (DDI), the third of its kind in the Commonwealth of Virginia, to best accommodate the projected traffic volumes as well as critical pedestrian movements in the interchange area. The selection of the DDI alternative was the result of extensive analysis by RDA to find an interchange design that would best accommodate traffic demand, reduce the project footprint and environmental impacts, improve constructability and shorten overall construction duration when compared with previously considered alternatives, and reduce overall project cost. As the Lead Designer for the project, RDA's responsibilities include:</p> <ul style="list-style-type: none"> • Interchange/Roadway Design • Overall Project Design Management & QA/QC • Public Involvement • Utility Relocation Coordination & Design • Right of Way Acquisition Services • Transportation Management Plan Design • Signage & Marking Plan Design • Drainage Design (Stormwater Management/ BMP Design, Erosion Control, Local Drainage Design, Culvert Design, Outfall Analysis) • Subconsultant Oversight & Management (Structural Design, Environmental Permitting & NEPA Document Update, Traffic Analysis & IMR Update, Signal Design) 	 <p align="center"><small>Photo Courtesy of VDOT</small></p>
<p align="center">Proposed Personnel on Project:</p> <p>Mo Kim, P.E., DBIA (RDA) Tony Dean (RDA) Sidney Thomas, LS (RDA) John Myers (RDA) Mark Gunn, P.E., DBIA (RDA) Adam Welschenbach, P.E., PTOE (RDA) Steven Thompson (RDA) Jan Sherman (LANE) Bob Cross (LANE) Jim Kreider (LANE) Stu Casaola (LANE) Chris Monahan (LANE)</p>	<p align="center">RELEVANT PROJECT ELEMENTS TO I-95/ROUTE 630 PROJECT</p> <p>Partnering: LANE/RDA (the D-B Team) delivered VDOT a best value, innovative design by changing the RFP design from a flyover to a DDI. This same team will provide leadership and expertise on the I-95/Rt 630 project.</p> <p>Innovative Interchange Design: Similar to the proposed I-95/Rt 630 interchange, the I-66/Route 15 Interchange reconstruction has been designed as a DDI. RDA analyzed multiple interchange alternatives to select the DDI for I-66/Route 15, which significantly reduces construction duration (1,250 days to 860 days). The heavy traffic volumes, restricted right of way, and proximity to residential and commercial developments on the I-66/Route 15 project are similar to those anticipated on the I-95/Route 630 project where our Team's "out of the box" thinking will be used to further innovate the design and construction process.</p> <p>Transportation Management Plan: Similar to the I-95/Rt 630 Interchange, the I-66/Route 15 Interchange required a complex TMP to construct the interchange in a constricted work zone with high traffic volumes and pedestrian mobility. RDA developed the TMP in coordination with LANE's construction team to ensure constructability while maintaining acceptable traffic operations, including access to the adjacent commercial developments.</p> <p>Roadway Widening: Like the I-95/Rt 630 project, the I-66/Route 15 project included widening of heavily traveled roadways where residential and commercial access will be maintained at all times.</p> <p>Pedestrian Accommodations: Implementation of a DDI drastically reduces pedestrian exposure to high volume movements. Furthermore, pedestrian access/safety during extensive MOT operations is paramount in our design and implementation along the Route 15 and 55 corridors. These same principles/considerations will be applied to the I-95/Rt 630 project to ensure pedestrian safety in a complex MOT environment.</p> <p>Emergency Services: The I-66/Route 15 project coordinated closely with emergency providers (i.e. police, fire, rescue, etc.) and the hospital (located adjacent to the project) to ensure that access through work zones would not impede their services. The I-95/Rt 630 project has identical challenges where our team will implement successful strategies from this project to its benefit.</p> <p>Right of Way Reductions: By introducing a DDI to this interchange and through design efficiencies, our Team was able to condense ROW by reducing impacts from 22 parcels to 16 parcels and eliminating two total parcel takes – saving VDOT over \$500K. The I-95/Rt 630 project will have similar benefits, especially with design efficiencies anticipated and envisioned.</p>	

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ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
ROUTE 29 SOLUTIONS Albemarle County, VA (DESIGN-BUILD)	Lane-Corman Joint Venture	Name of Client: VDOT Phone: 540.825.7500 Project Manager: David Covington Phone: 434.529.6310 Email: Dave.Covington.vdot.virginia.gov	03/2015	10/2017 (est)	\$116,746	\$116,746	\$3,059

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant.

Similar Scope of Work:	PROJECT SCOPE
<ul style="list-style-type: none"> • Design-Build with LANE • Roadway • Complex Interchange • Geometric & capacity improvements • Complex TMP/MOT • Hydraulics • Storm Water Management • Pedestrian Accommodations • Survey • Utility relocations • ROW acquisition • Public Involvement/Communications • Third party coordination 	<p>The Route 29 Solutions Design-Build project consists of three elements: the Rio Road Grade Separated Intersection (GSI), the Route 29 Widening , and the Berkmar Extension. RDA provided engineering design services as the Lead Designer for the Route 29 Widening element. RDA also provided survey, utility relocation coordination, ROW acquisition, and public involvement services for all three elements. The project scope for the Route 29 Widening element expands the existing road from four to six lanes from Polo Grounds Road to Towncenter Drive for a length of approximately 1.8 miles.</p> <p>RDA performed the design services on this project as a sub-consultant to RK&K out of their Fredericksburg Office. Survey, utility coordination, right of way, and public involvement was performed out of both the Manassas and Fredericksburg Offices. All design services have been completed for the Route 29 Solutions except for the Berkmar ROW acquisition and the public involvement which will be ongoing until contract completion.</p>
Proposed Personnel on Project:	RELEVANT PROJECT ELEMENTS TO I-95/ROUTE 630 WIDENING PROJECT
<p>John Giometti, PE (RDA) Chris Reed (RDA) Brian Komar (RDA) Michael Short (RDA) Sid Thomas (RDA) Chris Calamos (RDA) John Myers (RDA) George Hansbrough (LANE) David Holmes (LANE) Mike Russo (LANE)</p>	<p>LANE/RDA Team: LANE, RDA, and RKK partnered together to provide complete design services for the Route 29 Solutions project. Through collaboration and close coordination, our team is delivering a regionally significant project that involves a highly congested corridor with a project that safely widens Route 29 and provides an innovative, grade separated intersection (GSI) at Rio Road to effectively and efficiently move traffic.</p> <p>Roadway: Similar to the I-95/Route 630 project, the Route 29 Widening design adds capacity and improves the existing rural shoulder section to an urban road section with curb & gutter and shared use path/sidewalk on one side. Additionally, the corridor is a vital commuter route, like Route 630, with numerous residential developments and businesses adjacent to the road.</p> <p>Hydraulics: Most of the older culverts require replacement or rehabilitation. Video pipe inspections were evaluated to determine the appropriate course of action. The design also included hydrologic and hydraulic analysis for a major box culvert extension/rehabilitation at Powells Creek.</p> <p>Maintenance of Traffic: The Route 29 Widening roadway design and MOT were considered simultaneously to eliminate costly retaining walls and minimizing temporary pavement while largely staying within the existing right of way. Our complex TMP involved several phases that allowed existing vertical geometry to be brought to standard, maintained existing capacity, and resulted in significant cost savings for VDOT. The complexity of this MOT plan will be a critical experience that RDA will draw upon to perform similar services on the I-95/Route 630 project. Furthermore, the added complexity of the MOT associated with the GSI (prepared by our teaming partner, RKK) will be drawn upon for independent review and input on the DDI TMP/MOT.</p> <p>Utilities: Extensive utility relocation coordination is required for the Route 29 Solutions project, particularly for the Rio GSI and Route 29 Widening. Relocated utilities include electric, cable, gas, two water/sewer services, and six different communications lines. This coordination was on the critical path for construction activities to begin and was completed simultaneously for both projects in four months for Rio GSI and seven months for the Route 29 Widening. Additionally, careful attention was given to the vertical geometry, drainage design, and MOT to minimize the Charlottesville Gas relocations.</p> <p>Right of Way: RDA is performing the ROW acquisition for all three elements simultaneously for a total of over 60 parcels. From the notice to commence acquisition to the proposed settlement of all parcels in aggregate, it will be seven months with each project element being completed within five months. The 29 Solutions project deals with contentious business owners and residents along all three project elements in acquiring rights-of-way for the project. Given the impacts on the I-95/Route 630 project, we anticipate similar concerns and issues.</p> <p>Innovative Interchange: The GSI at Rio Road is another unique/innovative solution to meet the demands of high volumes in a constrained corridor, similar to a DDI. The complexity of the design and the MOT were further complicated by the utility and ROW constraints as well as public concerns. RDA provided lead services in each of these areas to reduce the challenges associated with the utilities and ROW while swaying the public perception back to the positive. The I-95/Route 630 project will have similar challenges, especially with public perceptions, that our team has specific strategies in place to resolve concerns and progress the design efficiently and effectively.</p> <p>Public Involvement/Communications: RDA served as the Public Involvement lead on behalf the Lane-Corman JV. Major activities included representation at monthly Project Delivery Advisory Panel meetings, establishment and maintenance of a toll free project hotline, individual meetings with each business owner on the Rio GSI project to explain impacts, individual correspondence with the same business owners to notify of construction activities that will impact their property, and coordination with VDOT District Public Affairs Manager.</p>
EVIDENCE OF PERFORMANCE	
<ul style="list-style-type: none"> • Delivered approved right of way plans within the first 4 months. • Designed advance work package in 5 months from NTP to allow for construction to occur within existing right of way. • Delivered approved for construction plans within 7 months from NTP. 	
<p>*For a project with multiple phases or multiple contracts, only one phase or one contract will be considered. If additional phases or contracts are shown under the same Work History Form, only the first phase or contract listed will be evaluated.</p>	



ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
I--581/ELM AVENUE INTERCHANGE IMPROVEMENT City of Roanoke, VA (DESIGN-BUILD)	Allan Myers (formally American Infrastructure-VA, Inc.)	Name of Client./ Owner: VDOT Phone: 540.378.5038 Project Manager: Robert Phlegar Phone: 540. 378.5038 Email: R.Phelgar@vdot.virginia.gov	06/2015	06/2015	\$20,400	\$20,400	\$1,507

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.

<p align="center">Similar Scope of Work:</p> <ul style="list-style-type: none"> • Design-Build • Roadways • Bridges/Structures • Interchanges • Environmental • Geotechnical • Right-of-Way • Hydraulics • Stormdrain and SWM • Demolition of Structures • Pedestrian Accommodations • Retaining Walls • Traffic Control Devices • Signs, Sign Structures, and Foundations • Transportation Management Plan • Utilities • Stakeholder Coordination • Public Involvement/Communications • QA/QC • Survey 	<p align="center">Evidence of Performance</p> <ul style="list-style-type: none"> • The design only took ten months from NTP to Approved Plans which allowed the project to be constructed on-time and on-budget. • Design of the MOT to eliminate a temporary pedestrian bridge and reduce the number of phases. 	<p align="center">Proposed Personnel on Project:</p> <p>Darell Fischer (RDA) Steven Thompson (RDA) Mo Kim (RDA) Adam Welschenbach (RDA)</p>	<p>PROJECT SCOPE</p> <p>The project consisted of a four-lane Divided Highway, Urban Minor Arterial Typical Section (GS-6) with Curb and Gutter, and Raised Median (1,200 linear feet); Six-Lane Divided Highway, Freeway/Other Principal Arterial (GS-5), Median Barrier. As the lead designer, RDA provided complete design services and/or coordination for roadway and bridge designs for 0.3 miles of widening and reconstruction on Elm Avenue to include the replacement of two bridges (one over I-581 and the other over the Norfolk Southern Railroad). These services were performed out of RDA's Richmond and Manassas offices. The project also included reconstruction of all four ramps to provide additional capacity and better traffic flow. Finally the project included guardrail replacement along I-581 to current standards along with the replacement of a 60-inch pipe crossing with an 84-inch pipe (originally designed using micro-tunneling technology).</p> <p>RELEVANT PROJECT ELEMENTS TO I-95/ROUTE 630 PROJECT</p> <p>Roadway: The I-581/Elm Avenue Interchange Improvements project provided add capacity on Elm Avenue, increased deceleration lengths on the I-581 ramps, and additional capacity on the ramps from I-581 to Elm Avenue. The I-581 Elm Avenue Interchange Improvements project has similar scope elements to the I-95/Route 630 project including: roadway widening, interstate ramp reconstruction/extension, work in high volume ADT's, and complex MOT/TMP. Our team increased capacity and efficiency of the interchange and eliminated significant backups on the interstate.</p> <p>Drainage: The design implemented strategies to incorporate existing drainage in good condition into the proposed drainage solution for the project to reduce costs and to continually maintain drainage capacity throughout construction. Our team worked with the Department to resolve unknown/buried debris encountered during the tunnel boring operation for the 84" pipe under I-581/Route 220.</p> <p>Bridge and Structures: Existing structures over I-581 and the NS Railroad were reconstructed and/or widened to provide additional capacity along Elm Avenue and clearance over the interstate. Both structures provided for pedestrian movements along Elm Avenue. Additionally, a sign bridge was designed mid-span on the bridge over I-581 at the center pier to provide bi-directional signage.</p> <p>Maintenance of Traffic: To maintain daily traffic both downtown and through the City with minimal disruptions, construction was completed in three stages for Elm Avenue and two stages for I-581. Completing construction on I-581 prior to shifting traffic eliminated future phases and reduced traffic impacts. Additionally, this simplified MOT plan helped to minimized concerns raised by the numerous first responders (similar to the I-95 / Route 630 project) adjacent to needed safe passage through the project.</p> <p>Environmental: RDA designed around impacts and obtained the required water quality permits ahead of construction.</p> <p>Right of Way: Right of Way was negotiated and acquired by our team for the project improvements. Properties that did not immediately settle agreed to Right of Entries in order to allow construction to begin – an approach that may be useful in our negotiations on the I-95 / Route 630 project. Another similarity, although not a total take, was the impact to a gas station adjacent to the widening of Elm Avenue.</p> <p>Utilities: As a result of design innovations, many of the anticipated utility conflicts were avoided. Those that could not be avoided worked with RDA and the contractor to stage their relocations around on-going construction.</p> <p>Public Outreach/Involvement: Our team met with emergency responders, as we will on the I-95 / Route 630 project, and held a couple of public meetings ahead of construction to ensure mitigation measures were integrated into our MOT/TMP design.</p> <p>LESSONS LEARNED</p> <p>Communication – Communication and early and often involvement of the City of Roanoke and FHWA to address issues uniquely affecting each.</p> <p>Quality Control – With as many "moving parts" as there are in a very confined interchange, the need to maintain and excel at quality control was critical to ensure that each piece and part correlates to the next and is accurate.</p>
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TMP – A critical component of TMP is flexibility. Analyzing each phase of the MOT (as required) allows the designer to alter the sequencing to develop a better functioning work zone. However, observing the construction phasing in the field and applying those results back to the "working model" is the ultimate lesson learned.

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