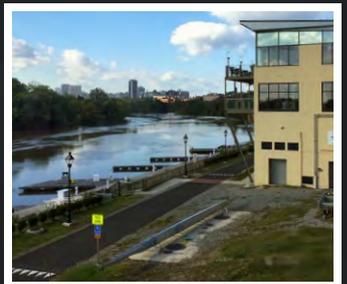
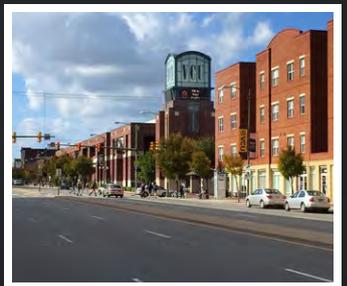
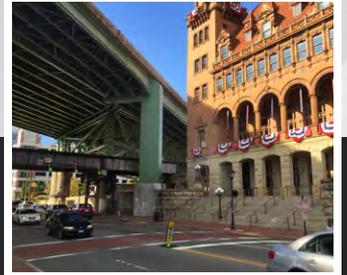


# GRTC BUS RAPID TRANSIT

From Broad Street to Orleans Drive

Design-Build Project  
County of Henrico & Richmond, Virginia





November 4, 2015

Mr. Bryan Stevenson, P.E.  
Alternate Project Delivery Office  
Virginia Department of Transportation (VDOT)  
1401 East Broad Street  
Richmond, Virginia 23219

Reference: **GRTC Bus Rapid Transit (BRT) Project**  
Contract ID Number: C00108069DB87

Dear Mr. Stevenson:

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

As a leader in the Design-Build (D-B) method (nationally ranked as the 44th Top Design-Build Firm by *Engineering News-Record*) LANE has constructed more than 70 D-B projects worth more than \$3 billion in 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 **STV Incorporated dba STV Group, Incorporated (STV)** as our Lead Designer. LANE and STV have a long history of successfully teaming together, and have delivered 11 D-B projects totaling \$800 million, including **the first bus rapid transit (BRT) project in the Commonwealth**. The LANE/STV D-B team provided the City of Alexandria with a system that delivers faster travel times and more on-time buses for passengers, which encourages the use of public transportation in a highly congested area. This successful and award-winning project was accomplished through successful partnering, innovative design, and efficient construction means and methods.

LANE and STV, supported by additional hand-selected design and construction specialty firms, are experienced with VDOT processes and procedures and will provide design and construction for the GRTC BRT project. We are confident in our team structure and experience, and have elaborated on our distinctive qualifications in the subsequent sections. The LANE/STV 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:** Donald E. Bryson, Jr. is the point of contact and authorized representative for the LANE/STV team for all matters associated with this qualifications submittal.

Donald E. Bryson, Jr., Pursuit Manager  
14500 Avion Parkway, Suite 200  
Chantilly, VA 20151  
Tel: (703) 222-5670 Fax: (703) 222-5960  
Email: [DEBryson@laneconstruct.com](mailto:DEBryson@laneconstruct.com)

**3.2.3 Principal Officer of the Offeror:** 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](mailto: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 Identity of Lead Contractor and Lead Designer:** The full legal name of the Offeror/Lead Contractor 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 STV Incorporated dba STV Group Incorporated. STV 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 Certification Regarding Debarment:** Certifications for Debarment for both Primary and Lower Tier Covered Transactions have been completed and executed for the Offeror and all subconsultants, subcontractors, and other entities identified as members of the LANE/STV team and may be found in the Appendix.

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

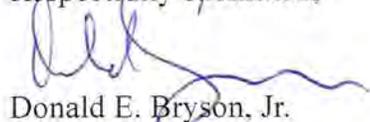
**3.2.9 Evidence of 100% Bonding Capability:** A surety letter from the bonding companies is included in the Appendix, confirming their willingness to provide any and all bonds for this project.

**3.2.10 SCC/DPOR Information and Evidence:** The matrix in the Appendix delineates the respective state registrations and licensures of the LANE/STV team members. 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.

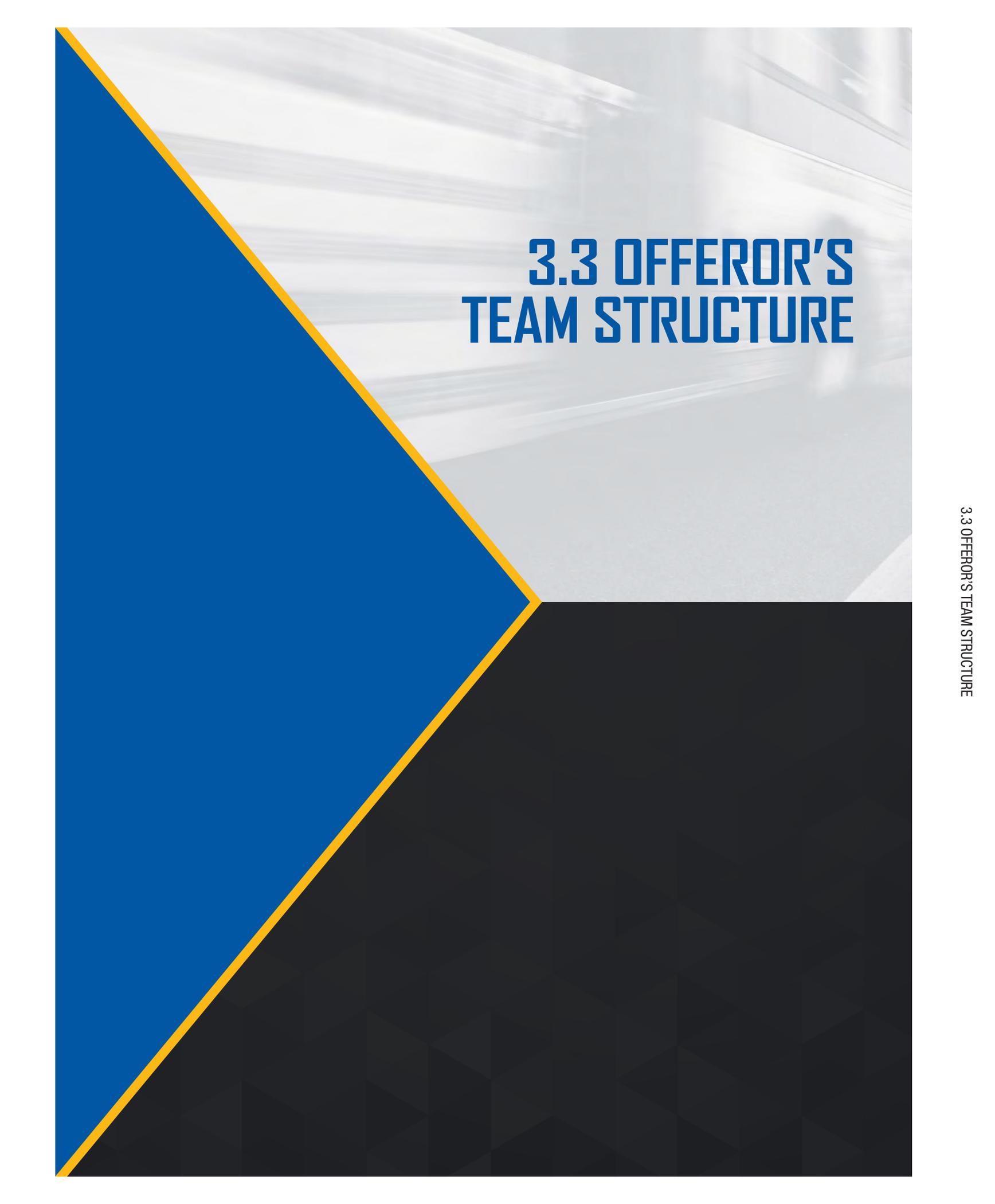
**3.2.11 DBE Statement:** LANE supports the Disadvantaged Business Enterprise (DBE) program and is committed to meeting the 10% goal for the entire value of this project using Virginia certified DBE companies.

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,



Donald E. Bryson, Jr.  
Pursuit Manager  
The Lane Construction Corporation



## **3.3 OFFEROR'S TEAM STRUCTURE**

### 3.3 OFFEROR'S TEAM STRUCTURE

The Lane Construction Corporation (LANE) will serve as the Lead Contractor of the D-B team for the GRTC Bus Rapid Transit Project (GRTC BRT) and will be responsible for managing the project, supervising construction, and self-performing the major work elements. Our proven civil experience in transit and roadway construction, evidenced by more than 70 D-B projects ranging in value from \$13 million to \$2.3 billion, demonstrates LANE's ability to tackle the most challenging infrastructure projects.

**CONSTRUCTION SUBCONSULTANTS:** Under subcontract to LANE are the following highly qualified firms:

- **NXL Consulting**—quality assurance (DBE/SWaM)
- **Seventh Point**—public relations (SWaM)
- **GeoConcepts Engineering, Inc.**—AMRL Certified QC lab (DBE/SWaM)
- **Virginia Sign & Lighting**, a Division of LANE—systems

**STV Incorporated dba STV Group Incorporated (STV)**, as the Lead Designer, will provide overall project management for all design activities. STV has considerable D-B and BRT experience. The firm has led engineering design services for some of the more significant D-B projects in the Southeast, as well as 10 BRT projects, including the Crystal-City Potomac Yard Transitway BRT design-build (CCPYT BRT). STV has been in business for over 100 years and, as a full-service firm, provides transportation engineering and construction management capabilities with specialty expertise in design of transit, roadway, railway, bridge, and traffic projects.

**DESIGN SUBCONSULTANTS:** Under subcontract to STV are the following highly qualified subconsultants:

- **Timmons Group, Inc.**—lead utilities and landscaping
- **KDR Real Estate Services, Inc.**—Right-of-Way (SWaM)
- **H&B Surveying and Mapping, LLC**—surveying (SWaM)
- **Inframap Corp.**—SUE (SWaM)
- **GeoConcepts Engineering, Inc.**—geotechnical engineering (DBE/SWaM)

**LANE AND STV SHARED EXPERIENCE:** LANE and STV have a long history of shared, successful D-B projects, including **the first LRT line in North Carolina and the first BRT in the Commonwealth** (Route 1 in Alexandria). Our team provided a BRT system in a highly congested section of Alexandria that delivers faster travel times and more on-time buses for passengers. This award-winning project was accomplished through successful partnering, innovative design, and efficient construction means and methods.

#### 3.3.1 Qualifications of Key Personnel

Our proposed Key Personnel, listed below, have served in similar roles on related transportation projects. Information regarding their experience can be found in Attachment 3.3.1 in the Appendix.

Name	Position	Company
Ken Prince, PE	D-B Project Manager	LANE
Bill McDowall, II, PE, DBIA	Quality Assurance Manager (QAM)	NXL
Michael Hooshangi, PE	Design Manager	STV
George Hansbrough	Construction Manager	LANE
Kelvin Benfield, AIA, CDT	Lead Architect	STV
Chris Hertz, PE	Systems Engineer	STV
Chris Kiefer, PE	Lead Utility Coordination Manager	Timmons

#### 3.3.2 Organizational Chart

The LANE/STV team organization provides a straight-forward chain of command, with individual tasks, responsibilities, and functional relationships clearly identified. The Organizational Chart on page 6 depicts VDOT, third party stakeholders, key personnel, and their respective relationships and functions.

## REPORTING RELATIONSHIPS OF KEY PERSONNEL

**D-B Project Manager (DBPM), Ken Prince, 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, and will include weekly design/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.

**☑ Added Value:** *Mr. Prince was the DBPM on the CCPYT BRT project with STV as the Lead Designer. The knowledge, experience, and lessons learned he gained on the first BRT ever built in the Commonwealth will prove invaluable to the GRTC BRT project.*

**Quality Assurance Manager (QAM), Bill McDowall, II, PE, DBIA (NXL)** 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 Mr. McDowall and the DBPM. Mr. McDowall will keep VDOT informed on the status of quality of construction and issues/solutions through weekly reports and progress meetings. As QAM, he can authorize job shutdown if quality issues warrant. Quality Assurance Inspector, Dennis Cochran (NXL), will report directly to the QAM, and will be assigned to the project on a full-time basis for the duration of the project. Certified inspectors from the Richmond office of Froehling and Robertson, Inc. (F&R) will report to NXL and perform independent QA testing.

**☑ Added Value:** *Mr. McDowall has over 30 years of experience in construction and quality management and inspection for complex infrastructure projects. During a 4-year period, he was accountable for the on-time, on-budget delivery of approximately 130 roadway and bridge construction projects in the Commonwealth.*

**Design Manager, Mike Hooshangi, PE (STV)** will report directly to the DBPM. He will maintain close communication with the DBPM such that the overall project design is completed in accordance with the contract documents. All design, ROW, and permitting disciplines report directly to Mr. Hooshangi. He will provide VDOT with design plans for review and approval, and is also responsible for establishing oversight of the design QA/QC program as well as communicating with the CM. The design QC will be coordinated by Mr. Hooshangi and will be performed by qualified independent staff personnel.

**☑ Added Value:** *Mr. Hooshangi has more than 36 years of experience designing and managing transportation infrastructure projects in Virginia. He has developed innovative designs for BRT and VDOT D-B projects, including the CCPYT BRT project and the I-581 at Valley View Interchange D-B.*

**Construction Manager, George Hansbrough (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. Work not meeting standards will be addressed immediately with corrective actions that same day. Mr. Hansbrough is currently working on the VDOT Route 29 Solutions project and will be available prior to the start of GRTC BRT construction. Mr. Hansbrough will hold a DEQ RLD Certification and a VDOT ESCCC prior to commencement of construction.

**☑ Added Value:** *Mr. Hansbrough brings over 25 years of construction experience to the GRTC project. He specializes in complex and multi-faceted construction projects. He is currently assigned to the Rio Road portion of the Route 29 project which is adjacent to numerous business and commercial properties. Mr. Hansbrough's experience dealing with these stakeholders will be an asset on the GRTC BRT project.*

**Lead Architect, Kelvin Benfield, AIA, CDT (STV)** will report directly to the Design Manager. Mr. Benfield has expertise in design of transit stations, shelters, streetscaping, and station amenities, lighting, signage, and other platform features. A licensed Professional Architect in the Commonwealth, Mr. Benfield will be responsible for architectural design plans and specifications for the stations.

**☑ Added Value:** *Mr. Benfield has 22 years of design experience for a variety of transit projects, from bus maintenance facilities to light rail stations, including the CATS Blue Line Extension LRT stations and the*

*Arlington Transit (ART) bus maintenance and wash facility. His expertise extends to effectively designing stations to benefit the pedestrian experience and coordinating with stakeholders and third parties.*

**Systems Engineer, Chris Hertz, PE (STV)** will report directly to the Design Manager. Mr. Hertz will be responsible for system design, system integration, and traffic control system design, communications and transit-related technology systems. Mr. Hertz is an expert in integrated networks for transit systems, including real-time bus arrival, fare collection, surveillance, transit signal priority (TSP), traffic control and communication systems.

**✓ Added Value:** *Mr. Hertz has dedicated his entire career to systems design for public transportation projects. He has keen skill providing designs that effectively integrate new systems with existing ones, as well as operational support. This experience is a key differentiator—there will be extensive coordination needed for the scheduling of all activities required during start-up, testing, and commissioning.*

**Lead Utility Coordination Manager, Chris Kiefer, PE (Timmons)** will report directly to the Design Manager. Mr. Kiefer will be responsible for coordination of all utility relocations and service coordination. He will identify conflicts; determine cost responsibilities; conduct utility field inspections; coordinate utility relocation design; review and recommend approval of utility relocation plans and estimates; and oversee utility relocation construction. He is local to Richmond, will be available to review utility relocation designs, and verify and modify designs, if necessary, based on field conditions and construction activities.

**✓ Added Value:** *Mr. Kiefer has a thorough, local knowledge of the utility companies along this project corridor through his 27 years of experience on projects in Richmond's central business district. He understands the myriad of utility challenges—most importantly those along the GRTC BRT corridor.*

#### **VALUE-ADDED POSITIONS:**

**Ian Evertz, PE—Design-Build Coordinator**, will support Mr. Prince and manage D-B elements to help dampen the general project “noise,” allowing Mr. Prince (DBPM) to focus on priorities.

**Michael Randolph, PE—Lead Engineer Roadway/Civil**, will support Mike Hooshangi (DM) and the design team. He managed the design for the CCPYT BRT project in Alexandria.

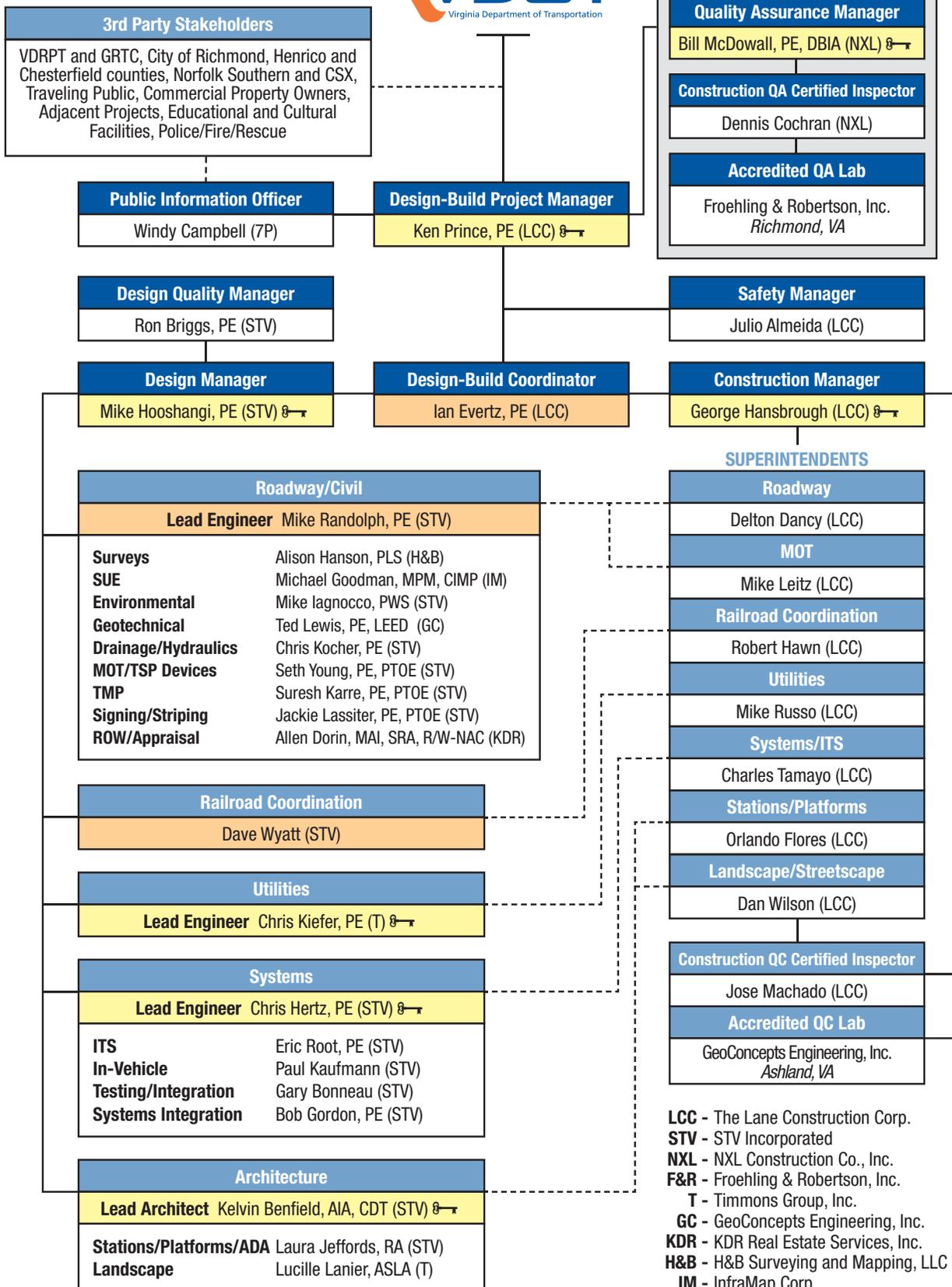
**Dave Wyatt—Railroad Coordination**, will draw upon his 45 years of work at Norfolk Southern to help resolve any issues with the Main St./NS bridge, which is a very schedule-sensitive project issue.

#### **DESIGN AND CONSTRUCTION TEAM INTERACTION**

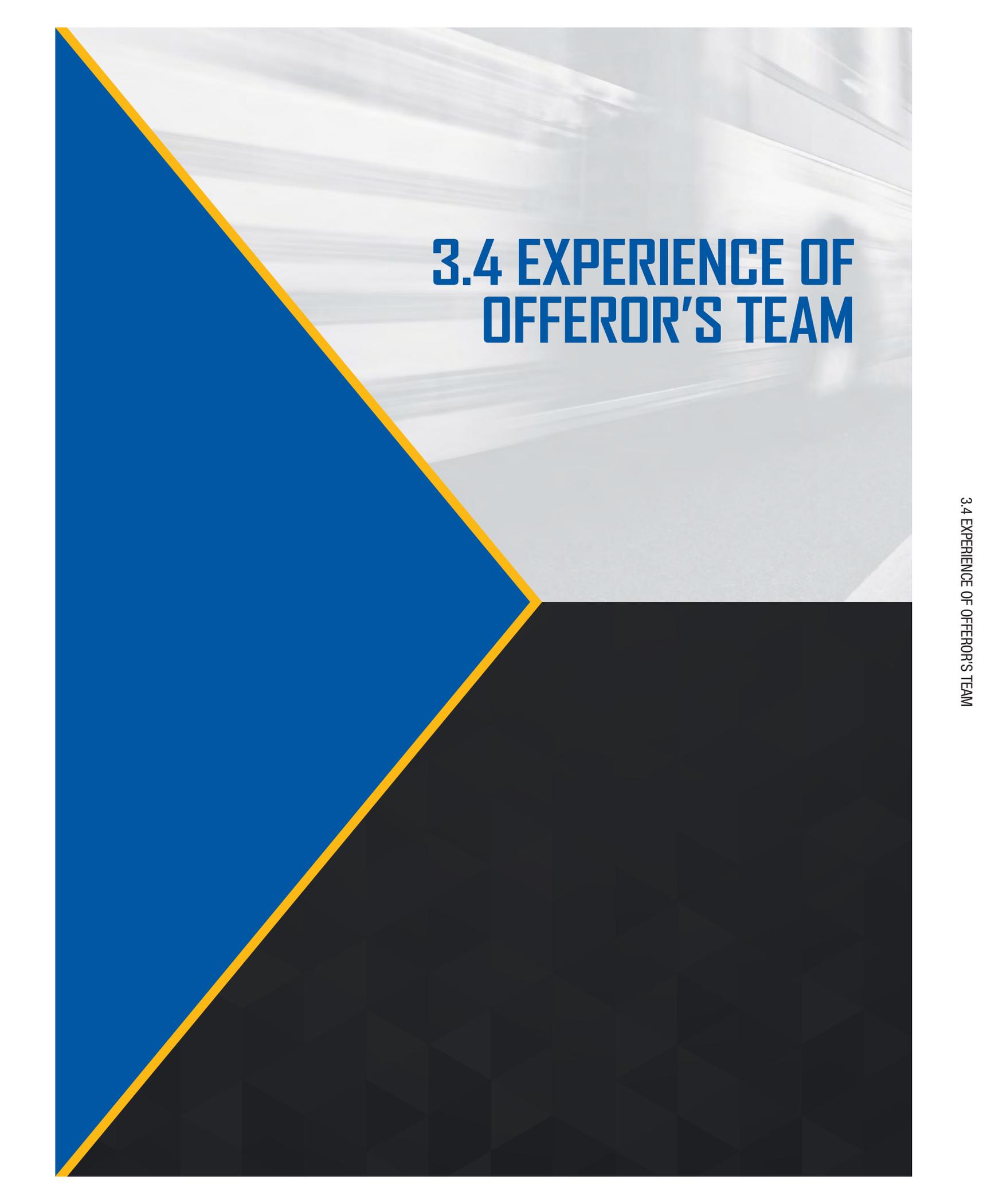
Regularly scheduled discipline coordination meetings throughout the project life are critical for success. Led by the DBPM, these meetings serve to disseminate project-critical information and are the central point of decision-making and communication among design, construction, and VDOT team members. These meetings serve to clearly define project criteria, meet VDOT's intentions, address any corridor-wide safety/constructability issues, and provide design consistencies 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	Benefit
Input in work package development / D-B strategy	Develop efficient construction sequence/schedule logic
Advising on self-performance vs. subcontracting	Tailoring of design/construction documentation
Provide design package input on construction M&M	Practical designs that support construction approaches
Design constructability/operability/pricing reviews	Design documents that are constructable/meet goals

Design Support During Construction	Benefit
Preparation of subcontractor statements of work	Translates design needs into subcontractor SOW
Assignment of design engineer(s) on-site, as required	Maintains intent of original design during changes
Providing and verifying final record drawings	Relates original design, changes, and as-builts



- LCC** - The Lane Construction Corp.
- STV** - STV Incorporated
- NXL** - NXL Construction Co., Inc.
- F&R** - Froehling & Robertson, Inc.
- T** - Timmons Group, Inc.
- GC** - GeoConcepts Engineering, Inc.
- KDR** - KDR Real Estate Services, Inc.
- H&B** - H&B Surveying and Mapping, LLC
- IM** - InfraMap Corp.
- 7P** - Seventh Point, Inc.
- Ⓢ→ - Key Personnel
- - Value Added Position



## 3.4 EXPERIENCE OF OFFEROR'S TEAM

### 3.4 EXPERIENCE OF OFFEROR'S TEAM

Both LANE and STV 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 success in controlling, managing, and executing work. The blend of similar projects that these firms have worked on, and are working on in the region with the agencies involved, confirms our qualifications to successfully deliver all elements of this project.

The LANE/STV team has demonstrated experience with multiple high-capacity and high-quality bus transit systems throughout the nation and in Canada. Just as we did in the Crystal City-Potomac Yard corridor, we look forward to delivering the GRTC BRT for you. Below is a summary of similar elements of our shared project history:

<b>TRANSIT</b>	Working together, LANE and STV have successfully delivered award-winning regional BRT and LRT projects: <ul style="list-style-type: none"> <li>• Crystal City Potomac Yard Transitway, along Route 1, in Alexandria—the first BRT in Virginia</li> <li>• CATS Lynx Blue Line Extension in Charlotte, a \$1 billion, 9.3-mile project with extensive utility relocation</li> </ul>
<b>DESIGN-BUILD</b>	LANE and STV have delivered 11 D-B projects valued at over \$800M, with over a dozen project awards (this list includes VDOT's I-581 at Valley View Interchange in Roanoke).
<b>COMPLEX MOT</b>	LANE and STV conceived a modified interstate-to-interstate multi-level interchange with innovative traffic phasing (\$95M I-85/485 “turbine” interchange) in Charlotte that recently won a national DBIA award.
<b>ACCELERATED SCHEDULE</b>	LANE and STV delivered the \$85 million I-485 D-B widening <b>almost 2 years ahead of schedule</b> , with an outstanding safety and quality record.
<b>UTILITIES</b>	Lane and STV have collaborated on over 200 utility relocations in the past 20 years, for all types of utility owners, including water, sanitary sewer, natural gas, electrical (buried and overhead), and phone/communications.

#### 3.4.1 Work History Forms

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



# 3.5 PROJECT RISKS

## 3.5 PROJECT RISKS

The LANE/STV team has carefully considered the key elements of work for the GRTC BRT project and performed risk assessments for the numerous potential risks to the project, including stakeholder coordination, permitting, geotechnical, and systems integration. However, the three most critical risks to project delivery relate to: MOT and Maintaining Business Access/Activity, Schedule, and Utilities.

### 1. Maintaining Traffic Flow and Business Activities

**RISK IDENTIFICATION:** The BRT corridor is a long, narrow, heavily traveled corridor lined with many “tenants”: public institutions, commercial businesses, and educational facilities. The introduction of a BRT system will pose potential conflicts between at least four modes of traffic (not including construction traffic): (1) bus, (2) vehicular, (3) bicycle, and (4) pedestrian.

#### WHY THE RISK IS CRITICAL, AND IMPACTS TO THE PROJECT:

- Construction activities will likely create increased traffic congestion along Broad Street/Main Street (and interconnected side streets), resulting in traffic delays.
- Station construction adjacent to businesses will create access problems and safety concerns for patrons attempting to enter/leave those businesses.
- Access to businesses must be maintained to encourage positive perception of the BRT system and foster overall public buy-in.

**RISK MITIGATION STRATEGIES:** Our team proposes to incorporate our vast experience, lessons learned, and proven systems to facilitate a broad, multi-faceted Transportation Management Plan (TMP) to facilitate a smooth MOT plan for the project duration, and to engage the community with an effective Public Information Plan (PIP). Examples of risk mitigation strategies we intend to incorporate include:

- Immediately upon contract award, the LANE/STV team will conduct an initial partnering meeting with VDOT, GRTC, DRPT, the City of Richmond, Henrico County, and interested stakeholders to review project requirements, and allow stakeholders to voice their issues and concerns. From this initial meeting we will develop a checklist of responsibilities and timelines for successfully achieving mutually agreeable activities/goals for project success.
- At the 60% complete design stage, the LANE/STV team will conduct a second meeting (entitled “stakeholders workshop”) to further educate stakeholders on the status of design and proposed construction activities. This allows us to arrange our construction schedule so we can accommodate local “business preferences,” as much as is practical, including accommodation of major events and peak shopping season(s).
- Each Release for Construction (RFC) work package will address MOT implications posed by that element of the work, with special attention to the flow of traffic to critical intersections and commercial hot spots.
- Pedestrians and bicyclists will be kept on existing facilities to the extent practical, but if a sidewalk or crosswalk area needs to be closed, a signed ADA-accessible alternate route will be provided. Temporary signs, drums, and barricades will be carefully placed to delineate pedestrians and bicycle passageways.
- We will provide extensive temporary signage directing pedestrians and bicyclists through the project corridor, and assistance with wayfinding to specific locations.
- We will sequence the station work at concurrent locations to accelerate schedule (i.e., “get in and get out quickly”), but we do not plan to have construction at adjacent stations, in order to lessen the immediate impact to a single location.

*Access to businesses must be maintained to encourage positive perception of the BRT system and foster overall public buy-in.*

**ROLE OF VDOT AND OTHER AGENCIES:** We anticipate general VDOT oversight as our team manages traffic in unison with the diverse day-to-day business operations along this corridor and generates consensus among stakeholders.

## 2. Schedule

**RISK IDENTIFICATION:** The schedule provided in the RFQ allows approximately 17 months from Notice of Award to Substantial Completion to complete design, utility relocation, construction, and systems integration. This schedule is accelerated from a traditional D-B and the potential for impacts is great in this congested corridor.

### WHY THE RISK IS CRITICAL, AND IMPACTS TO THE PROJECT:

- Missing the revenue service (opening) date of August 2017 may pose a variety of risks ranging from political to financial, not to mention negative impacts to businesses along the corridor.
- Failure to successfully merge the BRT construction schedule with the Main Street/NS Railway bridge construction schedule will negatively impact the overall completion (revenue service) date.
- Delays from utility relocations will impact the overall completion (revenue service) date.

*LANE/STV accelerated the schedule for the \$1.1 billion CATS Lynx BLE by providing early due diligence for utility locations and coordinated, expedited reviews from the agency.*

**RISK MITIGATION STRATEGIES:** To minimize these risks, we will use experienced and proven resources for this accelerated schedule.

The LANE/STV team is very experienced in delivering extremely challenging projects on-time and without excuses. We take great pride in the fact that **every one of our D-B projects has been completed on-time or ahead of schedule.** LANE's Management Team members are committed to providing critical project resources to complete the project on or ahead of schedule. Our staff meets and exceeds the requisite experience in design-build and technical capability, with extensive planning, staff, and equipment resources to manage the project safely and with the highest quality, and deliver on schedule and within budget. We will bring many of the key staff members who accelerated delivery of the award-winning (multiple), P3 design-build 29-mile-long 95 Express Lanes project in just 29 months under some of the most congested conditions in the country. Similarly, the GRTC BRT project will have to be designed and constructed at warp speed. Our team will also make a seamless transition of crew resources from the accelerated Route 29 Solutions, Rio Project element, where the construction of the grade separated intersection and roadway underneath is planned to take less than the 103 day contract period. Our team is most experienced and best suited in delivering accelerated projects early.

Our team will dissect the scope of work into manageable areas of work and staff each area of work with appropriate experts in the field, and use our **expansive resources** to handle the **aggressive work schedule.** The LANE/STV team has developed specific processes and procedures to control the schedule. This all starts with our team's comprehensive and efficient Project Design Manual (PDM) that will enhance and expedite the development of fully integrated project-compliant designs, which meet or exceed VDOT's requirements. The PDM will detail deliverable schedules and products; provide design criteria and design standards; outline document control methods; identify key staff; outline methods for prioritizing resources and assigning staff; list design methods, procedures and submittal guidelines; and provide communication procedures among the team members and VDOT.

### ROLE OF VDOT AND OTHER AGENCIES:

- VDOT's primary and most critical role will be the timely review and approval of all submittals. It would be our expectation that VDOT would partner with the LANE/STV team by accelerating your typical plan review policies and procedures to assist in meeting the aggressive schedule. These modifications could include rolling, or "Over-the-Shoulder" reviews, to accelerate turnaround of submissions. We will invite/request VDOT to participate in preparatory meetings for the implementation of major design and construction of the GRTC BRT. The LANE/STV team will also provide regular updates to VDOT to address questions from third-party stakeholders.
- Completion of the Main Street bridge/Norfolk Southern bridge will require frequent communication and coordination between VDOT and the LANE/STV team to dovetail the construction of the bridge with our work and schedule.

### 3. Utilities

**RISK IDENTIFICATION:** The conceptual design work performed to date indicated that there will be many utility conflicts posed by the new construction. In Section 3.6, we describe our approach for utility relocation.

**WHY THE RISK IS CRITICAL, AND IMPACTS TO THE PROJECT:**

- Potential schedule delays posed by utility owners who have not responded in a timely manner to our requests.
- Safety issues posed by damage to unforeseen utilities, such as gas mains (also a schedule impact).

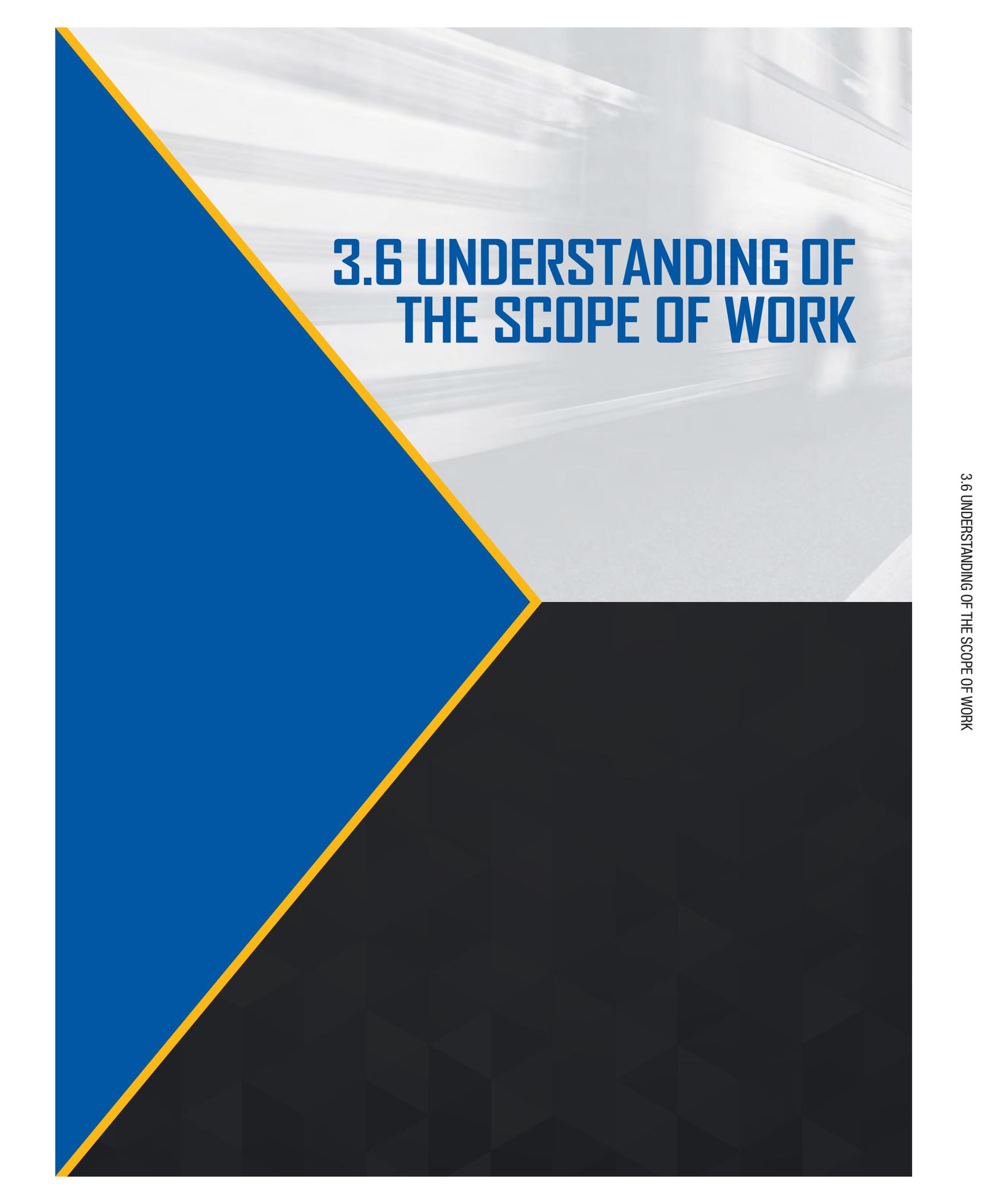
**RISK MITIGATION STRATEGIES:** To minimize risk associated with utilities, the LANE/STV team proposes a comprehensive utility program that consists of the following mitigation strategies:

- Assembling a well-organized utility matrix that clearly identifies each potential utility conflict: location, type, owner, contact information, and details pertaining to the conflict.
- Conducting a utility partnering meeting immediately after notice-to-proceed, whereby we would meet with each utility owner in the field and discuss a mutually beneficial plan to identify potential conflicts, discuss avoidance-versus-relocation options, and (based on the options) develop agreeable “rules of practice” for resolving these conflicts expeditiously.
- Proactively coordinating the utility work to ensure that relocations remain off of the critical path. We have identified existing utilities that will remain in place and utility relocation work to be completed.
- Verifying no additional easements are needed for utility adjustments.
- Developing an alternatives analysis for the determined utility conflicts as identified in the team for ways to possibly avoid or minimize a conflict (i.e. re-design a storm sewer run, etc.). A careful review of schedule impacts will be a determining factor.
- Coordinating the final determination on the potential utility conflicts back to the various utility providers to establish cost and more importantly schedule commitments for providing adjustments.

**ROLE OF VDOT AND OTHER AGENCIES:**

- Timely approvals of project-related submittals such as Release-for-Construction (RFC) packages

*The LANE/STV team includes Chris Kiefer, Utility Lead, who is knowledgeable of all the utilities in the area from his recent work downtown and along this corridor.*



# 3.6 UNDERSTANDING OF THE SCOPE OF WORK

### 3.6 UNDERSTANDING OF THE SCOPE OF WORK

From our team's work on the CCPYT BRT in Alexandria and the CATS LYNX BLE LRT, as well as dozens of other transit projects, we understand the highly detailed scope of work necessary to successfully deliver the GRTC Bus Rapid Transit Project ("Project").

The Project involves the design, construction, and testing of a 7.6-mile long system primarily along Broad Street, between Willow Lawn Drive and Orleans Drive. The project runs through the Richmond Central Business District, serving major tenants such as Virginia Commonwealth University (VCU), and offers 14 stations with numerous amenities. Two contracts were awarded in recent years to advance the project forward.

Our team has thoroughly studied the available materials and subsequently developed a detailed project understanding and associated schedule, shown on page 15. To deliver this scope of work and schedule, our understanding of the scope of work is as follows:

**DESIGN ACTIVITIES**—A significant element of our assumed design plan is to separate the design into 60% and 100% design packages, with significant decisions memorialized at the 60% stage:

lane configuration defined, curb cuts and sidewalk locations established, drainage structures located, and preliminary traffic phasing identified. We also assume (or suggest) that a workshop will be held at the 60% completion stage, where our team, VDOT, and GRTC will meet with interested stakeholders and tenants along the project corridor and discuss the broad plan for implementing the project. It is our intention to partner with these stakeholders and tenants, especially regarding their ability to conduct their business with minimal interruptions due to the construction. The design activities include:

**LOCATION SURVEYS/UTILITY LOCATES:** We assume that GRTC will provide us with survey data files in usable format, including planimetric mapping files, .dgn files, etc. We will perform confirmation survey field work that is suitable for final design-level accuracy. We will also perform (or complete) utility locates including SUE as described below.

**STATION SITE PLANS:** Based on the "Stations Basis of Design Report", approximate station locations and associated station site layouts have been prepared. Our final design will fine-tune these site plans, and will address precise requirements for locations of all station site elements, beginning with the final location of the bus lanes, platforms, curb lines, and sidewalks. ADA accessibility will be maintained at each station with level boarding to ease loading for all passengers.

**ROADWAY PLANS (LANE CONFIGURATION/STRIPING):** Based on the "Roadway Modifications Basis of Design Report," the overall design criteria and typical sections have been developed for each segment of the project. Our final design will further refine this design of all geometric items, including lane width, turn lane lengths, sidewalk widths, etc. for both the median and curb running transitway segments. We also understand that for the two mixed traffic segments, no modifications to the lane configuration or striping is anticipated.

**MAINTENANCE OF TRAFFIC (MOT):** We recognize the need to develop efficient maintenance of traffic (MOT) plans to minimize the work zone impacts in an urban environment with high density, closely spaced intersections and serving various modes (vehicular, bicycle, pedestrian, and transit) of transportation. Pedestrian detours will likely be used to accommodate sidewalk traffic needs during the construction of curb running alignment. A comprehensive Transportation Management Plan (TMP) will be developed in close coordination with input from all stakeholders.

**UTILITY PLANS (AVOIDANCE-RELOCATION PLANS):** As expected, there are a multitude of public and private utilities along the corridor, as well as proprietary communications lines associated with the Commonwealth and with VCU. Utility summit meetings were held in December 2014, January 2015, and

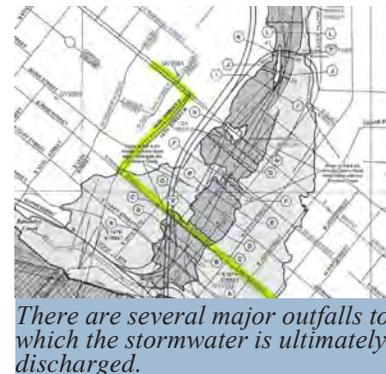


*The LANE/STV team delivered the first BRT system in the Commonwealth and understands the detailed scope of work to implement BRT in Richmond.*

*STV/LANE avoided high-voltage power lines along the corridor of the BRT transitway in Alexandria, VA.*

May 2015, for which some (but not all) existing utility information has been collected. As the design is advanced and locations of new construction are proposed (primarily station foundations and drainage systems), there will be a comprehensive conflict assessment. Quality level “A” SUE will be conducted to define precise utility locations from which an avoidance-or-relocation decision will be made for each conflict.

**DRAINAGE/STORMWATER MANAGEMENT:** The design intention for the stormwater drainage system is to provide surface conveyance to curbside gutters, existing curb inlets, and then storm pipe systems under the roadway/sidewalks. New construction is expected to necessitate modifications to either drainage or utility systems based on location conflicts. Runoff from new pavement, sidewalks, and station roof areas will be controlled; for station roof drainage, bio-filter containment cells along the ramped section of the station will be provided. There are several major outfalls to which the stormwater is ultimately discharged, and multiple design criteria apply for some/all of the drainage systems and outfalls:



- Work at Willow Lawn and Staples Mill Road stations are designated MS-4 areas, must adhere to stormwater management requirements, so runoff must be reduced by 20% less than existing conditions.
- The Shockoe Creek outfall and James River floodplain are subject to 100-year floodplain criteria, and restrictions posed for areas within the Chesapeake Bay Protection Area.
- Drainage east of I-195 will be collected in the combined stormwater/sanitary sewer system (CSO).

**STAKEHOLDER COORDINATION WORKSHOP:** Our team suggests that the Request for Proposals scope of work contain provisions for a workshop, conducted at perhaps the 60% completion stage, to educate interested third parties and local tenants as to the design development and intent. Input from these parties may be instrumental in constructing, for example, a proposed construction sequence that is sensitive, to the extent practical, to the business needs of companies along the corridor.

**ENVIRONMENTAL/PERMITTING:** Our environmental team will interface closely with the design team in an effort to avoid and minimize environmental impacts and ultimately streamline subsequent permitting efforts. Portions of the project occur within regulated 100-year floodplain areas as well as designated Chesapeake Bay Protection Areas. Numerous plan preparations and permits will be required, including an Erosion & Sediment Control Plan for Land Disturbance Permit and a Stormwater Pollution Prevention Plan (SWPPP) for roadway and station activities. Stormwater management, including treatment and runoff control, will be necessary to address potential impacts. The architectural review of station design by the Department of Historic Resources could trigger archaeological investigations. The environmental efforts will focus on facilitating design plan review/permitting conformance avoiding schedule delays.

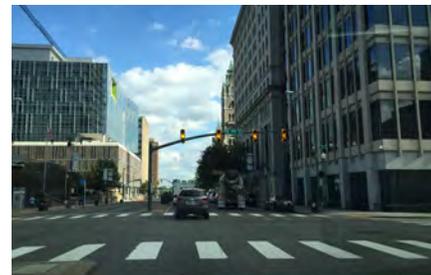
**RAILROAD COORDINATION:** The Main Street Bridge over Norfolk Southern, at the east end of the project, is a significant issue. This bridge is currently being designed by VDOT and is schedule-critical. The bridge is posted for 3 tons and cannot currently support BRT vehicle loads; hence coordination with VDOT and Norfolk Southern on this project—particularly the schedule—will be critical to keeping your project moving forward without interruption. Additionally, the corridor then passes beneath an old CSXT trestle structure, which will require coordination with a second freight railway. Our team has included a specific value-added position responsible for aiding in the coordination with the railroad.

**GEOTECHNICAL PROGRAM:** The preliminary “Geotechnical and Pavement Modifications Report” prepared by Schnabel Engineering will serve as the basis for future design. The preliminary report included 39 soil borings (depth=10 feet), identified the bearing capacity of soils where foundations will be placed, and analyzed the load-carrying capability of existing pavements subjected to BRT vehicle loading. The Schnabel report should provide all of the field work necessary for our designers to finalize the foundation design/sizing



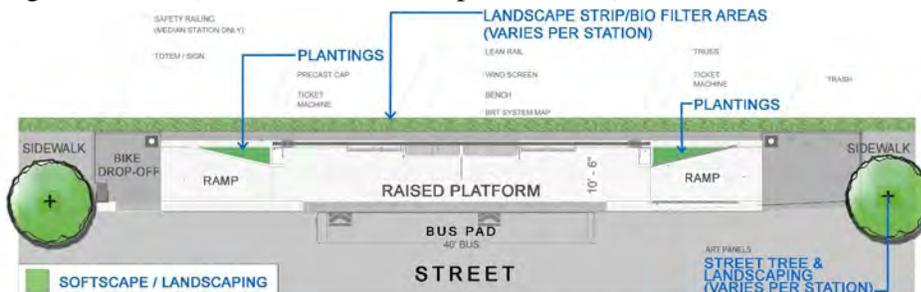
of spread footings (for station platforms) and drilled shafts (for pole foundations), as well as our design of final pavement sections, which may comprise a variety of pavement sections.

**TSP:** A Transit Signal Priority System (TSP), consistent with the recommendations included in the Systems Engineering Management Plan (SEMP), will be installed. The GTT Opticom GPS, distributed system was recommended due to its capability to expedite priority decisions and its compatibility with VDOT and Henrico County Emergency Vehicle Preemption Systems. The technology option will be coordinated with the City of Richmond for operations and maintenance coordination.



**LANDSCAPING PLANS:** A preliminary design report entitled “Urban Design and Landscaping Basis of Design Report” was prepared which addressed a number of design elements to add beautification to the project corridor:

- Hardscape/pavement treatments, including sustainable design initiatives
- Shelter area layout and design theme/public art
- Urban landscape (softscape) treatments
- Site furnishings/amenities (benches, bike racks, planters, etc.)



Our final landscape design is expected to expand on these preliminary reports (shown above), incorporate features from the dynamic cultural and educational elements within the central business district and region, and include construction features for these amenities. All tree and shrub plantings will be coordinated with the City of Richmond DPW and city arborist.

**CONSTRUCTION ACTIVITIES**—A significant element of our assumed construction plan is to construct the station areas sequentially based on a pre-defined prioritization system that takes into account the activities of the tenants. At any one time, we intend to have two station locations under construction that are NOT adjacent to one another. This will improve project safety and reduce impacts to tenants.

**DEMOLITION/UTILITY RELOCATIONS:** Construction will begin with the demolition and removal of all features that either conflict with the proposed construction or are to be replaced. At this time, all utility relocations will also be performed so that the new construction work can commence with utilities in their final locations, away from new construction features.

**DRAINAGE MODIFICATIONS:** It is anticipated that numerous drainage features (curb and gutter, inlets, pipes, etc.) will be relocated to mesh with the newly constructed project. Relocations will be constructed to facilitate both temporary and permanent drainage, taking into account stormwater collection, erosion/sediment control, water quality requirements, and other restrictions posed by the RFP.

**ROADWAY PAVEMENT (FIRST PHASE)/SIDEWALKS/ADA:** Safety for pedestrians and bicyclists will be of utmost importance on this project. Pedestrians and bicyclists will be kept on existing facilities to the extent practical, but if a sidewalk or crosswalk area needs to be closed, a signed ADA-accessible alternate route will be provided. Temporary lighted pedestrian enclosures may be provided to protect non-motorized traffic from overhead hazards, and signs, drums, and barricades will be carefully placed to delineate non-motorized passageways. We will protect pedestrians by communicating road and sidewalk closures well in advance of the closure; by placing barricades and barriers in place and a sufficient

distance from construction work; by clearly marking pedestrian detour routes and access to local businesses and venues; and by securing materials and equipment.

**STATIONS/PLATFORMS/CANOPIES:** The 14 stations will be designed to represent the locale and city using materials and elements from each area, and incorporating permanence through the use of steel and masonry with the warmth of cedar. Stations will be designed to handle patrons efficiently, economically, safely, conveniently, and comfortably. Public safety and compliance with ADA and other codes will guide basic design elements that will be enhanced at each location.



**ITS, CCTV, SYSTEMS, COMMUNICATIONS, FARE COLLECTION:** The communications network will consist of a hi-speed fiber optic data network that interfaces to the Traffic Operations Center located in City Hall and the backup Traffic Operations Center located at the Transportation Engineering Division Shop. The single-mode fiber will have network drops at each station and will support the transmission of voice, data, and video. If it is determined that it is more beneficial to avoid expensive communications infrastructure, wireless data transmission, such as point-to-multipoint (PMP) systems will be investigated. STV has recently deployed PMP wireless systems for the NYCT as part of a system-wide CCTV upgrade. The station communications and ITS equipment will consist of fare collection systems (FCS), CCTV systems, emergency telephones, and real-time transit systems (RTIS). STV understands that GRTC is upgrading its fare collection system. All equipment specified will integrate with the new progressive FCS. In-vehicle systems will be designed to include AVL, APC, AAS, on-board CCTV, wayfinding, and on-board WiFi. The AVL system will be compatible with the Clever Devices system, CleverCAD. STV is very familiar with this system having most recently specified CleverCAD for NJ TRANSIT. This system included the CleverCount APC unit that will be leveraged for this project to provide next station announcements as part of the AAS.

**FINAL PAVEMENT, STRIPING, SIGNAGE, LANDSCAPING:** The final step in construction will be placement of the final course of asphalt, followed by striping, regulatory and information signing, and landscaping.

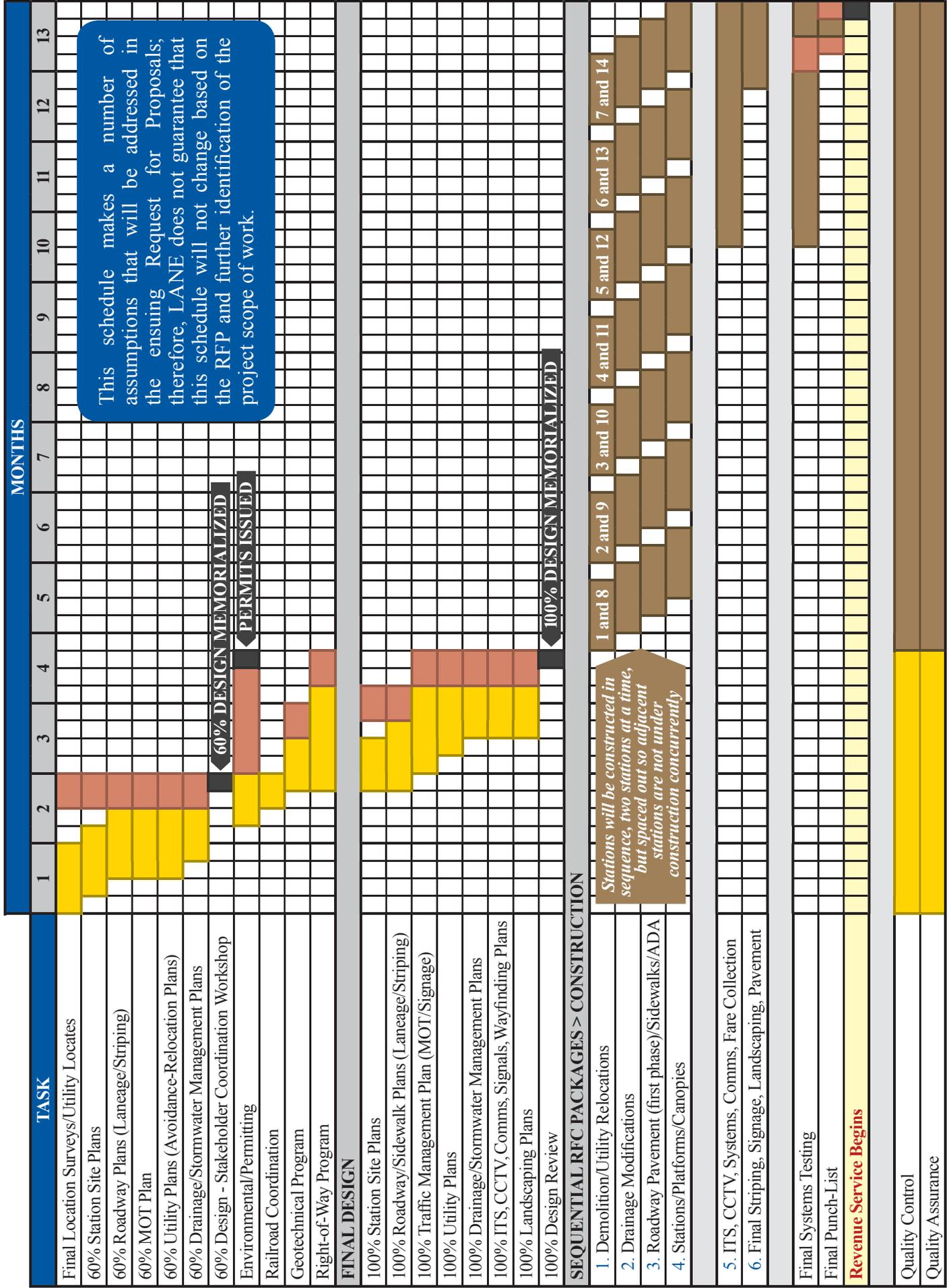
**TESTING, CLOSE-OUT, and REVENUE SERVICE**—Once construction is complete, we will work with GRTC to conduct systems testing of the various systems, ranging from signaling to emergency phones to CCTV and finally to fare collection.

**FINAL SYSTEMS TESTING:** Testing will be performed throughout the procurement and construction phases. Tests include Qualification Tests, Production Verification Tests, and Construction Inspection Tests which includes install and verification, acceptance tests, and post construction demonstration tests. The Systems Integration Testing (SIT) will be after substantial completion and will demonstrate that the subsystems work together with both the new systems and with the existing systems.

**FINAL PUNCH-LIST:** Upon substantial completion of the work, we anticipate that a final punch-list inspection will take place, likely involving representatives from VDOT, GRTC, the City of Richmond, DRPT, and the D-B team (primarily the DM, CM, and QAM). From this inspection, a list of items to be completed (prior to acceptance for revenue service) will be developed and those items attended to as the final construction activities on the project.

**PRE-REVENUE SERVICE:** Pre-revenue operations provides agency operations and maintenance departments with an opportunity to train, practice, and gain familiarity with the route, equipment, and systems for the new BRT prior to opening of revenue service to the public. This phase will require close coordination with various departments and outside agencies/contractors to confirm that all systems are performing correctly and safely.







# APPENDIX



**ATTACHMENT 3.1.2**

**Project: GRTC BRT**

**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.

<b>Statement of Qualifications Component</b>	<b>Form (if any)</b>	<b>RFQ Cross reference</b>	<b>Included within 15-page limit?</b>	<b>SOQ Page Reference</b>
<b>Statement of Qualifications Checklist and Contents</b>	Attachment 3.1.2	Section 3.1.2	no	16
<b>Acknowledgement of RFQ, Revision and/or Addenda</b>	Attachment 2.10 (Form C-78-RFQ)	Section 2.10	no	19
<b>Letter of Submittal (on Offeror's letterhead)</b>				
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	20
Debarment forms	Attachment 3.2.7(a) Attachment 3.2.7(b)	Section 3.2.7	no	22
Offeror's VDOT prequalification evidence	NA	Section 3.2.8	no	32
Evidence of obtaining bonding	NA	Section 3.2.9	no	33

**ATTACHMENT 3.1.2**

**Project: GRTC BRT**

**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

<b>Statement of Qualifications Component</b>	<b>Form (if any)</b>	<b>RFQ Cross reference</b>	<b>Included within 15-page limit?</b>	<b>SOQ Page Reference</b>
<b>SCC and DPOR registration documentation (Appendix)</b>	Attachment 3.2.10	Section 3.2.10	no	37
Full size copies of SCC Registration	NA	Section 3.2.10.1	no	40
Full size copies of DPOR Registration (Offices)	NA	Section 3.2.10.2	no	50
Full size copies of DPOR Registration (Key Personnel)	NA	Section 3.2.10.3	no	68
Full size copies of DPOR Registration (Non-APELSCIDLA)	NA	Section 3.2.10.4	no	73
<b>DBE statement within Letter of Submittal</b> confirming Offeror is committed to achieving the required DBE goal	NA	Section 3.2.11	yes	2
<b>Offeror's Team Structure</b>				
Identity of and qualifications of Key Personnel	NA	Section 3.3.1	yes	3
Key Personnel Resume – DB Project Manager	Attachment 3.3.1	Section 3.3.1.1	no	74
Key Personnel Resume – Quality Assurance Manager	Attachment 3.3.1	Section 3.3.1.2	no	76
Key Personnel Resume – Design Manager	Attachment 3.3.1	Section 3.3.1.3	no	78
Key Personnel Resume – Construction Manager	Attachment 3.3.1	Section 3.3.1.4	no	80
Key Personnel Resume – Lead Architect	Attachment 3.3.1	Section 3.3.1.5	no	82
Key Personnel Resume – System Engineer	Attachment 3.3.1	Section 3.3.1.6	no	84
Key Personnel Resume – Lead Utility Coordination Manager	Attachment 3.3.1	Section 3.3.1.7	no	86

**ATTACHMENT 3.1.2**

**Project: GRTC BRT**

**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

<b>Statement of Qualifications Component</b>	<b>Form (if any)</b>	<b>RFQ Cross reference</b>	<b>Included within 15-page limit?</b>	<b>SOQ Page Reference</b>
Organizational chart	NA	Section 3.3.2	yes	6
Organizational chart narrative	NA	Section 3.3.2	yes	3, 4
<b>Experience of Offeror's Team</b>				7
Lead Contractor Work History Form	Attachment 3.4.1(a)	Section 3.4	no	88
Lead Designer Work History Form	Attachment 3.4.1(b)	Section 3.4	no	91
Lead Architect Work History Form	Attachment 3.4.1(c)	Section 3.4	no	94
<b>Project Risk</b>				
Identify and discuss three critical risks for the Project	NA	Section 3.5.1	yes	8
<b><u>Understanding of the Scope of Work</u></b>				
<u>Identify and discuss Project scope of work</u>	<u>NA</u>	<u>Section 3.6.1</u>	<u>yes</u>	11



**ATTACHMENT 2.10**

**COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF TRANSPORTATION**

RFQ NO. C00XXXXXXXXDB87C00108069DB87  
PROJECT NO.: GRTC BRT

**ACKNOWLEDGEMENT OF RFQ, REVISION AND/OR ADDENDA**

Acknowledgement shall be made of receipt of the Request for Qualifications (RFQ) and/or any and all revisions and/or addenda pertaining to the above designated project which are issued by the Department prior to the Statement of Qualifications (SOQ) submission date shown herein. Failure to include this acknowledgement in the SOQ may result in the rejection of your SOQ.

By signing this Attachment 2.10, the Offeror acknowledges receipt of the RFQ and/or following revisions and/or addenda to the RFQ for the above designated project which were issued under cover letter(s) of the date(s) shown hereon:

1. Cover letter of RFQ – September 25, 2015  
(Date)
2. Cover letter of Addendum #1- October 2, 2015  
(Date)
3. Cover letter of Addendum #2- October 16, 2015  
(Date)

  
SIGNATURE

November 4, 2015  
DATE

Donald E. Bryson, Jr.

PRINTED NAME

Pursuit Manager

TITLE



## **ATTACHMENT 3.2.6**

### **Project: GRTC BRT**

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

<b>Relationship with Offeror (Affiliate or Subsidiary)</b>	<b>Full Legal Name</b>	<b>Address</b>
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 <sup>rd</sup> 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
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

**ATTACHMENT 3.2.6**

**Project: GRTC BRT**

**Affiliated and Subsidiary Companies of the Offeror**

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



**Debarment Forms**  
3.2.7(a) Primary

**ATTACHMENT NO. 3.2.7(a)**

**CERTIFICATION REGARDING DEBARMENT  
PRIMARY COVERED TRANSACTIONS**

**Project:** GRTC BRT

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

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

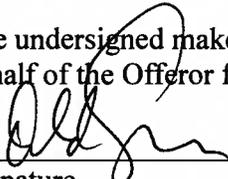
b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under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

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

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

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

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

	November 4, 2015	Pursuit Manager
_____ Signature	_____ Date	_____ Title

\_\_\_\_\_  
The Lane Construction Corporation  
Name of Firm

**Debarment Forms**  
3.2.7(b) Lower Tier

**ATTACHMENT NO. 3.2.7(b)**

**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

**Project No.:** GRTC BRT

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

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



Signature

11/04/2015

Date

Senior Vice President

Title

STV Incorporated dba STV Group Incorporated

Name of Firm

**ATTACHMENT NO. 3.2.7(b)**

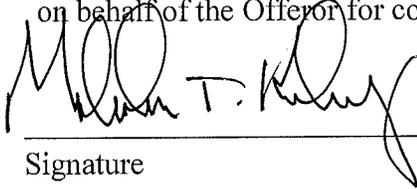
**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

**Project No.:** GRTC BRT

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.

  
Michael T. Kelly

Signature

10/13/2015

Date

President

Title

NXL Construction Services, Inc.

Name of Firm

**ATTACHMENT NO. 3.2.7(b)**

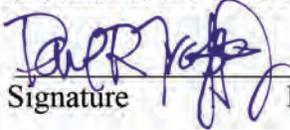
**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

**Project No.:** GRTC BRT

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

Date

10-15-15

Principal in Charge

Title

Timmons Group

Name of Firm

ATTACHMENT NO. 3.2.7(b)

**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

Project No.: GRTC BRT

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.

Michael J. Taylor      10/29/15      President  
Signature                      Date                      Title

Froehling and Robertson, Inc.  
Name of Firm



**ATTACHMENT NO. 3.2.7(b)**

**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

**Project No.:** GRTC BRT

- 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.

*Alexander W. Hanon*      October 12, 2015      President  
Signature                      Date                                      Title

H&B Surveying and Mapping, LLC  
Name of Firm

ATTACHMENT NO. 3.2.7(b)

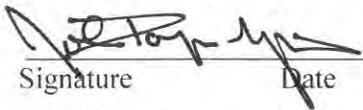
**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

**Project No.:** GRTC BRT

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.



10/12/2015

Vice President Business Development

Signature

Date

Title

InfraMap Corp.

Name of Firm

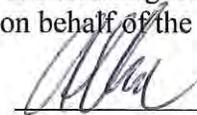
**ATTACHMENT NO. 3.2.7(b)**

**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

**Project No.:** GRTC BRT

- 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

October 15, 2015

Date

President

Title

KDR Real Estate Services, Inc.

Name of Firm

**ATTACHMENT NO. 3.2.7(b)**

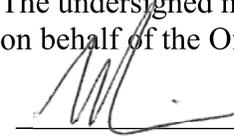
**CERTIFICATION REGARDING DEBARMENT  
LOWER TIER COVERED TRANSACTIONS**

**Project No.:** GRTC BRT

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

October 16, 2015

Date

Vice President, Public Affairs

Title

Seventh Point Transportation PR

Name of Firm





Prequalified Vendors Sorted By Vendor Name  
Includes All Qualified Levels As Of 10/8/2015

- L -

Vendor ID: L002  
Vendor Name: THE LANE CONSTRUCTION CORPORATION  
Prequal Exp: 06/30/2016

-- PREQ Address --

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

Work Classes (Listed But Not Limited To)

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

Bus. Contact: CAIOLA, VINCENT JAMES  
Email: VAPREQUAL@LANECONSTRUCT.COM

-- DBE Information --

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

Vendor ID: L005  
Vendor Name: LANFORD BROTHERS COMPANY, INCORPORATED  
Prequal Exp: 06/30/2016

-- PREQ Address --

P. O. BOX 7330  
ROANOKE, VA 24019-0330  
Phone: 540-992-2140  
Fax: 540-992-2139

Work Classes (Listed But Not Limited To)

- 003 - MAJOR STRUCTURES
- 013 - ROADWAY MILLING
- 049 - PAVEMENT SAWING AND GROOVING
- 050 - JOINT REPAIR / UNDERSEAL PAVEMENT

Bus. Contact: MCDANIEL, PATRICK NEAL  
Email: PATM@LANFORDBROS.COM

-- DBE Information --

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



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

October 19, 2015

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

RE: **The Lane Construction Corporation  
Request for Qualifications  
GRTC BUS RAPID TRANSIT (BRT) PROJECT  
From: Broad Street near Willow Lawn Drive To: Orleans Drive in Rocketts Landing  
County of Henrico and Richmond, Virginia, Contract ID Number: C00108069DB87  
Estimated Contract Price: \$38,000,000.00**

To Whom It May Concern:

This letter will serve to confirm that The Lane Construction Corporation is a highly regarded and valued client of the sureties, Zurich American Insurance Company (A.M. Best Financial Strength Rating of A+/Superior and Financial Size Category XV), Fidelity and Deposit Company of Maryland (A.M. Best Financial Strength Rating of A+/Superior and Financial Size Category XV) and Liberty Mutual Insurance Company (A.M. Best Financial Strength Rating of A/Excellent and Financial Size Category XV), the 'co-sureties'. Each surety company is licensed to conduct surety business in the Commonwealth of Virginia, and each surety company holds a Certificate of Authority as listed in the Department of the Treasury's Listing of Approved Sureties (Department Circular 570) dated July 1, 2015.

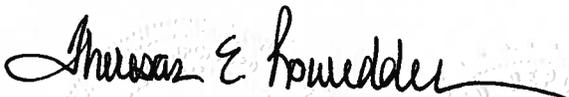
As the sureties for The Lane Construction Corporation, we advise that The Lane Construction Corporation is capable of obtaining 100% Performance Bond and 100% Labor and Materials Payment Bond in the amount of the anticipated cost of construction, and said bonds will cover the Project and any warranty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

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

Should you need additional assurance regarding the technical ability or bonding capacity of The Lane Construction Corporation, please do not hesitate to contact this office.

Sincerely,

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



Theresan E. Rowedder  
Attorney-in-Fact

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

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

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Maryland, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Maryland (herein collectively called the "Companies"), by **THOMAS O. MCCLELLAN, Vice President**, in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint **Kevin A. WHITE, Mark P. HERENDEEN, Jean CORREIA, Maria CHAVES, Theresan E. ROWEDDER, Bryan HUFT, Jeffrey HENDRICKS and Jane GILSON, all of Boston, Massachusetts, EACH** its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings**, and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

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

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said **ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND**, this 26th day of August, A.D. 2015.

**ATTEST:**

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



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

*Thomas O. McClellan*  
*Vice President*  
*Thomas O. McClellan*

State of Maryland  
County of Baltimore

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

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

*Maria D. Adamski*

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



**EXTRACT FROM BY-LAWS OF THE COMPANIES**

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

**CERTIFICATE**

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

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

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

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

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

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies, this 19TH day of OCTOBER, 2015.



Michael Bond, Vice President

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

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

Certificate No. 6999618

American Fire and Casualty Company  
The Ohio Casualty Insurance Company

Liberty Mutual Insurance Company  
West American Insurance Company

**POWER OF ATTORNEY**

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

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

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 28th day of May, 2015.



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

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

STATE OF PENNSYLVANIA ss  
COUNTY OF MONTGOMERY

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

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



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

By: Teresa Pastella  
Teresa Pastella, Notary Public

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

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

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

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

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

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

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 19th day of OCTOBER, 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

### Project GRTC BRT

#### 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	2016-01-31
					Business Entity Registration	0407002174	2015-12-31
STV Incorporated dba STV Group Inc	F0253452	Foreign Corporation	Active	10800 Midlothian Turnpike Suite 302, Richmond, VA 23235	Business Entity Branch Office	0411000462	2016-02-29
STV Incorporated dba STV Group Incorporated	F0253452	Foreign Corporation	Active	2722 Merrillee Drive, Suite 350, Fairfax, VA 22031	Business Entity Branch Office	0411000661	2016-02-29
STV Incorporated dba STV Group Incorporated	F0253452	Foreign Corporation	Active	1400 I Street NW Suite 1100, Washington, DC 20005	Business Entity Branch Office	0411001178	2016-02-29
STV Incorporated dba STV Group Incorporated	F0253452	Foreign Corporation	Active	7125 Ambassador Road, Suite 200, Baltimore, MD 21244	Business Entity Branch Office	0411000845	2016-02-29
STV Incorporated	F0253452	Foreign Corporation	Active	7125 Ambassador Road, Suite 200, Baltimore, MD 21244	Business Entity Branch Office	0411000887	2016-02-29

**ATTACHMENT 3.2.10****Project GRTC BRT****SCC and DPOR Information**

STV Incorporated dba STV Group Incorporated	F0253452	Foreign Corporation	Active	900 West Trade Street, Suite 715, Charlotte, NC 28208	Business Entity Branch Office	0411000787	2016-02-29
STV Incorporated dba STV/Ralph Whitehead Associates	F0253452	Foreign Corporation	Active	(old address) 1000 W Morehead Street, Suite 200, Charlotte, NC 28208	Business Entity Branch Office	0411000710	2016-02-29
STV Incorporated dba STV Group Incorporated	F0253452	Foreign Corporation	Active	225 Park Avenue South, New York, NY 10003	Business Entity Branch Office	0411000844	2016-02-29
STV Incorporated dba STV Group Incorporated	F0253452	Foreign Corporation	Active	205 West Welsh Dr., Douglassville, PA 19518	Business Entity	0407003505	2015-12-31
NXL Construction Co., Inc.	3497427	Corporation	Active	114 E. Cary St., Suite 200, Richmond, VA 23219	Business Entity	0407003031	2015-12-31
Timmons Group, Inc.	02640431	Corporation	Active	1001 Boulders Pkwy, Suite 300, Richmond, VA 23225	Professional Corporation	0405000456	2015-12-31
Froehling and Robertson, Inc.	00272112	Corporation	Active	3015 Dumbarton Road, Richmond, VA 23228	Business Entity	0407000098	2015-12-31
Geoconcepts Engineering, Inc.	5167671	Corporation	Active	19955 Highland Vista Drive Suite 170, Ashburn, VA 20147	Business Entity	0407004404	2015-12-31
H & B Surveying And Mapping, LLC	S2905604	Limited Liability Company	Active	612 Hull St., Suite 101B, Richmond, VA 23224	Business Entity	0407005432	2015-12-31
InfraMap Corp.	F1055252	S-Corp.	Active	10365 Cedar Lane, Glen Allen, VA 23059	Business Entity	0407003343	2015-12-31
KDR Real Estate Services Inc.	05712104	Corporation	Active	2500 Grenoble Road Richmond, VA 23294	Real Estate	0226007129	12-31-2016

**ATTACHMENT 3.2.10**

**Project GRTC BRT**

**SCC and DPOR Information**

Seventh Point, Inc.	2675411	Corporation	Active	DPOR N/A Firm locations: Virginia Beach and Richmond, VA	N/A	N/A	N/A
---------------------	---------	-------------	--------	---	-----	-----	-----

**DPOR INFORMATION FOR INDIVIDUALS (RFQ Sections 3.2.10.3 and 3.2.10.4)**

<b>Business Name</b>	<b>Individual's Name</b>	<b>Office Location Where Professional Services will be Provided (City/State)</b>	<b>Individual's DPOR Address</b>	<b>DPOR Type</b>	<b>DPOR Registration Number</b>	<b>DPOR Expiration Date</b>
<b>The Lane Construction Corporation</b>	<b>Kenneth Prince</b>	Chantilly, VA	Bristow, VA	Professional Engineer	0402044906	2017-01-31
<b>STV Incorporated dba STV Group Incorporated</b>	<b>Michael Hooshangi</b>	Fairfax, VA	Fairfax, VA	Professional Engineer	0402019827	2016-10-31
<b>STV Incorporated dba STV Group Incorporated</b>	<b>Kelvin Benfield</b>	Charlotte, NC	Charlotte, NC	Architect	0401015445	2016-12-31
<b>NXL Construction Co., Inc</b>	<b>Bill McDowall</b>	Richmond, VA	Hopewell, VA	Professional Engineer	0402018236	2016-10-31
<b>Timmons Group, Inc.</b>	<b>Christopher Kiefer</b>	Richmond, VA	Richmond, VA	Professional Engineer	0402023346	2016-06-30
KDR Real Estate Services Inc.	Allen Dorin, Jr.	Mechanicsville, VA	Richmond, VA	Certified General RE Appraiser	4001000562	2015-11-30





SCC eFile > Entity Search > Entity Details

[Login](#) | [Create an Account](#)



### SCC eFile Business Entity Details

[?](#) [Help](#)

#### 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

##### Court Services

##### Additional Services

##### General

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

##### Select an action

- [File a registered agent change](#)
- [File a registered office address change](#)
- [Resign as registered agent](#)
- [File an annual report](#)
- [Pay annual registration fee](#)
- [Order a certificate of good standing](#)
- [View eFile transaction history](#)
- [Manage email notifications](#)

##### Principal Office

90 FIELDSTONE COURT  
 CHESHIRE CT06410

[New Search](#) [Home](#)

##### Registered Agent/Registered Office

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

Screen ID: e1000

Need additional information? Contact [sccinfo@scc.virginia.gov](mailto:sccinfo@scc.virginia.gov) Website questions? Contact: [webmaster@scc.virginia.gov](mailto:webmaster@scc.virginia.gov)

We provide external links throughout our site.

- [PDF\(.pdf\) Reader](#)
- [Excel \(.xls\) Viewer](#)
- [PowerPoint \(.ppt\) Viewer](#)
- [Word \(.doc\) Viewer](#)

Build #: 1.0.0.24456



SCC eFile > Entity Search > Entity Details

[Login](#) | [Create an Account](#)



### SCC eFile Business Entity Details

[?](#) [Help](#)

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

##### 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

##### Court Services

##### Additional Services

#### General

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

#### Select an action

- [File a registered agent change](#)
- [File a registered office address change](#)
- [Resign as registered agent](#)
- [File an annual report](#)
- [Pay annual registration fee](#)
- [Order a certificate of good standing](#)
- [View eFile transaction history](#)
- [Manage email notifications](#)

#### Principal Office

205 WEST WELSH DRIVE  
 DOUGLASSVILLE PA19518

#### Registered Agent/Registered Office

CORPORATION SERVICE COMPANY  
 BANK OF AMERICA CENTER, 16TH FLOOR  
 1111 EAST MAIN STREET  
 RICHMOND VA 23219  
 RICHMOND CITY 216  
 Status: Active  
 Effective Date: 1/8/2015

Screen ID: e1000

Need additional information? Contact [sccinfo@scc.virginia.gov](mailto:sccinfo@scc.virginia.gov) Website questions? Contact: [webmaster@scc.virginia.gov](mailto:webmaster@scc.virginia.gov)  
 We provide external links throughout our site.

[PDF\(.pdf\) Reader](#)
[Excel \(.xls\) Viewer](#)
[PowerPoint \(.ppt\) Viewer](#)
[Word \(.doc\) Viewer](#)

Build #: 1.0.0.24456



SCC eFile > Entity Search > Entity Details

[Login](#) | [Create an Account](#)



### SCC eFile Business Entity Details

[?](#) [Help](#)

#### NXL Construction Co., 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
- Court Services
- Additional Services

#### General

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

#### Select an action

- [File a registered agent change](#)
- [File a registered office address change](#)
- [Resign as registered agent](#)
- [File an annual report](#)
- [Pay annual registration fee](#)
- [Order a certificate of good standing](#)
- [Submit a PDF for processing \(What can I submit?\)](#)
- [View eFile transaction history](#)
- [Manage email notifications](#)

#### Principal Office

114 E CARY STREET SUITE 200  
 RICHMOND VA23219

[New Search](#) [Home](#)

#### Registered Agent/Registered Office

NICOMEDES L DE LEON  
 9606 GEORGE'S BLUFF RD  
 RICHMOND VA 23229  
 HENRICO COUNTY 143  
 Status: Active  
 Effective Date: 10/8/1998

Screen ID: e1000

Need additional information? Contact [sccinfo@scc.virginia.gov](mailto:sccinfo@scc.virginia.gov) Website questions? Contact: [webmaster@scc.virginia.gov](mailto:webmaster@scc.virginia.gov)

We provide external links throughout our site.

- [PDF\(.pdf\) Reader](#)
- [Excel \(.xls\) Viewer](#)
- [PowerPoint \(.ppt\) Viewer](#)
- [Word \(.doc\) Viewer](#)

Build #: 1.0.0.24456



### SCC eFile Business Entity Details

[? Help](#)

#### Timmons Group, 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

##### Court Services

##### Additional Services

##### General

SCC ID: 02640431  
 Entity Type: Corporation  
 Jurisdiction of Formation: VA  
 Date of Formation/Registration: 11/30/1984  
 Status: Active  
 Shares Authorized: 50000

##### Select an action

- [File a registered agent change](#)
- [File a registered office address change](#)
- [Resign as registered agent](#)
- [File an annual report](#)
- [Pay annual registration fee](#)
- [Order a certificate of good standing](#)
- [Submit a PDF for processing \(What can I submit?\)](#)
- [View eFile transaction history](#)
- [Manage email notifications](#)

##### Principal Office

1001 BOULDERS PKWAY  
 STE 300  
 RICHMOND VA23225

##### Registered Agent/Registered Office

BRIAN F BORTELL  
 1001 BOULDERS PKWY STE 300  
 RICHMOND VA 23225  
 CHESTERFIELD COUNTY 120  
 Status: Active  
 Effective Date: 1/22/2007

Screen ID: e1000

Need additional information? Contact [sccinfo@scc.virginia.gov](mailto:sccinfo@scc.virginia.gov) Website questions? Contact: [webmaster@scc.virginia.gov](mailto:webmaster@scc.virginia.gov)  
 We provide external links throughout our site.

[PDF\(.pdf\) Reader](#)
[Excel \(.xls\) Viewer](#)
[PowerPoint \(.ppt\) Viewer](#)
[Word \(.doc\) Viewer](#)

Build #: 1.0.0.24456



SCC eFile > Entity Search > Entity Details

[Login](#) | [Create an Account](#)



### SCC eFile Business Entity Details

[?](#) [Help](#)

#### FROEHLING & ROBERTSON, INCORPORATED

##### 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

##### Court Services

##### Additional Services

##### General

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

##### Select an action

- [File a registered agent change](#)
- [File a registered office address change](#)
- [Resign as registered agent](#)
- [File an annual report](#)
- [Pay annual registration fee](#)
- [Order a certificate of good standing](#)
- [Submit a PDF for processing \(What can I submit?\)](#)
- [View eFile transaction history](#)
- [Manage email notifications](#)

##### Principal Office

3015 DUMBARTON ROAD  
 HENRICO VA23228

[New Search](#) [Home](#)

##### Registered Agent/Registered Office

WILLIAM H HOOFNAGLE III  
 1900 ONE JAMES CENTER  
 901 E CARY ST  
 RICHMOND VA 23219  
 RICHMOND CITY 216  
 Status: Active  
 Effective Date: 9/21/2011

Screen ID: e1000

Need additional information? Contact [sccinfo@scc.virginia.gov](mailto:sccinfo@scc.virginia.gov) Website questions? Contact: [webmaster@scc.virginia.gov](mailto:webmaster@scc.virginia.gov)

We provide external links throughout our site.

[PDF\(.pdf\) Reader](#)
[Excel \(.xls\) Viewer](#)
[PowerPoint \(.ppt\) Viewer](#)
[Word \(.doc\) Viewer](#)

Build #: 1.0.0.24456



SCC eFile > Entity Search > Entity Details

[Login](#) | [Create an Account](#)



### SCC eFile Business Entity Details

[?](#) [Help](#)

#### GeoConcepts 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

Court Services

Additional Services

#### General

SCC ID: 05167671  
 Entity Type: Corporation  
 Jurisdiction of Formation: VA  
 Date of Formation/Registration: 2/25/1999  
 Status: Active  
 Shares Authorized: 5000

#### Select an action

- [File a registered agent change](#)
- [File a registered office address change](#)
- [Resign as registered agent](#)
- [File an annual report](#)
- [Pay annual registration fee](#)
- [Order a certificate of good standing](#)
- [Submit a PDF for processing \(What can I submit?\)](#)
- [View eFile transaction history](#)
- [Manage email notifications](#)

#### Principal Office

19955 HIGHLAND VISTA DRIVE  
 SUITE 170  
 ASHBURN VA20147

[New Search](#) [Home](#)

#### Registered Agent/Registered Office

VIVIAN LEWIS  
 GEOCONCEPTS ENGINEERING INC  
 19955 HIGHLAND VISTA DR #170  
 ASHBURN VA 20147  
 LOUDOUN COUNTY 153  
 Status: Active  
 Effective Date: 11/24/2004

Screen ID: e1000

Need additional information? Contact [scinfo@sc.virginia.gov](mailto:scinfo@sc.virginia.gov) Website questions? Contact: [webmaster@sc.virginia.gov](mailto:webmaster@sc.virginia.gov)

We provide external links throughout our site.

- [PDF\(.pdf\) Reader](#)
- [Excel \(.xls\) Viewer](#)
- [PowerPoint \(.ppt\) Viewer](#)
- [Word \(.doc\) Viewer](#)

Build #: 1.0.0.24456



### SCC eFile Business Entity Details

[? Help](#)

#### H & B Surveying and Mapping, LLC

##### 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

##### Court Services

##### Additional Services

##### General

SCC ID: S2905604  
 Entity Type: Limited Liability Company  
 Jurisdiction of Formation: VA  
 Date of Formation/Registration: 4/27/2009  
 Status: Active

##### Select an action

- [File a registered agent change](#)
- [File a registered office address change](#)
- [Resign as registered agent](#)
- [File a principal office address change](#)
- [Pay annual registration fee](#)
- [Order a certificate of fact of existence](#)
- [Submit a PDF for processing \(What can I submit?\)](#)
- [View eFile transaction history](#)
- [Manage email notifications](#)

##### Principal Office

612 HULL STREET STE 101B  
 RICHMOND VA23224

[New Search](#) [Home](#)

##### Registered Agent/Registered Office

TIMOTHY H GUARE  
 TIMOTHY H GUARE PLC  
 6802 PARAGON PL STE 100  
 HENRICO VA 23230  
 HENRICO COUNTY 143  
 Status: Active  
 Effective Date: 7/2/2009

Screen ID: e1000

Need additional information? Contact [scinfo@scc.virginia.gov](mailto:scinfo@scc.virginia.gov) Website questions? Contact: [webmaster@scc.virginia.gov](mailto:webmaster@scc.virginia.gov)

We provide external links throughout our site.

- [PDF\(.pdf\) Reader](#)
- [Excel \(.xls\) Viewer](#)
- [PowerPoint \(.ppt\) Viewer](#)
- [Word \(.doc\) Viewer](#)

Build #: 1.0.0.24456



SCC eFile > Entity Search > Entity Details

[Login](#) | [Create an Account](#)



### SCC eFile Business Entity Details

[?](#) [Help](#)

#### 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

#### Court Services

#### Additional Services

#### InfraMap Corp.

##### General

SCC ID: F1055252  
 Entity Type: Foreign Corporation  
 Jurisdiction of Formation: DE  
 Date of Formation/Registration: 10/22/1990  
 Status: Active  
 Shares Authorized: 1500

##### Principal Office

10365 CEDAR LANE  
 GLEN ALLEN VA23059

##### Registered Agent/Registered Office

PAUL HAYES  
 10365 CEDAR LANE  
 GLEN ALLEN VA 23059  
 HANOVER COUNTY 142  
 Status: Active  
 Effective Date: 9/4/1998

##### Select an action

- [File a registered agent change](#)
- [File a registered office address change](#)
- [Resign as registered agent](#)
- [File an annual report](#)
- [Pay annual registration fee](#)
- [Order a certificate of good standing](#)
- [View eFile transaction history](#)
- [Manage email notifications](#)

Screen ID: e1000

Need additional information? Contact [sccinfo@scc.virginia.gov](mailto:sccinfo@scc.virginia.gov) Website questions? Contact: [webmaster@scc.virginia.gov](mailto:webmaster@scc.virginia.gov)

We provide external links throughout our site.

[PDF\(.pdf\) Reader](#)
[Excel \(.xls\) Viewer](#)
[PowerPoint \(.ppt\) Viewer](#)
[Word \(.doc\) Viewer](#)

Build #: 1.0.0.24456



### SCC eFile Business Entity Details

[?](#) Help

#### KDR Real Estate Services, 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

##### Court Services

##### Additional Services

##### General

SCC ID: 05712104  
 Entity Type: Corporation  
 Jurisdiction of Formation: VA  
 Date of Formation/Registration: 1/30/2002  
 Status: Active  
 Shares Authorized: 100

##### Select an action

- [File a registered agent change](#)
- [File a registered office address change](#)
- [Resign as registered agent](#)
- [File an annual report](#)
- [Pay annual registration fee](#)
- [Order a certificate of good standing](#)
- [Submit a PDF for processing \(What can I submit?\)](#)
- [View eFile transaction history](#)
- [Manage email notifications](#)

##### Principal Office

2500 GRENOBLE RD  
 RICHMOND VA23294

[New Search](#) [Home](#)

##### Registered Agent/Registered Office

ALLEN G DORIN JR  
 2500 GRENOBLE RD  
 RICHMOND VA 23294  
 HENRICO COUNTY 143  
 Status: Active  
 Effective Date: 7/9/2003

Screen ID: e1000

Need additional information? Contact [sccinfo@scc.virginia.gov](mailto:sccinfo@scc.virginia.gov) Website questions? Contact: [webmaster@scc.virginia.gov](mailto:webmaster@scc.virginia.gov)

We provide external links throughout our site.

- [PDF\(.pdf\) Reader](#)
- [Excel \(.xls\) Viewer](#)
- [PowerPoint \(.ppt\) Viewer](#)
- [Word \(.doc\) Viewer](#)

Build #: 1.0.0.24456



SCC eFile > Entity Search > Entity Details

[Login](#) | [Create an Account](#)



### SCC eFile Business Entity Details

[?](#) [Help](#)

#### Seventh Point, 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

##### Court Services

##### Additional Services

#### General

SCC ID: 02675411  
 Entity Type: Corporation  
 Jurisdiction of Formation: VA  
 Date of Formation/Registration: 3/4/1985  
 Status: Active  
 Shares Authorized: 3000

#### Select an action

- [File a registered agent change](#)
- [File a registered office address change](#)
- [Resign as registered agent](#)
- [File an annual report](#)
- [Pay annual registration fee](#)
- [Order a certificate of good standing](#)
- [Submit a PDF for processing \(What can I submit?\)](#)
- [View eFile transaction history](#)
- [Manage email notifications](#)

#### Principal Office

4752 EUCLID ROAD  
 VIRGINIA BEACH VA23462

[New Search](#) [Home](#)

#### Registered Agent/Registered Office

ALBERT H POOLE  
 4705 COLUMBUS ST  
 VIRGINIA BEACH VA 23462  
 VIRGINIA BEACH CITY 228  
 Status: Active  
 Effective Date: 3/24/1998

Screen ID: e1000

Need additional information? Contact [sccinfo@scc.virginia.gov](mailto:sccinfo@scc.virginia.gov) Website questions? Contact: [webmaster@scc.virginia.gov](mailto:webmaster@scc.virginia.gov)

We provide external links throughout our site.

- [PDF\(.pdf\) Reader](#)
- [Excel \(.xls\) Viewer](#)
- [PowerPoint \(.ppt\) Viewer](#)
- [Word \(.doc\) Viewer](#)

Build #: 1.0.0.24456

# DPOR License Lookup License Number 2701011871

## License Details

Name	THE LANE CONSTRUCTION CORPORATION / SENATE ASPHALT
DBA Name	VA PAVING COMPANY / VA SIGN AND LIGHTING COMPANY
License Number	2701011871
License Description	Contractor
Firm Type	Corporation
Rank <sup>1</sup>	Class A
Address	90 FIELDSTONE COURT, CHESHIRE, CT 06410
Specialties <sup>2</sup>	Building (BLD) Highway / Heavy (H/H)
Initial Certification Date	1972-10-12
Expiration Date	2016-01-31

- 1 Refer to the Statutory Definitions (<http://law.lis.virginia.gov/vacode/title54.1/chapter11/section54.1-1100/>) for descriptions of the rank or class of license (A, B, or C) that determines the monetary limits on contracts/projects.
- 2 Refer to the Classification Definitions (<http://lis.virginia.gov/cgi-bin/legp604.exe?000+reg+18VAC50-22-20>) and Specialty Definitions (<http://lis.virginia.gov/cgi-bin/legp604.exe?000+reg+18VAC50-22-30>) for detailed definitions of these classifications and specialties.

The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any reliance on data provided online. While DPOR has attempted to ensure that the data contained herein are accurate and reflect the status of its regulants, DPOR makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this data. If discrepancies or errors are discovered, please inform DPOR so that appropriate action may be taken.

The license information in this application was last updated at Fri Oct 02 02:50:18 EDT.

The disciplinary action information in this application was last updated at Fri Oct 02 02:50:19 EDT.

DPOR License Lookup build 1,157 (built 2015-09-14 09:09:32).

# DPOR License Lookup License Number 0407002174

## License Details

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

## Related Licenses <sup>1</sup>

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402014687	GREY, DAVID WISEMAN	Professional Engineer License	Engineering	2017-05-31

Showing 1 to 1 of 1 entries

- 1 The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any reliance on data provided online. While DPOR has attempted to ensure that the data contained herein are accurate and reflect the status of its regulants, DPOR makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this data. If discrepancies or errors are discovered, please inform the Broker and DPOR so that appropriate action may be taken.

The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

# DPOR License Lookup License Number 0411000462

## License Details

Name	STV INCORPORATED DBA STV GROUP INC
DBA Name	STV GROUP INC
License Number	0411000462
License Description	Business Entity Branch Office Registration
Rank	Business Entity Branch Office
Address	10800 MIDLOTHIAN TNPK SUITE 302, RICHMOND, VA 23235
Initial Certification Date	2006-11-15
Expiration Date	2016-02-29

## Related Licenses <sup>1</sup>

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

Showing 1 to 1 of 1 entries

- 1 The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any reliance on data provided online. While DPOR has attempted to ensure that the data contained herein are accurate and reflect the status of its regulants, DPOR makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this data. If discrepancies or errors are discovered, please inform the Broker and DPOR so that appropriate action may be taken.

The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

# DPOR License Lookup License Number 0411000661

## License Details

Name	STV INCORPORATED
DBA Name	STV GROUP INCORPORATED
License Number	0411000661
License Description	Business Entity Branch Office Registration
Rank	Business Entity Branch Office
Address	2722 MERRILLEE DR SUITE 350, FAIRFAX, VA 22031
Initial Certification Date	2009-09-11
Expiration Date	2016-02-29

## Related Licenses <sup>1</sup>

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

Showing 1 to 2 of 2 entries

- 1 The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any reliance on data provided online. While DPOR has attempted to ensure that the data contained herein are accurate and reflect the status of its regulants, DPOR makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this data. If discrepancies or errors are discovered, please inform the Broker and DPOR so that appropriate action may be taken.

The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the

# DPOR License Lookup License Number 0411000845

## License Details

Name	STV INCORPORATED
DBA Name	STV GROUP INCORPORATED
License Number	0411000845
License Description	Business Entity Branch Office Registration
Rank	Business Entity Branch Office
Address	7125 AMBASSADOR RD SUITE 200, BALTIMORE, MD 21244
Initial Certification Date	2011-07-15
Expiration Date	2016-02-29

## Related Licenses <sup>1</sup>

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

Showing 1 to 1 of 1 entries

- 1 The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any reliance on data provided online. While DPOR has attempted to ensure that the data contained herein are accurate and reflect the status of its regulants, DPOR makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this data. If discrepancies or errors are discovered, please inform the Broker and DPOR so that appropriate action may be taken.

The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

# DPOR License Lookup License Number 0411000887

## License Details

Name	STV INCORPORATED
License Number	0411000887
License Description	Business Entity Branch Office Registration
Rank	Business Entity Branch Office
Address	7125 AMBASSADOR ROAD SUITE 200, BALTIMORE, MD 21244
Initial Certification Date	2011-12-19
Expiration Date	2016-02-29

## Related Licenses <sup>1</sup>

License Number	License Holder Name	License Type	Relation Type	License Expiry
0406001668	LAUVER, KYLE THOMAS	Landscape Architect License	Landscape Architecture	2016-11-30

Showing 1 to 1 of 1 entries

- The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any reliance on data provided online. While DPOR has attempted to ensure that the data contained herein are accurate and reflect the status of its regulants, DPOR makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this data. If discrepancies or errors are discovered, please inform the Broker and DPOR so that appropriate action may be taken.

The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

# DPOR License Lookup License Number 0411001178

## License Details

Name	STV INCORPORATED
DBA Name	STV GROUP INCORPORATED
License Number	0411001178
License Description	Business Entity Branch Office Registration
Rank	Business Entity Branch Office
Address	1400 I STREET NW STE 1100, WASHINGTON, DC 20005
Initial Certification Date	2014-12-19
Expiration Date	2016-02-29

## Related Licenses <sup>1</sup>

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

Showing 1 to 1 of 1 entries

1 The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any reliance on data provided online. While DPOR has attempted to ensure that the data contained herein are accurate and reflect the status of its regulants, DPOR makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this data. If discrepancies or errors are discovered, please inform the Broker and DPOR so that appropriate action may be taken.

The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

# DPOR License Lookup License Number 0411000787

## License Details

Name	STV INCORPORATED
DBA Name	STV GROUP, INCORPORATED
License Number	0411000787
License Description	Business Entity Branch Office Registration
Rank	Business Entity Branch Office
Address	900 WEST TRADE STREET SUITE 715, CHARLOTTE, NC 28208
Initial Certification Date	2011-02-04
Expiration Date	2016-02-29

## Related Licenses <sup>1</sup>

License Number	License Holder Name	License Type	Relation Type	License Expiry
0401015445	BENFIELD, KELVIN LESTER	Architect License	Architecture	2016-12-31

Showing 1 to 1 of 1 entries

- 1 The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any reliance on data provided online. While DPOR has attempted to ensure that the data contained herein are accurate and reflect the status of its regulants, DPOR makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this data. If discrepancies or errors are discovered, please inform the Broker and DPOR so that appropriate action may be taken.

The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

# DPOR License Lookup License Number 0411000710

## License Details

Name	STV INCORPORATED
DBA Name	STV/RALPH WHITEHEAD ASSOCIATES
License Number	0411000710
License Description	Business Entity Branch Office Registration
Rank	Business Entity Branch Office
Address	1000 W MOREHEAD ST SUITE 200, CHARLOTTE, NC 28208
Initial Certification Date	2010-01-22
Expiration Date	2016-02-29

## Related Licenses <sup>1</sup>

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402017221	MATTHIS, GENE STUART II	Professional Engineer License	Engineering	2017-03-31

Showing 1 to 1 of 1 entries

- 1 The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any reliance on data provided online. While DPOR has attempted to ensure that the data contained herein are accurate and reflect the status of its regulants, DPOR makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this data. If discrepancies or errors are discovered, please inform the Broker and DPOR so that appropriate action may be taken.

The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

# DPOR License Lookup License Number 0407003505

## License Details

Name	STV INCORPORATED
DBA Name	STV GROUP INCORPORATED
License Number	0407003505
License Description	Business Entity Registration
Rank	Business Entity
Address	205 WEST WELSH DR, DOUGLASSVILLE, PA 19518
Initial Certification Date	1996-04-17
Expiration Date	2015-12-31

## Related Licenses <sup>1</sup>

License Number	License Holder Name	License Type	Relation Type	License Expiry
0401007780	DARLINGTON, ROBERT WILLIAM	Architect License	Architecture	2016-08-31
0402021773	BOMBOY, KEVIN DARRYL	Professional Engineer License	Engineering	2017-01-31

Showing 1 to 2 of 2 entries

- 1 The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any reliance on data provided online. While DPOR has attempted to ensure that the data contained herein are accurate and reflect the status of its regulants, DPOR makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this data. If discrepancies or errors are discovered, please inform the Broker and DPOR so that appropriate action may be taken.

The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the

# DPOR License Lookup License Number 0411000844

## License Details

Name	STV INCORPORATED
DBA Name	STV GROUP INCORPORATED
License Number	0411000844
License Description	Business Entity Branch Office Registration
Rank	Business Entity Branch Office
Address	225 PARK AVENUE SOUTH, NEW YORK, NY 10003
Initial Certification Date	2011-07-15
Expiration Date	2016-02-29

## Related Licenses <sup>1</sup>

License Number	License Holder Name	License Type	Relation Type	License Expiry
0401013735	ZISKIND, DAVID MILES	Architect License	Architecture	2016-04-30

Showing 1 to 1 of 1 entries

- 1 The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any reliance on data provided online. While DPOR has attempted to ensure that the data contained herein are accurate and reflect the status of its regulants, DPOR makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this data. If discrepancies or errors are discovered, please inform the Broker and DPOR so that appropriate action may be taken.

The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

# DPOR License Lookup License Number 0407003031

## License Details

Name	NXL CONSTRUCTION CO INC
DBA Name	NXL CONSTRUCTION SERVICES INC
License Number	0407003031
License Description	Business Entity Registration
Firm Type	Corporation
Rank	Business Entity
Address	114 E CARY ST STE 200, RICHMOND, VA 23219
Initial Certification Date	1991-11-08
Expiration Date	2015-12-31

## Related Licenses <sup>1</sup>

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402023030	DE LEON, NICOMEDES L	Professional Engineer License	Engineering	2016-02-29
0403001800	JONES, DAVID LYNN	Land Surveyor License	Land Surveying	2017-06-30

Showing 1 to 2 of 2 entries

- The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any reliance on data provided online. While DPOR has attempted to ensure that the data contained herein are accurate and reflect the status of its regulants, DPOR makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this data. If discrepancies or errors are discovered, please inform the Broker and DPOR so that appropriate action may be taken.

The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the

# DPOR License Lookup License Number 0405000456

## License Details

Name	TIMMONS GROUP INC
License Number	0405000456
License Description	Professional Corporation Registration
Firm Type	PC - Professional Corporation
Rank	Professional Corporation
Address	1001 BOULDERS PKWY STE 300, RICHMOND, VA 23225
Initial Certification Date	1984-12-26
Expiration Date	2015-12-31

## Related Licenses <sup>1</sup>

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402021266	BORTELL, BRIAN F	Professional Engineer License	Engineering	2016-07-31
0406000146	LANIER, LUCILLE CHENERY	Landscape Architect License	Landscape Architecture	2017-01-31
0403002287	DUNEVANT, MICHAEL DWAYNE	Land Surveyor License	Land Surveying	2017-01-31

Showing 1 to 3 of 3 entries

<sup>1</sup> The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any reliance on data provided online. While DPOR has attempted to ensure that the data contained herein are accurate and reflect the status of its regulants, DPOR makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this data. If discrepancies or errors are discovered, please inform the Broker and DPOR so that appropriate action may be taken.

# DPOR License Lookup License Number 0407004404

## License Details

Name	GEOCONCEPTS ENGINEERING INC
License Number	0407004404
License Description	Business Entity Registration
Firm Type	Corporation
Rank	Business Entity
Address	19955 HIGHLAND VISTA DRIVE SUITE 170, ASHBURN, VA 20147
Initial Certification Date	2003-03-28
Expiration Date	2015-12-31

## Related Licenses <sup>1</sup>

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402021556	BURKART, PAUL EDWARD	Professional Engineer License	Engineering	2016-03-31
0402021276	LEWIS, TADEUSZ WILLIAM	Professional Engineer License	Engineering	2016-04-30

Showing 1 to 2 of 2 entries

- 1 The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any reliance on data provided online. While DPOR has attempted to ensure that the data contained herein are accurate and reflect the status of its regulants, DPOR makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this data. If discrepancies or errors are discovered, please inform the Broker and DPOR so that appropriate action may be taken.

The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the

# DPOR License Lookup

## License Number 0407000098

### License Details

<b>Name</b>	FROEHLING & ROBERTSON, INC
<b>License Number</b>	0407000098
<b>License Description</b>	Business Entity Registration
<b>Rank</b>	Business Entity
<b>Address</b>	3015 DUMBARTON ROAD, RICHMOND, VA 23228
<b>Initial Certification Date</b>	1982-08-05
<b>Expiration Date</b>	2015-12-31

### Related Licenses <sup>1</sup>

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402008502	KIRBY, S H JR	Professional Engineer License	Engineering	2017-05-31

Showing 1 to 1 of 1 entries

- 1 The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any reliance on data provided online. While DPOR has attempted to ensure that the data contained herein are accurate and reflect the status of its regulants, DPOR makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this data. If discrepancies or errors are discovered, please inform the Broker and DPOR so that appropriate action may be taken.

# DPOR License Lookup License Number

## 0226007129

### License Details

<b>Name</b>	KDR REAL ESTATE SERVICES INC
<b>License Number</b>	0226007129
<b>License Description</b>	Real Estate Firm License
<b>Rank</b>	Firm License
<b>Address</b>	2500 GRENOBLE RD, RICHMOND, VA 23294
<b>Initial Certification Date</b>	2002-12-26
<b>Expiration Date</b>	2016-12-31
<b>In Charge Of</b>	DORIN, ALLEN GUNN JR

### Related Licenses <sup>1</sup>

License Number	License Holder Name	License Type	Relation Type	License Expiry
0225108043	DORIN, ALLEN GUNN JR	Real Estate Individual	Principal Broker	2017-03-31
0225159906	GEORGE, JOHN C JR	Real Estate Individual	Firm - Salesperson	2017-04-30

Showing 1 to 2 of 2 entries

- 1 The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any reliance on data provided online. While DPOR has attempted to ensure that the data contained herein are accurate and reflect the status of its regulants, DPOR makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this data. If discrepancies or errors are discovered, please inform the Broker and DPOR so that appropriate action may be taken.

# DPOR License Lookup License Number 0407005432

## License Details

Name	H & B SURVEYING & MAPPING LLC
License Number	0407005432
License Description	Business Entity Registration
Rank	Business Entity
Address	612 HULL ST SUITE 101B, RICHMOND, VA 23224
Initial Certification Date	2009-05-05
Expiration Date	2015-12-31

## Related Licenses <sup>1</sup>

License Number	License Holder Name	License Type	Relation Type	License Expiry
0403002617	HANSON, ALISON WATSON	Land Surveyor License	Land Surveying	2016-01-31

Showing 1 to 1 of 1 entries

- 1 The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any reliance on data provided online. While DPOR has attempted to ensure that the data contained herein are accurate and reflect the status of its regulants, DPOR makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this data. If discrepancies or errors are discovered, please inform the Broker and DPOR so that appropriate action may be taken.

The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

# DPOR License Lookup License Number 0407003343

## License Details

Name	INFRAMAP CORP
License Number	0407003343
License Description	Business Entity Registration
Firm Type	Corporation
Rank	Business Entity
Address	10365 CEDAR LANE, GLEN ALLEN, VA 23059
Initial Certification Date	1995-10-10
Expiration Date	2015-12-31

## Related Licenses <sup>1</sup>

License Number	License Holder Name	License Type	Relation Type	License Expiry
0403001452	ARMENDINGER, STEPHEN H	Land Surveyor License	Land Surveying	2016-09-30
0402039982	BELL, HANNAH JO	Professional Engineer License	Engineering	2016-05-31

Showing 1 to 2 of 2 entries

- The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any reliance on data provided online. While DPOR has attempted to ensure that the data contained herein are accurate and reflect the status of its regulants, DPOR makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this data. If discrepancies or errors are discovered, please inform the Broker and DPOR so that appropriate action may be taken.

The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the

# DPOR License Lookup License Number

## 0402044906

### License Details

<b>Name</b>	PRINCE, KENNETH KWAME
<b>License Number</b>	0402044906
<b>License Description</b>	Professional Engineer License
<b>Rank</b>	Professional Engineer
<b>Address</b>	BRISTOW, VA 20136-2675
<b>Initial Certification Date</b>	2009-01-05
<b>Expiration Date</b>	2017-01-31

---

The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any reliance on data provided online. While DPOR has attempted to ensure that the data contained herein are accurate and reflect the status of its regulants, DPOR makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this data. If discrepancies or errors are discovered, please inform DPOR so that appropriate action may be taken.

The license information in this application was last updated at Thu Oct 29 02:50:18 EDT.

The disciplinary action information in this application was last updated at Thu Oct 29 02:50:18 EDT.

DPOR License Lookup build 1,161 (built 2015-10-27 02:21:24).

# DPOR License Lookup License Number 0402019827

## License Details

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

## Related Licenses <sup>1</sup>

License Number	License Holder Name	License Type	Relation Type	License Expiry
0411000661	STV INCORPORATED	Business Entity Branch Office Registration	Engineering	2016-02-29

Showing 1 to 1 of 1 entries

- 1 The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any reliance on data provided online. While DPOR has attempted to ensure that the data contained herein are accurate and reflect the status of its regulants, DPOR makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this data. If discrepancies or errors are discovered, please inform the Broker and DPOR so that appropriate action may be taken.

The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

# DPOR License Lookup License Number

## 0401015445

### License Details

<b>Name</b>	BENFIELD, KELVIN LESTER
<b>License Number</b>	0401015445
<b>License Description</b>	Architect License
<b>Rank</b>	Architect
<b>Address</b>	CHARLOTTE, NC 28210
<b>Initial Certification Date</b>	2010-12-09
<b>Expiration Date</b>	2016-12-31

### Related Licenses <sup>1</sup>

License Number	License Holder Name	License Type	Relation Type	License Expiry
0411000787	STV INCORPORATED	Business Entity Branch Office Registration	Architecture	2016-02-29

Showing 1 to 1 of 1 entries

- 1 The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any reliance on data provided online. While DPOR has attempted to ensure that the data contained herein are accurate and reflect the status of its regulants, DPOR makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this data. If discrepancies or errors are discovered, please inform the Broker and DPOR so that appropriate action may be taken.

The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

# DPOR License Lookup License Number 0402023346

## License Details

Name	KIEFER, CHRISTOPHER MACK
License Number	0402023346
License Description	Professional Engineer License
Rank	Professional Engineer
Address	RICHMOND, VA 23225
Initial Certification Date	1992-06-25
Expiration Date	2016-06-30

---

The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any reliance on data provided online. While DPOR has attempted to ensure that the data contained herein are accurate and reflect the status of its regulants, DPOR makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this data. If discrepancies or errors are discovered, please inform DPOR so that appropriate action may be taken.

The license information in this application was last updated at Fri Oct 02 02:50:18 EDT.

The disciplinary action information in this application was last updated at Fri Oct 02 02:50:19 EDT.

DPOR License Lookup build 1,158 (built 2015-10-02 03:20:42).

# DPOR License Lookup

## License Number 0402018236

### License Details

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

---

The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any reliance on data provided online. While DPOR has attempted to ensure that the data contained herein are accurate and reflect the status of its regulants, DPOR makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this data. If discrepancies or errors are discovered, please inform DPOR so that appropriate action may be taken.

The license information in this application was last updated at Mon Oct 26 02:50:18 EDT.

The disciplinary action information in this application was last updated at Mon Oct 26 02:50:18 EDT.

DPOR License Lookup build 1,160 (built 2015-10-06 09:58:05).

# DPOR License Lookup License Number 4001000562

## License Details

Name DORIN, ALLEN G JR  
License Number 4001000562  
License Description Real Estate Appraiser License  
Status Active  
Rank Certified General RE Appraiser  
Address RICHMOND, VA 23294  
Initial Certification Date 1991-11-26  
Expiration Date 2015-11-30

## Continuing Education <sup>1</sup>

Start Date	End Date	Requirement	Hours Required	Hours Earned	Hours Deficit
2013-12-01	2015-11-30	Appraiser Other Category	21	3	18
2013-12-01	2015-11-30	Appraiser USPAP Update	7	0	7

Showing 1 to 2 of 2 entries

<sup>1</sup> No continuing education is required for inactive licenses.

A total of 28 classroom hours of Continuing Education is required to renew your license.

Of the 28 classroom hours, you will need to complete the 7-hour classroom USPAP course which shall be the National Uniform Standards of Professional Appraisal Practice course or its equivalent. (The 15-hour USPAP course cannot be used in lieu of the 7-hour USPAP course for continuing education.)

The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

DPOR assumes no liability for any errors, omissions, or inaccuracies in the information provided or for any reliance on data provided online. While DPOR has attempted to ensure that the data contained herein are accurate and reflect the status of its regulants, DPOR makes no warranties, expressed or



## ATTACHMENT 3.3.1

### KEY PERSONNEL RESUME FORM

<b>Brief Resume of Key Personnel anticipated for the Project.</b>	
a. <u>Name &amp; Title:</u> <b>Kenneth Prince, PE—District Manager</b>	
b. <u>Project Assignment:</u> <b>Design-Build Project Manager</b>	
c. <u>Name of Firm with which you are now associated:</u> <b>Lane Construction Corporation</b>	
d. <u>Employment History:</u> <b>With this Firm 12 Years With Other Firms 7 Years</b>	
<p>Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below):</p> <p>Mr. Prince will be available to VDOT throughout the project and possesses the necessary expertise and experience required to supervise and exercise control of the work. He will accept responsibility for the final work product</p> <ul style="list-style-type: none"> <li>• <b>The Lane Construction Corporation—2011-Present:</b> Mr. Prince, a registered licensed PE in Virginia, serves as the District Manager and Project Manager for LANE for various D-B projects in the Mid-Atlantic ranging from \$7M to \$726M. He is responsible for overall management of the design, construction, quality, and contract administration on these projects. He provides strategic planning and execution for projects, leads a team of project and construction managers, and works with design and construction teams on innovative techniques and means and methods to execute projects. He organizes and assigns equipment, personnel, and subcontractor resources to execute each project. He leads and implements safety initiatives, establishes project objectives, policies, procedures and performance standards, sets and monitors budgets, and assures that a quality management system is in place.</li> <li>• <b>The Lane Construction Corporation, Project Manager/Engineer—2003-2010:</b> Mr. Prince was responsible for the execution of all transportation construction operations, safety, QC/QA programs for LANE’s Mid-Atlantic region. He supervised work crews and subcontractors on projects for interstate construction, utility relocation, major concrete paving, bridges, earthwork, and environmental controls.</li> <li>• <b>Washington Group International, Construction Engineer/Superintendent—2000–2002:</b> Mr. Prince was responsible for construction engineering and operations, scheduling of work crews and subcontractors, safety and quality programs and construction plans on a \$45M USACE project.</li> </ul>	
e. <u>Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</u> <b>University of Michigan, Ann Arbor, MI / B.S. / 1996 / Civil Engineering</b>	
f. <u>Active Registration: Year First Registered/ Discipline/VA Registration #:</u> <b>2009/PE/VA #0402044906</b>	
<p>g. Document the extent and depth of your experience and qualifications relevant to the Project.</p> <ol style="list-style-type: none"> <li>1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i></li> <li>2. <i>Note whether experience is with current firm or with other firm.</i></li> <li>3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i></li> </ol> <p><b>(List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)</b></p> <p>* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.</p>	
<b>Crystal City-Potomac Yard Transitway (Route 1) Bus Rapid Transit (BRT), Alexandria, VA      DESIGN-BUILD</b>	
<i>Firm:</i> Lane Construction Corporation	<i>Project Role:</i> Design-Build Project Manager
<i>Beginning Date:</i> 2011	<i>End Date:</i> 2014
<p><b><i>Specific Responsibilities:</i></b> Mr. Prince was responsible for directing and managing the project team, coordinated with and monitored contract progress with the Owner and subcontractors (including adherence to contractual requirements and specifications), and oversaw the overall safety and quality control programs. He ensured that project resources (manpower, materials, subcontractors, and equipment) were available and furnished in a timely manner to the project. He facilitated communication among team partners, efficiently designated resources to ensure timely delivery, coordinated with personnel on adjacent projects, and supervised the procurement and furnishings of materials, equipment, services and labor necessary for project completion.</p>	

**Project Relevance:** This \$13M D-B project is the Washington, DC region’s very first constructed BRT line. The project included construction of 0.8 miles of “bus only” dedicated travel lanes in the existing median of Jefferson Davis Highway (Route 1) which is a heavily traveled urban/commercial roadway. Similarities to the GRTC BRT project include: roadway improvements; survey; environmental, including permitting; geotechnical; milling and overlay of existing pavement; hydraulics; storm drainage and stormwater management facilities; traffic control devices including Transit Signal Priority (TSP) system and signals; communications installation and upgrades; systems integration; TMP; signing, striping and pavement marking; right-of-way; utilities; landscaping; seven stations and platforms; sidewalk upgrades; stakeholder and third party coordination; public involvement/ relations; QA/QC; construction engineering and inspection; compliance with safety and security plans; testing; and overall Project management. Other important aspects of the project included excavation, hazardous materials identification and remediation, drainage system installation and retrofitting, a new street lighting system, and reconfiguration of the traffic signal system to accommodate the future BRT lanes. Challenges on this project included unknown utilities and changes to conditions, but the project team reacted quickly and efficiently which allowed for the project to be completed ahead of schedule. With the project taking place in a congested urban area in Alexandria, the team exercised caution with the existing vehicular and pedestrian traffic. To remain safe, this project LANE continually worked with our on-site safety personnel to implement safety controls to prevent hazards to vehicles and pedestrians on and near the site.

**VDOT, I-95 Express Lanes, Fairfax County to Stafford County, VA** **DESIGN-BUILD**

<b>Firm:</b>	Lane Construction Corporation	<b>Project Role:</b>	Project Executive/District Manager
<b>Beginning Date:</b>	2012	<b>End Date:</b>	2014

**Specific Responsibilities:** Mr. Prince’s role as DBPM for the GRTC BRT project will be similar to his role on the I-95 Express Lanes D-B project. Mr. Prince administered the contract, directed the project team, and oversaw quality on this \$726M D-B. He coordinated all resources necessary to execute the successful, early delivery; monitored progress of the design/construction deliverables; supervised the procurement and furnishing of materials, equipment, services and labor; and ensured that safety and quality standards were upheld. He coordinated regularly with project partners, including the designer, VDOT, GEC, and key stakeholders, and negotiated and resolved contract terms. He was responsible for overall project design, quality, safety, and contract administration.

**Project Relevance:** This D-B project created 29 miles of Express Lanes on I-95 from Alexandria to Stafford. This nine-mile reversible two-lane extension of the existing HOV lanes helps alleviate some of the worst traffic on one of the most heavily traveled and congested urban corridors in the United States. This Design-Build Project involved an expedited design and construction schedule. Elements include: dedicated and significant resources available to work both day and night shifts; fast track design culminating in a four-month schedule; and extensive team collaboration amongst all stakeholders to produce a quality design expeditiously in order to commence construction. VDOT Program Manager, H.S. Warraich observes that, compared with the five-year I-495 project, “I-95 has moved at warp speed.” Similar scope of work items to the Richmond BRT project include: roadway improvements (dedicated traffic lanes); survey; environmental, including permitting; geotechnical; milling and overlay of existing pavement; hydraulics; storm drainage and SWM facilities; traffic control devices; communications installation and upgrades; systems integration; TMP; signing, striping and pavement marking; right-of-way; utilities; landscaping; stations and platforms; ITS; stakeholder and third party coordination; public involvement/ relations; QA/QC; construction engineering and inspection; railroad coordination; compliance with safety and security plans; testing; and overall Project management. Like the Richmond BRT project, the I-95 Express Lanes includes extensive MOT plans, utility relocation efforts (including past identification and data gathering), review of design concepts against existing utilities, determination of mitigation measures, and ongoing coordination with utility companies. The project involved comprehensive public relations with over 365 outreach meetings.

**MWAA, Dulles Corridor Metrorail Phase 1, Dulles, VA** **DESIGN-BUILD**

<b>Firm:</b>	Lane Construction Corporation	<b>Project Role:</b>	Design-Build Project Manager
<b>Beginning Date:</b>	2008	<b>End Date:</b>	2012

**Specific Responsibilities:** As DBPM, Mr. Prince was responsible for overall construction, quality and safety programs, ensured all requirements and specifications were delivered, contract administration, directing and managing project development, constructability reviews with the designers, defining project scope, goals and deliverables, collaborating with senior management and stakeholders, public outreach and public meetings, estimating resources, supervising the procurement and furnishing of all materials, equipment, services and labor necessary for project completion, scheduling project timelines and milestones, supervising team members, and developing best practices and tools for project execution and management.

**Project Relevance:** Overall project management from commencement through execution and completion of over 17 miles of major utility relocation, support of excavation, environmental and erosion and sediment controls, MOT along Route 7 in Tysons (heavy commercial/urban area) and the 11-mile Phase 1 alignment of the Dulles Metrorail Silver Line. The project included the construction and implementation of extensive MOT plans (over 300), road construction and repairs on Routes 7, 123 and related side streets in Tysons Corner; erosion and sediment control measures; demolition; earthwork; utilities; contaminated soil and hazardous material coordination and mitigation; asphalt and concrete pavement; traffic signals; roadway lighting; extensive new utilities installation; and public relations/involvement. LANE’s “Safest Project of the Year” Award in 2010 and 2011 - an IRR of 0.00.

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

## ATTACHMENT 3.3.1

### KEY PERSONNEL RESUME FORM

<b>Brief Resume of Key Personnel anticipated for the Project.</b>	
a. <u>Name &amp; Title:</u> <b>Bill McDowall, PE, DBIA—Quality Assurance/Project Manager</b>	
b. <u>Project Assignment:</u> <b>Quality Assurance Manager</b>	
c. <u>Name of Firm with which you are now associated:</u> <b>NXL Construction Services, Inc.</b>	
d. <u>Employment History:</u> <b>With this Firm ≤1 Years With Other Firms 33 Years</b>	
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):	
<ul style="list-style-type: none"> <li>• <b>NXL Construction Company, Inc.—QAM / Project Manager (2014-Present):</b> As PM/QAM for NXL, Mr. McDowall assists with ongoing Design-Build projects to ensure performance and coordination of QA testing and inspection in accordance with VDOT’s Design-Build guidelines throughout the project. Other responsibilities include the monitoring of contractor’s QC program and ensuring all contract requirements &amp; specifications are appropriately administered &amp; applied, all required QC testing and independent QA is carried out in accordance with applicable requirements ensuring construction quality standards are met.</li> <li>• <b>Volkert, Inc.—Vice President (2002-2014):</b> In this role, Mr. McDowall managed construction engineering staff, contract management, quality control, and field inspection/review.</li> <li>• <b>Virginia Department of Transportation—Assistant State Construction Engineer (1996-2001):</b> Oversight of construction program in Northern Virginia, Fredericksburg, and Culpeper districts.</li> </ul>	
e. <u>Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</u> <b>North Carolina State University, Raleigh, NC/Bachelor of Science/1980/Civil Engineering</b>	
f. <u>Active Registration: Year First Registered/ Discipline/VA Registration #:</u> <b>1988 /PE/Virginia /#018236; 2014/Design Build Institute of America</b>	
g. Document the extent and depth of your experience and qualifications relevant to the Project. <ol style="list-style-type: none"> <li>1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i></li> <li>2. <i>Note whether experience is with current firm or with other firm.</i></li> <li>3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i></li> </ol> <p><b>(List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)</b></p> <p>* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.</p>	
<b>Middle Ground Boulevard Extension, Newport News VA</b> <span style="float: right;"><b>DESIGN-BUILD</b></span>	
<i>Firm:</i> Volkert, Inc.	<i>Project Role:</i> Chief Construction Manager
<i>Beginning Date:</i> 8/2012	<i>End Date:</i> 6/2014
<b><i>Specific Responsibilities:</i></b> Mr. McDowall’s confirmed that compliance and contractor quality control was upheld in the field and followed VDOT’s design-build procedures and requirements and satisfaction with Volkert’s performance of QA management and testing. He reviewed piling for bearing capacity, length, and center of gravity. He also made recommendation for various adjustments, reviewed and verified QC for asphalt placement and reviewed CPM schedules for completeness. He managed on-site staff to ensure a quality project was built on schedule, within budget and safely.	
<b><i>Project Relevance:</i></b> This Hampton Roads Area design-build project included a new 4-lane roadway, bridge construction over CSX Railroad, sidewalk and shared-use path construction, enhanced landscaping and lighting, additional turn lanes and signal modifications. It also involved construction and implementation of maintenance of traffic, environmental controls; demolition; earthwork; storm drainage, water, electrical, communication utilities; asphalt and concrete pavement; roadway bridges; retaining walls; traffic signals; and roadway lighting.	
<b>I-66 Pavement Rehabilitation, Fairfax County VA</b> <span style="float: right;"><b>DESIGN-BUILD</b></span>	
<i>Firm:</i> Volkert, Inc.	<i>Project Role:</i> Quality Assurance Manager
<i>Beginning Date:</i> 2/2011	<i>End Date:</i> 6/2013

**Specific Responsibilities:** Mr. McDowall managed QA inspection and materials testing, including preparation of the QA testing plan, review and approval of the QC testing plan, supervision of QA testing technicians, review of testing results, preparation reports, and confirmation of accurate maintenance of testing documentation including the materials notebook, etc. He led inspection meetings and prepared construction inspection checklists. In addition to coordinating with VDOT's OIA/OVST Inspectors, Mr. McDowall also worked with the contractor and QC team to anticipate and resolve field issues in the most efficient and cost-effective manner. Developed, monitored, and updated CPM construction schedule and conducted analysis. Prepared monthly summary reports. Involved with preparation and implementation of QA/QC plan and monitored compliance throughout design and construction. Conducted a constructability review during each of the 4 stages of design.

**Project Relevance:** This Northern Virginia Area design-build project was an urban reconstruction project in a highly congested area, similar to the Military Boulevard Project. The project involved full-depth patching of concrete pavement and asphalt overly of a 6.5-mile segment of I-66. Roadway geometric improvements, drainage, utility, ITS, and lighting upgrades, TMP development and public outreach were also major components of this \$43M construction project. A key challenge of this project was the coordination of concurrent design and construction through the development of an effective but complex sequencing plan and complex transportation management plan to maintain high volumes of traffic on I-66. The project received a national pavement quality award from the National Asphalt Pavement Association.

**Route 11/Route 460 Widening, Roanoke County VA**

<b>Firm:</b> Volkert, Inc.	<b>Project Role:</b> QA / QC Manager
<b>Beginning Date:</b> 11/2010	<b>End Date:</b> 5/2014

**Specific Responsibilities:** Mr. McDowall oversaw constructability review, NOI analysis, and CPM schedule review and impact analysis. He also provided engineering support during construction. Mr. McDowall observed inspection activities and verified project documentation as well as testing reports for completeness and accuracy. Met with client and contractor representatives to discuss and evaluate construction issues and advise on potential cost effective resolutions. The original plans incorporated standard VDOT designs for the widening of a single-span bridge crossing a creek and 2 box culverts. Recommended using alternative designs to lower construction costs and increase construction productivity while still meeting VDOT requirements.

**Project Relevance:** This western Virginia project included the widening a 2.1-mile section of 3-lane road to 5 lanes. This \$30M construction project included a 40-foot long bridge with 36 drilled shaft foundations, triple and double-box culverts, a raised median, center and right-turn lanes at intersections and crossovers, and an extensive storm drainage system with stormwater management ponds and large jack and bore segments under the Norfolk Southern Railroad tracks into the Roanoke River.

**Route 221 Realignment, Roanoke County VA**

<b>Firm:</b> Volkert, Inc.	<b>Project Role:</b> QA / QC Manager
<b>Beginning Date:</b> 9/2010	<b>End Date:</b> 8/2013

**Specific Responsibilities:** Mr. McDowall performed contract administration, design/construction coordination, project oversight, and construction quality control. He managed on-site staff to ensure a quality project was built on schedule, within budget and safely. He ensured Contractor quality control was upheld in the field, managed and coordinated with the various specialty subcontractors and suppliers. He observed inspectors work and checked project documentation for completeness and accuracy and to verify proper organization and maintenance. Reviewed testing reports for completeness and accuracy. Reviewed the blasting and surplus removal plans to confirm judicious use of explosives, proper blasting techniques, and safety. Evaluated and reviewed construction schedules for completeness and conducted schedule impact analysis. Planned upcoming work activities with the construction manager and inspection staff. Assisted with identification of potential issues and careful planning for avoidance / mitigation. Met with VDOT project manager to evaluate satisfaction with inspector performance and to discuss quality improvement processes.

**Project Relevance:** This \$20M project involved realignment a 0.75-mile segment of Route 221 and widening from 2 to 4 lanes. It also included 2 new prestressed-concrete bulb-t beam bridges, a single-span steel replacement bridge, a new culvert, intersection improvements, a new drainage system and 2 SWM ponds. The existing 2-lane road was a major commuter route with an average daily traffic volume of 14,000. Challenges included blasting operations that were appropriate for the various types of rocks and geological conditions, prevention of slope failure, safety of motorists and construction workers, avoidance of environmental impacts, omission from the steel schedule, and finding a disposal site that complied with local ordinances and VDOT and the USACE requirements.

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

## ATTACHMENT 3.3.1

### KEY PERSONNEL RESUME FORM

<b>Brief Resume of Key Personnel anticipated for the Project.</b>	
a. <u>Name &amp; Title:</u> <b>Michael Hooshangi, PE—Senior Civil Engineer/Project Manager</b>	
b. <u>Project Assignment:</u> <b>Design Manager</b>	
c. <u>Name of Firm with which you are now associated:</u> <b>: STV</b>	
d. <u>Employment History:</u> <b>With this Firm 2.5 Years With Other Firms 34 Years</b> 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): <b>Mr. Hooshangi will be available to VDOT throughout the project and possesses the necessary expertise and experience required to manage design of the work.</b> <ul style="list-style-type: none"> <li>• <b>STV Incorporated, 4/2013-Present</b>—Mr. Hooshangi has more than 36 years of experience designing and managing transportation infrastructure projects in Virginia. Mr. Hooshangi is responsible for the quality design execution of D-B, transit, roadway, bridge, and interchange projects in the Mid-Atlantic region. He provides strategic planning, team management, and design; monitors schedules and budgets; and develops the quality management plan.</li> <li>• <b>AECOM, Senior Program Director, Civil Department Manager (9/2000 - 3/2013)</b>—Mr. Hooshangi was responsible for overseeing design and providing quality control for all civil engineering projects, including the \$260 million 11th Street Corridor Design-Build project for DDOT.</li> </ul>	
e. <u>Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</u> <b>Marshall University (Huntington, WV)/Master of Science/1978/Civil Engineering</b> <b>WVU Institute of Technology (Montgomery, WV)/Bachelor of Science/1977/Civil Engineering</b>	
f. <u>Active Registration: Year First Registered/ Discipline/VA Registration #:</u> <b>2009/PE/VA #0402044906</b>	
g. Document the extent and depth of your experience and qualifications relevant to the Project. <ol style="list-style-type: none"> <li>1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i></li> <li>2. <i>Note whether experience is with current firm or with other firm.</i></li> <li>3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i></li> </ol> <p><b>(List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)</b></p> <p>* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.</p>	
<b>Crystal-City/Potomac Yard Transitway (Route 1) BRT—Alexandria, VA</b> <span style="float: right;"><b>DESIGN-BUILD</b></span>	
<i>Firm:</i> STV	<i>Project Role:</i> Chief Engineer
<i>Beginning Date:</i> 2011	<i>End Date:</i> 2014
<b><i>Specific Responsibilities:</i></b> Supervised engineering design and construction administrative services for the \$12.9 million design-build of the Route 1 section of the Crystal City/Potomac Yard for bus rapid transit (BRT) in Alexandria, VA. The 0.8-mile, 2-lane transitway runs in the median of US 1 between Potomac Avenue and East Glebe Road and is fully dedicated to transit service. The design included provisions for five stations along the corridor, along with ADA-compliant pedestrian ramps and signal upgrades. Each station has state-of-the-art features, including real-time passenger/transit information.	
<b><i>Project Relevance:</i></b> This project is similar to the GRTC BRT due to existence of onsite utilities, station design for seven state-of-the-art stations, ITS, real-time transit systems, fare collection, as well as concrete pavement, street lighting, traffic signal modifications, MOT, and landscaping. The transitway was designed to allow for possible future conversion for streetcar use and involved extensive partnering with Arlington County, the City of Alexandria, Washington Metropolitan Area Transit Authority, and the Virginia Department of Rail and Public Transportation.	
<b>VDOT I-581/Valley View Boulevard Interchange Design-Build Improvements—Roanoke, VA</b> <span style="float: right;"><b>DESIGN-BUILD</b></span>	
<i>Firm:</i> STV	<i>Project Role:</i> Design Manager
<i>Beginning Date:</i> 2013	<i>End Date:</i> Present
<b><i>Specific Responsibilities:</i></b> With LANE as the Lead Contractor, Mr. Hooshangi is designing a diverging diamond interchange in Roanoke, VA, to facilitate high-volume left-turn movements from Valley View Boulevard onto I-581. Mr. Hooshangi is responsible for the design and preparation of all construction plans. The Project is located at the intersection of Valley View Boulevard with I-581 and includes design of a grade-separated DDI interchange with two new auxiliary lanes along I-581 NB & SB lanes, widening of Valley View Boulevard to provide two (2) through lanes in each direction and dual left turn lanes for both the northbound and southbound movements to I-58. Other design elements include bridge widening, five retaining walls, over 6000' of sound barrier walls, two signalize intersections, drainage systems, SWM, right-of-way, signing, pavement markings, maintenance of traffic, landscaping, and the relocation of the Lick Run Greenway shared-use path, which included a new pedestrian bridge. The scope also includes four entrance/exit ramps, and parking lot relocation.	

**Project Relevance:** This \$64 million D-B project is providing the region’s first diverging-diamond interchange. The project includes many similar roadway design improvements including permitting; milling and overlay of existing pavement; hydraulics; storm drainage and stormwater management facilities; TMP; signing, striping and pavement marking; right-of-way; utilities; landscaping; QA/QC; construction engineering and inspection; and overall project management. I-581 is a critical linkage between I-81 and the City of Roanoke. The STV team is facilitating the safe and efficient movement of vehicles, pedestrians, and bicyclists through and around roadway work zones and providing protection for workers and equipment within work zones. The development of the TMP involved extensive coordination and input from various design disciplines, members of the construction team, VDOT, FHWA, the City of Roanoke, and other stakeholders. Traffic is being maintained at all times. This is being accomplished through staged construction and the use of permanent pavement in conjunction with temporary pavement to shift traffic.

**DDOT 11th Street Interchange Design-Build—Washington, D.C. DESIGN-BUILD**

<i>Firm:</i> AECOM	<i>Project Role:</i> Project Manager/Lead Roadway
<i>Beginning Date:</i> 2009	<i>End Date:</i> 2013

**Specific Responsibilities:** Mr. Hooshangi led design and highway engineering efforts for a \$260 million design-build project along the 11th Street corridor for the replacement of two existing bridges across the Anacostia River in Washington, D.C., for the District Department of Transportation (DDOT). The project involved reconstructing and reconfiguring the interchanges at I-295, Anacostia River crossings, and connections to the Southeast/Southwest Freeway. Mr. Hooshangi was responsible for the design and preparation of roadway plans associated with the new interchange, including realignment of inbound I-295, new ramps, retaining walls, signage, and pavement markings. He also oversaw development of complex MOT scheme, which included a detailed TMP.

**Project Relevance:** Like the Richmond BRT project, the DDOT 11th Street Interchange Design-Build project includes extensive MOT plans including a TMP plan and utility relocations due to proximity of project to Washington Navy Yard. The MOT and TMP plans ensured the constructability of the utility relocation and project itself were accomplished while maintaining access to throughout the site. To mitigate the frequency of utility conflicts and the impact on the actual construction work, Mr. Hooshangi developed a strategy to identify the impacts and coordinate early and regularly with utility companies. The roadway improvements are similar, and include milling and overlay of existing pavement; hydraulics; storm drainage and SWM facilities; signing, striping, and pavement marking; right-of-way; utilities; landscaping; stakeholder/third party coordination; public involvement/relations; QA/QC; and overall project management.

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

<i>Current Firm:</i> AECOM	<i>Project Role:</i> Project Manager
<i>Beginning Date:</i> 2005	<i>End Date:</i> 2013

**Specific Responsibilities:** Project manager and lead highway engineer for development of the construction plans to replace two major interchanges of Route 50 (Arlington Boulevard) with 10th Street and Courthouse Road in Arlington County, VA, at an estimated total cost of \$42 million for VDOT. Mr. Hooshangi supervised design of the new interchange which includes: two new Collector Distribution Roads, Ramps, three traffic signals, transportation management plans, 13 mechanically stabilized earth (MSE) retaining walls, two bridges, interchange lighting and pedestrian improvements. He was responsible for all required plan assemblies, implementation of project scheduling, client and subconsultant coordination, and implementation of QA/QC procedures. The context-sensitive design of MSE walls required close coordination with an artist hired by Arlington County to beautify this gateway to Arlington. The project features a public art component with custom-designed concrete panels and LED back-illuminated, patterned metal grillwork designed by an artist, working with the Arlington Cultural Affairs Public Art program.

**Project Relevance:** New roads, new signals, TMP, pedestrian improvements including a bicycle trail that was added along eastbound of Arlington Boulevard from Pershing Drive to Rolfe Street. The westbound multipurpose trail was relocated and extended under the 10th Street bridge. Similar scope items included roadway improvements in congested urban area similar to the location of the GRTC BRT Project. These improvements included; milling and overlay of existing pavement; hydraulics; storm drainage and stormwater management facilities; TMP; signing, striping and pavement marking; right-of-way; utilities; landscaping; stakeholder and third party coordination; public involvement/relations; QA/QC; construction engineering and inspection; and overall project management. The project was constructed in a congested urban area in Arlington, Virginia with high traffic volume, significant utility conflicts and complex right-of-way acquisitions from businesses and residential areas. The team developed an effective TMP that included traffic controls to minimize the flow of traffic through the construction area advance signage and detour plans. Strategies used to mitigate and identify the impacts of utilities included early coordination, regular meetings with utility companies, and use of nightshift work.

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

## ATTACHMENT 3.3.1

### KEY PERSONNEL RESUME FORM

<b>Brief Resume of Key Personnel anticipated for the Project.</b>	
a. <b>Name &amp; Title:</b> <b>George Hansbrough—Superintendent</b>	
b. <b>Project Assignment:</b> <b>Construction Manager</b>	
c. <b>Name of Firm with which you are now associated:</b> <b>Lane Construction Corporation</b>	
d. <b>Employment History:</b> <b>With this Firm 20 Years With Other Firms 7 Years</b> Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): Mr. Hansbrough has over 27 years of experience of managing heavy civil and construction projects and will be the driving force of this Richmond BRT project, as exemplified here in his employment history. He is well versed in the construction industry and has served on several award winning, high profile projects for LANE. He has served in a number of roles that include Pipe Foreman, Foreman, and Senior Foreman to his current role as Superintendent. He holds several industry certifications, which include ASHI-Adult CPR & Heart saver AED and First Aid, Erosion Sediment Control Contractor Certification Program, V-DOT Intermediate Work Zone Traffic Control Training, OSHA 30hr course in Construction Training and Health. Other certifications and training include Highlift/Manlift, Hilti Powder Actuated tools, confined space, trench and excavation, flagging and rigging. <ul style="list-style-type: none"> <li>• <b>The Lane Construction Corporation, 2008-Present</b>—Mr. Hansbrough serves as a Superintendent for LANE. Over the past 20 years, George has worked on numerous highways, runways, and mass transit projects with the majority taking place in Northern VA counties. His construction experience includes managing the design build construction process; highways and bridges, airport runways and taxi-ways, Metro station construction and several other mass transit projects. Mr. Hansbrough’s responsibilities include: cost control tracking; field layouts; survey; form and false-work design; Method Analysis studies; and safety implementation. 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.</li> <li>• <b>The Lane Construction Corporation, 2008-2000—Senior Foreman:</b> Mr. Hansbrough’s responsibilities over the years have included concrete prep, form setting and pouring, excavation, grade and concrete, demolition and replacement. Additionally he also had attended weekly scheduling meetings, review of budgets and followed through with subcontractors in order to maintain construction goals.</li> </ul>	
e. <b>Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</b> <b>Falls Church High School (1988), Falls Church, VA; Springhill Votech Trade School (1988); Certified Mason (1988)</b>	
f. <b>Active Registration: Year First Registered/ Discipline/VA Registration #:</b> <b>N/A</b>	
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> <b>(List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)</b> * On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.	
<b>Dulles Corridor MetroRail, Phase I Utility Relocation, Dulles, VA</b> <span style="float: right;"><b>DESIGN-BUILD</b></span>	
<i>Firm:</i> Lane Construction Corporation	<i>Project Role:</i> Superintendent
<i>Beginning Date:</i> 2011	<i>End Date:</i> 2012
<b>Specific Responsibilities:</b> Mr. Hansbrough’s responsibilities included project scheduling and coordination, production management, quality control, cost control and subcontractor coordination. In addition he planned and managed weekly scheduling and project timelines, monitored and implemented safety programs, estimated manpower, equipment and resources needed to achieve project milestones on time and under budget, and led and managed project personnel.	
<b>Project Relevance:</b> This \$112 million project consisted of installation of high and medium voltage traction power duct bank, roadway construction, drainage and waterline. The job included installation of 11 miles of duct bank, 138 manholes, 11,000 linear feet of waterline and 8,000 lineal feet (over 75 ea) of jack and bore steel casings. This project has many similar scope elements as the GRTC BRT project such as: survey; environmental; major utility relocation; heavy MOT; public involvement/relations and management; QA/QC; construction engineering and inspection; and project management. The project also included significant public relations including coordination with the MWAA and the development of work-plans that incorporates Third Party availability and schedule requirements.	

<b>VDOT, I-95 EXPRESS LANES, Fairfax County to Stafford County, VA</b>		<b>DESIGN-BUILD</b>	
<i>Firm:</i>	Lane Construction Corporation	<i>Project Role:</i>	Superintendent
<i>Beginning Date:</i>	2012	<i>End Date:</i>	7/15
<p><b>Specific Responsibilities:</b> Hansbrough oversaw that all daily construction activities on the project were met. Mr. Hansbrough was responsible for the management of the construction process which included the QC program, project scheduling and coordination, production management, cost control, subcontractor coordination, work plans, and specific means/methods for carrying out the work. He was responsible for ensuring the materials used and work performed met contract requirements and the approved construction plans and specifications. Mr. Hansbrough had extensive involvement with the complex MOT plans and implementation, relocation, adjustments, and coordination of utilities, and helped address environmental concerns (this project has been lauded for its landscaping and environmental measures).</p> <p><b>Project Relevance:</b> This \$726 million DB/P3 project consists of 29 miles of constructing additional lanes and 10 new bridges on the existing I-95 HOV lanes. The project includes construction of sound walls, retaining/MSE walls, earth work, bridge widening, paving, and complex drainage systems. Like the GRTC BRT project, the I-95 Express Lanes included extensive MOT plans, utility relocation efforts (including past identification and data gathering), review of design concepts against existing utilities, determination of mitigation measures, and ongoing coordination with utility companies. The project involved comprehensive public relations with over 365 outreach meetings held during the course of the project.</p>			
<b>WMATA, Largo Blue Line Route Extension, Largo, MD</b>		<b>DESIGN-BUILD</b>	
<i>Firm:</i>	Lane Construction Corporation	<i>Project Role:</i>	Senior Foreman
<i>Beginning Date:</i>	2003	<i>End Date:</i>	2004
<p><b>Specific Responsibilities:</b> Mr. Hansbrough was responsible in overseeing that the daily construction activities on the project are met. His responsibilities for this project included: scheduling and coordination, subcontractor coordination, quantity tracking, traffic management, open cut excavation, earth retaining wall and roadway stabilization and construction. He was responsible for managing the construction process, to include all QC activities to be sure the materials used and work performed meet contract requirements and the “approved for construction” plans and specifications.</p> <p><b>Project Relevance:</b> This \$220 million D-B contract involved 3.1 miles of concrete cut and cover double box units with a concrete wall separating the inbound and outbound track. Several multi-span viaduct structures on concrete piers were constructed along with retained cut reinforced concrete walls. Extensive mechanical and electrical systems including tunnel ventilation systems as well as track electrification were also included in the D-B contract. All track work and automated control systems including train protection, train operation and automatic train supervision provided WMATA with a complete system ready for use in the fall of 2004. Public communication, coordination with utilities, safety to the traveling public were major concerns for WMATA and addressed at all levels by the LANE Team..</p>			
<b>VDOT Route 29 Solutions, Charlottesville, VA</b>		<b>DESIGN-BUILD</b>	
<i>Firm:</i>	Lane Construction Corporation	<i>Project Role:</i>	Superintendent
<i>Beginning Date:</i>	2014	<i>End Date:</i>	Present
<p><b>Specific Responsibilities:</b> As Superintendent on this project, Mr. Hansbrough is responsible for meeting daily construction activities. Mr. Hansbrough is responsible for the management of the construction process which included the QC program, project scheduling and coordination, production management, cost control, subcontractor coordination, work plans, and specific means/methods for carrying out the work. He is responsible for ensuring the materials used and work performed met contract requirements and the approved construction plans and specifications.</p> <p><b>Project Relevance:</b> This \$116.7M contract will widen Route 29 between Polo Grounds Road and Towncenter Drive, extend Berkmar Drive from Hilton Heights Road to Towncenter Drive, and construct a grade-separated intersection at Route 29 and Rio Road. The goal of the Route 29 Solutions project is to improve safety and increase mobility along the Route 29 corridor. The similar scope of work items includes: roadway improvements; survey; environmental, including permitting; geotechnical; milling and overlay of existing pavement; hydraulics; storm drainage and SWM facilities; traffic control devices; communications installation and upgrades; TMP; signing, striping and pavement marking; right-of-way; utilities; landscaping; stakeholder and third party coordination; QA/QC; construction engineering and inspection; compliance with safety plans; testing; and overall Project management. The project also involves extensive public involvement/relations.</p>			
<p>h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. <b>Mr. Hansbrough is currently assigned to the VDOT Route 29 Solutions project and will be available for the GRTC BRT project prior to start of construction.</b></p>			

## ATTACHMENT 3.3.1

### KEY PERSONNEL RESUME FORM

<b>Brief Resume of Key Personnel anticipated for the Project.</b>	
a. <u>Name &amp; Title:</u> <b>Kelvin Benfield, AIA, CDT—Senior Project Manager</b>	
b. <u>Project Assignment:</u> <b>Lead Architect</b>	
c. <u>Name of Firm with which you are now associated:</u> <b>: STV</b>	
d. <u>Employment History:</u> <b>With this Firm 5 Years With Other Firms 17 Years</b> 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): <b>Mr. Benfield will be available to VDOT throughout the project and possesses the necessary expertise and experience required to manage design of the stations and related architectural elements.</b> <ul style="list-style-type: none"> <li>• <b>STV Incorporated, 5/2010-Present</b>—Mr. Benfield has 22 years of design and project management experience in a variety of markets, including government, education, and commercial for light rail stations to bus maintenance facility design. He is currently designing light rail stations for the Charlotte Area Transit System LYNX Blue Line Extension Light Rail Project and also worked on the ART House Bus Maintenance Facility in Arlington, VA.</li> <li>• <b>ESD Architecture, 2009—Senior Project Manager</b></li> <li>• <b>Narmour Wright Creech, 2006 - 2009—Project Manager/Architect</b></li> <li>• <b>The FWA Group, 2001 - 2006—Architect</b></li> <li>• <b>Paramount Parks Inc., 1996 - 2001—Project Manager</b></li> </ul>	
e. <u>Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</u> <b>University of North Carolina at Charlotte (Charlotte, NC)/Bachelor of Architecture/1993/Architecture</b>	
f. <u>Active Registration: Year First Registered/ Discipline/VA Registration #:</u> <b>2010/RA/Virginia/#015445</b>	
g. Document the extent and depth of your experience and qualifications relevant to the Project. <ol style="list-style-type: none"> <li>1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i></li> <li>2. <i>Note whether experience is with current firm or with other firm.</i></li> <li>3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i></li> </ol> <p><b>(List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)</b></p> <p>* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.</p>	
<b>CATS LYNX Blue Line Extension Light Rail Project—Charlotte, NC</b>	
<i>Firm:</i> STV	<i>Project Role:</i> Architect
<i>Beginning Date:</i> 2010	<i>End Date:</i> Present
<b><i>Specific Responsibilities:</i></b> Producing designs for 11 light rail stations in Charlotte, NC, in support of this project to extend the Charlotte Area Transit System (CATS) light rail service 9.3 miles from Center City to the Charlotte campus of the University of North Carolina. Mr. Benfield is also developing plans for renovations to modify a vehicle maintenance facility and for a new operations and maintenance building. His responsibilities include addressing code compliance, existing structures, and operational concerns.	
<b><i>Project Relevance:</i></b> This \$ 1.1 billion DBB project is extending the region’s—and the state’s—first light rail transit. Similarities to the GRTC BRT include LRT stations; shelters; streetscaping; station amenities; lighting; signage; platform furniture; roadway improvements; survey; environmental, including permitting; geotechnical; milling and overlay of existing pavement; hydraulics; storm drainage and stormwater management facilities; TMP; signing, striping and pavement marking; right-of-way; utilities; landscaping; stakeholder and third party coordination; public involvement/relations; QA/QC; construction engineering and inspection; and overall project management.	
<b>CATS LYNX Blue Line Light Rail Capacity Expansion Project BLCE—Charlotte, NC</b>	
<i>Firm:</i> STV	<i>Project Role:</i> Architect
<i>Beginning Date:</i> 12/12	<i>End Date:</i> 2/15

**Specific Responsibilities:** Designed architectural renovations for four existing light rail stations in Charlotte, NC to increase the size of the platforms and serve three light rail vehicles instead of two. He developed construction documents for bid and code enforcement review.

**Project Relevance:** The project extends four stations along the existing system, working with fixed parameters including utilizes and site constraints. Similarities to the GRTC BRT include LRT stations; shelters; streetscaping; station amenities; lighting; signage; platform furniture; survey; hydraulics; storm drainage; stakeholder and third party coordination; public involvement/relations; QA/QC; construction engineering and inspection; and overall project management.

**ART House Maintenance Facility —Arlington, VA**

<i>Firm:</i> STV	<i>Project Role:</i> Project Architect
------------------	--

<i>Beginning Date:</i> 2012	<i>End Date:</i> 2014
-----------------------------	-----------------------

**Specific Responsibilities:** Developed plans for a new Arlington Transit (ART) bus maintenance and wash facility, compressed natural gas (CNG) compressor station, and CNG fueling station in Arlington, VA. Mr. Benfield developed design plans and elevations for client review and coordinated with the project consultants up to the 60% construction document phase.

**Project Relevance:** Bus maintenance facility for BRT system. Similarities to the GRTC BRT project include streetscaping; lighting; signage; overall Project management.

**City of Charlotte 6th Street and Charlotte Convention Center Trolley Stops—Charlotte, NC**

<i>Firm:</i> The FWA Group	<i>Project Role:</i> Architect
----------------------------	--------------------------------

<i>Beginning Date:</i> 2004	<i>End Date:</i> 2004
-----------------------------	-----------------------

**Specific Responsibilities:** Designed temporary trolley stops that would be removed once light rail went into operation in Charlotte, NC. Mr. Benfield’s design met all ADA guidelines and was built on a minimal budget. Design included way finding and operation signage. He also provided complete permit and construction documents.

**Project Relevance:** Trolley stops, streetscaping; station amenities; lighting; signage; platform furniture; overall project management.

**City of Huntersville Town Center and Parking Garage —Huntersville, NC**

<i>Firm:</i> Narmour Wright Creech	<i>Project Role:</i> Project Manager/Architect
------------------------------------	--

<i>Beginning Date:</i> 2007	<i>End Date:</i> 2009
-----------------------------	-----------------------

**Specific Responsibilities:** Oversaw design for a 35,000-sf mixed-use project in Huntersville, NC, that includes a 3-story building, with the first two levels occupied by a children’s museum and the third level used by the Town of Huntersville as office space. A 3-level garage provides 280 parking spaces. Mr. Benfield managed the project from design through bidding and assisted the town in hiring a construction manager-at-risk.

**Project Relevance:** Trolley stops, streetscaping; station amenities; lighting; signage; platform furniture; overall project management.

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

## ATTACHMENT 3.3.1

### KEY PERSONNEL RESUME FORM

<b>Brief Resume of Key Personnel anticipated for the Project.</b>	
a. <u>Name &amp; Title:</u> <b>Christopher Hertz, PE, PMP—Lead Communications/Security Systems Engineer</b>	
b. <u>Project Assignment:</u> <b>Systems Engineer</b>	
c. <u>Name of Firm with which you are now associated:</u> : <b>STV</b>	
d. <u>Employment History:</u> <b>With this Firm 13.5 Years With Other Firms 0 Years</b> 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): <b>Mr. Hertz will be available to VDOT throughout the project and possesses the necessary expertise and experience required to manage design of the work.</b>	
<ul style="list-style-type: none"> <li>• <b>STV Incorporated, 6/2002-Present</b>—Mr. Hertz is a project manager and communications systems engineer with more than 10 years of experience working on major public transportation projects. He has proven expertise in fiber optic cabling design, data network design, supervisory control and data acquisition (SCADA) systems, synchronous optical networking (SONET), CCTV, PA, telephone, fire alarm, access control, and passenger information display (PID) systems. Mr. Hertz has particular skill in providing designs that successfully integrate and interface new systems with existing communications system.</li> <li>• <b>Cornerstone Technologies, (2001 - 2002)</b>—Electrical Engineering Assistant</li> </ul>	
e. <u>Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</u> <b>Widener University (Chester, PA )/Master of Science/2008/Engineering Management</b> <b>University of Scranton (Scranton, PA)/Bachelor of Science/2002/Electrical Engineering</b>	
f. <u>Active Registration: Year First Registered/Discipline/VARegistration#:</u> <b>2010/PE/New Jersey#24GE04873800</b> (pursuing reciprocity in Virginia)	
g. Document the extent and depth of your experience and qualifications relevant to the Project. <ol style="list-style-type: none"> <li>1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i></li> <li>2. <i>Note whether experience is with current firm or with other firm.</i></li> <li>3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i></li> </ol> <p><b>(List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)</b></p> <p>* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.</p>	
<b>CATS LYNX Blue Line Extension Light Rail Project—Charlotte, NC</b>	
<i>Firm:</i> STV	<i>Project Role:</i> Systems Engineer
<i>Beginning Date:</i> 2012	<i>End Date:</i> Present
<b><i>Specific Responsibilities:</i></b> Developed and reviewed detailed engineering and design documentation for the communication systems for the \$1.1 billion extension of the LYNX Blue Line light rail service for the Charlotte Area Transit System (CATS). The new 9.3-mile alignment will add 11 stations between Center City Charlotte and the University of North Carolina at Charlotte. Mr. Hertz provided quality review of communication systems design, which includes the fiber-optic backbones for a carrier transmission system, software and hardware train control, SCADA, CCTV, telephone and radio, fire and intrusion, and PA systems. He is currently providing design support services during construction of the extension.	
<b><i>Project Relevance:</i></b> This \$1.1 billion D-B project is an extension of the first light rail transit line in North Carolina (also designed by STV). Scope included roadway improvements; survey; environmental, including permitting; geotechnical; railroad coordination; hydraulics; storm drainage and stormwater management facilities; TMP; right-of-way; utilities; stakeholder and third party coordination; public involvement/relations; QA/QC; construction engineering and inspection; and overall project management.	
<b>City of Ottawa Confederation Line LRT —Ottawa, Ontario</b> <span style="float: right;"><b>DESIGN-BUILD-FINANCE-MAINTAIN</b></span>	
<i>Firm:</i> STV	<i>Project Role:</i> System Lead
<i>Beginning Date:</i> 2010	<i>End Date:</i> Present

**Specific Responsibilities:** Mr. Hertz is managing design for all communications systems for this \$2.1 billion project, which involves converting an exclusive bus transitway to a light rail transit (LRT) system for the City of Ottawa, Ontario. When completed, the 7.8-mile electric LRT line will connect Tunney’s Pasture Station to Blair Station via a transit tunnel. Thirteen stations are proposed, four of which will be in the 1.5-mile-long tunnel beneath downtown Ottawa. Mr. Hertz provided technical direction and oversight for the communications systems, which include a systemwide, fiber-optic backbone supporting a GigE network with various Internet protocol (IP)-based systems, including PA/PID, SCADA, voice-over-IP telephone, intrusion access control, and CCTV. The new communications systems will interface with the existing Operations Control Center and a new backup control center. A new P.25 radio and cellular infrastructure that provide wireless coverage in the underground stations and tunnel areas are also included in the design, as well as Wi-Fi for transmitting CCTV video and train diagnostics from the LRT vehicles. Mr. Hertz coordinated with other disciplines, including traction power and signaling design and civil engineering, to interface with existing and new rail systems equipment. He is currently providing design support services during construction of the project.

**Project Relevance:** Mr. Hertz coordinated with other disciplines, including traction power and signaling design and civil engineering, to interface with existing and new rail systems equipment both above and below ground. The scope included transit; communications systems; TMP; utility coordination; stakeholder and third party coordination; public involvement/relations; QA/QC; and overall project management.

**WMATA Morgan Boulevard and Largo Town Center Stations—Washington, D.C. DESIGN-BUILD**

<i>Firm:</i> STV	<i>Project Role:</i> Systems Engineer
<i>Beginning Date:</i> 2002	<i>End Date:</i> 2003

**Specific Responsibilities:** Provided design for communications conduit and equipment layouts for the Morgan Boulevard and Largo Town Center light rail stations in Washington, D.C. The systems included SONET, CCTV, PA, fire, intrusion alarm, emergency, public telephone, and PID. The design included conduit runs for the stations’ mezzanine and platform levels, as well as the parking area at Morgan station and the 6-level, approximately 2,000-space commuter parking garage at Largo Town Center. The new Morgan Boulevard Station and communication systems design for Largo Station were part of the extension of Washington Metropolitan Area Transit Authority (WMATA) Blue Line service to Prince George’s County, MD, as part of the agency’s long-term capital development plan.

**Project Relevance:** Like the Richmond BRT project, this project includes extensive systems design and implementation.

**PennDOT District 6-0 SR 0095 Betsy Ross Interchange Reconstruction—Philadelphia, PA**

<i>Firm:</i> STV	<i>Project Role:</i> ITS Quality Manager
<i>Beginning Date:</i> 2013	<i>End Date:</i> Present

**Specific Responsibilities:** Overseeing the design and integration support for \$880 million intelligent transportation system (ITS) devices along the I-95 main line and arterial roadways in Philadelphia. Devices include CCTV cameras, dynamic message signs, and Bluetooth travel-time sensors. The expanded ITS will provide the Pennsylvania Department of Transportation (PennDOT) with accurate, up-to-date traffic information and give motorists access to real-time traffic conditions. In addition to device placement, Mr. Hertz is supervising the coordination of the fiber-optic infrastructure necessary for communication with the devices and integration with the existing traffic management system. He is overseeing all aspects of the ITS design, including site surveys; development of the systems engineering report and design drawing package; and coordination with various agencies to deliver a consistent, efficient design.

**Project Relevance:** Comprehensive ITS/Systems design and implementation.

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

## ATTACHMENT 3.3.1

### KEY PERSONNEL RESUME FORM

<b>Brief Resume of Key Personnel anticipated for the Project.</b>	
a. <u>Name &amp; Title:</u> <b>Chris Kiefer, PE—Senior Civil/Utility Engineer</b>	
b. <u>Project Assignment:</u> <b>Utilities Lead</b>	
c. <u>Name of Firm with which you are now associated:</u> <b>Timmons Group</b>	
d. <u>Employment History:</u> <b>With this Firm 27 Years With Other Firms 0 Years</b> 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): <b>Timmons Group, Inc., Group Leader for Transportation, April 2003-Present</b> <ul style="list-style-type: none"><li>• Managing and coordinating the workload of our in-house staff and subconsultants; providing consistency and coordination across all assigned tasks; coordinating progress meetings and establishing regular communications with clients; providing project review and Quality Control/Quality Assurance and serving as Project Manager/Contract Manager on large scale projects/on call contracts.</li></ul> <b>Timmons Group, Inc., Assistant Department Manager for Transportation, September 1994-April 2003</b> <ul style="list-style-type: none"><li>• Mr. Kiefer provided management oversight of the Transportation Planning and Traffic Engineering department being responsible for production of staff. He is a subject matter expert on all design related activities, including Virginia DOT guidelines, policies, and procedures, utility coordination, funding regulations and sources, and was primary client contact on several on call contracts including Chesterfield County Department of Transportation while serving as Project Manager on many road design projects.</li></ul> <b>Timmons Group, Inc., Project Manager, Transportation, September 1990-September 1994</b> <ul style="list-style-type: none"><li>• As Project Manager, Mr. Kiefer's responsibilities included designing, overseeing design and plan preparation, construction administration requirements, resolving utility conflicts, and providing review services relative to design projects and cut sheets and shop drawings.</li></ul> <b>Timmons Group, Inc., Project Engineer, Transportation, January 1988-September 1990</b> <ul style="list-style-type: none"><li>• As a Project Engineer in Timmons Group's Transportation division, Mr. Kiefer performed design and plan preparation, utility conflict resolution, the preparation of traffic management plans, and drainage design plans for roadway improvement projects.</li></ul>	
e. <u>Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</u> <b>University of Notre Dame - Notre Dame, IN / Bachelor of Science / 1988 / Civil Engineering</b>	
f. <u>Active Registration: Year First Registered/ Discipline/VA Registration #:</u> <b>1991/PE/Virginia #023346</b>	
g. Document the extent and depth of your experience and qualifications relevant to the Project. <ol style="list-style-type: none"><li>1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i></li><li>2. <i>Note whether experience is with current firm or with other firm.</i></li><li>3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i></li></ol> <b>(List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)</b> * On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.	
<b>Broad Street Traffic Signal Improvements, Richmond, VA</b>	
<i>Firm:</i> Timmons Group	<i>Project Role:</i> Engineer of Record
<i>Beginning Date:</i> 3/2006	<i>End Date:</i> 8/2008
<b><i>Specific Responsibilities:</i></b> Served as the Engineer of Record, responsible for utility coordination and conflict resolution, traffic signal design, sidewalk design, signing plans, pavement marking plans, cost estimating, and shop drawing review. The project involved removing the existing signal poles from the median and replacing them with new mast arm poles, signal heads and traffic signing. The project involved the replacement of ten traffic signals and existing curb-cut ramps located along Broad Street in Richmond's central business district to meet the latest VDOT and ADA standards. The design involved Accessible Pedestrian Signals (APS).	
<b><i>Project Relevance:</i></b> This project included new signal design at the following intersections with Broad Street (N. Meadow, N. Allen, N. Lombardy, Bowe, N. First, N. Second, N. Third, N. Seventh, N. Eighth, and N. Ninth) all located in the corridor of the proposed GRTC BRT. The project included utility coordination with and/or review of 19 different utilities, including all Richmond City utilities (Traffic, Water, Sanitary, Storm, Gas & Lights) utilities, tying into the Richmond City Central Signal System, and we became very knowledgeable of all of the various utility facilities (and owner representatives) in the Central Business District area.	

<b>Richmond City Center, Richmond, VA</b>		
<i>Firm:</i>	Timmons Group	<i>Project Role:</i> Engineer of Record
<i>Beginning Date:</i>	6/2004	<i>End Date:</i> 6/2006
<p><b>Specific Responsibilities</b> Timmons Group worked with ECI Development Services for the Broad Street Community Development Authority to complete a \$66.7 million downtown redevelopment plan aimed at revitalizing Richmond's urban core. Mr. Kiefer's responsibilities included design and construction phase services for infrastructure improvements within an 8-block area of city streets, including:</p> <ul style="list-style-type: none"> <li>• Pedestrian and traffic improvements, including reopening 6th Street to vehicular traffic, signal improvements, turn lanes, widening existing sidewalks, and providing new crosswalks.</li> <li>• Streetscape improvements, including new road surfaces throughout the project, concrete sidewalks with granite curbing and brick banding, landscaping, pedestrian-scale lighting, and new street furniture and signage.</li> <li>• Utility improvements consisting of water and gas line replacement, service connections, lining existing combined storm and sanitary sewers, and installation of new electrical duct bank to power street lights, pedestrian-scale lighting and traffic signals. Many utilities were located 20 to 30 feet below grade.</li> </ul> <p><b>Project Relevance:</b> This project included new signal design at Broad Street at N. Fifth, N. Seventh, and N. Eighth Streets, all located in the corridor of the proposed GRTC BRT as well as four signals on Grace and Marshall Streets. The project included utility coordination with and/or review of 19 different utilities, including all Richmond City utilities, DVP, Verizon, and numerous Telecommunication Facilities; tying into the Richmond City Central Signal System; re-routing DVP and Verizon Duct Banks as part of the design; completing all of the necessary Richmond City utility adjustment plans as necessary for the project which included storm sewer, sanitary sewer, traffic conduits, waterline, gas and street lights; and the importance of finding and tying in building roof drains into storm sewer systems.</p>		
<b>Gateway Plaza, Richmond, VA</b>		
<i>Firm:</i>	Timmons Group	<i>Project Role:</i> Engineer of Record
<i>Beginning Date:</i>	1/2012	<i>End Date:</i> 9/2015
<p><b>Specific Responsibilities:</b> Gateway Plaza is a new 18-story office tower recently constructed along the southern edge of Richmond's central business district. The block that encompasses the proposed development was formerly surface parking bisected by southbound 8th Street. Timmons Group worked closely with the City of Richmond's Traffic Engineering Department to evaluate the redirection of traffic movements and reconfiguration of the adjacent road network to accommodate both existing and new traffic flows. Mr. Kiefer was the Transportation Project Manager, including development of the traffic analysis and simulation modeling, preparation of the street and intersection design plans, traffic signal plans, underground utility coordination services, construction plans, specifications and estimates. Timmons Group also provided boundary, topographic and utility locating surveys, geotechnical engineering, site civil engineering, construction staking and permit coordination services.</p> <p><b>Project Relevance:</b> This project is located in the City's Downtown central business district area and included design of two new signals; utility coordination, including all public and private utility providers in the area, relocation of DVP and Verizon utilities, design of adjustments to Richmond City utility facilities due to planned improvements within the right of way, and included the expansion of the City's Central Signal System Fiber Optic network.</p>		
<b>Deepwater Terminal Road Extension, Richmond, VA</b>		
<i>Firm:</i>	Timmons Group	<i>Project Role:</i> Engineer of Record
<i>Beginning Date:</i>	3/2014	<i>End Date:</i> Ongoing
<p><b>Specific Responsibilities:</b> This project involves the extension of Deepwater Terminal Road to Goodes Street to improve truck access to the Port of Richmond. Mr. Kiefer is the Project Manager for this project and his responsibilities include stakeholder involvement (Port of Richmond Authority, City departments, adjacent industries and property owners) as well as coordination with a wide variety of utility companies located within the corridor. Common utilities include: Dominion Virginia Power (distribution and transmission), Verizon, City gas, water and sewer. Additional utilities include Plantation Pipeline, Colonial Pipeline, Sunoco products slurry effluent piping and effluent station, and various other private industrial lines within the corridor.</p> <p><b>Project Relevance:</b> This project included extensive utility coordination, including Plantation Pipeline, Colonial Pipeline, Dominion Va. Power Distribution, Dominion Va. Power Transmission, Verizon, Comcast, Richmond City DPU, Dominion Site Services, Sonoco Products (private) utilities, replacement of a portion of a private pipeline and some Dominion Va. Power facilities; review of existing utilities (conflict resolution determination) to minimize and/or avoid conflicts; and working with Richmond City DPU staff to ensure their facilities would not be affected.</p>		
<p>h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. <b>N/A</b></p>		



**Work History Forms**  
3.4.1(a) Lead Contractor

**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	
<b>Crystal City-Potomac Yard (Route 1) Transitway BRT (DESIGN-BUILD) Alexandria, VA</b>	<b>STV</b>	Name of Client/ Owner: City of Alexandria Phone: (703) 746-4146 Project Manager: Suzanne Lee Farmer Phone: (703) 746-4146 Email: lee.farmer@alexandria.gov	<b>12/2013</b>	<b>06/2014 (Due to added scope of work from Client/Owner)</b>	<b>\$7,442</b>	<b>\$12,782 (Due to added scope of work from Client/Owner)</b>	<b>\$12,782</b>

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 Elements:**

- Design-Build with STV
- Traffic control devices
- Extensive utilities
- Coordination with multiple stakeholders
- Systems integration
- Stations and platforms
- Landscaping
- Work performed in urban/commercial area
- Constrained site conditions
- ROW
- MOT

**Evidence of Performance:**

This project was recently awarded the **2014 Engineering Excellence Award** from the Washington Metro chapter of the American Council of Engineering Companies.

*"I am pleased to provide this letter of reference to the Lane Construction Corporation for its work on the Route 1 Corridor Bus Rapid Transit Lanes Design/Build. This project originally involved the design and construction of .8 miles of concrete roadway dedicated to use by buses only. Later a change order was issued to include seven (7) custom shelters. The total duration of the project for both the design and construction phases was two and one-half (2 1/2) years at a cost of \$12,926,131. Substantial completion was achieved on 6/27/2014. The Lane Corporation worked diligently and efficiently to achieve the milestones described above. I would be pleased to work with them again."*

-Lucky Stokes, P.E. – Division Chief, Construction, Department of Implementation, City of Alexandria, Virginia

**Personnel on Project:**

Ken Prince, PE; Ian Evertz, PE; Orlando Flores  
STV: Mike Hooshangi, PE; Mike Randolph, PE; Chris Kocher, PE

**PROJECT SCOPE**

LANE led a best-value D-B team (with STV as the Lead Designer) that successfully constructed the Washington, DC region's very first BRT line. Jointly conceived by the City of Alexandria and Arlington County, and operated by Washington Metropolitan Area Transit Authority (WMATA) Metro, the BRT line runs along the busy Route 1 corridor between the Braddock Road and Crystal City Metro stations. The new service, called the Metroway, features higher capacity buses running more frequently, including late at night and on weekends, in the dedicated lanes separated from other traffic by medians or striping. This project included construction of 0.8 miles of "bus only" concrete travel lanes in the existing median of Jefferson Davis Highway (Route 1) from Potomac Avenue to East Glebe Rd in Alexandria, VA and the construction of seven bus shelters, which were added on a change order. Construction of this project consisted of working in a highly traveled urban corridor with low/deficient LOS in peak hours, many commercial businesses and a high level of stakeholder coordination. Specific scopes of work included placement of asphalt and concrete pavement, extensive MOT efforts, heavy focus on safety, drainage, traffic signalization/timing, utility relocations, and curb and gutter. Other important aspects of the project included excavation, hazardous materials identification and remediation, landscaping with soil amendments, a new street lighting system, and reconfiguration of the traffic signal system to accommodate the future BRT lanes. LANE also placed specialty colored concrete in specific geometric designs to indicate the different bus stops along the route, as well as stamped asphalt crosswalks for pedestrians. The construction of the BRT lanes also involved excavation of the existing median area, construction of a new concrete transit-way exclusively for buses and emergency vehicles, installation of Filterra bio-filtration systems, removal of existing buried asphalt and concrete in median, identification and removal of hazardous materials within excavation, installation of storm drain structures and piping, retrofitting of existing storm structures, installation of a new street light system, remediation of green areas, landscaping, design and building BRT stations (7 EA). Challenges on this project include unknown utilities and changes to conditions (e.g., different sized existing storm drain facilities); however project team reacted quickly and efficiently and were able to stay on schedule and within budget. With the project taking place in a congested area in Alexandria, the team stayed cautious of the existing vehicular and pedestrian traffic. To remain safe on this project LANE continually worked with its on-site safety personnel to implement safety controls to prevent hazards to vehicles, workforce and pedestrians on the site.



**RELEVANT PROJECT ELEMENTS**

**Urban Roadway:** Route 1 within the project footprint is very similar to the GRTC BRT project footprint as it is heavily relied upon during both AM and PM peak travel times for commuters, schools, government and first responders as a main thoroughfare, is heavily populated with commercial businesses, and operates at low and/or deficient Levels of Service during these peak travel times. LANE excels at working in challenging and spatially constrained work environments such as this where every activity from material deliveries to daily worker ingress/egress routes require detailed planning and protocols. Our leadership down to our crews are experienced in working in such difficult corridors as this; LANE will staff the GRTC BRT project accordingly.

**Public Involvement:** LANE understands from our extensive similar experience and lessons learned that in order for these types of projects to be a success, a great deal of public outreach and community involvement must be done. On the CCPYTBRT project, LANE proactively managed the public outreach effort with local businesses, daily commuters, local municipalities and first responders so there were no surprises when traversing the work zone and that construction phase transitions occurred seamlessly and were "painless" for all stakeholders.

**Maintenance of Traffic (MOT):** Working in such a corridor as Route 1 (similar to Broad Street in Richmond) required immeasurable communication between the contractor and designer when it comes to developing the traffic management plans, project phasing, and the actual MOT means and methods and devices to be used. LANE has an extensive history coordinating with our Lead Designer STV and are committed to open and effective communication channels not only within our D-B team but also with VDOT, City of Richmond, and the public as we were with the City of Alexandria, VDOT and the local community. Similar to the requirements of the GRTC BRT project, LANE had to do an extensive amount of reconfiguration to the traffic patterns through existing intersections while minimizing impacts and confusion to vehicular traffic. Through careful planning, community outreach efforts and strategically placed driver-oriented signage, LANE successfully launched a phased opening of the CCPYTBRT lanes. The opening of the CCPYTBRT lanes was without incident and has been very effective since its inception.

**Traffic Signals:** This project included double the number of signal heads and audible pedestrian pushbuttons at each intersection to account for the additional roadway and vehicular movements. Implementation of these signals again required careful planning and community outreach to ensure a smooth transition when the new signals went live. Activating the new signals also required a complete signal communication system overhaul. LANE had to update the signalization system to include video detection and wireless communication making the system state of the art.

**Safety:** Relevant to the proposed project, this project took place in a highly congested area in Alexandria. The LANE team was particularly cautious working alongside existing vehicular and pedestrian traffic. LANE's on-site safety personnel worked directly with leadership, crews and subcontractors to implement safety controls and site specific safety plans to prevent hazards to vehicles, workforce and pedestrians on and near the site. This BRT project is also notable for the team working more than **800 days without a single lost-time or OSHA-recordable incident.**

**Environmental:** The CCPYTBRT project was located in an environmentally sensitive area. LANE was responsible for removing, hauling and disposing of contaminated ground soil as part of the excavation for this project.

**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	
<b>Dulles Corridor Metrorail Project (Phase 1)</b> Tysons, VA <b>(DESIGN-BUILD)</b>	<b>Dulles Transit Partners (Bechtel)</b>	Name of Client./ Owner: <b>Metropolitan Washington Airports Authority</b> Phone: <b>703.572.0500</b> Project Manager: <b>John Kearney</b> Phone: <b>703.572.0500</b> Email: <b>john.kearney@dullesmetro.com</b>	<b>11/2010</b>	<b>1/2012</b> <b>( Due to added scope of work by Client/Owner)</b>	<b>\$72,000</b>	<b>\$139,000</b> <b>(Due to added scope of work from Client/Owner)</b>	<b>\$139,000</b>

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.

<b>Similar Scope Elements:</b>	<b>PROJECT SCOPE</b>	<p>Phase 1 of the 23.1-mile extension of the Metrorail system project is an 11.6-mile extension of Metrorail (Silver Line) starting from the Orange Line at West Falls Church, proceeding along the Dulles Connector Road to an aerial alignment through Tysons, including four stations, and an at-grade alignment to Wiehle Avenue Station along the median of the Airport Access Highway (AAH). The LANE project office was located within Loop "C" of the Rt. 7 Bridge (southeast quadrant of the Rt. 7 bridge over DTR). LANE's project limits started at Rt. 7/DTR, including work on the DTR in spot locations and proceeded eastward along Rt. 7 and along Rt. 123 to McLean. LANE was responsible for adjusting, relocating, and implementing utility systems to facilitate road improvements along Rt. 7 and 123 to accommodate the Metrorail facilities. The project also included the assembly and erection of the pedestrian bridges at each of the metro stations between Wiehle Ave. and Tysons. This project required extensive MOT, road construction and repairs on Routes 7, 123 and related side streets in the Tysons area necessitating detailed coordination with local businesses, stakeholders, VDOT MegaProjects, and first responders. Work included construction of a large bridge foundation on caissons for the Silver Line aerial rail bridge over Rt. 123 and I-495. The project implemented an innovative support of excavation systems, open cut trenching, detailed as-built documentation, and an instrumentation monitoring program to monitor the existing infrastructure and critical facilities. MOT involved lane closures, traffic shifts and detours. Utility systems relocated included sanitary sewer, water distribution, electrical distribution, communications, Verizon catholic protection, and traction power feeder. Various means and methods of construction were used including 80 jack-and-bore crossings totaling 8,000 linear feet to minimize impacts to the public.</p>	
<ul style="list-style-type: none"> <li>• Design-Build</li> <li>• Work performed in urban setting</li> <li>• Roadway</li> <li>• Pedestrian accommodations</li> <li>• WMATA coordination</li> <li>• Extensive utility relocation</li> <li>• Public involvement/relations</li> <li>• Extensive MOT/phasing</li> <li>• Coordination with VDOT and multiple stakeholders</li> <li>• QA/QC</li> </ul>	<b>RELEVANT PROJECT ELEMENTS</b>		
<b>Evidence of Performance:</b>	<p>“During my years here on this project working with Lane Construction I can now say that Lane Construction is the most responsive, reliable and safest contractor available. Lane always supplied our project with good crews, good equipment and good supervision to develop and maintain strong working relationships with VDOT, Fairfax County, adjacent property owners and the traveling public. All work associated with the Utility Relocation scope was handled with the highest level of professionalism and constant efforts were made to allow life to continue in Tysons Corner even while every utility existing in the area was being uprooted and relocated.” –John Kearney, Program Manager for MWAA</p>	<p><b>Utilities:</b> The Dulles Utilities Project involved major utility relocations which involved heavy coordination, collaboration and design planning with more than 30 different utility companies. LANE has developed intimate knowledge of major utilities (similar ones will be encountered on the GRTC BRT project), the specifications to be adhered to when relocating, abandoning or adjusting them and has developed strong relationships with utility key personnel. LANE will bring this valuable, first hand experience of the complex utility network as well as many of the same craft and supervisory personnel to the GRTC BRT project. Approximately 32 unmarked or mismarked utilities created utility conflicts that had the potential to delay the project schedule. LANE implemented an effective utility avoidance plan and policy to address these unmarked utilities and worked with MWAA and the remediation subcontractor to mitigate delays from the resulting contaminated soil. Over 1,000 test pits were excavated by hand or other non-mechanized methods to physically verify the location of existing utilities in order to construct new utility facilities. LANE immediately stopped work in any area where contaminated soil indicators (such as odor or appearance), unknown containers, piping, or similar structures were discovered; or any other materials which are reasonably suspected to be Hazardous Substances.</p> <p><b>MOT:</b> A key challenge on the Dulles Metrorail project was dealing with one of the largest traffic congestion issues in the country. Extensive MOT coordination was performed for the Tysons primary routes: Routes 7 and 123, I-495, Rt. 267 DTR, I-66 and the AAH with VDOT and the I-495 Express Lanes project. LANE successfully designed and implemented more than 300 unique MOT plans for both pedestrian and vehicular traffic in the Tyson's area, the 12th largest business district in the country. LANE also constructed temporary sidewalks and signage to safely guide pedestrians through the work area.</p> <p><b>Noise Mitigation:</b> Noise was recognized by the project as an issue due to the close proximity of homes and businesses to the work area. This will most likely be a similar issue on the GRTC BRT project. LANE worked with the Owner to provide advance notice of potentially noisy work activities. Advanced notice was provided via: weekly look ahead schedules; email notifications; phone calls; and face-to-face meetings with property owners or their representatives. Noise producing activities were scheduled to avoid sensitive periods; “white noise” backup alarms were installed on equipment to mitigate the effects of equipment backup alarms. When alternate scheduling was not possible, LANE parked large sound attenuation vehicles between the work area and the residential neighborhoods. The vehicles were lined with plywood to create a temporary sound barrier to redirect noise. The temporary sound barrier had to be set up and removed daily to comply with lane closure restrictions for the project. Furthermore, a Hotline was set up and published on the project website and email notifications were distributed for construction-related emergencies including noise disturbances.</p> <p><b>Partnering:</b> An important similarity to the proposed project is that the LANE Team partnered with the Tysons retail and business community to ensure efficient traffic movements and minimal impacts to the traveling public, buses, and first responders by allowing flexibility in our schedule and sequencing of work activities.</p> <p><b>Safety:</b> LANE had a comprehensive and effective safety program with full time safety personnel and had a project IRR of under 1.0. and 0.0 lost time incidents with nearly 1 million work hours recorded. LANE assigned 2 full time safety supervisors who administered the safety program with management's commitment, work force engagement, weekly training, daily pre-planning meetings, job hazard analysis, and safety achievement celebrations and incentives. This project was LANE's safest project for two consecutive years, registering 0.0 recordables during that period.</p>	
<b>Personnel on Project:</b>	<p>Ken Prince, PE George Hansbrough Shaun High</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	
<b>LYNX Blue Line Extension Light Rail (Section B, C, Civil and Roadway)</b> <i>Charlotte, NC</i>	<b>STV</b>	Name of Client/ Owner: <b>City of Charlotte</b> Phone: <b>(704) 336-4626</b> Project Manager: <b>David Smith, P.E.</b> Phone: <b>(704) 336-4626</b> Email: <b>dbsmith@charoteenc.gov</b>	<b>02/2017</b>	<b>02/2017</b>	<b>\$109,815,000</b>	<b>\$123,105,000 (Owner increased scope)</b>	<b>\$123,105,000</b>

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 Elements:**

- Light Rail Transit
- Partnered with STV
- Stations/Platforms
- Coordination with multiple stakeholders
- Systems Integration
- Stations and Platforms
- Landscaping
- Work performed in urban/commercial area
- Constrained site conditions
- ROW
- MOT
- Project Management
- QA/QC

**Evidence of Performance:**

"It's a significant amount of work for our community, It's something our people can depend on and look forward to." -Berry Jenkins, highway division director at Carolinas AGC

**Personnel on Project:**

Chris Mangro  
STV: Kelvin Benfield, AIA, CDT; Eric Root, PE; Chris Hertz, PE

**PROJECT SCOPE**

LANE is the Lead Contractor for the LYNX Blue Line Extension (BLE) Northeast Corridor Light Rail Project which extends the existing LYNX Blue Line from the 7<sup>th</sup> Street Station in Center City Charlotte to the University of North Carolina at Charlotte campus. The 9.3-mile extension will include 11 new light rail stations, with approximately 3,100 parking spaces at four stations with parking facilities and are wedged into some of the city's busiest road and freight rail corridors.

The BLE also includes approximately 20 at-grade crossings of streets and approximately 11 grade separation structures over or under roads, railroads, and environmental features. Additional scopes of work include grading, drainage, erosion control, bridges, arterial roadways, retaining walls, traffic control, and water main and sanitary sewer installation.

**RELEVANT PROJECT ELEMENTS**

**MOT:** MOT phasing was implemented to minimize the impacts to the local residents, businesses and traveling public. In most cases the transitway is built adjacent to the travelway and temporary off peak lane closures were utilized for all work at cross-streets and at the tie-in points.

**Utilities:** Because the BLE runs through developed areas, there are extensive impacts to existing utilities. Before the roadway widening could begin along a 4.15-mile stretch of four-lane Tryon Avenue (one of Charlotte's main through routes) dozens of utility poles and numerous underground telecommunication and infrastructure lines buried up to 15 ft deep had to be moved to create sufficient subterranean space for a new storm drainage network and the widened roadway.

**Expedited Schedule:** Utility relocations for the trains (owner responsibility) caused significant schedule delays to the project. In order to keep the project on track, the Owner asked LANE to expedite the schedule to maintain the original completion date. LANE increased resources and added crews to be able to complete the project on time despite the 8 month delay!

**Railroad Coordination.** Approximately 4 miles of the BLE runs in railroad right-of-way. Coordination was required with four different, and often competing, railroad entities, including CSX Transportation, Norfolk Southern Railway, North Carolina Railroad, and the North Carolina Department of Transportation (NCDOT) Rail Division. To accommodate existing and planned rail needs, a consensus was reached for the ultimate configuration of three freight tracks, two passenger rail tracks, and two light rail tracks in the corridor that currently carries just two freight tracks.

**Structures:** To bring the BLE onto the UNCC campus, LANE is constructing a 40-ft-deep, 340-ft-long, cut-and-cover underpass beneath Tryon Avenue's northbound lanes that will include a 23-ft by 36-ft cast-in-place box culvert structure, reinforced with one-sided wall formwork and permanent soil nail walls. From there, the 822-ft-long, 11-span precast Toby Creek Viaduct with pre-stressed supports will convey the Blue Line Extension across a wetland to the terminus station.

**Community Involvement:** At the completion of the project, artists will be hired to create pieces of art that will be incorporated into stations along the light-rail line.

\*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.



**Work History Forms**  
3.4.1(b) Lead Designer

**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)	
<b>Crystal City-Potomac Yard (Route 1) Transitway BRT</b> <i>Alexandria, VA</i> <b>(DESIGN-BUILD)</b>	<b>The Lane Construction Corporation</b>	Name of Client./ Owner: <b>City of Alexandria</b> Project Manager: <b>Lee Farmer</b> Phone: <b>(703) 746-4146</b> Email: <b>lee.farmer@alexandriava.gov</b>	<b>7/12</b>	<b>6/2014</b>	<b>\$7,442</b>	<b>\$12,782 (due to client-requested change orders)</b>	<b>\$750</b>

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.

<b>Similar Scope Elements:</b>	<b>PROJECT SCOPE</b>		
<ul style="list-style-type: none"> <li>Roadway improvements</li> <li>Intersection improvements</li> <li>Traffic signal design</li> <li>Trail and sidewalk design</li> <li>Bus stop safety and accessibility</li> <li>Storm drain design, SWM, quality treatment and E&amp;SC</li> <li>Hydraulic and hydrologic analysis</li> <li>Pavement marking and signage</li> <li>QA/QC</li> <li>Quantity takeoff and cost estimates</li> <li>Public involvement/outreach</li> </ul>	<p>STV provided engineering design services for the first Bus Rapid Transitway (BRT) in Virginia and the DC Metro area. The design-build segment of Route 1 in Alexandria, VA was part of the overall Crystal City/Potomac Yard Transitway which provides high-capacity and high-quality bus transit services in the five-mile corridor between Pentagon City in Arlington County and the Braddock Road Metrorail Station in the City of Alexandria. The 0.8-mile, 2-lane transitway runs in the median of US 1 between Potomac Avenue and East Glebe Road and is fully dedicated to transit service, with no other vehicles except emergency vehicles having access.</p>		
<b>Evidence of Performance:</b>	<b>RELEVANT PROJECT ELEMENTS</b>		
<p>After the first year of successful operation the transitway ridership in Alexandria has exceeded original projections.</p> <p>The project was recognized by the American Council of Engineering Companies of the Metropolitan Washington region (ACEC/MW) at the National Engineering Excellence Awards. The project received an Honor Award, which recognizes projects that demonstrate a high degree of achievement, value, and ingenuity.</p>	<p><b>Utilities:</b> Onsite utilities included, electric power distribution, electric power transmission, storm sewer, sanitary sewer and communications for traffic systems. During construction, STV redesigned the northern portion of the project after a critical and previously unknown underground transmission line conflict was discovered which saved millions in relocation costs and avoided two years of construction delays.</p> <p><b>Stations:</b> The design included provisions for seven stations along the corridor and includes level boarding platforms, ADA-compliant pedestrian ramps and signal upgrades. Additional elements of the design included concrete pavement, street lighting, traffic signal modifications, and landscaping. Each station has state-of-the-art features including real-time passenger/transit information systems and off board fare collection. The transitway was designed to allow for possible future conversion for streetcar use.</p> <p><b>MOT:</b> MOT phasing was developed to minimize the impacts to the local residents, businesses and traveling public. In most cases the transitway was built adjacent to the travelway and temporary off peak lane closures were used for all work at cross-streets and at the tie-in points.</p> <p><b>ITS:</b> This project also included the design and construction of a transit priority system to allow the transit vehicles to receive priority at each signalized intersection and bypass queues along the corridor.</p> <p><b>Partnering:</b> The Crystal City/Potomac Yard Transitway, is jointly sponsored by Arlington County and the City of Alexandria in cooperation with the Washington Metropolitan Area Transit Authority (WMATA) and the Virginia Department of Rail and Public Transportation (VDRPT).</p>		
<b>Personnel on Project:</b>			
<p>Mike Hooshangi, PE; Mike Randolph, PE; Chris Kocher, PE</p> <p>LANE: Ken Prince, PE; Ian Evertz, PE; Orlando Flores</p>			

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

**ATTACHMENT 3.4.1(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)	
<b>CityLynx Gold Line</b> <b>Charlotte Streetcar Systems/Integration</b> <i>Charlotte, NC</i>	<b>Balfour Beatty Infrastructure</b>	Name of Client: <b>City of Charlotte</b> Project Manager: <b>Tonia Wimberly</b> Phone: <b>(704) 353-1931</b> Email: <a href="mailto:twimberly@charlottenc.gov">twimberly@charlottenc.gov</a>	<b>12/12</b>	<b>6/15</b>	<b>\$28,000</b>	<b>\$37,000</b>	<b>\$199</b>

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.

<b>Similar Scope Elements:</b>	<b>PROJECT SCOPE</b>
<ul style="list-style-type: none"> <li>Urban transit</li> <li>Streetcar systems</li> <li>Design, inspection, testing, commissioning</li> <li>QA/QC</li> <li>Links to existing LRT</li> <li>Pedestrian experience</li> </ul>	<p>The CityLYNX Gold Line, a 10-mile streetcar system is being constructed in phases. Integral to the 2030 Transit Plan, the alignment will serve as a critical connection for the efficient and robust operation of Charlotte's overall transit system, including a connection to the LYNX Blue Line. This connector to the Blue Line will also provide rail access to allow heavy maintenance to be performed at the South Boulevard Light Rail Maintenance Facility.</p> <p>Phase 1 provides a 1.5-mile route from the Charlotte Transportation Center on Trade Street in Charlotte's CBD to Novant Hospital at Hawthorne Lane and Fifth Street with six stops along the way.</p> <p>The project involved construction of a conventional in-street running electric streetcar with dual-track. A half-mile of existing track and associated overhead catenary system (OCS) poles were previously installed along Elizabeth Avenue. The project included installation of embedded track, the OCS, traction power system (including two re-furnished sub-stations), and signaling/train control. The project used three Gomaco Birney Replica Trolleys that are owned by the City; however, the line is designed for modern streetcar vehicles which will be implemented in a future phase.</p>
<b>Evidence of Performance:</b>	<b>RELEVANT PROJECT ELEMENTS</b>
<p>The same team for this project also performed all testing and start up oversight for the CATS LYNX Blue Line and has been the single engineering support entity for CATS Operations since opening day.</p> <p>Weekday ridership for the CityLYNX Gold Line commuter rail, from the start of the new service on July 14 to July 31, averaged 1,507 passenger trips, 67 percent above the original projection of 900 trips per month. Saturdays averaged slightly higher.</p>	<p>STV provided systems oversight, testing, and inspection services, and technical reviews for test plans and procedures during construction, start-up, testing, and commissioning of the Streetcar project. Systems included: continuity and isolation, stray current, OCS, TPSS, signaling/train control, communications/SCADA, vehicles, start-up, and systems integration.</p> <p><b>Systems design, construction, and operation:</b> STV offered a comprehensive knowledge of numerous disciplines, including catenary, substations, traction power return, cathodic protection, corrosion control, train control, track and vehicles.</p> <p><b>Stations and connections to LRT:</b> The route will have six stops, including a connection to the LYNX Blue Line light rail transitway, for which STV is providing the full scope of design and oversight services.</p> <p><b>Designed with the future in mind:</b> The streetcar will not use trolleys forever; the vision is for modern streetcars in the future, and the design accommodates that future plan.</p> <p><b>Utilities in congested urban area:</b> Numerous existing utilities in the area required coordination and mitigation strategies.</p>
<b>Personnel on Project:</b>	<b>PHOTO</b>
Christ Hertz, PE; Eric Root, PE	

\*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)	
<b>Metro Orange Line BRT</b> <i>Los Angeles, CA</i> <b>(DESIGN-BUILD)</b>	<b>Joint Venture Shimmick Construction Co./Obayashi Corporation</b>	Name of Client./ Owner: <b>Los Angeles County Metropolitan Transportation Authority (Metro)</b> Project Manager: <b>Hitesh Patel</b> Phone: <b>(213) 922-7212</b> Email: <b>patelh@metro.net</b>	<b>3/2003</b>	<b>10/2005</b>	<b>\$300,000</b>	<b>\$320,000</b>	<b>\$380</b>

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.

<b>Similar Scope Elements:</b>	<b>PROJECT SCOPE</b>	
<ul style="list-style-type: none"> <li>Roadway improvements</li> <li>Intersection improvements</li> <li>Traffic signal design</li> <li>Trail and sidewalk design</li> <li>Bus stop safety and accessibility</li> <li>SWM/design and E&amp;SC</li> <li>Hydraulic and hydrologic analysis</li> <li>Pavement marking and signage</li> <li>ROW</li> <li>QA/QC</li> <li>Quantity takeoff and cost estimates</li> <li>Public involvement/outreach</li> </ul>	<p>The Orange Line BRT debuted in October 2005 as one of the first full-service BRT lines in the U.S. and the first exclusive busway in Los Angeles. The 14.5-mile Orange Line runs east-west through the San Fernando Valley, connecting the Warner Center mall and office complex in Woodland Hills to the Red Line subway in North Hollywood. The Orange Line runs almost entirely along an at-grade, dedicated busway within an abandoned rail right-of-way. The line's 13 stations are similar in design to light rail stations, with canopied platforms, real-time information, covered seating, lighting, bicycle parking, automated fare collection machines, and public art. The project also includes extensive native landscaping along the corridor and a bicycle and pedestrian path parallel to the busway. The Orange Line operates on a headway-based schedule and uses a pre-paid, proof-of-payment fare system.</p>	
<b>Evidence of Performance:</b>	<b>RELEVANT PROJECT ELEMENTS</b>	
<p>Opened in October 2005, the Metro Orange Line ("Orange Line") is one of the first true BRT lines in the United States. Less than a year after its opening the Orange Line's projected ridership more than tripled.</p> <p>The project won numerous awards, including the 2006 Transit Project of the Year Award from the California Transportation Foundation.</p> <p>"This team has created a fast, convenient link across the Valley, without tunneling, laying track, or creating additional traffic on existing streets." - Michael A. Enomoto, FAIA (AIA LA president)</p>	<p><b>Design-Build</b> The \$320 million San Fernando Valley East-West Transit Corridor Bus Rapid Transit (BRT) design-build project extends Metro service west into the outlying San Fernando Valley by 14.2 miles. The new BRT line runs along the Chandler alignment, a defunct Southern Pacific Railway right-of-way (ROW), and has 13 stations spaced approximately 1-mile apart from the terminus of the Red Line in North Hollywood to the Warner Center in Woodland Hills. Working closely with Metro, STV prepared the preliminary engineering and developed the statement of work, design criteria, operations and maintenance plan, system assurance plan, engineer's estimate, and bridging documents for design-build procurement. Additionally, the firm developed criteria and standards for the BRT vehicles, fare collection systems, traffic signal and bus control systems, and communications systems.</p> <p><b>Urban Environment:</b> STV took advantage of urban improvement opportunities provided from operating in a former railroad ROW by designing a linear greenbelt. Busway lanes typically occupy only 26 feet of a 100-foot-wide right-of-way, leaving ample width to accommodate landscaping, as well as bicycle and pedestrian paths connecting to surrounding neighborhoods.</p> <p><b>ROW Challenges:</b> In some locations, where the backyards of homes are next to the right-of-way, soundwalls were necessary. Most walls are located on top of earthen berms within the right-of-way and set back from backyard property lines to avoid shading. Landscaping was installed and maintained on both sides of the soundwalls.</p> <p><b>Multiple Intersections:</b> As a result of operating on a former railroad ROW, the busway crosses more than 30 intersections. To avoid traffic congestion in front of the busway and maintain safety, STV oversaw the design of several intersection improvements, including new turning lanes and signals, which were synchronized with busway operations.</p> <p><b>Station Design:</b> The stations are decorated with terrazzo paving and enameled art panels. Each station also offers bicycle racks and lockers, covered seating, telephones, lighting, and security cameras. Six stations have park-and-ride lots, supplying a total of 3,800 free parking spaces. Every station is equipped with Advanced Travelers' Information System (ATIS) electronic signage that informs travelers of the wait time and provides further real-time transitway operating information. Security provisions included security patrols by the City of Los Angeles Police Department (LAPD), closed-circuit television (CCTV) monitoring, and emergency phones. Working with Metro Art, STV created a unique image for each station.</p> <p><b>Construction Phase:</b> STV provided assistance during the bidding phase, including preparing addenda bid documents and responding to requests for information (RFIs). As the project entered construction, STV continued to assist the client in reviewing the contractor's design submittals, responding to RFIs and requests for change (RFCs) as required. STV continued working with Metro on this project approximately three years after revenue operations started. During this last phase, the firm assisted Metro in evaluating construction issues and responding to various contractor close-out items.</p> <p><b>Safety:</b> Safety modifications were implemented soon after opening, and as of June 2006, the 2006 accident rate for the Orange Line was lower than that of other Metro services.</p>	
<b>Personnel on Project:</b>	<b>Safety:</b>	



\*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

**Work History Forms**  
3.4.1(c) Lead Architect

**ATTACHMENT 3.4.1(c)**

**LEAD ARCHITECT - 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)	
<b>CATS LYNX Blue Line Extension Light Rail Stations</b> <i>Charlotte, NC</i>	<b>The Lane Construction Corporation</b>	Name of Client./ Owner: <b>Charlotte Area Transit System (CATS)</b> Project Manager: <b>Danny Rogers (BLE Project Director)</b> Phone: <b>(704) 432-3033</b> Email: <b>drogers@ci.charlotte.nc.us</b>	<b>6/13</b>	<b>2017</b>	<b>\$109,815,000</b>	<b>\$123,105,000 (due to Owner-increased scope)</b>	<b>\$79,883</b>

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.

<b>Similar Scope Elements:</b>	<b>PROJECT SCOPE</b>
<ul style="list-style-type: none"> <li>Station area planning and design/parking lots</li> <li>Historic &amp; cultural resources</li> <li>Survey &amp; ROW plats</li> <li>Traffic, civil/roadway design</li> <li>Geotechnical/drilling</li> <li>Noise &amp; vibration</li> <li>Utility coordination</li> <li>Systems</li> <li>Cost estimating</li> <li>Station and facility site planning/design</li> <li>Stormwater</li> </ul>	<p>The Charlotte Area Transit System (CATS) 9.8-mile Blue Line (also known as the South Corridor Light Rail Project), was the first major light rail transit (LRT) line in North Carolina. Since it opened for service in 2007, ridership has exceeded projections by twofold and it has spurred over a billion dollars in economic development along the line. The Blue Line Extension (BLE) will add another 9.3 miles to the transit system, extending service to the northeast from Center City Charlotte to the University of North Carolina Charlotte campus (UNC Charlotte). <b>The \$1.1 billion project includes 11 stations accommodating 3-car trains, three parking garages, one surface parking lot, and a storage yard with maintenance and operations building.</b> The alignment includes three light rail bridges over active freight railroad tracks, six light rail/roadway grade separations and 20 at-grade crossings. Since beginning work in 2008, STV has completed architectural design, transportation planning, environmental investigations (including a DEIS and FEIS), operations planning, preliminary engineering, and technical support for successful federal and state Full Funding Grant Agreements (FFGA). The firm is now providing construction-phase services for the project, which is scheduled to open for service in 2017.</p>
<b>Evidence of Performance:</b>	<b>RELEVANT PROJECT ELEMENTS</b>
<p>STV's ability to reduce the costs and identify practical engineering solutions during the FEIS stage was key to moving the BLE to final engineering and construction. In December 2011, FTA issued a Record of Decision stating its approval of the project, and three months later CATS and the FTA executed a Full Funding Grant Agreement for \$580 million in New Starts funding. Due to our success in managing the preliminary engineering and environmental work, CATS selected STV to continue providing services for the final design, bidding, and construction phases.</p>	<p><b>Stations:</b> STV is designing the 3-car stations, which include seven center platforms, three side platforms, and one elevated center platform. Four of the stations are integrated into adjacent park-and-ride facilities, including two with elevators leading to pedestrian bridges connecting to parking garages. Stations are designed utilizing ADA, NC Building Code, and NFPA 130 with the most stringent criteria applied where the codes overlap.</p> <p><b>Shelters:</b> Approximately 30% of the platform is covered by canopies. The station canopies are designed to protect patrons under typical weather conditions of sun or rain with windscreens shielding the benches and roofs projecting close to the platform edge. Designs for the canopies are divided into three types, ticket vending, center loaded platforms and side loaded platforms. Each type of platform is a different width to accommodate the patrons loading and unloading from the train. The canopies incorporate the information and safety systems on the platform using signage and public address speakers. The ticket vending canopies are monitored by the CCTV cameras which are connect to the Rail Operation Command Center.</p> <p><b>Streetscaping:</b> The integration of the Art in Transit project on the stations provides a unique identity for each station while keeping essential elements standardized to create a system-wide identity and ease of use. Finishes on the platform are tied into the overall experience of each station, whether it is a map of the locale in the concrete or a local plant motif in the fencing.</p> <p><b>Station amenities (lighting, signage, and other platform furniture):</b> The designation of the station amenities strip is used to define the circulation path through the station and is consistent from station to station to promote the ease of movement and familiarity for the entire system. Station amenities include canopies, benches, ticket vending machines, variable message signs (VMS), public address (PA) speakers, CCTV cameras, lighting, and tree wells. The use of hand rails and Z-crossings guide patrons onto the platform safely along with signage and a PA to keep them informed of train movement.</p> <p><b>Pedestrian Experience Lessons Learned:</b> Guiding the patron along a common path at each station with standardized elements helps promote the safety and ease of experience on the entire CATS Blue Line. Providing a safe, enjoyable, and accessible connection to the neighborhood which the light rail serves helps promote ridership.</p> <p><b>Partnering:</b> This project was another successful project with The Lane Construction Corporation.</p> <p><b>Accelerating Schedule:</b> Accelerated construction schedule achieved through effective coordination with utility companies and redesigns.</p>
<b>Personnel on Project:</b>	<b>PERSONNEL</b>
<p><b>Kelvin Benfield, AIA, CDT;</b> Eric Root, PE; Chris Hertz, PE LANE: Chris Mangro</p>	<p><b>PERSONNEL</b></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