

MAY 28, 2015

ORIGINAL

STATEMENT OF QUALIFICATIONS

INTERSTATE 64 CAPACITY IMPROVEMENTS – SEGMENT II

**FROM: 1.05 MILES WEST OF ROUTE 199
(HUMELSINE PARKWAY)**

**TO: 0.54 MILES EAST OF ROUTE 238
(YORKTOWN ROAD)**

**NEWPORT NEWS, YORK COUNTY AND
JAMES CITY COUNTY, VIRGINIA**

**STATE PROJECT NO.: 0064-965-264, P101, R201,
C501,B627, B628, B629, B630, B631, B632, B633, B634,
B635, D603, D604, D605, D606, D607, D608**

CONTRACT ID NUMBER: C00106665DB82



PREPARED FOR:



SUBMITTED BY:





May 28, 2015

Mr. Joseph A. Clarke, PE, DBIA
Alternate Project Delivery Office
Virginia Department of Transportation
1401 East Broad Street
Richmond, Virginia 23219

RE: Interstate 64 Capacity Improvements – Segment II

State Project No.: 0064-965-264, P101, R201, C501, B627, B628, B629, B630, B631, B632, B633, B634, B635, D603, D604, D605, D606, D607, D608
Contract ID Number: C00106665DB82

Dear Mr. Clarke:

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* and specializes in high quality roadway, bridge, and mass-transit 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 *Engineering News-Record*) 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 HDR Engineering, Inc. as the Lead Designer. LANE and HDR have a history of teaming together and have delivered more than a dozen D-B projects (ten interstate widening projects). 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 HDR, 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-64 Capacity Improvements – Segment II project. We are confident in our team structure and experience, and have elaborated on our distinctive qualifications in the subsequent sections. The LANE Team has assembled committed personnel, with proven delivery of VDOT's requirements to meet the quality, safety, and schedule demands of this project.

3.2.2 Offeror's Point of Contact Information: Mr. 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

90 Fieldstone Court Cheshire, CT 06410 USA T 203.235.3351 F 203.237.4260

LaneConstruct.com

An Equal Opportunity Employer M/F/D/V

3.2.3 Offeror's Principal Officer Information: Mr. Mark A. Schiller is the principal officer of The Lane Construction Corporation.

Mark A. Schiller, Senior Vice President
14500 Avion Parkway, Suite 200
Chantilly, VA 20151
Tel: (703) 222-5670 Fax: (703) 222-5960
Email: MASchiller@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: HDR Engineering, Inc. HDR 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: LANE's parent company is Lane Industries, Inc. 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 12% goal for the design and construction of this project utilizing Virginia certified DBE companies.

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 Interstate 64 Capacity Improvements – Segment II (I-64 Segment II) project and will be responsible for managing the project, supervising construction, and self-performing the major work elements. LANE is currently nationally ranked as the #1 Highway Contractor and ranked #44 in Top D-B Firms by *Engineering News-Record (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-Consulting, Inc. (Quality Assurance)
- Pulsar Advertising, Inc. (Public Relations)
- Geotechnical Environmental & Testing Solutions, Inc. (AMRL Certified QC Lab)

HDR HDR Engineering, Inc. (HDR), as the Lead Designer, will provide overall project management for all design activities. Known for providing value-added solutions and innovations in their approach to projects for almost 100 years, HDR is one of the largest design firms in the United States, ranked by *ENR* at #6 in the Top 50 Transportation Designers listing and #9 in the overall Top 500 Design Firms.

Design Subconsultants

Under subcontract to HDR are the following highly qualified subconsultants:

- Parsons Brinckerhoff, Inc. (MOT, TMP, ITS)
- O.R. Colan Associates (Right of Way)
- Athavale, Lystad & Associates, Inc. (Structures)
- Harris Miller Miller & Hanson, Inc. (Noise Abatement Analysis)
- Precision Measurements, Inc. (Surveying)

LANE and HDR have a long history of teaming together on important D-B interstate widening projects including the I-85 Widening, I-495 Express Lanes and I-95 Express Lanes projects. On the I-95 Express Lanes project, the Team was able to complete 29 miles of median interstate widening in 29 months AND finish one month ahead of schedule. This was accomplished through partnering and innovative design and construction means and methods. **To provide VDOT the highest level of confidence, we are staffing the I-64 Segment II project with the leadership team from our I-85 Widening project and the core production staff from our I-495 and I-95 Express Lanes projects.**

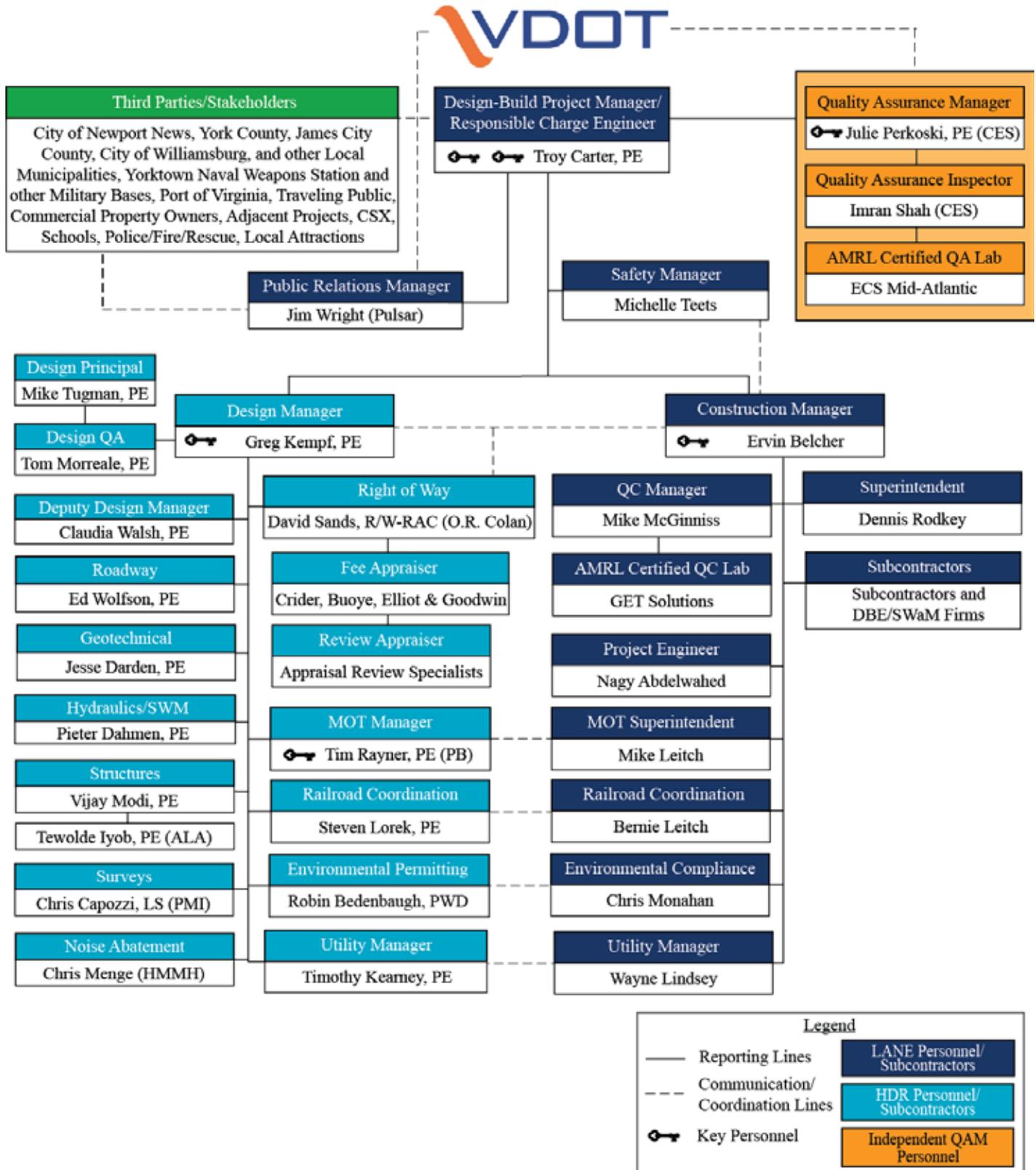
3.3.1 Qualifications of Key Personnel

All of the proposed Key Personnel have noteworthy experience on transportation projects similar to the roles they will serve on the I-64 Segment II project. Information regarding their experience can be found in Attachment 3.3.1 in the Appendix.

Name	Position	Company
Troy Carter, PE	D-B Project Manager	LANE
	Responsible Charge Engineer	
Julie Perkoski, PE	Quality Assurance Manager	CES
Greg Kempf, PE	Design Manager	HDR
Ervin Belcher	Construction Manager	LANE
Tim Rayner, PE, PTOE	Maintenance of Traffic (MOT) Manager	Parsons Brinckerhoff

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. Troy Carter, PE (LANE) will report to VDOT and serve as VDOT's central point of contact. He will facilitate communication among team partners 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. Carter'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.

Mr. Carter will also serve as the **Responsible Charge Engineer (RCE)**, 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. Carter will be capable of answering questions/inquiries relevant to engineering decisions relating to design and/or construction, demonstrating reasonable knowledge of and proficiency in these areas. Mr. Carter is a Professional Engineer in North Carolina and will have his Virginia PE license prior to the submittal of the Technical Proposal.

R Added Value: Mr. Carter recently completed the I-85 Widening project (*included in Work Histories*) with HDR as the Lead Designer and our proposed Design Manager, Greg Kempf. The I-85 Widening project is of similar size, scope and complexity to the I-64 Segment II project. Mr. Carter has worked with HDR on seven (7) D-B projects and has spent the majority of his career working on complex interstate projects in highly traveled corridors. His extensive engineering background and design/construction integration experience makes Mr. Carter more than qualified and prepared to assume the DBPM and RCE positions.

Quality Assurance Manager (QAM), Ms. Julie Perkoski, 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, and issues raised by construction personnel will be resolved by Ms. Perkoski and the DBPM. Ms. Perkoski will keep VDOT informed on the status of quality of construction and issues/solutions through weekly reports and progress meetings. As QAM, Ms. Perkoski will hold the authority to shut down the job if quality issues warrant. **Quality Assurance Inspector, Mr. Imran Shah (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. **ESC Mid-Atlantic** will report to CES and will perform independent QA testing.

R Added Value: Ms. Perkoski has extensive VDOT experience in the Hampton Roads region. She was recently the Manager of Design Construction Services on the \$2.1B D-B, P3 Elizabeth River Tunnels project where she was responsible for the quality assurance reviews.

Design Manager, Mr. Greg Kempf, PE (HDR) will report directly to the DBPM. Mr. Kempf will maintain close communication with the DBPM 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. Kempf. He will provide VDOT with design plans for review and approval. Mr. Kempf is also responsible for establishing oversight of the QA/QC program for all design disciplines of the project and communicating with the CM. The design QC will be coordinated by Mr. Kempf and will be performed by qualified independent staff personnel. He will be supported by Design Principal, Mr. Mike Tugman, PE Deputy Design Manager, Ms. Claudia Walsh, PE and Mr. Tom Morreale, PE who will provide the independent design QA functions.

R Added Value: Mr. Kempf recently completed the I-85 Widening project (*included in Work Histories*) with LANE and our proposed DBPM, Troy Carter. Mr. Kempf and Mr. Carter have worked together on seven (7) D-B projects and their experience and working relationship will be an asset to the I-64 Segment II project.

Construction Manager, Mr. Ervin Belcher (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 daily with adjacent projects

underway. He will coordinate daily meetings with the QAM, QA Lead Inspector, and QC Manager to discuss all ongoing construction activities. He will also review all construction QC reports and lab results. Anything not meeting standards will be addressed immediately with corrective actions mandated that same day. Mr. Belcher is currently working on the FDOT I-95 from SR-406 to North of SR-44 project and will be available prior to the start of I-64 Segment II construction. Mr. Belcher will hold a DEQ RLD Certification and a VDOT ESCCC prior to commencement of construction.

R Added Value: Mr. Belcher has been a Construction Manager on numerous interstate widening projects in Virginia and throughout the East Coast. His extensive experience working in heavily traveled corridors with extensive MOT coordination will be a benefit to the Team. He has worked with proposed DBPM, Troy Carter, and DM, Greg Kempf on numerous D-B interstate projects. He was also the Superintendent on Area 3 of the I-495 Express Lanes project where he worked with HDR personnel assigned to the I-64 Segment II project.

MOT Manager, Mr. Tim Rayner, PE (Parsons Brinckerhoff) will report directly to the DM. Mr. Rayner will be responsible for developing and implementing the TMP for the Project. He will be the key point of contact for issues arising relative to the MOT and will ensure that construction activities are coordinated with other roadway and tunnel work in the I-64 peninsula corridor, are communicated to the public, and that construction work zones are accomplished in accordance with applicable standards and requirements. He has successfully completed the Advanced Level, VDOT Work Zone Traffic Control training in accordance with Traffic Engineering Memorandum TE-345.

R Added Value: Mr. Rayner is currently Traffic Operations Designer and Manager for the Midtown Tunnel Project, which includes I-264 Widening, a new Interchange, the MLK Extension, Midtown Tunnel Construction, and Downtown Tunnel Rehabilitation. He has designed complex MOT plans and TMP’s for highly traveled corridors, including interstates. He also has recent relevant experience in coordinating plans and detours across multiple jurisdictions and with other nearby work zones and is extremely familiar with the Hampton Roads region.

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	D-B	Interstate Widening	ADT > 90K	Phased Constr.	Similar Role on a LANE/HDR Project
<i>Other pertinent design disciplines that will report directly to Mr. Kempf, PE (DM) include:</i>						
Mike Tugman, PE/Design Principal	28	●	●	●	●	● (I-95, I-495, I-85 over Yadkin, Foothills Parkway)
Claudia Walsh, PE/Deputy DM	21	●	●	●	●	● (I-95, I-495, I-85 over Yadkin, Foothills Parkway)
Tom Morreale, PE/Design QA	32	●	●	●	●	● (I-95, I-495, Foothills Parkway, I-540 North Wake Expressway)
Ed Wolfson, PE/Roadway	18	●	●	●	●	● (I-95, I-495)
Vijay Modi, PE/Structures	32	●	●	●	●	● (I-95, I-495, Foothills Parkway, I-540 North Wake Expressway)
Pieter Dahmen, PE/ Hydraulics/ SWM	37	●	●	●	●	● (I-95, I-495, Foothills Parkway, I-85 over Yadkin)
Jesse Darden, PE/ Geotechnical	15	●	●	●	●	● (I-95, I-85 Widening)

Name/Position	Yrs	D-B	Interstate Widening	ADT > 90K	Phased Constr.	Similar Role on a LANE/HDR Project
<i>Other pertinent construction disciplines that will report directly to Mr. Belcher (CM) include:</i>						
Dennis Rodkey/Superintendent	33	●	●	●	●	● (I-95, I-495)
Mike Leitch/MOT Superintendent	9	●	●	●	●	● (I-95, I-495)
Bernie Leitch/Railroad Coordinator	40	●	●	●	●	● (I-495)
Chris Monahan/Environmental	12	●	●	●	●	● (I-95, I-495)

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 throughout the entire design and construction phases.

The LANE Team’s extensive D-B experience has shown that regularly scheduled discipline coordination meetings throughout project execution are critical to ensuring a successful project. These focused meetings, which are led by the DBPM, serve as a conduit for disseminating project-critical information and are the central point of decision-making and communication among all involved in the project. These regular, open forums of discussion among 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.*

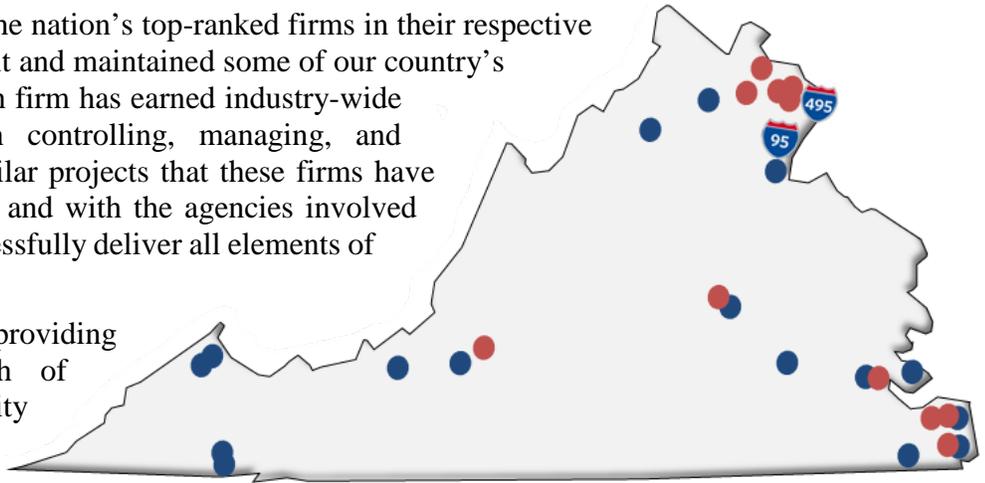
Design Support During Construction	Benefit
Preparation of subcontractor statements of work	Ensures translation of design requirements into subcontractor statements of work
Assignment of design engineer(s) on-site, as required	Provides assistance in interpretation of design requirements and responding 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

Both LANE and HDR are among the nation’s top-ranked firms in their respective disciplines. We have designed, built and maintained some of our country’s most important infrastructure. Each firm has earned industry-wide recognition for their success in controlling, managing, and executing work. The blend of similar projects that these firms have and are working on in the region, and with the agencies involved confirms our qualifications to successfully deliver all elements of this project.

LANE and HDR are committed to providing VDOT and the Commonwealth of Virginia with safe and quality projects. LANE has a long and successful history of project



completion in Virginia having completed nearly 150 projects worth over \$2.4B. The map shown above highlights VDOT projects completed by LANE (|) and HDR (|) within the past 10 years as well as our Team experience on the I-495 and I-95 Express Lanes.

Additional Notable Experience:

During the past several years, our Team has designed and constructed over 75 miles of projects along the East Coast that have garnered awards:

Projects	Awards
I-495 Express Lanes (VA)	<ul style="list-style-type: none"> DBE Prime Contractor of the Year (LANE) 2013 Construction Management Project Achievement Award ARTBA Work Zone Safety Awareness Award for the Orange Cones. No Phones. anti-distracted driving campaign
I-95 Express Lanes (VA)	<ul style="list-style-type: none"> DBE Prime Contractor of the Year (Fluor-Lane95) DBE Consultant of the Year (HDR)
I-85 Widening (NC)	<ul style="list-style-type: none"> 2012 Trans-Ovation Award 2012 ARTBA Work Zone Safety Award for innovation in work zone safety, which is also featured in the ARTBA Access/Egress Work Group Guidance document prepared for the FHWA. First Place – Innovations in Technology/Methodology for “Temporary Median Access Bridge and Ramps.” First Place – Training Programs/State Level for “Effective Use of Law Enforcement in Work Zones Training.”
I-77 HOV/Median Widening (NC)	<ul style="list-style-type: none"> 2002 NAPA Outstanding Work Zone Safety
I-77 Yadkin (NC)	<ul style="list-style-type: none"> 2008 ACPA National Award

3.4.1 Work History Forms

Work History Forms (Attachments 3.4.1(a) and (b)) as required for LANE (Lead Contractor) and HDR (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-64 Segment II 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, utility relocation and protection, bridge widening, rehabilitation and phasing, existing pavement condition, MOT, agency/stakeholder coordination, public relations, permitting, and Stormwater Management and associated ROW acquisitions. Each of these risk items will have a major impact on the project if not properly assessed and mitigated. We have concluded **MOT/Public Safety, Geotechnical, and Stormwater Management/Drainage** are the three most critical risks to the success of this project. The table below highlights our experience mitigating these three risks on some of our LANE/HDR D-B projects.

LANE/HDR D-B Projects	Contract Value (\$M)	Interstate Widening	Risk #1 MOT/Public Safety		Risk #2 Geotechnical		Risk #3 SWM/ Drainage
			ADT > 90K	Phased Construction	Full Depth Reconstruction	Challenging Soil Conditions	Innovative SWM/RW Minimization
I-85 Widening *	148	ü					
I-95 Express Lanes	726	ü					
I-495 Express Lanes	1,500	ü					
I-77 HOV/Median Widening	87	ü					
I-77 Yadkin *	59						
I-485 Widening *	92	ü					
I-540 East Wake Expressway *	56						
I-85 over the Yadkin	136	ü					
I-4 Ultimate	2,300	ü					
I-385 Improvements *	65	ü					
I-35W	212	ü					
Foothills Parkway *	50	ü					
I-95 at US-74 / Lumberton *	108	ü					

**Project Completed by our Proposed DBPM/RCE (Carter) and DM (Kempf)*

RISK NO. 1 – MOT/PUBLIC SAFETY

Risk Identification: The LANE Team considers MOT/Public Safety the most critical risk associated with construction of the I-64 Segment II project. The project corridor has an average daily traffic (ADT) volume in excess of 94,000 vehicles per day; has a high commercial truck percentage; is a busy commuter route; and is in a popular tourist destination region. The congestion currently experienced in the corridor could be worsened by travelers not familiar with the region and/or those not expecting work zones and alternating traffic patterns. Work zones and changing traffic patterns create a high potential for incidents if MOT is not properly planned and implemented. Plus, much of the construction will be in the median, and median work zones create additional risk due to the potential for ingress and egress of personnel and equipment in the left travel lane.

Why the MOT/Public Safety Risk is Critical and the Impacts to the Project:

- Increased incident rates and potential for injuries due to lane restrictions and median access requirements
- Impacts to efficient evacuation of the Hampton Roads region in emergency situations

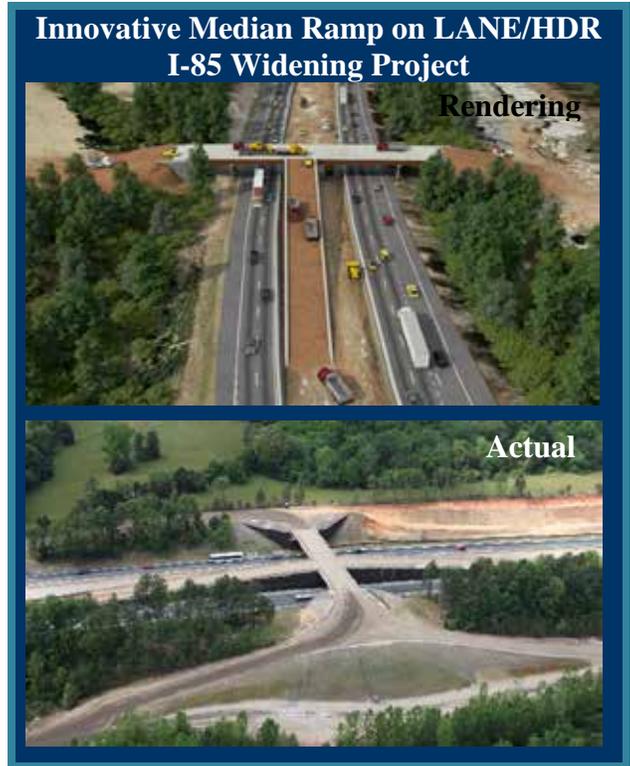
- Impacts to deliveries essential to our national defense at Naval Weapons Station Yorktown and Naval Station Norfolk
- Negative impacts to the region’s tourism industry
- Exacerbating already unacceptable congestion throughout the I-64 corridor
- Impeded response times and access for First Responders
- Negative public acceptance of this and future I-64 Projects
- Impact to delivery of goods to and from the Port of Virginia

Risk Mitigation Strategy: Our Team will implement multiple MOT strategies we have successfully utilized on previous interstate projects (I-64, I-264, I-95 and I-495 in Virginia, I-85 and I-485 in North Carolina, to name a few) to mitigate the impact of construction activities on traffic safety and congestion, yet allow for efficient progression of construction activities. We are investigating the appropriate application of these strategies in order to provide access to the median work zone that will minimize the interface between construction traffic and travelers. In addition, we will develop a timely outreach and communication plan with the public, implement appropriate MOT devices, and dedicate a roving MOT maintenance crew to maintain all MOT measures and to assist with incidents that may occur. We will leverage these and other strategies our Team has learned from our collective experience in similarly congested interstate corridors and apply those innovations as appropriate.

An innovative work zone traffic control and access plan is particularly critical on this project due to the high ADT on I-64. Safe and efficient access to the median work zone is critical to advancing construction activities and maintaining the project schedule while not further reducing the LOS for travelers. In order to provide a concrete barrier protected construction zone in the median and maintain two lanes of traffic in each direction, we will likely need to strengthen outside shoulders to shift traffic to the outside. The shoulder is not a full depth pavement section and is therefore structurally insufficient to support I-64 traffic loading.

The work zone access component of this risk results from high speed traffic interfacing with lower speed construction traffic as it enters and exits the work zone. LANE has successfully mitigated this risk in a number of ways. For instance, on the I-85 Widening Project (*included in Work Histories*), LANE and HDR developed an innovative and award winning MOT plan that created a temporary bridge over the interstate travel lanes to provide construction traffic direct access to the median and totally eliminate conflict with the traveling public. The project has won multiple awards including the TransOvation Award from the American Road and Transportation Builders Association (ARTBA). This concept was devised by the same LANE Team being assigned to this project.

For the I-64 Segment II project, the LANE Team has already investigated a plan to access the work zone by means other than through the mainline travel lanes. This plan will bring the same high level of safety and congestion mitigation to this project as was implemented on the I-85 Widening project. Sight distance, merging conditions at nearby ramps and other factors will be analyzed in determining all ingress/egress points. In addition, we will work with VDOT and the State Police to determine the required number and location of crossovers for police and first responder access and for location of turn outs for incident management. Although the primary mitigation measure will be to minimize ingress/egress to the work zone from the mainline, there may be localized areas where access may be required from the mainline travel lanes. On similar projects we have mitigated this issue by “pre-constructing” sections of the inside widening to use as acceleration/deceleration lanes for construction vehicles rather than turning directly into/out of the mainline lanes.



“The flexibility for all the experts to come together and put together the solutions that are needed like this temporary work bridge, and separating the traffic and the general public, is very, very creative”

–Victor Mendez, Director of the Federal Highway Administration, speaking about the I-85 project

There are a number of other innovative approaches for addressing the challenges associated with MOT and work zone access that will be further developed and discussed with VDOT during the technical proposal phase of this solicitation. Once vetted, these approaches will be detailed in the Transportation Management Plan (TMP) to be developed prior to initiation of construction activities. The TMP and MOT plans will consider elements including appropriate lane widths, speed limits, signage, pavement markings, tapers and barrier type and placement locations. As part of this effort, we will also consider existing I-64 traffic patterns, high crash locations and daily and seasonal peak travel times to develop emergency and incident contingency plans.

After initial development of the TMP and MOT plans, the LANE Team will continually evaluate and update these plans as project conditions warrant. The MOT Manager will conduct weekly MOT meetings with management, construction personnel and VDOT to perform this evaluation and make recommendations and/or modifications to the plans. The TMP will be developed as a living document, initially describing the designed MOT and detours. After implementing, coordination meetings and field visits will be conducted to verify correct implementation and effectiveness of the MOT, and to identify potential

issues and methods to improve the effectiveness and safety of the plan. This strategy has proven successful on many LANE/HDR projects, namely the I-85 Widening, I-95 Express Lanes and I-495 Express Lanes.

An integral part of the TMP is planning for extensive communication with the travelling public. An effective Public Communications Plan and strong Public Outreach effort will help keep motorists and other stakeholders informed of construction progress as well as upcoming changes to traffic patterns. Our public relations specialist, Pulsar, will manage this effort. LANE and Pulsar have worked together on several successful projects, including the I-64/264 pavement rehabilitation project in Norfolk. In addition to traditional communication methods, Pulsar will utilize social media to apprise motorists and first responders of incidents, traffic pattern changes, lane closures or other relevant information.

Together, LANE and HDR have successfully completed some of the most difficult “construct under traffic” MOT projects in the country. These include the I-95 Express Lanes in Northern Virginia where we worked over 3.8 million safe work hours without a lost time incident, in a corridor with ADT counts of 200,000+, and *successfully constructed 29 miles of express lanes in the median with no major incidents in just 29 months.* LANE and HDR also worked together on the I-495 Express Lanes (Area 3) in Northern Virginia to analyze multiple construction phasing scenarios, ingress/egress points, and sequencing of events in order to determine work zone LOS impacts in that high volume corridor.

Our Team commits to staffing the I-64 Segment II project with the leadership team from our I-85 Widening project and the core production staff from our I-495 and I-95 Express Lanes projects.

In addition, we have included Parsons Brinckerhoff as part of our Team based on their experience helping to deliver the Elizabeth River Crossing D-B project. For that project, our proposed MOT Manager, Tim Rayner, served in a similar role. Mr. Rayner led the initial design of the TMP and MOT for the numerous phases and stages of construction with widely varying road types and time period restrictions. The variety of MOT applications used in construction of the Elizabeth River Crossing project can be directly applied to the I-64 Segment II project, including Interstate lane closures to accommodate widening and construction of new ramps and bridge widenings as well as full Interstate closures to accommodate sign structure construction.

The LANE Team is committed to mitigating the MOT/Public Safety risk on this project using our full arsenal of experienced design and construction professionals who all have recent and very relevant similar work experiences. Our focus will be to maximize both safety and mobility throughout the construction period.

Role of VDOT and other Agencies: VDOT’s role will be to provide plan reviews and approvals. We will also request appropriate Naval and CSX personnel attend coordination meetings to provide our team with their schedule and needs so they can be accommodated per RFQ Section 2.2. In addition, the Team will work with other municipalities in the Hampton Roads area as needs arise, and we will coordinate our work closely with the Virginia State Police.

RISK NO. 2 - GEOTECHNICAL

Risk Identification: Risks associated with existing geotechnical and pavement conditions are multi-faceted on this project and require a comprehensive engineering approach including a robust assessment, analysis and implementation plan to ensure the project meets or exceeds VDOT's life cycle expectations. Our team has focused our attention on three elements of this risk most relevant and critical to the success of the project:

- Reconstruction and Widening of Existing Pavements
- Impacts to Existing Adjacent Structures
- Settlement of Compressible Soils

The existing lanes of I-64 are required to be fully reconstructed and widened into the median to accommodate new travel lanes and shoulders. Of primary concern is the fact that according to the Geotechnical Data Report (GDR) dated October 23, 2012, subgrade stability issues in areas of proposed pavements are likely. Soils are predominantly lean clays to clayey sand with high fines content. Moisture content was also high across the borings. These soils present significant risk as they need to be amended or replaced with suitable soils, which could negatively affect cost and schedule. Other pavement-related geotechnical risks include existing pavement subgrade condition, differential settlement between existing and proposed sections during phased construction, and continuity of the sub-base drainage.

In addition, the widening of nine bridges in a constrained median area has the potential to impact existing bridges and culverts. Construction activities and techniques causing vibration and/or displacement such as pile driving or the use of large vibratory rollers can cause structural distress to older structures, near-field settlement, and impacts to adjacent structures/facilities up to several hundred feet away.

Bridge construction in this portion of the Coastal Plain of Virginia typically involves the use of deep foundation supports to limit settlement associated with compressible subsurface soils. These same soils impact construction of the approach fills in terms of stability, time rate of settlement, secondary compression settlement, and additional downdrag-induced loads on the deep foundations. These risks are echoed by the GDR, based on specific test boring data collected in Segment 1 of the project.

Why the Geotechnical Risk is Critical and the Impacts to the Project: According to the Geotechnical Data Report, over 50% of the bulk soil samples had a CBR value of 5 or less with some ranging as low as 1.2. There are also many documented areas with elevated moisture contents and/or high levels of organics. When these compressible soils are encountered, impacts can vary depending on the extent and method to which they must be mitigated. It is difficult to determine accurately the quantity of mitigation required and the means by which mitigation is planned can change due to actual conditions. These factors can impact the project's success in several ways;

- Potential schedule and cost implications
- Extended construction periods necessary for adequate completion of primary settlements
- Out-of-tolerance long-term settlement (secondary)
- Application of downdrag loads on deep foundation elements, resulting in overloaded foundations
- Necessity for specialized equipment
- Motorist delays
- Sequence of construction/phasing modifications
- Vibration damage and remediation to existing structures
- Lack of continuity in sub-base drainage resulting in a decrease of structural support of the pavement section
- Differential settlement between sections that impacts pavement maintenance and surface drainage

Risk Mitigation Strategies: The first step our Team will take in mitigating geotechnical risk is to perform additional sampling of subsurface soils and pavement cores to further delineate areas of concern such as: high potential settlement in the proposed pavement footprint, areas with excessive moisture content or underperforming drainage, excessive organic materials, or problem areas at proposed bridge widening locations. This will allow our Team to develop appropriate mitigation strategies for construction activities and locations.

Where appropriate, our Team will treat weak subgrade soils using cement or lime stabilization. LANE is very experienced carrying out shallow chemical soil stabilization and owns the necessary equipment including rotary

mixers and pug mills. LANE has performed dozens of recent jobs with cement or lime soil stabilization which provides many benefits versus undercutting including;

- A more balanced and efficient earthmoving plan
- Improved construction schedule
- Less environmental impacts during construction
- Fewer impacts to surrounding infrastructure due to a lower quantity of trucking

LANE has relevant and local experience mitigating compressible soils similar to those that will be encountered on this project. Poor soils with excessive levels of moisture were addressed while LANE was reconstructing the main runway at Fentress Naval Airfield in Chesapeake. In many areas small pools of water appeared on the freshly prepared subgrade surface the next day. LANE worked with the Owner to develop an innovative mitigation strategy by cement treating, in place, the recycled concrete pavement which was the stone base material. The end result was an excellent cement treated base material for the runway which performed as designed with no maintenance issues.

The best mitigation strategy for preventing vibration induced distress to existing/adjacent structures is to select construction procedures that limit vibration. Non-displacement driven piles (H-piles or open-ended steel pipe pile), pre-augering for displacement piles, and drilled foundations (drilled shafts, micropiles, auger cast piles) are options we will consider. Often the most practical construction methods are also the ones that induce vibration. In these cases, we will have an active monitoring plan in place prior to construction, including pre-construction surveys, establishment of vibration thresholds, clearly delineated zones of impact, and pre-prepared remedial actions if threshold values are exceeded. This plan is critical, particularly in a constrained environment.

HDR and LANE successfully implemented this approach on the recently completed I-95 Express Lanes project in Stafford and Prince William Counties. Out of seven new bridges within the new roadway construction, three were constructed in the median between existing NB and SB-lane bridges, with tight clearances between existing and proposed abutments. Steel H-piles were selected for the foundations. *HDR assisted in writing a new Special Provision for VDOT for vibration and survey monitoring of adjacent structures during construction activities.*

The I-95 Express Lanes project utilized sleeved steel H-piles to limit vibrations to adjacent structures.



In order to ascertain the best approach to pavement reconstruction, we will utilize sampling data to evaluate pavement type, layer thicknesses, and subgrade support. Subgrade areas identified with weak support characteristics will be candidates for lime or cement stabilization. Pavement exploration is also key in planning the continuity of the sub-base drainage system. Drainage can be directly conveyed between new and old sections, or, if not feasible, longitudinal underdrains can be constructed between the sections. Accurate characterization of subsurface stratigraphy and geotechnical parameters enables our Team to develop strategies to resolve impacts before they influence the project negatively. Time to complete primary consolidation will be appropriately scheduled to meet the overall construction schedule. Areas where unimproved ground will undergo settlement too slowly to meet the schedule may be improved with wick drains. Secondary compression will be controlled through the use of temporary surcharging fills placed to the appropriate height and duration. Wick drains and surcharging techniques are often employed as mitigation measures in southeastern Virginia, where unconsolidated sedimentary soils are thicker and more compressible.

Downdrag loads on deep foundation elements can often be mitigated by understanding when structural dead loads will be applied to the foundation (installation of bridge girders, decking, etc.) relative to completion of primary settlement and live load magnitudes. If structural dead loads are applied after completion of potential downdrag inducing settlement, the impact of downdrag loading can be effectively mitigated. Additionally, isolating foundation elements through the embankment with sleeves can reduce the magnitude of downdrag load foundation elements must carry. Per AASHTO, downdrag loading can be reduced to account for the application of live loads. These mitigation methods support optimization of the foundation load carrying capacity for support of the structures. By understanding this nuance, our geotechnical and bridge engineers work together to fully optimize foundation design.

Our Team’s engineered approach on the I-95 Express Lanes project successfully mitigated downdrag loads through the use of corrugated metal pipes that were sleeved around the steel H-piles for six of the seven new bridges on the project. This allowed Lane to install piles first and place MSE wall fill around the sleeves without impacting the piles. The void around the sleeves were filled after settlement of the walls was substantially complete and before the bridge dead loads were applied.

Role of VDOT and other Agencies: VDOT’s role will be limited to oversight only and any Independent Assurance testing necessary.

RISK NO. 3- STORMWATER MANAGEMENT/DRAINAGE

Risk Identification: The I-64 Segment II project is located in gently rolling terrain with crossings over waterways such as tributaries to Queens Creek, White Man Swamp, Kings Creek, Skiffes Creek Reservoir and un-named smaller drainage ways. Potential issues associated with stormwater management (SWM) and drainage include:

- Additional right-of-way and/or easements for stormwater management or outfalls
- Offsite Impacts Due to Increases in Head and Tailwater Elevations
- Condition of Existing Box Culverts/Pipes To Be Extended/Retained
- Erosion and Sediment Controls throughout & Protection of the Drinking Water Supply

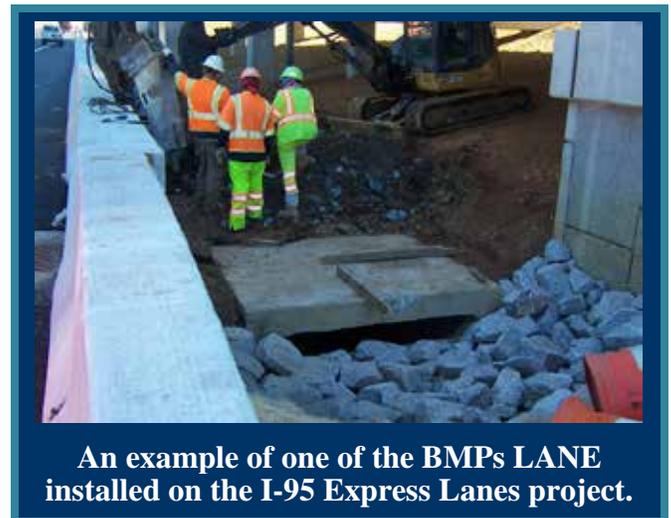
Why the Stormwater Management/Drainage Risk is Critical and the Impacts to the Project: If discharge from the project area is not appropriately assessed and subsequently addressed it will result in increased stormwater management and treatment. Costly overruns and impacts to design layouts, ROW, permitting, and environmental would likely be incurred. Unplanned additional right-of-way and/or easement requirements often result in schedule impacts. This is especially true on this project since it may include acquisition of federal property at the Yorktown Naval Weapons Station.

Replacement of existing box culverts/pipes is costly and severely impact the construction schedule. In addition to material and labor costs, the installation of new structures results in additional construction phasing and maintenance of traffic.

Additionally, inadequate E&S plans will create the potential for permit violations, damage, fines and schedule delays. The project is just upstream of Skiffes Creek Reservoir owned by the City of Newport News Waterworks so protecting the surrounding area from project run-off is critical to protecting this drinking water supply.

Risk Mitigation Strategies: The Team will develop a stormwater plan that will locate basins within the ROW or easement limits shown on the preliminary plans and avoid the need for additional right of way or easements. Where appropriate our team will aggressively explore all means and methods to reduce and/or eliminate property impacts related to stormwater management.

HDR and LANE have extensive experience working together employing innovative strategies to mitigate stormwater management impacts and risks. On the recently completed I-95 Express Lanes project, adding lanes in the median presented challenges due to the limited available space. In order to avoid the time and expense of acquiring additional ROW for treatment related detention ponds, our Team worked closely with VDOT and BMP manufacturers to size and locate adequate manufactured BMP devices to exceed required pollutant removal levels and minimize maintenance requirements. *Introducing these devices provided a smart solution that reduced impacts, eliminated the need for additional ROW reducing property acquisition costs and schedule risk.*



An example of one of the BMPs LANE installed on the I-95 Express Lanes project.

Mitigating encroachment on the Yorktown Naval Weapons Station is paramount due to the lengthy process required to obtain right of way/easements on Federal property. Should circumstances result in the need for easements (permanent or temporary) on this property, the process will require working through NAVFAC

policies and procedures and must be identified early in the process to avoid delays to the schedule. Our Team successfully navigated a similar process on the I-95 Express project working with NAVFAC at the U.S. Marine Corps Base at Quantico. Close coordination resulted in our ability to secure the necessary easements to complete the project on schedule.

Mitigation measures will include detailed and comprehensive hydrologic analysis of pre-project existing conditions of all upstream and project tributary areas. We expect this analysis will demonstrate the onsite drainage area is small relative to the offsite area and MS-19 can be met without mitigation. For the MS-19 analysis of the I-95 Express Lanes project, HDR successfully proved for outfalls with upstream off-site drainage areas, even with the increase in on-site impervious area, it did not result in increased downstream flooding and erosion potential and no mitigation was required for many of the project outfalls. If there is an impact on off-site areas, additional quantity control measures will be designed to mitigate the impact. The preliminary plans show numerous SWM basins each with maintenance requirements. A detailed analysis will be performed to determine if some of the basins can be combined. The plans also show two concrete retention basins which are presumably required due to ROW constraints and to meet water quantity control criteria. Concrete retention basins often are placed below ground and are generally more difficult to maintain. We will evaluate additional alternatives to provide adequate retention while reducing cost and future maintenance requirements.

If pipes currently have significant sediment deposits but enough conveyance capacity if cleaned, recommendations for pipe cleaning will be made. A condition assessment will also be performed. For the I-95 Express Lanes project, a detailed field investigation was performed identifying which structures, pipes and outfalls needed cleaning prior to being used for the proposed drainage conditions. For pipes with inadequate capacity, parallel systems or replacements will be necessary.

The preliminary plans show numerous new drainage pipes underneath existing and proposed pavement. New pipes under existing travel lanes will need to be either jack & bored, or an MOT plan will be required where new pipes can be installed using conventional phase cut and cover procedures. The Team will analyze which method is preferred based on soil borings, MOT, and schedule requirements.

Regardless of the installation methods, our Team has extensive experience maximizing the use of existing structures to minimize cost and impacts associated with new pipe installation. For example, *we worked with VDOT on the I-95 Express Lanes Project to verify that adequate hydraulic capacity existed to maximize the utilization of existing drainage structures in acceptable condition along the 9-mile corridor. Based on these efforts, only one cross-structure was added to the project.*

Mitigation measures will also include the preparation of detailed, phased erosion and sediment control plans. For the I-95 Express Lanes project, HDR developed detailed phased E&S plans with clear water diversions to circumvent disturbed areas, thereby limiting the area and distances to be treated. This included the design of more than 80 sediment traps in a project site with rolling terrain and tight geometric constraints. The E&S plan developed by HDR was approved by environmental reviewers and helped the project meet project schedules avoiding fines and delays. Protection of the Skiffes Creek Reservoir warrants additional measures such as the use of sediment basins, super silt fence and frequent inspection and maintenance of erosion control measures. The LANE Team will E&S certify all of our supervisory personnel plus have a full time engineer on staff dedicated to ensuring all E&S measures are functioning and well maintained. HDR has experience in the design of roadway projects that cross, or are adjacent to, water supply reservoirs as was demonstrated when completing the design for VDOT of the Clarksville Bypass across Kerr Reservoir in Mecklenburg County. The Lane Team is well experienced in Stormwater Management & Environmental Protection and will not allow this risk to impact the project.

Role of VDOT and other Agencies: VDOT will provide overall owner approvals on the SWM and drainage design and participate with regulatory agencies including DEQ, VMRC, US Fish and Wildlife Service, City of Newport News Waterworks, NAVFAC, and any additional agencies as needed.

ATTACHMENT 3.1.2
SOQ CHECKLIST

ATTACHMENT 3.1.2

Project: 0064-965-264, Contract ID#: C00106665DB82

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	2
Offeror's Point of Contact information	NA	Section 3.2.2	yes	1
Principal Officer information	NA	Section 3.2.3	yes	2
Offeror's corporate structure	NA	Section 3.2.4	yes	2
Identity of Lead Contractor and Lead Designer	NA	Section 3.2.5	yes	2
Affiliated/subsidiary companies	Attachment 3.2.6	Section 3.2.6	no	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	2
Evidence of obtaining bonding	NA	Section 3.2.9	no	2

ATTACHMENT 3.1.2

Project: 0064-965-264, Contract ID#: C00106665DB82

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15-page limit?	SOQ Page Reference
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
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	2
Offeror's Team Structure				
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	no	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

ATTACHMENT 3.1.2

Project: 0064-965-264, Contract ID#: C00106665DB82

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15-page limit?	SOQ Page Reference
Key Personnel Resume – Construction Manager	Attachment 3.3.1	Section 3.3.1.5	no	Appendix Attachment 3.3.1
Key Personnel Resume – Maintenance of Traffic Manager	Attachment 3.3.1	Section 3.3.1.6	no	Appendix Attachment 3.3.1
Organizational chart	NA	Section 3.3.2	yes	4
Organizational chart narrative	NA	Section 3.3.2	yes	3-7
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)
Project Risk				
Identify and discuss three critical risks for the Project	NA	Section 3.5.1	yes	9-15

ATTACHMENT 2.10
FORM C-78-RFQ

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

ATTACHMENT 3.2.6

State Project No. 0064-965-264, Contract ID#: C00106665DB82

Affiliated and Subsidiary Companies of the Offeror

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

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

Relationship with Offeror (Affiliate or Subsidiary)	Full Legal Name	Address
PARENT COMPANY	Lane Industries Incorporated	90 Fieldstone Court Cheshire CT 06410
AFFILIATE	Lane Worldwide Infrastructure, Inc.	90 Fieldstone Court Cheshire CT 06410
AFFILIATE	Lane Infrastructure, Inc.	90 Fieldstone Court Cheshire, CT 06410
AFFILIATE	Lane International, B.V.	Prins Bernhardplein 200 1097 JB Amsterdam, the Netherlands
AFFILIATE	Lane Mideast Contracting, LLC	P.O. Box 35243 Abu Dhabi, UAE Makeen Tower Corner of 9th and 10th Streets
AFFILIATE	Lane Mideast, Qatar, LLC	Grand Hamad Street Bin Al Sheikh Bldg. 3 rd Floor Doha, Qatar
SUBSIDIARY	Lanecon Corporation	90 Fieldstone Court Cheshire, CT 06410
JOINT VENTURE (30% PARTNER)	Skanska-Granite-Lane	295 Bendix Road, Suite 400 Virginia Beach, VA 23452

ATTACHMENT 3.2.6

State Project No. 0064-965-264, Contract ID#: C00106665DB82

Affiliated and Subsidiary Companies of the Offeror

JOINT VENTURE (35% PARTNER)	Fluor-Lane 95, LLC	6700 Las Colinas Blvd. Irving, TX 75039
JOINT VENTURE (20% PARTNER)	AGL Constructors	929 West Adams Street Chicago, IL 60607
JOINT VENTURE (25% PARTNER)	Gemma-Lane Liberty Partners	769 Hebron Avenue Glastonbury, CT 06033
JOINT VENTURE (25% PARTNER)	Gemma-Lane Patriot Partners	769 Hebron Avenue Glastonbury, CT 06033
TRADE NAME	Civil Wall Solutions, A Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410
TRADE NAME	Cold River Materials, A Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410
TRADE NAME	Prestress of the Carolinas, A Division of the Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410
TRADE NAME	Senate Asphalt, A Division of The Lane Construction Corporation	90 Fieldstone Court Cheshire, CT 06410
TRADE NAME	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 3.2.7(b)
DEBARMENT FORM- LOWER TIER COVERED
TRANSACTIONS

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0064-965-264
Contract ID#: C00106665DB82

- 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

05/28/2015
Date

Kenneth Aducci, Sr. Vice President
Title

HDR Engineering, Inc.
Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0064-965-264
Contract ID#: C00106665DB82

- 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.

	May 15, 2015	Managing Partner
Signature	Date	Title

Appraisal Review Specialists, LLC
Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0064-965-264

Contract ID#: C00106665DB82

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

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

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

	5/12/15	President
_____ Signature	_____ Date	_____ Title
Athavale, Lystad & Associates, Inc.		
_____ Name of Firm		

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

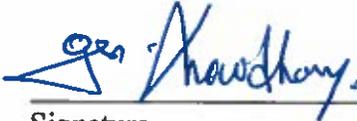
Project No.: 0064-965-264

Contract ID#: C00106665DB82

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

MAY 28, 2015
Date

PRINCIPAL, MANAGING MEMBER
Title

CES-CONSULTING, INC.
Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0064-965-264
Contract ID#: C00106665DB82

- 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>Tracy J. Boyle</u>	<u>5-15-15</u>	<u>Partner</u>
Signature	Date	Title

Crider, Boyle, Elliott & Goodwin LLC
Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0064-965-264
Contract ID#: C00106665DB82

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.



5/13/2015

Mary Ellen Eagan, President and CEO

Signature

Date

Title

Harris Miller Miller & Hanson Inc. d/b/a HMMH

Name of Firm

ATTACHMENT NO. 3.2.7(b)

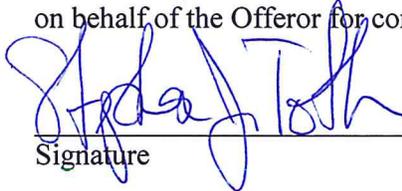
**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0064-965-264
Contract ID#: C00106665DB82

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

May 12, 2015

Date

Chief Operating Officer

Title

O. R. Colan Associates of Florida, LLC

Name of Firm

ATTACHMENT NO. 3.2.7(b)

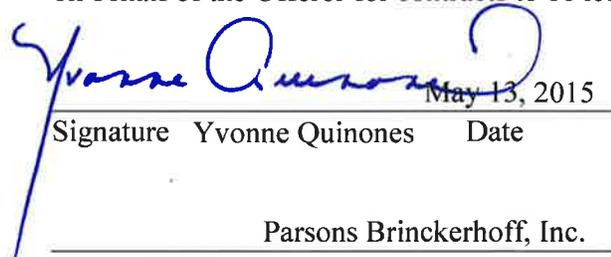
**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0064-965-264
Contract ID#: C00106665DB82

- 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.

	May 13, 2015	Vice President
Signature Yvonne Quinones	Date	Title
Parsons Brinckerhoff, Inc.		
Name of Firm		

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0064-965-264
Contract ID#: C00106665DB82

- 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><i>Deani J. Geuz</i></u>	<u>May 13, 2015</u>	<u>President</u>
Signature	Date	Title

Precision Measurements, Inc.
Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS**

Project No.: 0064-965-264

Contract ID#: C00106665DB82

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

MAY 28, 2015

Date

PARTNER

Title

PULSAR ADVERTISING, INC.

Name of Firm

**ATTACHMENT 3.2.8
VDOT PREQUALIFIED SUPPORTING
DOCUMENTATION**

TRANSPORT - E22
LSPPREQ

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

07/18/2014
2:01 PM
PAGE 240

=====

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

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

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

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

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

=====

ATTACHMENT 3.2.9
SURETY LETTER

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

May 13, 2015

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

RE: **The Lane Construction Corporation
Request for Qualifications**

Interstate 64 Capacity Improvements – Segment II From: 1.05 miles west of Route 199 (Humelsine Parkway)

To: 0.54 miles East of Route 238 (Yorktown Road) Newport News, York County and James City County, Virginia

State Project No.: 0064-965-264, P101, R201, C501, B627, B628, B629, B630, B631, B632, B633, B634, B635, D603, D604, D605, D606, D607, D608;

Contract ID Number: C00106665DB82 - Estimated Value of Project: \$185,000,000.00

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, 2014.

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 30th day of May, A.D. 2013.

ATTEST:

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



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

Thomas O. McClellan
Vice President
Thomas O. McClellan

State of Maryland
County of Baltimore

On this 30th day of May, A.D. 2013, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **THOMAS O. MCCLELLAN, Vice President, and ERIC D. BARNES, Secretary**, of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, deposeth and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

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

Maria D. Adamski

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



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 13th day of May, 20 15.



Geoffrey Delisio

Geoffrey Delisio, 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. 6855104

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 2nd day of February, 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 2nd day of February, 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 13TH day of MAY, 20 15.



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

State Project No. 0064-965-264, Contract ID#: C00106665DB82

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
					Business Entity Registration	0407002174	12/31/2015
HDR Engineering, Inc.	F0484602	Foreign Corporation	Active	5700 Lake Wright Drive, Suite 300, Norfolk, VA 23502	Business Entity Branch Office Registration	0411000028	02/29/2016
				4470 Cox Road, Suite 200 Glen Allen, VA 23060	Business Entity Branch Office Registration	0411000192	02/29/2016
Appraisal Review Specialists, LLC	T0490682	Foreign LLC	Active	3058 Mount Vernon Road Suite 12, Hurricane, WV 25523	Appraisal Business Registration	4008001735	04/30/2016
Athavale, Lystad & Associates, Inc.	F0605842	Foreign Corporation	Active	8180 Greensboro Drive #550, McLean, VA 22120	Business Entity Registration	0407002804	12/31/2015
CES-Consulting, LLC	S3416007	Limited Liability Company	Active	13991 Virginia Cedar Court, Gainesville, VA 20155	Business Entity Registration	0407005783	12/31/2015
Crider Bouye & Elliot, LLC	T0501512	Foreign LLC	Active	2 Ridgeway Ave Greenville, SC 29607	Appraisal Business Registration	4008001745	06/30/2016
ECS Mid-Atlantic, LLC	S1208216	Limited Liability Company	Active	14026 Thunderbolt Pl, Ste 100 Chantilly, VA 20151	Business Entity Registration	0407004628	12/31/2015

ATTACHMENT 3.2.10

State Project No. 0064-965-264, Contract ID#: C00106665DB82

SCC and DPOR Information

GET Solutions, Inc.	05418470	Corporation	Active	204-B Grayson Road Virginia Beach, VA 23462	Business Entity Registration	0407004018	12/31/2015
HMMH	F1451857	Foreign Corporation	Active	N/A	N/A	N/A	N/A
O.R. Colan Associates of Florida, LLC	T0309270	Foreign LLC	Active	N/A for ROW	N/A	N/A	N/A
Parsons Brinckerhoff, Inc	F0501603	Foreign Corporation	Active	277 Bendix Road, Suite 300 Virginia Beach, VA 23452	Business Entity Branch Office Registration	0411000137	02/29/2016
Precision Measurements, Inc.	04504361	Corporation	Active	11835 Canon Blvd, Ste B-103, Newport News, VA 23606	Business Entity Branch Office Registration	0411000292	02/29/2016
Pulsar Advertising, Inc.	F1608555	Foreign Corporation	Active	N/A	N/A	N/A	N/A

ATTACHMENT 3.2.10

State Project No. 0064-965-264, Contract ID#: C00106665DB82

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	Individual's DPOR Address	DPOR Type	DPOR Registration Number	DPOR Expiration Date
The Lane Construction Corporation	Troy Carter	Chantilly, VA	N/A	Professional Engineer License	NC – 032649 He will have his VA PE prior to submission of the technical.	12/31/2015
HDR Engineering, Inc.	Gregory Kempf	Norfolk, VA	2717 Peachtree St, Raleigh, NC 27608	Professional Engineer License	0402054792	05/31/2017
Parsons Brinckerhoff, Inc.	Timothy Rayner	Virginia Beach, VA	2944 Lynnhaven Drive Virginia Beach, VA 23451	Professional Engineer License	0402041012	06/30/2015
CES Consulting, LLC.	Julie Perkoski	Gainesville, VA	4000 Monitor Drive Hampton, VA 23669	Professional Engineer License	0402026174	06/30/2015

ATTACHMENT 3.2.10.1
SCC SUPPORTING DOCUMENTATION



Commonwealth of Virginia
State Corporation Commission

[SCC eFile](#) > [Entity Search](#) > Entity Details



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



SCC eFile Business Entity Details

HDR ENGINEERING, INC.

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: F0484602
Entity Type: Foreign Corporation
Jurisdiction of Formation: NE
Date of Formation/Registration: 6/25/1985
Status: Active
Shares Authorized: 10000

Select an act

[File a regist](#)
[File a regist](#)
[Resign as re](#)
[File an annu](#)
[Pay annual](#)
[Order a cert](#)
[View eFile t](#)



Commonwealth of Virginia
State Corporation Commission

[CC eFile](#) > [Entity Search](#) > Entity Details



SCC eFile

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

Business Entities

Appraisal Review Specialists, LLC

General

SCC ID: T0490682
 Entity Type: Foreign Limited Liability Company
 Jurisdiction of Formation: WV
 Date of Formation/Registration: 2/3/2012
 Status: Active



SCC eFile
Business Entity Details

ATHAVALLE, LYSTAD & ASSOCIATES, INC.

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: F0605842
 Entity Type: Foreign Corporation
 Jurisdiction of Formation: MD
 Date of Formation/Registration: 3/2/1989
 Status: Active
 Shares Authorized: 1000

Select an action

- [File a registration](#)
- [File a renewal](#)
- [Resign as a member](#)
- [File an annual report](#)
- [Pay annual fee](#)
- [Order a certificate](#)
- [View eFile transcript](#)



Commonwealth of Virginia
State Corporation Commission

[SCC eFile](#) > [Entity Search](#) > Entity Details



SCC eFile

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

Business Entities

CES Consulting, LLC

General

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



Commonwealth of Virginia
State Corporation Commission

[SCC eFile](#) > [Entity Search](#) > Entity Details



SCC eFile

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

Business Entities

Crider, Bouye & Elliott, LLC

General

SCC ID: T0501512
Entity Type: Foreign Limited Liability Company
Jurisdiction of Formation: SC
Date of Formation/Registration: 5/22/2012
Status: Active



Commonwealth of Virginia
State Corporation Commission

[SCC eFile](#) > [Entity Search](#) > Entity Details



Geotechnical Environmental and Testing Solutions, Inc.

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



Commonwealth of Virginia
State Corporation Commission

[SCC eFile](#) > [Entity Search](#) > Entity Details



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



SCC eFile Business Entity Details

Harris Miller Miller & Hanson Inc.

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

Select an action

[File a registration](#)
[File a registration](#)
[Resign as registered agent](#)
[File an annual report](#)
[Pay annual report](#)
[Order a certificate](#)
[View eFile history](#)



SCC eFile Business Entity Details

O.R. Colan Associates of Florida, 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: T0309270
Entity Type: Foreign Limited Liability Company
Jurisdiction of Formation: FL
Date of Formation/Registration: 6/2/2006
Status: Active

Select an action

[File a registration](#)
[File a registration](#)
[Resign as registered agent](#)
[File a principal](#)
[Pay annual report](#)



SCC eFile Business Entity Details

Parsons Brinckerhoff, Inc.

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: F0501603
Entity Type: Foreign Corporation
Jurisdiction of Formation: NY
Date of Formation/Registration: 2/11/1986
Status: Active
Shares Authorized: 30000

Select an action

[File a registration](#)
[File a registration](#)
[Resign as registered](#)
[File an annual report](#)
[Pay annual report](#)
[Order a certificate](#)
[View eFile transcript](#)



SCC eFile Business Entity Details

PRECISION MEASUREMENTS, INC.

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

Select an action

[File a registration](#)
[File a registration](#)
[Resign as registered](#)
[File an annual report](#)
[Pay annual report](#)
[Order a certificate](#)
[Submit a P](#)



Commonwealth of Virginia
State Corporation Commission

[SCC eFile](#) > [Entity Search](#) > Entity Details



Pulsar Advertising, Inc.

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: F1608555
Entity Type: Foreign Corporation
Jurisdiction of Formation: NY
Date of Formation/Registration: 11/22/2004
Status: Active
Shares Authorized: 200

ATTACHMENT 3.2.10.2
DPOR SUPPORTING DOCUMENTATION
FOR EACH OFFICE



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
- Report a Licensee
- Records & Documents

Details of license number 2701011871

Name: THE LANE CONSTRUCTION CORPORATION / SENATE ASPHALT
 Doing Business As: VA PAVING COMPANY / VA SIGN AND LIGHTING COMPANY
 License Number: 2701011871
 License Description: Contractor Class A
 Class Definitions
 Business Type: Corporation
 Address: 90 FIELDSTONE COURT
 CHESHIRE, CT 06410
 Specialties/Classifications: Building (BLD)
 Classification Definitions Highway / Heavy (H/H)
 Specialty Definitions
 Initial Certification Date: 1972-10-12
 Expiration Date: 2016-01-31



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

Details of license number 0407002174

Name: THE LANE CONSTRUCTION CORPORATION / SENATE ASPHALT
 License Number: 0407002174
 License Description: Business Entity Registration
 Business Type: CORP
 Address: 90 FIELDSTONE COURT
 CHESHIRE, CT 06410
 Initial Certification Date: 1985-09-30
 Expiration Date: 2015-12-31



Department of Professional and Occupational Regulation

> License Lookup > License Lookup & Disciplinary Actions

- License Lookup
- License Renewal & Fees
- Licenses
- Professions & Occupations
- Forms & Applications
- Public Housing Office
- Community Associations
- Report a Licensee

License Search Advanced License Search Disciplinary Action Search

License Details Related Licenses



Name HDR ENGINEERING INC
License Number 0411000028
License Description Business Entity Branch Office Registration
Business Type Corporation
Rank Business Entity Branch Office
Address 5700 LAKE WRIGHT DRIVE SUITE 300, NORFOLK, VA 23502
Initial Certification Date 1992-03-23
Expiration Date 2016-02-29



Department of Professional and Occupational Regulation

> License Lookup > License Lookup & Disciplinary Actions

- License Lookup
- License Renewal & Fees
- Licenses
- Professions & Occupations
- Forms & Applications
- Public Housing Office
- Community Associations
- Report a Licensee

License Search Advanced License Search Disciplinary Action Search

License Details Related Licenses

Name HDR ENGINEERING INC
License Number 0411000192
License Description Business Entity Branch Office Registration
Business Type Corporation
Rank Business Entity Branch Office
Address 4470 COX ROAD SUITE 200, GLEN ALLEN, VA 23060
Initial Certification Date 1998-08-24
Expiration Date 2016-02-29



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
- Report a Licensee

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

[License Details](#)

Name APPRAISAL REVIEW SPECIALISTS LLC
License Number 4008001735
License Description Appraisal Business Registration
Firm Type LLC - Limited Liability Company
Rank Business Entity
Address 3058 MOUNT VERNON ROAD SUITE 12,
 HURRICANE, WV 25523
Initial Certification Date 2012-04-05
Expiration Date 2016-04-30



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
- Report a Licensee

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

[License Details](#)

[Related Licenses](#)

Name ATHAVALLE, LYSTAD AND ASSOCIATES INC
License Number 0407002804
License Description Business Entity Registration
Rank Business Entity
Address 8180 GREENSBORO DRIVE #550, MCLEAN, VA
 22102
Initial Certification Date 1987-04-20
Expiration Date 2015-12-31



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
- Report a Licensee

License Search Advanced License Search Disciplinary Action Search

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 2015-12-31



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
- Report a Licensee

License Search Advanced License Search Disciplinary Action Search

License Details

Name CRIDER BOUYE & ELLIOTT LLC
License Number 4008001745
License Description Appraisal Business Registration
Firm Type LLC - Limited Liability Company
Rank Business Entity
Address 2 RIDGEWAY AVE, GREENVILLE, SC 29607
Initial Certification Date 2012-06-13
Expiration Date 2016-06-30



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
- Report a Licensee
- Records & Documents

License Search Advanced License Search Disciplinary Action Search

License Details Related Licenses

Name	ECS-MID-ATLANTIC LLC
DBA Name	LEO J TITUS JR PE
License Number	0407004628
License Description	Business Entity Registration
Firm Type	LLC - Limited Liability Company
Rank	Business Entity
Address	14026 THUNDERBOLT PL STE 100, CHANTILLY, VA 20151
Initial Certification Date	2004-12-10
Expiration Date	2015-12-31



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
- Report a Licensee
- Records & Documents

License Search Advanced License Search Disciplinary Action Search

License Details Related Licenses

Name	GEOTECHNICAL ENVIRONMENTAL & TESTING SOLUTIONS INC
License Number	0407004018
License Description	Business Entity Registration
Firm Type	Corporation
Rank	Business Entity
Address	204-B GRAYSON ROAD, VIRGINIA BEACH, VA 23462
Initial Certification Date	2000-09-12
Expiration Date	2015-12-31



Department of Professional and Occupational Regulation

> License Lookup > License Lookup & Disciplinary Actions

- License Lookup
- Online Renewal & Licenses
- Records
- Professions & Occupations
- Forms & Applications
- Air Housing Office
- Community Associations
- Report a Licensee

License Search Advanced License Search Disciplinary Action Search

License Details Related Licenses



Name PARSONS BRINCKERHOFF INC
License Number 0411000137
License Description Business Entity Branch Office Registration
Business Type Corporation
Rank Business Entity Branch Office
Address 277 BENDIX ROAD SUITE 300, VIRGINIA BEACH, VA 23452
Initial Certification Date 1997-02-10
Expiration Date 2016-02-29



Department of Professional and Occupational Regulation

> License Lookup > License Lookup & Disciplinary Actions

- License Lookup
- Online Renewal & Licenses
- Records
- Professions & Occupations
- Forms & Applications
- Air Housing Office
- Community Associations
- Report a Licensee

License Search Advanced License Search Disciplinary Action Search

License Details Related Licenses

Name PRECISION MEASUREMENTS INC
License Number 0411000292
License Description Business Entity Branch Office Registration
Business Type Corporation
Rank Business Entity Branch Office
Address 11835 CANON BLVD STE B-103, NEWPORT NEWS, VA 23606
Initial Certification Date 2002-03-06
Expiration Date 2016-02-29

**ATTACHMENT 3.2.10.3
DPOR SUPPORTING DOCUMENTATION
FOR KEY PERSONNEL**



Department of Professional and Occupational Regulation

Home > License Lookup > License Lookup & Disciplinary Actions

License Lookup	License Search	Advanced License Search	Disciplinary Action Search
Online Renewal & Services	License Details		
Boards			
Professions & Occupations			
Forms & Applications			
Fair Housing Office			
Community Associations			
	Name	KEMPF, GREGORY ANDREW	
	License Number	0402054792	
	License Description	Professional Engineer License	
	Rank	Professional Engineer	
	Address	RALEIGH, NC 27608	
	Initial Certification Date	2015-05-18	
	Expiration Date	2017-05-31	



Department of Professional and Occupational Regulation

> License Lookup > License Lookup & Disciplinary Actions

License Lookup	License Search	Advanced License Search	Disciplinary Action Search
Online Renewal & Services	License Details		
Boards			
Professions & Occupations			
Forms & Applications			
Fair Housing Office			
Community Associations			
	Name	RAYNER, TIMOTHY RAYMOND	
	License Number	0402041012	
	License Description	Professional Engineer License	
	Rank	Professional Engineer	
	Address	VIRGINIA BEACH, VA 23451	
	Initial Certification Date	2005-06-17	
	Expiration Date	2015-06-30	



Department of Professional and Occupational Regulation

Home > License Lookup > License Lookup & Disciplinary Actions

License Lookup

Online Renewal & Services

Boards

Professions & Occupations

Forms & Applications

Air Housing Office

Community Associations

License Search

Advanced License Search

Disciplinary Action Search

License Details

Name	PERKOSKI, JULIANNE
License Number	0402026174
License Description	Professional Engineer License
Rank	Professional Engineer
Address	HAMPTON, VA 23669
Initial Certification Date	1995-06-13
Expiration Date	2015-06-30

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: TROY CARTER, PE, SENIOR PROJECT MANAGER	
b. Project Assignment: DESIGN BUILD PROJECT MANAGER	
c. Name of Firm with which you are now associated: THE LANE CONSTRUCTION CORPORATION	
<p>d. Employment History: With this Firm <u>10</u> Years With Other Firms <u>10</u> 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, 2013–Present, Senior Project Manager. Mr. Carter, a registered licensed PE in North Carolina, serves as Senior Project Manager for LANE on large complex D-B projects in the Mid-Atlantic. He is responsible for overall management of the design, project development from beginning to end, construction, quality, safety, and contract administration on these projects. He provides strategic planning and execution for projects, provides leadership for 20 plus superintendents and engineers, and works with design and construction teams on innovative techniques and means and methods. He organizes and assigns equipment, personnel, and subcontractor resources to execute each project. He leads and implements safety initiatives to ensure a safe working environment at all times, establishes project objectives, policies, procedures and performance standards, sets and monitors budgets, and assures that a quality management system is in place.</p> <p>The Lane Construction Corporation, 2005–2012, Project Manager. As Project Manager, Mr. Carter was responsible for project management and development of CPM schedule, managing numerous projects throughout North and South Carolina and the construction schedule, project buyout, and construction of pre-stressed girders and steel beams. Negotiated with SCDOT, NCDOT and FHWA on all matters and additionally coordinated with City of Columbia, River Alliance, SCE&G, Inc. AT&T, US Army Corp of Engineers, DHEC, SHPO, and FHWA on projects as needed. He supervised/managed environmental obligations, all subcontractors’ activities, and installation of underground sanitary, watermain and storm in phases.</p> <p>AMES Construction Corporation, Inc., 2002–2005. Project Manager. Mr. Carter was responsible for development of CPM schedule (maintenance and updates), management of construction schedule and project buyout, contract change orders (estimate and negotiate); and managed all subcontractor activities.</p> <p>Martin K. Eby, Pre–2002, Project Manager/Project Engineer. As PM, Mr. Carter was responsible for project engineering and planning for bridge construction, formwork design and coordination, developing construction schedule and project layout, and assisted the Project Superintendent with field leadership. He supervised/managed work crews and subcontractors on projects with interstate construction, utility relocation, major concrete paving, bridges, earthwork, and environmental controls.</p>	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Southern Illinois University at Edwardsville (SIUE), IL / B.S. / 1995 / Civil Engineering	
f. Active Registration: Year First Registered/ Discipline/VA Registration #: PE / NC / #032649	
<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>	
NCDOT, I-85 Widening, Cabarrus County, NC (DESIGN-BUILD)	
Name of Firm: The Lane Construction Corporation	Project Role: Project Manager
Beginning Date: 2012	End Date: 2014
<p>Specific Responsibilities: As Project Manager for this D-B project, Mr. Carter was responsible for the overall project design and construction. He supervised and managed 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. Carter ensured all contract obligations were met and successfully avoided and/or resolved disputes in accordance with contract documents. He was 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. His responsibilities also encompassed all the required retaining and noise walls, storm drainage, foundations, embankments, slopes and temporary structures. Mr. Carter also coordinated public outreach and public meetings. <i>Mr. Carter worked with HDR and proposed DM, Mr. Kempf on this project.</i></p> <p>Project Relevance: This \$125M D-B project consisted of widening approximately seven miles of I-85 from four to eight lanes and improvements to roads around the Bruton Smith Boulevard interchange. Similar to I-64 Segment II, this section of roadway required widening in order to reduce traffic congestion. This segment of roadway also encompassed two popular attraction destinations: Charlotte Motor Speedway and Concord Mills Mall, (North Carolina’s No. 1 visitor attraction). For this project, LANE removed</p>	

the deteriorated pavement of a four-lane divided highway and replaced and extended it with eight lanes of new concrete pavement. LANE designed and constructed an interchange and Y-lines and service roads to improve access to I-85. Additional similarities to the I-64 Segment II project included: interstate rehabilitation; phased construction; total pavement replacement; median widening; 120,000 ADT; median access during construction; worked within the existing Interstate right of way; utility and other third-party coordination; public involvement; adjacent project coordination. The innovative MOT plan involved constructing a temporary two-span bridge over I-85 near the project's on-site pavement plant, with ramps down to the median, allowing access to the median construction zones of the project, and later access to the outside construction zones, unimpeded by existing traffic.

NCDOT, I-485/I-85 Interchange and Widening, Charlotte, NC (DESIGN-BUILD)

Name of Firm: The Lane Construction Corporation	Project Role: Project Manager
Beginning Date: 2012	End Date: February 2015

Specific Responsibilities: As Project Manager for this D-B project, Mr. Carter was responsible for the overall project design and construction. He supervised and managed 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. Carter ensured all contract obligations were met and successfully avoided and/or resolved disputes in accordance with contract documents. Mr. Carter was responsible for directing and managing the project management team, coordinating with and monitoring contract progress with the Owner and subcontractors and overseeing the overall safety and QC programs.

Project Relevance: This \$98.7M D-B project consisted of the design and construction of the widening of I-85 and the interchange of I-85 and I-485 (Charlotte Outer Eastern Loop). The existing I-85/I-485 Interchange was modified to a turbine interchange that utilizes smaller, single-span bridges, smaller columns and flatter roadway profiles. This innovative two-level turbine interchange allowed for a significant reduction of earthwork eliminating the need to haul material from off-site and drastically reducing costs by approximately \$40M. The reduction in hauling reduced wear on existing infrastructure and the project's impact on traffic congestion, improving safety for the traveling public. "Roads and Bridges" magazine named the I-85/I-485 turbine interchange the #1 road project in North America for 2012. Innovative design reduced environmental, ROW and utility impacts. Similarities to the I-64 Segment II project included: interstate rehabilitation; phased construction; pavement replacement; roadway widening; 120,000 ADT; working within the existing Interstate right of way; utility and other third-party coordination; public involvement; adjacent project coordination.

SCDOT, US-17 ACE Basin Bridge, Greenpond, SC (DESIGN-BUILD)

Name of Firm: The Lane Construction Corporation	Project Role: Project Manager
Beginning Date: 2010	End Date: 2013

Specific Responsibilities: As Project Manager for this D-B project, Mr. Carter was responsible for the overall project design and construction. He supervised and managed 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. Carter ensured all contract obligations were met and successfully avoided and/or resolved disputes in accordance with contract documents. Mr. Carter was responsible for directing and managing the project management team, coordinating with and monitoring contract progress with the Owner and subcontractors and overseeing the overall safety and QC programs. He facilitated communication among team partners and coordinated with personnel on adjacent projects. Mr. Carter's interactions from design through construction included leading project meetings to discuss all aspects of the project, verifying that Owner specifications were followed in design through construction, and participating in constructability reviews.

Project Relevance: This \$76M D-B project consisted of widening over 14 miles of the existing road into a four-lane divided highway with three bridges. The project also included limited roadway improvements to SC Route 303, SC Route 64 and various secondary and local roads to accommodate the widening. LANE handled all the components of the contract, including design and construction, traffic control, hot mix asphalt, cement treated base, signals, drainage, excavation, guardrail, pavement markings, box culvert, subsurface weeps, surcharge, right-of-way services and acquisition, railroad coordination and utility relations/community outreach efforts for the project. Construction included three bridges, including one over the Ashpoo River and one over the CSX railroad. Like the I-64 Segment II project, this project included: roadway widening; phased construction; extensive coordination with CSX Railroad; adjacent project coordination; public relations coordination with the surrounding community.

NCDOT, I-95 at US-74 Maxton Bypass, Robeson County, NC (DESIGN-BUILD)

Name of Firm: The Lane Construction Corporation	Project Role: Project Manager
Beginning Date: 2005	End Date: 2009

Specific Responsibilities: As Project Manager for this D-B project, Mr. Carter was responsible for the overall project design and construction. He supervised and managed 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. Carter ensured all contract obligations were met and successfully avoided and/or resolved disputes in accordance with contract documents. Mr. Carter was responsible for directing and managing the project management team, coordinating with and monitoring contract progress with the Owner and subcontractors and overseeing the overall safety and QC programs. Mr. Carter also developed and maintained NCDOT reclamation plans for borrow sources. He tracked job cost, negotiated with the Owner on all matters, supported GPS dozers and survey crews as needed, and coordinated and supported traffic control operations as needed. **Mr. Carter worked with HDR and proposed DM, Mr. Kempf on this project.**

Project Relevance: This \$108M construction project consisted of 11 miles of new roadway, including 6 million CY of borrow, 500,000 TN of asphalt, construction of 7 bridges, and a major interchange with I-95 in Robeson County. The project required extensive MOT which included multiple phases of construction to accommodate new ramps, collector-distributor roadways, and multiple bridges in a physically constrained, high ADT environment.

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. Carter 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: TROY CARTER, PE, SENIOR PROJECT MANAGER	
b. Project Assignment: RESPONSIBLE CHARGE ENGINEER	
c. Name of Firm with which you are now associated: THE LANE CONSTRUCTION CORPORATION	
d. Employment History: With this Firm <u>10</u> Years With Other Firms <u>10</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): <p>The Lane Construction Corporation, 2013–Present, Senior Project Manager. Mr. Carter, a registered licensed PE in North Carolina, serves as Senior Project Manager for LANE on large complex D-B projects in the Mid-Atlantic. He is responsible for overall management of the design, project development from beginning to end, construction, quality, safety, and contract administration on these projects. He provides strategic planning and execution for projects, provides leadership for 20 plus superintendents and engineers, and works with design and construction teams on innovative techniques and means and methods. He organizes and assigns equipment, personnel, and subcontractor resources to execute each project. He leads and implements safety initiatives to ensure a safe working environment at all times, establishes project objectives, policies, procedures and performance standards, sets and monitors budgets, and assures that a quality management system is in place.</p> <p>The Lane Construction Corporation, 2005–2012, Project Manager. As Project Manager, Mr. Carter was responsible for project management and development of CPM schedule, managing numerous projects throughout North and South Carolina and the construction schedule, project buyout, and construction of pre-stressed girders and steel beams. Negotiated with SCDOT, NCDOT and FHWA on all matters and additionally coordinated with City of Columbia, River Alliance, SCE&G, Inc. AT&T, US Army Corp of Engineers, DHEC, SHPO, and FHWA on projects as needed. He supervised/managed environmental obligations, all subcontractors’ activities, and installation of underground sanitary, watermain and storm in phases.</p> <p>AMES Construction Corporation, Inc., 2002–2005. Project Manager. Mr. Carter was responsible for development of CPM schedule (maintenance and updates), management of construction schedule and project buyout, contract change orders (estimate and negotiate); and managed all subcontractor activities.</p> <p>Martin K. Eby, Pre–2002, Project Manager/Project Engineer. As PM, Mr. Carter was responsible for project engineering and planning for bridge construction, formwork design and coordination, developing construction schedule and project layout, and assisted the Project Superintendent with field leadership. He supervised/managed work crews and subcontractors on projects with interstate construction, utility relocation, major concrete paving, bridges, earthwork, and environmental controls.</p>	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Southern Illinois University at Edwardsville (SIUE), IL / B.S. / 1995 / Civil Engineering	
f. Active Registration: Year First Registered/ Discipline/VA Registration #: PE / NC / #032649	
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.	
NCDOT, I-85 Widening, Cabarrus County, NC (DESIGN-BUILD)	
Name of Firm: The Lane Construction Corporation	Project Role: Project Manager
Beginning Date: 2012	End Date: 2014
<p>Specific Responsibilities: As PM, Mr. Carter was responsible for the project design and construction. Mr. Carter was fully integrated among the project team which included subcontractors and subconsultants. He provided supervisory direction on engineering decisions during construction. Mr. Carter was knowledgeable and proficient on engineering decisions related to design and/or construction. Mr. Carter communicated regularly with the Owner and had authority to act on behalf of LANE and shut down the project (not necessary on this project). Mr. Carter also ensured that engineering services were performed by qualified and licensed professionals and that plans were signed and sealed by such qualified professionals consistent with applicable licensing regulations by the North Carolina Board of Examiners for Engineers and Surveyors (NCBELS). Mr. Carter communicated frequently with the DM, CM and Quality persons. Mr. Carter worked with HDR and proposed DM, Mr. Kempf.</p> <p>Project Relevance: This \$125M D-B project consisted of widening approximately seven miles of I-85 from four to eight lanes and improvements to roads around the Bruton Smith Boulevard interchange. Similar to I-64 Segment II, this section of roadway required widening in order to reduce traffic congestion. This segment of roadway also encompassed two popular attraction destinations: Charlotte Motor Speedway and Concord Mills Mall, (North Carolina’s No. 1 visitor attraction). For this project, LANE removed</p>	

the deteriorated pavement of a four-lane divided highway and replaced and extended it with eight lanes of new concrete pavement. LANE designed and constructed an interchange and Y-lines and service roads to improve access to I-85. Additional similarities to the I-64 Segment II project included: interstate rehabilitation; phased construction; total pavement replacement; median widening; 120,000 ADT; median access during construction; worked within the existing Interstate right of way; utility and other third-party coordination; public involvement; adjacent project coordination. The innovative MOT plan involved constructing a temporary two-span bridge over I-85 near the project's on-site pavement plant, with ramps down to the median, allowing access to the median construction zones of the project, and later access to the outside construction zones, unimpeded by existing traffic.

NCDOT, I-485/I-85 Interchange and Widening, Charlotte, NC (DESIGN-BUILD)

Name of Firm: The Lane Construction Corporation	Project Role: Project Manager
Beginning Date: 2012	End Date: February 2015

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

Project Relevance: This \$98.7M D-B project consisted of the design and construction of the widening of I-85 and the interchange of I-85 and I-485 (Charlotte Outer Eastern Loop). The existing I-85/I-485 Interchange was modified to a turbine interchange that utilizes smaller, single-span bridges, smaller columns and flatter roadway profiles. This innovative two-level turbine interchange allowed for a significant reduction of earthwork eliminating the need to haul material from off-site and drastically reducing costs by approximately \$40M. The reduction in hauling reduced wear on existing infrastructure and the project's impact on traffic congestion, improving safety for the traveling public. "Roads and Bridges" magazine named the I-85/I-485 turbine interchange the #1 road project in North America for 2012. Innovative design reduced environmental, ROW and utility impacts. Similarities to the I-64 Segment II project included: interstate rehabilitation; phased construction; pavement replacement; roadway widening; 120,000 ADT; working within the existing Interstate right of way; utility and other third-party coordination; public involvement; adjacent project coordination.

SCDOT, US-17 ACE Basin Bridge, Greenpond, SC (DESIGN-BUILD)

Name of Firm: The Lane Construction Corporation	Project Role: Project Manager
Beginning Date: 2010	End Date: 2013

Specific Responsibilities: As Project Manager, Mr. Carter was responsible for the project design and construction. Mr. Carter was fully integrated among the project team which included subcontractors and subconsultants. He provided supervisory direction on engineering decisions during construction. Mr. Carter was knowledgeable and proficient on engineering decisions related to design and/or construction. Mr. Carter communicated regularly with the Owner and had authority to act on behalf of LANE and shut down the project (not necessary on this project). Mr. Carter also ensured that engineering services were performed by qualified and licensed professionals and that plans were signed and sealed by such qualified professionals consistent with applicable licensing regulations by the South Carolina Department of Labor, Licensing and Regulation. Mr. Carter communicated frequently with the DM, CM and Quality personnel.

Project Relevance: This \$76M D-B project consisted of widening over 14 miles of the existing road into a four-lane divided highway with three bridges. The project also included limited roadway improvements to SC Route 303, SC Route 64 and various secondary and local roads to accommodate the widening. LANE handled all the components of the contract, including design and construction, traffic control, hot mix asphalt, cement treated base, signals, drainage, excavation, guardrail, pavement markings, box culvert, subsurface weeps, surcharge, right-of-way services and acquisition, railroad coordination and utility relations/community outreach efforts for the project. Construction included three bridges, including one over the Ashpoo River and one over the CSX railroad. Like the I-64 Segment II project, this project included: roadway widening; phased construction; extensive coordination with CSX Railroad; adjacent project coordination; public relations coordination with the surrounding community.

NCDOT, I-95 at US-74 Maxton Bypass, Robeson County, NC (DESIGN-BUILD)

Name of Firm: The Lane Construction Corporation	Project Role: Project Manager
Beginning Date: 2005	End Date: 2009

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

Mr. Carter worked with HDR and proposed DM, Mr. Kempf on this project.

Project Relevance: This \$108M construction project consisted of 11 miles of new roadway, including 6 million CY of borrow, 500,000 TN of asphalt, construction of 7 bridges, and a major interchange with I-95 in Robeson County. The project required extensive MOT which included multiple phases of construction to accommodate new ramps, collector-distributor roadways, and multiple bridges in a physically constrained, high ADT environment.

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. Carter 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: **JULIE PERKOSKI, PE, REGIONAL DIRECTOR AND SENIOR PROJECT 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 <1 Years With Other Firms 30 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):

CES-Consulting, Inc. 2015-Present, Regional Director and Senior Project Manager. Ms. Perkoski is the Regional Director for the Hampton Roads area and is responsible for providing quality. She also manages the staff of 4 inspectors and one design engineer in the Hampton Roads Area. This staff provides quality assurance services, VDOT independent assurance inspection and bridge design services on various VDOT projects. She is thoroughly familiar with VDOT *Minimum Requirements for Quality Assurance and Quality Control on Design-Build and P3 Projects, January 2012*. Ms. Perkoski currently serves as Quality Assurance Manager (QAM) on a project for Chesterfield County, VA.

Parsons Brinckerhoff, Inc. 1993-2015, Assistant Vice President and Project Manager. Ms. Perkoski served as Quality Assurance Manager (QAM), providing quality assurance services for various VDOT DB projects. She is thoroughly familiar with VDOT *Minimum Requirements for Quality Assurance and Quality Control on Design-Build and P3 Projects, January 2012*. She also has experience as a Project Lead Construction Engineer, providing construction management and design services for numerous highway, airport, military, governmental, recreational, and residential facilities. She has extensive VDOT experience in the Hampton Roads region. Managed the construction inspection staff of 10 inspectors in the Hampton Roads area, and performed company project management duties for project invoicing and cost control. Also assisted in development of bridging documents, project controls (Constructability, Bid ability, Scheduling and Risk analysis).

e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:
Pennsylvania State University, University Park, PA / B.A.E. / 1985 / Architectural Engineering

f. Active Registration: Year First Registered/ Discipline/VA Registration #:
1998 / Professional Engineer / VA #0402027950
Virginia DCR Erosion & Sediment Control Contractor Certification #2752 (Expiration 11/30/2015)

g. Document the extent and depth of experience and qualifications relevant to the Project.
 1. *Note your specific responsibilities and authorities for each project, not those of the firm.*
 2. *Note whether experience is with current firm or with other firm.*
 3. *Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.*

(List at least three (3), but no more than five (5) relevant projects for which you have performed a similar function.)*On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.

VDOT Elizabeth River Tunnels Project, Portsmouth, VA		(DESIGN-BUILD)	
Name of Firm:	Parsons Brinckerhoff	Project Role:	Manager of Design Construction Services
Beginning Date:	2012	End Date:	2015

Specific Responsibilities: Ms. Perkoski’s responsibilities included assisting in the Quality Assurance review of the design documents, designing the ITS layout for the project, managing the RFI and shop drawing reviews, and coordinating with the project design team and contractor to ensure the RFI and shop drawing reviews were correct and timely. Ms. Perkoski was responsible for the quality assurance (QA) inspection and testing of all materials used and work performed on the project, which included monitoring of the contractor's quality control (QC) program. She ensured that all work and materials, testing, and sampling were performed in conformance with the contract requirements, plans, and specifications.

Project Relevance: Ms. Perkoski served as manager of the design construction services for this \$2.1B D-B, P3 project. The project included the design and construction of a new Midtown Tunnel, rehabilitation of the existing Midtown and Downtown Tunnels and design and construction of the new MLK extension, which is an elevated roadway connection to I-264. The project scope included major road construction from Hampton Blvd. and Brambleton Blvd. to the Norfolk approach of the Midtown Tunnel, from existing MLK Expressway and Rt. 164 to the Portsmouth approach of the Midtown Tunnel, and major road and bridge construction of the new MLK Expressway extension.

VDOT I-295 Widening/Interchange at Meadowville Road, Chesterfield County, VA		(DESIGN-BUILD)	
Name of Firm:	Parsons Brinckerhoff	Project Role:	Quality Assurance Manager (QAM)
Beginning Date:	2010	End Date:	2012
<p>Specific Responsibilities: Ms. Perkoski was the Quality Assurance Manager (QAM) for the Meadowville Road Interchange project which included the design and construction of the new diamond interchange at I-295 and Meadowville Road in Chesterfield County, which consisted of new ramps from the Meadowville Road overpass to and from I-295, with widening of the interstate to accommodate the new ramps. Her responsibilities included: the development of the QA/QC Manual; managed daily quality assurance operations; monitored and reviewed inspection diaries; ensured material testing was performed in accordance with the project specifications; and worked with the contractor, engineer, and VDOT to resolve construction issues.</p> <p>Project Relevance: Ms. Perkoski served as the QAM for this project, the same role as proposed for the I-64 Capacity Improvements project. This project has several similarities to the I-64 Segment II project that included: interstate widening, stormwater management, and utility relocation. The project was a D-B project for VDOT in Richmond.</p>			
Route 60 Widening, Chesterfield, VA		(DESIGN-BUILD)	
Name of Firm:	CES-Consulting, Inc.	Project Role:	Quality Assurance Manager (QAM)
Beginning Date:	2015	End Date:	Present
<p>Specific Responsibilities: Ms. Perkoski responsibilities include development of the project QA/QC plan, overseeing the Design QA/QC processes, managing daily quality assurance operations; monitoring and reviewing inspection diaries; ensuring material testing was performed in accordance with the project specifications; and working with the contractor, design engineer, and Chesterfield County to resolve construction issues.</p> <p>Project Relevance: The project consists of corridor widening from 4 to 6 lanes and includes construction of bridges and widening of existing bridges, ROW acquisition, utility relocation, major storm drainage and stormwater management facilities, roadway pavement structure. This congested route is being constructed while maintaining all existing lanes open during daytime hours, to minimize the impacts to traffic.</p>			
VDOT I-66 Advanced Traffic Management System (ATMS), Prince William & Fairfax Counties, VA		(DESIGN-BUILD)	
Name of Firm:	Parsons Brinckerhoff	Project Role:	Quality Assurance Manager (QAM)
Beginning Date:	2013	End Date:	March 2015
<p>Specific Responsibilities: The scope of this project included shop drawing submittals and installation of numerous ITS & lane control sign structures along the corridor to better manage and enhance the traffic flow during peak and non-peak hours. Other responsibilities included: managing daily quality assurance for concrete foundation, conduit installation and ITS operations; monitoring and reviewing inspection diaries; ensuring material testing was performed in accordance with the project specifications; and working with the contractor, engineer, and VDOT to resolve construction issues that were impacting the cost and schedule of the project. Assisted the Department in prioritizing the schedule for the portions of the I66 corridor that needed the functioning of the ATM System the most. As QAM, Ms. Perkoski has been responsible for the overall administration of the project QA Plan.</p> <p>Project Relevance: Ms. Perkoski served as Quality Assurance Manager (QAM) for this project on I-66 in Fairfax and Prince William Counties, one of the busiest thoroughfares in northern Virginia. She was responsible for overseeing the development of the QA/QC plan for the project. This project has several similarities to the I-64 Capacity Improvements Segment II project including: interstate shoulder widening, interstate MOT, utility relocations, day and night operations, coordination with D-B manager and VDOT project manager, project documentation, foundations, project material certifications and ITS installations.</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 anticipated duration of each assignment. N/A. Ms. Perkoski 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: GREGORY A. KEMPF, PRINCIPLE PROJECT MANAGER	
b. Project Assignment: DESIGN MANAGER	
c. Name of Firm with which you are now associated: HDR ENGINEERING, INC.	
d. Employment History: With this Firm <u>18</u> Years With Other Firms <u>9</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): HDR Engineering, Inc., 1996–Present, Principle Project Manager. Mr. Kempf, a licensed PE in Virginia, serves as a project manager in HDR’s design-build practice. He has worked as the design manager, production manager, or design director on multiple design-build projects since the late 1990’s. Mr. Kempf joined HDR eighteen years ago, and is an active member of the Design-Build Institute of America. He is highly respected in the industry for his strong design and management capabilities. His diversified background includes managing large multi-discipline projects and design leadership in producing final design roadway and maintenance of traffic plans. In addition, Mr. Kempf has been responsible for traffic operations planning, traffic impact analyses, feasibility studies, access and circulation studies, and interchange modification reports. A twenty-eight year veteran in the industry, he also serves as HDR’s Eastern Regional Innovative Delivery Director, and is responsible for programming and strategic direction for tracking, pursuing and executing alternative delivery projects throughout the eastern United States.	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: North Carolina State University, Raleigh, NC / B.S. / 1990 / Civil Engineering	
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 2015 / PE / 0402054792	
g. Document the extent and depth of experience and qualifications relevant to the Project. 1. <i>Note your specific responsibilities and authorities for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.) *On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.	
NCDOT, I-85 Widening, Cabarrus County, NC (DESIGN-BUILD)	
Name of Firm: HDR Engineering, Inc.	Project Role: Design Director
Beginning Date: 2010	End Date: 2014
Specific Responsibilities: As the Design Director, Mr. Kempf was responsible for insuring the Design Manager and the design team adhered to all contract requirements of both the owner’s design-build contract and the professional services agreement with prime contractor LANE for this 7 mile, \$145M widening and reconstruction project. He was ultimately responsible to HDR for the successful design-side delivery of the project. Mr. Kempf was tasked with ensuring corporate quality and safety initiatives are strictly adhered to, and owner, contractor, and subcontractor obligations were met. He was also responsible for ensuring all necessary resources were made available to the design team, and the owner and contractor were satisfied with the work product produced by the design team.	
Project Relevance: Design management for Interstate rehabilitation; staged construction; total pavement replacement; design standard upgrades; median widening of; 120,000 DHV build year traffic volume; median access during construction; working within the existing Interstate right of way; utility and other third-party impacts; public involvement; emergency services impacts; adjacent project coordination. As part of creating the MOT plan for this project, Mr. Kempf was intimately involved in developing an award-winning median access plan. The plan entailed constructing a temporary two-span bridge over I-85 near the project’s on-site pavement plant, with ramps down to the median, allowing access to the median construction zones of the project, and later access to the outside construction zones, unimpeded by existing traffic. The temporary bridge and ramps were also utilized by emergency responders to bypass traffic backups enroute to and from incident sites. This design innovation was recognized by the State Highway Patrol as a critical safety enhancement during the course of construction. Mr. Kempf also helped develop another critical design innovation on this project involving bridge construction staging. Due to the limited space available in the median to perform staged construction activities, the roadway grade was raised by several feet at mainline-over bridge locations, and one girder line was removed from each existing bridge. The raised grades allowed just enough median area to overlap existing and proposed bridge decks and to perform two-phase bridge construction, in lieu of a much lengthier three-phase scheme. Time savings more than made up for the increased quantities and overall MOT became much less complex.	

NCDOT, I-77 Rehabilitation, Yadkin County, NC		(DESIGN-BUILD)	
Name of Firm:	HDR Engineering, Inc.	Project Role:	Design Manager
Beginning Date:	2007	End Date:	2009
<p>Specific Responsibilities: As the Design Manager, Mr. Kempf was responsible for implementing all required FHWA and NCDOT design standards and coordinating all design disciplines and activities in a timely fashion with prime contractor LANE for this 7 mile \$59M Interstate reconstruction project. He was also responsible for leading and coordinating interdisciplinary and constructability reviews, design and permitting schedule compliance, and managing design services during construction. Additional responsibilities included contract compliance, both owner-side and contractor-side, along with providing stakeholder and public information services. Finally, Mr. Kempf was also tasked with utility owner coordination, management of quality control reviews, coordination of quality assurance audits, and managing and coordinating the work product of multiple design subconsultants.</p> <p>Project Relevance: Multi-discipline design management, heavy ADT traffic and with time restrictions severely limiting allowable operations; staged construction; critical maintenance of traffic design; construction access restrictions; design within the existing right of way; stormwater design and permitting, bridge rehabilitation. As part of the design delivery, Mr. Kempf was instrumental in conceiving and delivering two critical innovative design features: the first included the jacking and rehabilitation of existing interchange bridges in-place, and the second was an MOT scheme that utilized final pavement designs on temporary traffic lanes in the median, which ultimately provided the owner with permanent 12' wide paved median shoulders for the entire length of the project in lieu of allowable 4' wide paved shoulders. These two schemes eliminated an entire phase of traffic maintenance and allowed the design-build team to deliver the project a full year ahead of the owner-specified construction duration. These design and construction innovations saved the owner millions of dollars and thousands of hours of traffic delay for the traveling public.</p>			
NCDOT, I-85 Yadkin Bridge Widening, Rowan and Davidson Counties, NC		(DESIGN-BUILD)	
Name of Firm:	HDR Engineering, Inc.	Project Role:	Design Director (HDR), QC
Beginning Date:	2010	End Date:	2013
<p>Specific Responsibilities: HDR was a major design subconsultant to prime designer STV, Inc. and performed all roadway, stormwater, erosion control, and MOT design for the project. As HDR's Design Director, Mr. Kempf was responsible for insuring HDR's Design Manager and the design team adhered to all contract requirements of both the owner's design-build contract with prime contractor LANE / Flatiron Construction Corporation JV and HDR's professional services agreement with the prime designer for this \$136M Interstate widening and improvement. He was ultimately responsible to HDR for the successful design-side delivery of the project. Mr. Kempf was tasked with ensuring corporate quality and safety initiatives are strictly adhered to, and owner, contractor, and subcontractor obligations were met. He was also responsible for ensuring all necessary resources were made available to the design team, and the owner and contractor were satisfied with the work product produced by the design team. Mr. Kempf also performed detailed QC, peer reviews, and interdisciplinary reviews throughout the project's design phase.</p> <p>Project Relevance: Design management for Interstate widening and rehabilitation; total pavement replacement; design standard upgrades; median widening; staged construction; 110,000 DHV build year traffic volume; construction access during construction; utility, railroad, and other third-party impacts and coordination; public involvement; emergency services impacts; mobility of the travelling public.</p>			
NCDOT, I-77 Widening and HOV, Mecklenburg County, NC		(DESIGN-BUILD)	
Name of Firm:	HDR Engineering, Inc.	Project Role:	Roadway and MOT Design Manager, Production Manager
Beginning Date:	2001	End Date:	2005
<p>Specific Responsibilities: As the Roadway and MOT Design Manager, Mr. Kempf was responsible for the final geometric design of the roadway plans and of the final MOT and staging plans for this \$80M, 9 mile Interstate widening, reconstruction and HOV lanes addition project for LANE. In his Production Manager role, Mr. Kempf was responsible for assuring that all design disciplines coordinated their work product and adhered to the project QC and documentation requirements per the project schedule.</p> <p>Project Relevance: design-build plan production; interdisciplinary reviews; staged construction; design management for Interstate widening and rehabilitation; design standard upgrades; median widening; 140,000 DHV build year traffic volume; construction access during construction; utility, railroad, and other third-party impacts and coordination; public involvement; emergency services impacts. Mr. Kempf was a key part of conceiving and designing an innovative median construction zone access plan where an existing bridge over I-77 was narrowed for existing traffic and the construction team was able to construct a median access ramp from the bridge to the median, allowing construction traffic access to the median construction zone away from existing traffic.</p>			
<p>a. 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. Kempf 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: ERVIN BELCHER, SUPERINTENDENT	
b. Project Assignment: CONSTRUCTION MANAGER	
c. Name of Firm with which you are now associated: THE LANE CONSTRUCTION CORPORATION	
d. Employment History: With this Firm 34 Years With Other Firms 3 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, Pre 2000–Present, Superintendent/Assistant Superintendent. Mr. Belcher serves as Project Superintendent for LANE for various D-B projects in the Mid-Atlantic ranging from \$10M to \$1.5B. He is responsible for the planning and supervision of work crews in the construction of bridges and ramps. His experience includes: Managing the D-B construction process; cost control tracking; field layouts; survey; form and false-work design; method analysis studies; and safety implementation for bridges. He is accountable for all project QC activities, CPM scheduling, submittals, RFIs; progress reports, and subcontractor coordination. He has control over constructability reviews with the designer and VDOT to ensure all work meets approved construction plans and specs. He leads and implements safety initiatives to ensure a safe working environment at all times, establishes project objectives, policies, procedures and performance standards, monitors budgets, and assures that a quality management system is in place. As Assistant Superintendent from 1999-2003, Mr. Belcher performed estimating duties including take-offs, spec review, work schemes, pricing of work schemes, pre-bid CPM scheduling, solicitation of quotes, and bid closeout. Mr. Belcher is a seasoned construction veteran with over 35 years of experience in bridge, road widening, paving, and grading and project/subcontractor coordination. He has extensive field management experience and has led Quality Control efforts, safety meetings and toolbox talks. Mr. Belcher has previous working experience with HDR, DBPM Troy Carter and DM Greg Kempf. Mr. Belcher will hold a DEQ RLD Certification and VDOT ESCCC prior to commencement of construction.	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Mansfield High School, PA / 1978	
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-495 Express Lanes, Fairfax County, VA (DESIGN-BUILD)	
Name of Firm:	The Lane Construction Corporation
Project Role:	Superintendent
Beginning Date:	2010
End Date:	2014
Specific Responsibilities: Mr. Belcher oversaw all entire field operations including GPS grading, traffic control, under drains and culvert installation, demolitions, and existing pavement removal. He coordinated subcontractors' schedules, created a progress schedule to maintain cost-effectiveness, earmarked safety issues and discussed with crews, calculated erosion control maintenance, and communicated effectively with quality control for inspections and daily routines. He was responsible and accountable for planning, scheduling, cost, D-B conformance and quality control (QC). He coordinated with and monitored contract progress with VDOT and subcontractors (including adherence to contractual requirements and specifications), and oversaw the overall safety and quality control programs.	
Project Relevance: Construction of four new Express traffic lanes (two in each direction) in the median of the existing lanes on the Capital Beltway. Work included the reconstruction of ramps, heavy maintenance of traffic effort, shoulder reconstructions, interchanges, frontage roads, bridge over and underpasses and bridge widening's, and pedestrian crossings. The Project encompassed the replacement of more than \$260M of aging infrastructure, including 12 interchanges and 58 bridges. Construction of the Project required close coordination with VDOT, MWAA, WMATA, local jurisdictions, businesses, community associations, and the traveling public. Like the I-64 Segment II project, the I-495 Express Lanes project consisted of extensive interstate widening, asphalt mill and overlay, shoulder reconstruction, ROW, geotechnical	

explorations, survey, road widening, hydraulics, QA/QC, structural bridge work, extensive MOT plans, utility relocation efforts and coordination with utility companies. Worked with numerous HDR personnel on this project.

TDOT, I-40 Widening, Wilson County, TN (DESIGN-BUILD)

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

Specific Responsibilities: Mr. Belcher was responsible and accountable for schedule, cost, D-B conformance, quality of structures being built, punchlist, backing up the shoulder after paving, reworking rock cut, and safety of crew. He secured major subcontracts and suppliers for elements such as structural steel, bridge bearings, S.I.P. formwork, reinforcing steel, foundation piling, demolition, and post and panel walls. He devised and implemented hazard analysis and safety procedures for crews and equipment, oversaw the QC program, and worked with the designer and owner to ensure materials used and work performed met contract requirements, design plans, and specifications.

Project Relevance: This \$57M project widened nine miles of I-40 from four lanes to eight lanes. The improvements included four 12-foot-wide travel lanes with one HOV lane in each direction, 10-foot-wide paved outside shoulders and 12-foot-wide paved inside shoulders. LANE converted two 3-span bridges (on for EB and one for WB) into one bridge. Both bridges were widened to the middle and widened on the outside to create the one bridge. Like the I-64 Segment II project, the I-40 Widening consisted of extensive interstate widening, asphalt mill and overlay, shoulder reconstruction, ROW, geotechnical explorations, survey, road widening, hydraulics, QA/QC, structural bridge work, extensive MOT plans, utility relocation efforts include past identification and data gathering, review of design concepts against existing utilities, determination of mitigation measures, and coordination with utility companies.

FDOT District 5, I-95 from SR-406 to North of SR-44, Brevard & Volusia Counties, FL (DESIGN-BUILD)

Name of Firm:	The Lane Construction Corporation	Project Role:	Superintendent
Beginning Date:	2014	End Date:	Current (

Specific Responsibilities: Mr. Belcher manages the day-to-day operations between excavation and embankment crews, paving and milling crews, bridge crews, pipe crews, and subcontractors. He is responsible and accountable for planning, scheduling, cost, D-B conformance and quality control (QC). He devises and implements hazard analysis and safety procedures for crews and equipment, and works with the designer and owner to ensure materials used and work performed met contract requirements, design plans, and specifications.

Project Relevance: This \$118M project involves the widening of the existing I-95 interstate highway from four lanes to six from south of SR 406 (Garden Street) to a half mile north of SR 44. Similar to the proposed I-64 Segment II this project includes new pavement, drainage system improvements, bridge widening and replacement, survey, QA/QC, hydraulics, public involvement/relations, soundwall construction, median barriers, signing and pavement markings, signalization, stormwater, and milling and resurfacing.

GDOT, I-20 Widening & Resurfacing, Augusta, GA

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

Specific Responsibilities: As Superintendent on this project, Mr. Belcher oversaw all entire field operations including the QC program, GPS grading, traffic control, under drains and culvert installation, demolitions, and existing pavement removal. He coordinated subcontractors' schedules, created a progress schedule to maintain cost-effectiveness, earmarked safety issues and discussed with crews, calculated erosion control maintenance, and communicated effectively with GDOT for inspections and daily routines. Mr. Belcher was responsible for ensuring all work conformed to the contract specifications.

Project Relevance: The Augusta I-20 project consisted of three miles of widening and reconstruction of I-20/SR 402 from four lanes to six and the reconstruction of two bridges. This \$52M contract for GDOT was designed to help handle the increased traffic of Georgia's second largest urban area. Like the I-64 Segment II project, the I-20 Widening consisted of shoulder reconstruction, ROW, geotechnical explorations, survey, road widening, hydraulics, QA/QC, structural bridge work, extensive MOT plans, utility relocation efforts include past identification and data gathering, review of design concepts against existing utilities, determination of mitigation measures, and coordination with utility companies.

NCDOT, I-540 Extension, Wake County, NC

Name of Firm:	The Lane Construction Corporation	Project Role:	Superintendent
Beginning Date:	2004	End Date:	2007

Specific Responsibilities: Mr. Belcher supervised and coordinated all field activities on the project. He monitored area utility work and marked existing lines. In addition, he determined daily, weekly, and monthly work progress needed to maintain on-time schedule. He was also responsible for and accountable for schedule, cost, contract conformance, quality of structures being built, QC program, safety of crew and overseeing subcontractors' work.

Project Relevance: This \$109M project consisted of two new consecutive sections of I-540 between US 55 and I-40. LANE cleared in excess of 200 acres, moved more than 1.9 million yards of excavation materials and 3.5 million metric tons of borrow and placed 110,000 tons of base course, 197,000 metric tons of asphalt and 115,000 cubic yards of concrete pavement. LANE also built 21 bridge structures, including box culverts and three stream realignments. Quantities included 110,332 yds of concrete paving.

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. **Mr. Belcher is currently assigned to the FDOT I-95 project. He will be available full-time/onsite when the start of construction begins for I-64 Segment II.**

**ATTACHMENT 3.3.1
KEY PERSONNEL RESUME FORM**

Brief Resume of Key Personnel anticipated for the Project.	
a. Name & Title: TIM RAYNER, PE, PTOE, LEAD TRANSPORTATION ENGINEER	
b. Project Assignment: MAINTENANCE OF TRAFFIC MANAGER	
c. Name of Firm with which you are now associated: PARSONS BRINCKERHOFF, INC.	
d. Employment History: With this Firm <u>7</u> Years With Other Firms <u>10</u> Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): Parsons Brinckerhoff, 2007-Present, Lead Transportation Engineer. Mr. Rayner is a Lead Transportation Engineer and performs a range of traffic and transportation planning services, including: maintenance of traffic design; development of transportation management plans in accordance with VDOT I&IM LD-241; transportation system congestion analysis; system performance measurement; micro/macro-modeling; analysis of traffic impacts; travel demand forecasting; multimodal interactions; operational/safety analysis; neighborhood traffic; and project planning and funding. Tim has successfully completed the Advanced Level, VDOT Work Zone Traffic Control training in accordance with Traffic engineering Memorandum TE-345. Mr. Rayner is proficient with the following software: CORSIM (Traffic Software Integration System), Highway Capacity Software 2010, Synchro, VISSIM, and AutoCad. City of Virginia Beach, July 2006 – August 2007. Mr. Rayner led a newly created Transportation Planning group within the Department of Public Works for the City of Virginia Beach. He was tasked with developing and determining methodologies, data sources, and techniques to identify transportation problems; developing performance measures and analyzing system performance data; analyzing the development of projects for transportation facilities and/or service improvements (including traffic signal corridor timing, traffic engineering and safety improvements). City of Virginia Beach, July 2004 – July 2006, Senior Engineer. Mr. Rayner was a senior engineer in the City’s Traffic Engineering Division, leading signal timing projects, conducting traffic studies at congested or high crash locations, reviewing traffic impact studies submitted by consultants, reviewing designs plans submitted by consultants on City Capital Improvement Program (CIP) projects, and other traffic engineering activities. City of East Lansing, July 2003 – June 2004, Traffic Engineering Administrator. As a traffic engineering administrator with the City of East Lansing, Mr. Rayner was responsible for all traffic engineering related activities (e.g., traffic studies, review of site related traffic studies, City Traffic Engineering rep. at regional meetings and design of City CIP projects). City of East Lansing, MI, February 2001 – July 2003, Senior Engineer. Mr. Rayner was the senior engineer under the Traffic Engineering Administrator performing traffic data analysis, congestion analysis and transportation planning services.. DLZ of Michigan, April 2000 – February 2001, Project Engineer. Mr. Rayner was a project engineer in the Public Works division of DLZ, including water mains, sanitary sewers, sanitary force mains, and other public works related projects.	
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: University of Wisconsin, Madison, WI/M.S./2005/Engineering Michigan State University, MI/ B.S./1997/Biosystems Engineering Lansing Community College, Lansing, MI/A.S./1993/Applied Science, Civil Technology	
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 2005 / Professional Engineer / VA #0402041012 2008 / Professional Traffic Operations Engineer	
g. Document the extent and depth of experience and qualifications relevant to the Project. 1. <i>Note your specific responsibilities and authorities for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List at least three (3), but no more than five (5) relevant projects for which you have performed a similar function.) *On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.	
VDOT Elizabeth River Tunnel, Portsmouth, VA (DESIGN-BUILD)	
Name of Firm: Parsons Brinckerhoff	Project Role: Traffic Operations Designer and Manager
Beginning Date: 2012	End Date: 2017
Specific Responsibilities: Mr. Rayner served as the Traffic Operations Designer and Manager for preparation of the TMP, MOT plans, traffic signal design, signing and pavement marking, as well as design and integration of the entire ITS system for this important connection through the existing and new Mid-Town tunnels and hurricane evacuation route. Mr. Rayner was engaged in this project from conceptual phase through final design, is the Engineer of Record for specific MOT Plans, traffic signals, and the ITS Plans. Mr. Rayner remains deeply involved throughout the construction period and continues to provide design support during the construction phase of the project. Part of this design report is developing MOT and detours along	

regional routes, including working with VDOT to develop traffic information to disseminate to the public.

Project Relevance: For this project Mr. Rayner was responsible for developing a living Transportation Management Plan (TMP) tailored to numerous design package submittals. Mr. Rayner oversaw the design and traffic aspects of any necessary revisions to the TMP to assist the Contractor in increasing efficiency of traffic flows, public safety and construction efficiency. The TMP covers multiple detour routes along urban arterials through Portsmouth, Norfolk and on VDOT facilities. Final Plans for signing and pavement marking, traffic signal design, and ITS were completed over a period of several months and designed concurrently with other disciplines not typical in a design/bid/build project, requiring consistent coordination to ensure that design package submittals were accurate and on schedule. **The design for this project is complete.** Construction is scheduled for completion in 2017.

US 17 (Dominion Boulevard) Widening, Chesapeake, VA

Name of Firm: Parsons Brinckerhoff	Project Role: Traffic Operations Designer and Manager
Beginning Date: 2009	End Date: 2012

Specific Responsibilities: Mr. Rayner served as the Traffic Operations Designer and Manager for the maintenance of traffic design, traffic signal design, temporary traffic signal design, and signing and pavement marking for the design and construction of this project. Mr. Rayner is continuing to provide design support during the construction phase of the project.

Project Relevance: Mr. Rayner developed a phased TMP/MOT plan to construct grade separated interchanges while maintaining existing traffic flows at the major intersections with US 17 and several arterial City streets. Each phase of construction was analyzed to minimize impacts to traffic operations. Changes to existing overhead and arterial guide signs were developed for each phase, including through the complex adjacent interchange with Rte 17, I-64, and Chesapeake Expressway to avoid driver confusion due to changing traffic patterns during construction. Plans included the design of temporary signals for each phase of use. Permanent signals were also designed for arterials adjacent to the project. **The design for this project is complete.** Construction is scheduled for completion in 2017.

VDOT Meadowville Road / I-295, Chesterfield, VA (DESIGN-BUILD)

Name of Firm: Parsons Brinckerhoff	Project Role: Traffic Operations Designer/Manager
Beginning Date: 2009	End Date: 2014

Specific Responsibilities: Mr. Rayner served as the Lead Traffic Engineer for the preliminary and final design phases of this fast-tracked interstate design-build project, which included the design of MOT along I-95 and TMP development.

Project Relevance: Parsons Brinckerhoff served as the lead designer providing interchange design, Maintenance of Traffic design and construction engineering inspection services for this design-build project to construct a new interchange at Meadowville Road and Interstate 295 in Chesterfield, VA. This high profile project provides interstate access to the Meadowville Technology Park and was delivered on a fast track basis using D-B delivery.

VDOT Route 60 Widening - Midlothian Turnpike, Chesterfield, VA (DESIGN-BUILD)

Name of Firm: Parsons Brinckerhoff	Project Role: Traffic Operations Design Manager
Beginning Date: 2015	End Date: Present

Specific Responsibilities: Mr. Rayner is serving as the Traffic Operations Manager for the Route 60 Widening project. He is responsible for the maintenance of traffic, traffic signal design, and signing and pavement marking for the design and construction of this project.

Project Relevance: This project features the widening of Route 60 from a 4 lane divided highway, with bifurcated profiles, to a 6 lane divided highway with bifurcated profiles. This congested route is being constructed while maintaining all existing lanes open during daytime hours, to minimize the impacts to traffic. This effort is made more complex due to the bifurcation which creates significant grade differentials, eliminating the use of crossovers as part of MOT. In addition, bridge work, utilities, and historic landmarks limit where temporary pavement can be utilized. Lane closures are allowed at night, but must be reopened at the beginning of each day. These constraints together lead to a complex MOT plan and requires close coordination with the development of the SOC, minimizing impacts to traffic, maximizing work zone safety, with the efficiency of a D-B project.

New York Avenue Bridge over CSX Traffic Management Plan (TMP), District of Columbia

Name of Firm: Parsons Brinckerhoff	Project Role: Traffic Operations Designer and Manager
Beginning Date: 2010	End Date: 2012

Specific Responsibilities: Mr. Rayner served as the Traffic Operations Engineer for the New York Ave TMP project between I-395 and 295; he was responsible for the operational analysis of New York Avenue and surrounding area for multiple scenarios. The scenarios were based on detours and road closures schedules of 6 major construction projects along New York Ave.. Analysis determined the impacts of the projects and project schedules were adjusted to minimize impacts.

Project Relevance: This extensive TMP required the coordination of MOT schedules of individual projects with different contractors to determine when closures and detours were to occur. Working with the client, project schedules were revised based on the results of the analysis. While lanes were to remain open on New York Avenue and impacts minimized, the large volume of traffic was still impacted by the construction. Therefore, alternate routes were developed and coordinated with any projects that were scheduled along those alternate routes. This information was disseminated to the public through an extensive outreach program which included incentives to commuters to utilize alternate modes of travel.

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. Rayner is not required on-site full-time.**

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.

Similar Scope of Work:	PROJECT SCOPE	
<ul style="list-style-type: none"> • Design-Build with HDR • 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 with other Active Construction Projects Within the Vicinity of the Project Site 	RELEVANT PROJECT ELEMENTS TO I-64 SEGMENT II	
Personnel on Project:	<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 concrete pavement. Improvements to area roads and interchanges were also performed, including two diverging diamond intersections and a super street. Similar to the I-64 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 interstate corridor widening in the median, 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>LANE/HDR Team: LANE and HDR partnered to design and construct this important NCDOT project. Troy Carter (proposed DBPM) and Greg Kempf (proposed DM) were both involved in this project performing similar roles to their positions on I-64 Segment II.</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/HDR 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>	
EVIDENCE OF PERFORMANCE		
<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>		

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-495 EXPRESS LANES Fairfax County, VA DESIGN-BUILD	HNTB (HDR: I-495/DTR Interchange)	Name of Client./ Owner: VDOT Phone: 540.829.7500 Project Manager: John Lynch, P.E. Phone: 540.829.7512 Email: John.Lynch@vdot.virginia.gov	12/20/2012	11/16/2012	\$1,346,560	\$1,481,670	\$642,000

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

Similar Scope of Work:	PROJECT SCOPE	
<ul style="list-style-type: none"> • Design-Build • Teamed with HDR • Roadways • Bridge Widening • Environmental • Geotechnical/Poor Soils • Right-of-Way • Hydraulics • Stormdrain and SWM • Demolition of Structures • Retaining Walls • Traffic Control Devices • Signs, Sign Structures, and Foundations • Transportation Management Plan • Traffic Maintenance and Management • Utilities • Stakeholder Coordination • Public Hearing and Public Involvement • QA/QC • Survey • Guardrail • Construction Engineering and Inspection • Project Management and Coordination with other Active Construction Projects Within the Vicinity of the Project Site 	RELEVANT PROJECT ELEMENTS TO I-64 SEGMENT II	
Personnel on Project:	<p>Construction of four new managed/HOV traffic lanes (two in each direction) in the median of the existing lanes on the Capital Beltway. Work included the reconstruction of ramps, heavy maintenance of traffic effort, shoulder reconstructions, interchanges, frontage roads, bridge over and underpasses and bridge widening's, and pedestrian crossings. The Project encompassed the replacement of more than \$260M of aging infrastructure, including 12 interchanges and 58 bridges. Construction of the Project required close coordination with VDOT, MWAA, WMATA, local jurisdictions, businesses, community associations, and the traveling public. Although only a 35% CJV member, LANE provided nearly all of the project supervision and workforce, plus all asphalt paving.</p> <p>LANE/HDR Team: LANE engaged the services of HDR for lead designer for the Dulles Toll Road/495 Interchange. The LANE/HDR Team developed and implemented many project innovations including the use of post and panel retaining walls in lieu of conventional concrete cantilever retaining walls; the use of MSE wall bridge abutments to reduce the steel girder spans; integral and semi-integral bridge abutments; recycling demolished existing concrete pavement; recycling existing asphalt pavements; and innovative MOT schemes which kept upwards of 300,000 cars per day moving safely and efficiently.</p> <p>Roadway: The I-495 Express Lanes project is one of the largest roadway projects constructed in the Commonwealth. Similar to the I-64 Segment II project, the I-495 Express Lanes project widened the existing roadway by constructing two new lanes in each direction in the median on a 14-mile stretch from the Springfield Interchange to just north of the Dulles Toll Road (approximately 56 lane miles). The Express Lanes project has similar scope elements including, roadway widening, box culvert extensions, ITS, ramp extensions, shoulder strengthening, work in high volume ADT's, sound barriers, complex MOT schemes and bridge widenings.. The team constructed three new access points and upgraded 12 key interchanges that increased capacity and mobility, improved driver safety and removed operational deficiencies, with minimal impact to the traveling public, residences, and businesses.</p> <p>Bridge and Structures: Similar to the bridges along I-64 Segment II, our Team widened several bridges on this project adjacent to high ADT count live traffic. Also similar to the I-64 Segment II bridge widenings, several of these bridge widening's were in poor soil conditions which our team mitigated through foundation design. LANE also devised an innovative phasing and design for the widening/replacement of the Rt. 7 Bridge over 495; the original plan consisted of building a temporary bridge to maintain traffic, however, our team decided that phased construction of the permanent bridge improved MOT and was more cost-effective. The original concept called for three-stage replacement of the bridges over the Beltway, but we were able to plan and execute ALL bridge replacements in two stages except for the Rt. 7 Bridge.</p> <p>Maintenance of Traffic: A key challenge on the I-495 Express Lanes project was accommodating extreme volumes of commuter, residential, and commercial vehicular traffic. The contract required the project to maintain the existing traffic during construction; affecting every phase of the planning, design, and construction. By conducting extensive traffic studies and through close coordination with VDOT and the local jurisdictions, our Team produced a number of innovative designs, work zone access methods, carefully planned lane shifts, and construction phasing sequences that helped to minimize disruption during construction. Additionally, the alignment of many of the existing bridges over the Beltway could not be shifted so new replacement bridges were built on the same footprint as the old structures. One of the significant challenges for this project was not starting daytime lane closures until after 9:30 am and having all four lanes of traffic open again at 3:30 pm. Overnight closures were similarly restricted and exceptions were rare – primarily for steel erection, where short-duration total closures were permitted. Lane fulfilled this requirement by not reducing traffic capacity during construction.</p> <p>Railroad Coordination: The project also included interfacing and crossing over existing WMATA Metro (Dulles Corridor Metrorail Project Phase 1) and Norfolk Southern tracks.</p> <p>Environmental: The project alignment traversed multiple wetlands, wooded areas, and state and county park lands, which required identification and protection of specimen trees on the project perimeter as well as wetland delineation, protection and conversion.</p> <p>Significant Economic Corridor: The Capital Beltway (I-495) was originally envisioned as primarily a bypass for long-distance eastern seaboard traffic to avoid driving directly through Washington, DC. However, the explosive growth both of housing and business in the Washington suburbs following the Beltway's completion quickly made the Beltway the area's "main street" for local traffic as well. Similar to I-64 Segment II, yet on a larger scale, numerous large shopping malls, community colleges, sports and concert stadiums, and corporate employment centers were purposely built adjacent to the Beltway, and these added greatly to the traffic, as has the passenger growth of regional airports accessed by the Beltway. I-495 Express Lanes cross several streets and busy state routes, and included interchange reconstruction on the nation's 4th ranked busiest highway, requiring intensive MOT planning and coordination to keep the congested traffic moving throughout construction.</p> <p>Public Outreach/Involvement: More than 2,000 public outreach meetings were conducted and, in coordination with VDOT, the Team kept the public involved through various media methods: project website, routine newsletters, and brochure mailings to residents and business.</p> <p>Safety: The I-495 Express Lanes project has been the recipient of numerous awards including a safety award for more than 5,000,000 manhours without a lost time incident in September 2012. Despite working alongside traffic in a limited area, with many key activities like bridge demolition and steel erection occurring at night, the construction team achieved a Total Recordable Incident Rate (TRIR) of 0.69, which ranks the project among the best heavy civil projects in the nation.</p>	
Personnel on Project:	<p>Ervin Belcher (LANE) Mike Leitch (LANE) Bernie Leitch (LANE) Wayne Lindsey (LANE) Chris Monahan (LANE) Michelle Teets (LANE)</p>	
EVIDENCE OF PERFORMANCE		
<p>"A solid experienced company that has built to standard and worked well under difficult traffic and space constraints to minimize impact on travel." - <i>Garrett Moore, P.E., VDOT Chief Engineer</i></p> <p>"Project was built over four years under traffic as high as 200,000 vpd and achieved 5 million safe work hours as of September 2012 without a lost time incident, making it among the safest heavy civil projects ever built in the U.S." - <i>Public Works Financing Newsletter, 12/2012</i></p> <p>"As the primary self-perform entity in the Flour-Lane Joint Venture, Lane has demonstrated outstanding ability to complete construction on time under these heavy traffic conditions," wrote Tim Steinhilber (General Manager, Capital Beltway Express, LLC)</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>		

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-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 HDR • Roadways • Traffic Maintenance and Management • Military Base Coordination • Shoulder Strengthening • Bridge Widening Adjacent to Interstate Traffic • 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. Although only a 35% CJV member, 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">Personnel on Project:</p> <table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td>Ervin Belcher (LANE)</td> <td>Mike Leitch (LANE)</td> </tr> <tr> <td>Bernie Leitch (LANE)</td> <td>Wayne Lindsey (LANE)</td> </tr> <tr> <td>Chris Monahan (LANE)</td> <td>Michelle Teets (LANE)</td> </tr> <tr> <td>Claudia Walsh (HDR)</td> <td>Tom Morreale (HDR)</td> </tr> <tr> <td>Ed Wolfson (HDR)</td> <td>Jesse Darden (HDR)</td> </tr> <tr> <td>Vijay Modi (HDR)</td> <td>Pieter Dahmen (HDR)</td> </tr> </table>	Ervin Belcher (LANE)		Mike Leitch (LANE)	Bernie Leitch (LANE)	Wayne Lindsey (LANE)	Chris Monahan (LANE)	Michelle Teets (LANE)	Claudia Walsh (HDR)	Tom Morreale (HDR)	Ed Wolfson (HDR)	Jesse Darden (HDR)	Vijay Modi (HDR)	Pieter Dahmen (HDR)
Ervin Belcher (LANE)	Mike Leitch (LANE)												
Bernie Leitch (LANE)	Wayne Lindsey (LANE)												
Chris Monahan (LANE)	Michelle Teets (LANE)												
Claudia Walsh (HDR)	Tom Morreale (HDR)												
Ed Wolfson (HDR)	Jesse Darden (HDR)												
Vijay Modi (HDR)	Pieter Dahmen (HDR)												

"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.

*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(b)
LEAD DESIGNER WORK HISTORY FORMS

ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/ general contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
I-85 Widening, Cabarrus County, NC DESIGN-BUILD	The Lane Construction Corporation	Name of Client./ Owner: NCDOT Project Manager: Rodger Rochelle Phone: 919.212.3250 Email: RdRochelle@dot.state.nc.us	08/2010	10/2014	\$125,000	\$145,000	\$9,300

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

<p align="center">Similar Scope of Work:</p> <ul style="list-style-type: none"> • Design-Build with LANE • Roadways • Interstate Median Widening • Staged Construction • Structures and Bridges • Environmental • Geotechnical • Bridge Hydraulics • Stormdrain and SWM • Demolition of Structures • Guardrail and Barrier • Retaining Walls • Construction Phasing and Access • Signs, Sign Structures, and Foundations • Transportation Management Plan • High ADT Maintenance of Traffic • Right-of-Way Acquisition Services • Utility Coordination and Relocation • Stakeholder Coordination • Public Involvement • QA/QC • Coordination with Adjacent D-B Projects 	<p align="center">PROJECT SCOPE</p> <p>This D-B project was a seven mile median widening of I-85 within the existing right of way from two lanes in each direction to four lanes in each direction, including three interchanges, two regulated stream crossings and other extensive side road improvements. The project required the complete replacement of all existing concrete pavement. Build year traffic was 120,000 vpd, which caused severe traffic congestion during peak hours and significant travel delays during other times of the day. The widening of I-85 was a critical, high-priority need for residents, businesses, and travelers in Mecklenburg and Cabarrus Counties, as well as an important economic development project for the Greater Charlotte Area. The ultimate facility has a variable median (22-foot minimum with barrier separation) and was designed to meet interstate standards for a 70-mph design speed rolling urban freeway. Just after project award, the owner directed a change in scope to add the design and construction of two diverging diamond interchanges (DDIs) at major side roads, extending the original contract completion date. The DDIs effectively extended the functional life of these interchanges by ten years, and are among the first designed and opened for traffic in NC. Superstreet design concepts were also included on the major side roads. HDR was the Prime Designer and design work was performed from the Raleigh, Charlotte, Rock Hill, Charleston (SC), Glen Allen, Norfolk, Portland (OR), Minneapolis and Tampa office locations.</p>					
<p align="center">Personnel on Project:</p> <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Greg Kempf (HDR)</td> <td style="border: none;">Claudia Walsh (HDR)</td> </tr> <tr> <td style="border: none;">Jesse Darden (HDR)</td> <td style="border: none;">Troy Carter (LANE)</td> </tr> </table>	Greg Kempf (HDR)		Claudia Walsh (HDR)	Jesse Darden (HDR)	Troy Carter (LANE)	<p align="center">RELEVANT PROJECT ELEMENTS TO I-64 SEGMENT II</p> <p>LANE/HDR Team: LANE and HDR partnered to design and construct this important NCDOT project. Troy Carter (proposed DBPM) and Greg Kempf (proposed DM) were both involved in this project performing similar roles to their positions on I-64 Segment II.</p> <p>High ADT Maintenance of Traffic: In order to reduce impacts to the travelling public and simplify this complex project to the extent practical, the design and contracting team jointly pursued the concept of reducing total MOT phases to only two. As part of this minimization of traffic impacts, the team developed an award-winning median access plan. The plan entailed constructing a temporary two-span bridge over I-85 near the project's on-site pavement plant and laydown yard, with ramps down to the median, allowing access to the median construction zones of the project for Phase I, and later, Phase II access to the outside construction zones unimpeded by existing traffic. The temporary bridge and ramps were also utilized by emergency responders to bypass traffic backups enroute to and from incident sites. This innovation was recognized by the State Highway Patrol as a vital safety enhancement during the course of construction.</p> <p>Another critical design innovation to allow use of a two phase MOT plan involved bridge construction staging. Due to the limited space available in the median to perform staged construction activities, the final roadway grade was raised by several feet at each mainline-over bridge location, and one girder line was removed from each existing bridge. The raised grade allowed just enough median space to overlap existing and proposed bridge end bents and perform a two-phase bridge construction, in lieu of a much lengthier three-phase scheme. Time savings more than made up for the increased quantities, overall MOT became much less complex, and total traffic delay experienced by the travelling public was greatly reduced.</p> <p>Environmental Impacts: The project required the acquisition of a Corps of Engineers Section 404 permit as well as State-level Water Quality and Stormwater Certification permits. Erosion control designs were prepared for the 25-year design storm event. The project impacted two streams which were listed on the 303(d) list of impaired waters due to turbidity and ecological/biological integrity. Environmental scientists worked closely with roadway, stormwater, and erosion control staff to ensure a design compliant with agency commitments and permit conditions, and the Section 404 permit was acquired within seven months. Scientists worked on-site during construction to assist with permit compliance activities and to phase-implement stormwater and erosion control devices.</p> <p>Geotechnical: The total replacement of old concrete pavement inevitably meant there were difficult subgrade conditions encountered throughout the I-85 footprint. The design team routinely developed site-specific plans to assist with subgrade remediation as each deficiency was uncovered during construction. Also, all bridges on the project were replaced, so the geotechnical design team had to develop foundation design and phasing plans to account for tight geometric constraints, MOT phasing, working in close proximity to existing traffic and the potential for vibration induced impacts both to existing bridges before they were removed from service and to earlier phases of the replacement bridges.</p> <p>Other: Utility coordination, wet-utility design, and side road ROW acquisition services were other critical parts of HDR's work product on this project.</p>
Greg Kempf (HDR)	Claudia Walsh (HDR)					
Jesse Darden (HDR)	Troy Carter (LANE)					
<p align="center">EVIDENCE OF PERFORMANCE</p> <p>The project won 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). It also received a citation of commendation from the State Highway Patrol noting safety and emergency access enhancements.</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>						

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)	
I-95 EXPRESS LANES Fairfax, Prince William and Stafford Counties, VA DESIGN-BUILD	Fluor-Lane 95, LLC	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	08/2012	12/14/2014	\$691,147	\$726,194	\$7,900

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

Similar Scope of Work:	PROJECT SCOPE												
<ul style="list-style-type: none"> • Design-Build with LANE • 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 with other Active Construction Projects Within the Vicinity of the Project Site 	RELEVANT PROJECT ELEMENTS TO I-64 SEGMENT II												
Personnel on Project:	EVIDENCE OF PERFORMANCE												
<table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Claudia Walsh (HDR)</td> <td>Tom Morreale (HDR)</td> </tr> <tr> <td>Ed Wolfson (HDR)</td> <td>Jesse Darden (HDR)</td> </tr> <tr> <td>Vijay Modi (HDR)</td> <td>Pieter Dahmen (HDR)</td> </tr> <tr> <td>Mike Leitch (LANE)</td> <td>Wayne Lindsey (LANE)</td> </tr> <tr> <td>Bernie Leitch (LANE)</td> <td>Michelle Teets (LANE)</td> </tr> <tr> <td>Chris Monahan (LANE)</td> <td>ALA</td> </tr> </table>	Claudia Walsh (HDR)	Tom Morreale (HDR)	Ed Wolfson (HDR)	Jesse Darden (HDR)	Vijay Modi (HDR)	Pieter Dahmen (HDR)	Mike Leitch (LANE)	Wayne Lindsey (LANE)	Bernie Leitch (LANE)	Michelle Teets (LANE)	Chris Monahan (LANE)	ALA	<p>HDR was the Lead Designer for Area 1 of the I-95 Express Lanes D-B project which included the engineering design, plan development, and engineering coordination during construction for nine miles of two-lane reversible Express lanes within the existing interstate median. New ingress/egress points included two flyovers from the Express lanes to the southbound I-95 general purpose lanes and one northbound slip ramp from I-95 to the Express lanes. HDR provided design services for seven (7) new bridges along the project corridor. The \$726M project included over 4.5 miles of new storm drainage pipe, analysis and design of storm water management basins for water quality and quantity control. Additionally HDR performed pavement design and optimized foundation design. The scope also included the development of signing, lighting, pavement marking and sequence of construction/maintenance of traffic plans. HDR was responsible for the ITS design and construction support that consisted of multiple subsystems including CCTV traffic surveillance cameras, toll and driver information DMS signs, video-based automatic incident detection cameras, etc. HDR was the Prime Designer and design work was performed from the Norfolk, Vienna, Glen Allen, Roanoke, and Omaha, NE office locations.</p> <p>LANE/HDR Team: HDR partnered with LANE and was the Lead Designer for Area 1 (Stafford and Prince William County segment) which included the preliminary and final engineering design, TMP development, and engineering coordination during construction. LANE and HDR will be assigning the core production staff from our I-95 Express Lanes project to the I-64 Segment II project.</p> <p>Maintenance of Traffic/Public Safety. Similar to the I-64 Segment II project, MOT along this heavily traveled and congested interstate corridor was critical (ADT of nearly 250,000). 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 LANE/HDR 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>Geotechnical. HDR performed geotechnical investigation and analysis for over 400 borings and performed pavement design and optimized foundation design in areas containing Potomac clay and acidic sulfate soils. The Team also assisted in writing a new Special Provision for VDOT for vibration and survey monitoring of adjacent structures during construction activities.</p> <p>Stormwater Management/Drainage. The project included over 4.5 miles of new storm drainage pipe, 45 stormwater management ponds and surface drainage system for 9 miles of new roadway. This project had similar constraints as the I-64 Segment II project. One strategy employed by HDR included the use of manufactured BMP devices. HDR worked with VDOT to size and locate these devices in order to mitigate additional ROW impacts.</p> <p>Roadway. Project included design of improvements within the existing median. Design included horizontal and vertical alignment optimization as well as balancing earthwork and minimization of environmental impacts. Design also included signing, lighting and pavement marking plans.</p> <p>Bridges/Structures. Similar to the I-64 Segment II project, a large portion of the bridge work for this project included work in the interstate median. The seven new bridges included two steel curved girders, three single span bridges with steel girders, and two two-span steel girder bridges. Foundation designs included both driven piles and drilled shafts. Additional structural design was done for a large number of retaining and sound walls, signs, and toll gantries.</p> <p>Utility Relocation and Coordination. HDR was responsible for the utility relocation design and coordination for entire project corridor.</p> <p>ROW/Military Coordination. HDR was responsible for right of way acquisition services for 29 mile corridor. This included extensive coordination with U.S. Marine Corps Base at Quantico.</p>
Claudia Walsh (HDR)	Tom Morreale (HDR)												
Ed Wolfson (HDR)	Jesse Darden (HDR)												
Vijay Modi (HDR)	Pieter Dahmen (HDR)												
Mike Leitch (LANE)	Wayne Lindsey (LANE)												
Bernie Leitch (LANE)	Michelle Teets (LANE)												
Chris Monahan (LANE)	ALA												

“The Fluor/Lane/Transurban team continues to be impressed with HDR’s commitment to provide a high quality product within an incredibly constrained timeframe. Those of us on the project know that we can count on HDR when we are presented with a difficult challenge.” - *John Thomas, P.E., Fluor Design Lead*

*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(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)	
I-495/DTR Interchange, Fairfax County, VA DESIGN-BUILD	Fluor-Lane, LLC	Name of Client./ Owner: VDOT Phone: 703.259.0243 Project Manager: Larry Cloyed, PMP Phone: 703.313.6689 Email: larry.cloyed@vdot.virginia.gov	12/2007	11/2012	\$67,000	\$67,000	\$3,221

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 • 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 with other Active Construction Projects Within the Vicinity of the Project Site 	<p align="center">PROJECT SCOPE</p> <p>The Metropolitan Washington Airports Authority (MWAA), a major stakeholder to the I-495 Express Lanes project and owner of the land in the vicinity of the interchange, required modification to this interchange to provide direct connection from the Dulles International Airport Access Highway (DIAAH) to I-495 as part of the I-495 Express Lanes D-B project. This project included the relocation of approximately 1 mile of the eastbound DIAAH and construction of approximately 1 mile of new ramp providing a direct connection for eastbound DIAAH to both northbound and southbound I-495. This new ramp construction included an 872' curved steel bridge crossing over the DTR with high MSE wall approaches. The project also included signing and pavement marking and lighting improvements associated with the interchange modification. Geotechnical investigation and final design was completed in six months. In addition stormwater and drainage design/calculations were prepared and facilitated permitting and design impacts on adjacent streams and wetlands. HDR was the Prime Designer and design work was performed from the Norfolk, Vienna, Glen Allen, Roanoke, and Pittsburgh, PA office locations.</p>												
<p align="center">Personnel on Project:</p> <table border="0" style="width: 100%; font-size: small;"> <tr> <td>Claudia Walsh (HDR)</td> <td>Tom Morreale (HDR)</td> </tr> <tr> <td>Ed Wolfson (HDR)</td> <td>Pieter Dahmen (HDR)</td> </tr> <tr> <td>Vijay Modi (HDR)</td> <td>Mike Leitch (LANE)</td> </tr> <tr> <td>Ervin Belcher (LANE)</td> <td>Michelle Teets (LANE)</td> </tr> <tr> <td>Bernie Leitch (LANE)</td> <td>Wayne Lindsey (LANE)</td> </tr> <tr> <td>Chris Monahan (LANE)</td> <td></td> </tr> </table>	Claudia Walsh (HDR)		Tom Morreale (HDR)	Ed Wolfson (HDR)	Pieter Dahmen (HDR)	Vijay Modi (HDR)	Mike Leitch (LANE)	Ervin Belcher (LANE)	Michelle Teets (LANE)	Bernie Leitch (LANE)	Wayne Lindsey (LANE)	Chris Monahan (LANE)	
Claudia Walsh (HDR)	Tom Morreale (HDR)												
Ed Wolfson (HDR)	Pieter Dahmen (HDR)												
Vijay Modi (HDR)	Mike Leitch (LANE)												
Ervin Belcher (LANE)	Michelle Teets (LANE)												
Bernie Leitch (LANE)	Wayne Lindsey (LANE)												
Chris Monahan (LANE)													

EVIDENCE OF PERFORMANCE

"A solid experienced company that has built to standard and worked well under difficult traffic and space constraints to minimize impact on travel." - *Garrett Moore, P.E., VDOT Chief Engineer*

*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.