STATEMENT OF QUALIFICATIONS

Design Build
I-95/Route 630
Reconstruction and Widening

State Project Nos.: I-95/Route 630 Interchange Relocation (0095-089-F09), UPC 13558
Route 630 Widening (0630-089-202), UPC 4632

Federal Project Nos.: I-95/Route 630 Interchange Relocation (NH-095-2)
Route 630 Widening (STP-089-6)

Contract ID Number: C00013558DB83

Submitted by:  
February 2, 2016
February 2, 2016
Mr. John Daoulas, PE
Alternate Project Delivery Office
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219

RE: Letter of Submittal | Design Build | I-95/Route 630 Reconstruction & Widening | Stafford County, VA
State Project Nos.: I-95/Route 630 Interchange Relocation (0095-089-F09), UPC 13558
Route 630 Widening (0630-089-202), UPC 4632 | Federal Project Nos.: I-95/Route 630 Interchange
Relocation (NH-095-2), Route 630 Widening (STP-089-6) | Contract ID Number C0013558DB83

Dear Mr. Daoulas:

3.2.1 Corman-Branch, a Joint Venture (Corman-Branch JV), 12001 Guilford Road, Annapolis Junction, MD 20701, a joint venture between Corman Construction, Inc. and Branch Highways, Inc. is the legal entity who will execute the contract with VDOT and submits the following:

- One original Statement of Qualifications (SOQ) with full supporting documentation
- One CD-ROM containing the entire SOQ in a single cohesive Adobe PDF file
- 10 abbreviated copies of the original SOQ

<table>
<thead>
<tr>
<th>3.2.2 Point of Contact</th>
<th>Secondary Point of Contact</th>
<th>3.2.3 Principal Officer of Legal Entity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scott Szympruch, PE, Division Manager, Corman Mid-Atlantic Corman Construction, Inc. 12001 Guilford Road Annapolis Junction, MD 20701 301-343-5476 - Cell 301-953-0384 Fax <a href="mailto:ssyzympruch@comanconstruction.com">ssyzympruch@comanconstruction.com</a></td>
<td>Lou Robbins, PE, DBIA, Vice President Design-Build Corman Construction, Inc. 12001 Guilford Road Annapolis Junction, MD 20701 703-772-8566 - Cell 301-953-0384 Fax <a href="mailto:lrobbins@comanconstruction.com">lrobbins@comanconstruction.com</a></td>
<td>Arthur C. Cox, III, Vice President Corman Construction, Inc. 12001 Guilford Road Annapolis Junction, MD 20701 410-792-9400 Telephone <a href="mailto:ccox@comanconstruction.com">ccox@comanconstruction.com</a></td>
</tr>
</tbody>
</table>

3.2.4 Corporate Structure: Corman-Branch, a Joint Venture is a construction joint venture of Corman Construction, Inc. (Corman) and Branch Highways, Inc. (Branch). The Corman-Branch JV will share financial responsibility for the project. Corman and Branch will be jointly and severally liable with no limitations. Corman-Branch JV will provide a single 100% performance bond and single 100% payment bond.

3.2.5 Lead Contractor: Corman-Branch, a Joint Venture | Lead Designer: Whitman, Requardt & Associates, LLP

3.2.6 Affiliated and/or Subsidiary Companies Table (Attachment 3.2.6) is in the Appendix.

3.2.7 Certification Regarding Debarment Forms (Attachments 3.2.7(a) and 3.2.7(b)) are in the Appendix.

3.2.8 Corman Construction, Inc. (C097-Active) and Branch Highways, Inc. (B319-Active) VDOT Prequalification certificates are in the Appendix, along with evidence that our Joint Venture (JV073) is prequalified.

3.2.9 Surety Letters are in the Appendix.

3.2.10 SCC and DPOR information are in Attachment 3.2.10 and supporting documentation are in the Appendix.

3.2.11 Corman-Branch JV is committed to achieving a 15% DBE participation goal for the entire value of the contract.

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

Sincerely,

CORMAN CONSTRUCTION, INC.

Arthur C. Cox, III, Vice President

BRANCH HIGHWAYS, INC.

Patrick Bartorillo, President
With a combined Design-Build portfolio of over $1.9 billion, Corman Construction, Inc. (Corman) and Branch Highways, Inc. (Branch) have teamed together to form Corman-Branch, a Joint Venture (Corman-Branch JV). Together, we come to VDOT with the hands-on experience and top notch personnel it takes to execute the design, construction, and manage the risks of the I-95/Route 630 Reconstruction and Widening projects. Our two firms are no strangers to each other. Corman and E.V. Williams, Inc. (a wholly owned subsidiary of Branch Highways) are currently working together on three projects in Virginia:

1. Constructing Virginia’s first Continuous Flow Intersection (CFI) as part of a design-build roadway project that reconstructs 3.6 miles of Military Highway in Norfolk for VDOT. Construction Cost: $60 Million
2. Widening 2.8 miles of Route 17 in Newport News from four to six lanes to accommodate the forecasted traffic volume of 59,000 ADT, including a new bridge over the Poquoson River for VDOT. Construction Cost: $25.2 Million
3. Reconstructing the Tidewater Drive and Little Creek Intersection, including roadway and bridge construction for the City of Norfolk. Construction Cost: $6 Million

Through the years, both firms have built a solid reputation of strategically aligning with the Design-Build partners most suited to meet project needs and requirements. For this project, the Corman-Branch JV selected Whitman, Requardt & Associates, LLP (WRA) as the Lead Designer. With over 100 years of experience, WRA was specifically chosen, along with John Maddox, PE as the Design Manager, for their past successes working with both JV partners. WRA is teamed with Corman on VDOT’s Design-Build Fall Hill Avenue project as the Lead Designer and Design-Build Route 29 Solutions as the engineer leading the Berkmar Drive Extension where they are working with Ryan Gorman, our proposed Responsible Charge Engineer and Design/Construction Integrator. Corman and WRA are partners on three other Design-Builds in the Hampton Roads and Washington, DC areas with a combined value of $95 Million and worked on VDOT’s I-64/Route 15 Zion Crossroads Diverging Diamond Interchange (DDI) project where Corman was the Design-Builder and WRA developed preliminary plans and reviewed final plans submitted by the Corman Design-Build Team. WRA has worked with Branch on three Design-Build projects, including the Route 123 Bridge over the Campus Connector for George Mason University (GMU) and the PPTA Design-Build project in Augusta County that extends Route 636 with a bridge over the CSX railroad. WRA’s key personnel have successfully delivered design services to VDOT on Virginia’s busiest and most heavily-traveled interstates, interchanges, and roadways for many projects for over 60 years, including multiple bridge designs for the Fredericksburg and Richmond districts – Many constructed by Corman. WRA has extensive experience designing interstate widening projects on I-95/495, I-66, I-64 and I-81. The Corman-Branch | WRA Team delivers projects with seasoned professionals and resources, providing the highest quality to ensure that the project will be complete within budget and schedule. Assisting WRA as a major subconsultant is AMT, who designed the Southgate DDI for VDOT. They have an extensive work history with the JV and WRA.

WE WILL DO THE SAME AT I-95/ROUTE 630 RECONSTRUCTION AND WIDENING PROJECTS!
We confidently make this statement as the key design and construction firms have successfully worked together on these past projects:

<table>
<thead>
<tr>
<th>Projects</th>
<th>Corman-Branch JV</th>
<th>WRA</th>
<th>AMT</th>
<th>ALA</th>
<th>H&amp;B</th>
<th>KCI</th>
<th>Diversified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design-Build Route 1 Widening</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Design-Build Fall Hill &amp; Mary Washington Extension</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Design-Build I-64/Route 15 (Zion Crossroads) Diverging Diamond Interchange (DDI)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Design-Build I-64/Route 623 Widening</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Southgate Drive Diverging Diamond Interchange (DDI)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Design-Build Route 29 Solutions</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Design-Build Intercounty Contract A</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Design-Build Intercounty Contract B</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Design-Build Military Highway Continuous Flow Intersection</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Table 1: Project Team collaborations

3.3.1 Key Personnel: The Corman-Branch | WRA Team has assembled highly-qualified and experienced individuals and structured them for optimal performance. Our key staff and design firms come together with a shared history of successful projects and established working relationships, including Zion Crossroads (Corman and WRA) and Southgate Drive Interchange (Branch and AMT), both DDIs for VDOT. This established teaming will minimize VDOT’s risks and staffing requirements. Although our task leaders and technical staff are responsible for items, such as design, public involvement, and construction, everyone is responsible for project success. Table 2 introduces our Key Personnel with resumes in the Appendix (Attachment 3.3.1).

| .1 Design-Build Project Manager (DBPM)                     | Scott Szympruch, PE |
| .2 Responsible Charge Engineer (RCE)                       | Ryan Gorman, PE, DBIA |
| .3 Quality Assurance Manager (QAM)                          | Dow Lasitter, III, PE, CCM |
| .4 Design Manager (DM)                                     | John Maddox, PE     |
| .5 Construction Manager (CM)                                | Greg Suttle         |

Table 2: Key Personnel

VALUE ADDED STAFF

In addition to the above key personnel, the Corman-Branch | WRA Team appoints the following value-added staff to deliver a quality project on time and on budget. Symbolizes having Design-Build experience:

DDI Technical Design Team (TDT): Included in this team are DDI technical experts that offer valuable past experience on VDOT DDI Projects. They will utilize the recently completed VDOT design criteria for DDIs, which were developed based on VDOT’s recent experience on DDIs, including the two DDIs worked on by WRA and AMT. The DDI Technical Design Team (TDT) will utilize our lessons learned on our past DDIs, best practices and guidance provided by FHWA’s ‘Diverging Diamond Interchange, Informational Guide, 2014’, MoDOT’s ‘Missouri’s Experience with a Diverging Diamond Interchange, Lessons Learned’, and VDOT ‘DDI Guidelines.’ They will ensure the DDI meets or exceeds the design criteria required by VDOT, including, but not limited to the design speed, curve radii, ramp radii, and crossing angle.
John Epperly (WRA) with over 40 years’ experience in the design of major interstate and interchange projects. John was the lead designer for VDOT’s I-64/Route 15 Zion Crossroads DDI for the preliminary design and final plan review for VDOT where Corman was the Design-Builder. John is also the lead designer for the Route 1/Route 123 interchange and widening in Prince William County an $83 million project with many similar design elements and risks as this project. John will report to the Design Manager.

Laura Meheil, PE (AMT) has 29 years of design and management experience on high-volume highway facilities and interchanges throughout Virginia. Laura is the Project Manager on Virginia’s third DDI: the Southgate Drive/US 460 DDI in Blacksburg for VDOT, which is being constructed by Branch. Laura will report to the Design Manager.

A critical element of the DDI design is traffic operations. For this, our DDI TDT includes Scott Thompson-Graves, PE, PTOE (WRA) with 19 years’ experience. He has performed the traffic analysis of the I-64/Route 15 Zion Crossroads DDI constructed by Corman and the I-83, Exit 4/PA 851 DDI. Scott studied two other DDIs in Pennsylvania on I-83 and I-79 and is starting the DDI design at US 222/322. Scott will report to the Design Manager.

Mike Surasky, PE (AMT) with over 18 years’ experience has worked extensively on DDI planning, analysis, and design. Mike worked on seven DDIs over the last five years and has taught seminars and classes on the design and operations of DDIs, as well as set the design standards for signing and marking of DDIs in North Carolina. Mike will report to the Design Manager.

Other Value-Added Staff

Design QA/QC Manager: Mark Vasco, PE (WRA) with 34 years’ experience managing and designing major transportation improvement projects for VDOT, including interchanges and interstate widening projects. Mark has been the Design QA/QC Manager for the Fall Hill Avenue Widening and Route 29 Solutions (Berkmar Drive Extension) design-builds with Corman. He has also worked with Branch on the Design-Build GMU Campus Connector project for the Route 123 improvements. He worked extensively with the proposed project design teams and will ensure the QA/QC process meets all VDOT requirements. Mark will lead the design QA/QC efforts, report to the Design Manager and certify to the RCE the designs meet VDOT standards and RFP requirements.

Roadway Engineer: Gail Kuttesch, PE (WRA) with 11 years’ experience in designing interchange and roadway projects. Gail is currently leading the design for the Design-Build Fall Hill Avenue project for the Corman/WRA Design-Build Team. Similar project elements include roadway widening, extension of a roadway on a new location, and the bridge over I-95. Gail will lead the roadway design efforts and report to the Design Manager.

Roadway Engineer: Jeff McKay, PE (AMT) has 22 years of experience in designing and managing major highway improvement projects for VDOT, including the Route 460/Southgate Drive DDI in Blacksburg under construction by Branch and Route 123 Widening in Fairfax. He will lead the Route 630 widening and report to the Design Manager.

Structural/Bridge Engineer: Jeremy Schlussel, PE (WRA) has recent design-build experience with Corman and Branch having been the Lead Bridge Engineer on four projects, including VDOT’s Design-Build Fall Hill Avenue Bridge over I-95, a similar structure to the proposed bridge on Route 630 over I-95 with similar geotechnical conditions. His other design-build bridge design experience with Corman and Branch included the Berkmar Drive Extension Bridge over South Fork of the Rivanna River, the Route 123 Bridge over Campus Connector, and Route 636 over CSXT. He has 19 years’ experience in bridge design and designed 25 bridges in the Fredericksburg District since 2005; several constructed by Corman. Jeremy will report to the Design Manager.

Structural/Bridge Engineer: Dan Walsh, PE (ALA) has recent design-build experience with Corman having been the Lead Bridge Engineer on the Route 1 Improvements at Fort Belvoir. He has extensive experience working with WRA on VDOT projects and is currently working on three contracts, including the I-81 Bridge Replacement over the New River project. Dan has 19 years’ experience in bridge design, including the design of bridges over interstates in northern Virginia. Dan will report to the Lead Bridge Engineer Jeremy Schlussel and the Design Manager.

Public Relations Manager: Mike Russell, PE (WRA) has over 25 years’ experience in leading major transportation projects and ensuring robust public affairs, community outreach, marketing, advertising, and strategic public communications programs. His knowledge and experience include collaboratively...
planning and delivering community and media relations programs associated with transportation construction and road building. Mike was the VDOT Bristol District Engineer for four years and the VDOT Salem District Preliminary Engineering Manager for four years, which required extensive public involvement, including project-specific public outreach, annual Six Year Improvement Plan hearings and legislative briefings, and routinely meeting with citizens, local, and state elected officials to address transportation questions and concerns. Mike will report to the DBPM.

**Dry Utility Relocations: Paul Martin (WRA)** has over 26 years’ experience in coordinating dry utility installations and relocations. He coordinated utility relocations for the PPTA I-495 and I-95 Express Lanes and worked in the VDOT Fredericksburg District Utility Coordination group for over a year under WRA’s VDOT Utility Coordination contract, on projects throughout the District ensuring proven relationships with the utility owners along the project, including Verizon, Dominion Virginia Power, Columbia Gas, and Comcast. Paul will be the single point of contact to coordinate utility service relocations and will work with the service providers for timely delivery. He tracks milestone project dates and provides complete utility notifications while consolidating documentation tracking of correspondence for timely service deliveries. Paul will report to the Design Manager and assist the Construction Manager during construction.

**Wet Utility Relocations: Dan Seli, PE (WRA)** has nearly 27 years of utility relocation design experience, including managing WRA’s VDOT Utility Relocation contract since 1996. He has designed projects for all utility owners along the project corridor, including Stafford County Utilities. Dan has been responsible for wet utility coordination and design tasks of similar size and complexity, for design and construction services. He will report to the Design Manager and assist the Construction Manager during construction.

**Wetland Delineation and Permitting Coordinator: David Kwasniewski (WRA)** has 11 years of experience in permitting linear projects including the Fall Hill Avenue (Corman) and Walney Road Bridge Replacement Design-Build projects. His experience includes a lead role in two of the largest permits for transportation projects in Virginia including the Route 460 Relocation in Hampton Roads. David will report to the Design Manager and assist the Construction Manager to ensure permit commitments are adhered to during construction.

**Geotechnical: Jeff Basford, PE (WRA)** has 15 years’ experience, including geotechnical engineering and pavement design on major VDOT projects, including three major interstate projects on I-81. Jeff recently completed the geotechnical engineering for several Design-Build projects, including Fall Hill Avenue and three projects in Washington, DC and in Hampton Roads, all with Corman, and the GMU Campus Connector Extension and the Route 636 project in Augusta County for Branch. The Fall Hill Avenue Design-Build project included similar soils (Potomac Clays) and potential settlement at the proposed bridge abutments, which will allow Jeff to effectively design for the geotechnical risk on this project. Jeff will report to the Design Manager and support the Construction Manager during construction.

**MOT/Traffic Engineer/TMP: Dana Trone, PE, PTOE (WRA)** has over 19 years of experience in traffic engineering and analysis on major transportation projects in Virginia and has provided support on major interchange projects with complex TMPs. Her involvement includes the traffic analysis, signing, marking and signals preliminary design and final design review of the I-64/Route 15 Zion Crossroads DDI where Corman was the Design-Builder. Dana’s interchange experience also includes the Fairfax County Parkway Interchange at Fair Lakes and the Route 1 at Route 123 in Prince William County. She has worked extensively on the Fall Hill Avenue project with Corman. Dana reports to the Design Manager.

**Design/Construction Integrator: Ryan Gorman, PE, DBIA (Corman-Branch JV)** will coordinate with the contractor and designers and ensure the design meets all VDOT’s requirements. He has been involved with local design-build projects since 2007 and has over 19 years of heavy civil construction experience. As a Virginia PE, Ryan performs engineering designs and estimates for construction. His career path as Corman’s Superintendent to Senior Project Manager to Design-Build Project Manager has broadened his attention to detail and quality, which will position the Corman-Branch | WRA Team in meeting VDOT’s requirements. Ryan will review design submittals for conformance to project requirements, constructability and scheduling needs. He is currently the Design/Construction Integrator AND Responsible Charge Engineer (RCE) on the first contract in Virginia to require a dedicated RCE position – the $116 Million Design-Build Route 29 Solutions project. Ryan has been embedded with the WRA Design Team in their Richmond office during bridge and roadway design development for the Berkmar Drive Extension and wet utility design. He will report to the DBPM.
Right-of-Way (ROW): Vanessa Ringgold, SR/WA, R/W-RAC (Diversified Property Services) has over 10 years’ experience in ROW acquisition and will lead preparing the ROW Acquisition and Relocation Plan. Diversified Property Services, Inc., has been a VDOT Pre-qualified Right-of-Way consulting firm since 1988. *Vanessa is currently working with Corman on the Route 1 at Fort Belvoir Road Improvement and VDOT’s Military Highway Continuous Flow Intersection design-build projects.* She will report to the DBPM and coordinate with the Design-Manager and the RCE.

### 3.3.2 Organizational Chart:
The Corman-Branch | WRA Team organizational chart on Page 8 illustrates our “chain of command” of all companies, including individuals responsible for pertinent disciplines proposed on our team and notes key personnel. Solid lines identify the reporting relationships of our team members in managing, designing and constructing the project and illustrate clear reporting lines from the DBPM to the design and construction team. Dashed lines represent indirect reporting and obligations to the owner and/or corporate management. *The chart also shows a clear separation and independence between the Quality Control (QC) and Quality Assurance (QA) programs for construction, including separation between QA and QC inspection and field/laboratory testing per Minimum Requirements for Quality Assurance and Quality Control on Design Build and P3 Projects, January 2012.*

#### Functional Relationships – Integrate to Facilitate:
Design-Build unites the contractor and designer more than just contractually. It integrates innovative design and construction techniques that benefit schedule and cost, which lead to client satisfaction. Ryan Gorman, PE, DBIA (Design/Construction Integrator and Responsible Charge Engineer) will ensure timely interface between Corman-Branch JV’s field crews and the designers with concerns openly discussed. Having a dedicated Design/Construction Integrator during design eliminates subsequent delays or rework, streamlines reviews, and eliminates potential construction field issues, thereby guaranteeing a superior project on time and on budget. Through our DBPM and CM, we will create a firm relationship that sets the foundation to interact and partner with VDOT and third-party stakeholders. Other integration strategies include:

- Interdisciplinary design reviews prior to milestones to coordinate design disciplines.
- Corman-Branch JV constructability reviews of design, especially for MOT, E&S control, and utility conflict avoidance.
- The RCE and/or Construction Engineer will be in WRA’s design office for a seamless link between designer and constructor.
- Weekly schedule meetings to review the previous week and develop three and four-week look aheads
- Monthly scheduling meetings to review CPM progress.
- Weekly foreman meetings to discuss safety, schedule, and coordination.
- Morning huddles with the crews to set daily safety and production goals.
- Weekly progress meetings with VDOT to review and discuss submittals and progress.
- Bi-weekly contractor coordination meetings with adjacent contracts, EMS, Police, etc.
- Monthly partnering meetings with stakeholders to identify and resolve issues.

Our Key staff’s duties and responsibilities include:

**Design-Build Project Manager (DBPM) Scott Szympruch, PE (Corman-Branch JV)** is responsible for overall project design and construction, quality management, contract administration, and other services, including procuring/furnishing materials, equipment, services, and labor. He will be available to the Department, has the expertise/experience to supervise and exercise control of the work, and accepts responsibility for the final work product. Scott is VDOT’s primary point of contact who will coordinate, integrate, and administrate the Corman-Branch | WRA Team, including design, construction, quality assurance, MOT, safety, and utilities. *He will be responsible for meeting our contract obligations and avoid/resolve disputes per the RFP.* Scott will supervise the Design Manager, Responsible Charge Engineer, Design/Construction Integrator, Construction Manager, ROW Manager, and Quality Assurance Manager and manage/coordinate any public outreach and public meetings through the Public Relations Manager. He will be involved with preconstruction, design, construction, and punch out. Scott will assist with constructability reviews and safety audits, and oversee the quality management program, purchasing, and construction operations.

**Responsible Charge Engineer (RCE) Ryan Gorman, PE, DBIA (Corman-Branch JV).** Our Team structure provides distinct positive influences on design and constructability. For this reason, Ryan will fulfill dual roles of the RCE and Design/Construction Integrator. *As RCE, he accepts full professional responsibility for engineering services relating to the final work product.* Ryan will be fully integrated among the project team, including sub-consultants and communicate regularly to maintain open lines of communication with the Department, DM, CM, and QAM. He will oversee coordination from both a design and construction operations.
Design-Build | I-95/Route 630 Reconstruction & Widening | C00013558DB83

On the Route 29 Solutions project, he is the first to fulfill the RCE role for the Design-Builder on a VDOT Design-Build project. His RCE role there will become part-time in the coming months, affording him full access and availability for this new RCE role. Corman and WRA have witnessed firsthand enhanced communications based on the RCE role on our work together on the Berkmar Drive Extension project, which is part of Route 29 Solutions. The joint venture has vested him with the authority to act on behalf of the Corman-Branch JV to make any decisions to provide a quality project while progressing the project on schedule. He can also stop work, if warranted. Ryan reports to the DBPM with responsibility to communicate with the DM, CM, ROW Manager, Executive Committee, and QAM.

Quality Assurance Manager (QAM) Dow Lasitter, III, PE, CCM (KCI) reports to the DBPM and will have direct, independent access to VDOT. He will ensure work is performed in conformance with contract requirements and “approved for construction” plans/specifications. Dow will be responsible for the development of and adherence to the QA Plan, QA inspection and testing of all materials used, and work performed. As an independent entity, he will audit and monitor Corman-Branch | WRA Team’s Construction Quality Control Program. He can stop construction, enforce compliance with specifications, and issue and require resolution of Non-Conformance Reports (NCRs). Dow will manage the QA program, including the QA inspector and independent QA testing firm and testing technicians. The QA team will conduct independent and concurrent tests and analysis of the work from the construction QC team. He will maintain project quality records and approve/submit pay estimates. He will also submit monthly written reports to VDOT’s project manager and the JV’s Executive Committee.

Design Manager (DM) John Maddox, PE (WRA), reports to the DBPM, brings over 30 years of experience, and has worked on numerous Design-Build projects with Corman and Branch. He has extensive experience in the design of interchanges and was the Project Manager for the I-64/Route 15 Zion Crossroads DDI preliminary design and review of the Corman Design-Build Team’s final plan submittals. He was also the Project Manager on the I-81 interstate widening project at Buffalo Creek and Maury River. John will ensure a quality product and input into the schedule, meet design milestones and interfaces. Along with the Design QA/QC Manager, he will establish and oversee the QA/QC program for the pertinent design disciplines, including review of design, working plans, shop drawings, and specifications. John will manage the design and assign resources, oversee design sub-consultants, coordinate design and review schedules, develop and implement corrective measures, if necessary, and integrate environmental compliance measures into the design. He will stay involved once construction starts to oversee any plan modifications and shop drawings, and review construction progress with the CM and coordinate with the RCE.

Construction Manager Greg Suttle (Corman-Branch JV) has over 28 years of hands-on experience it takes to manage construction, including QC activities to ensure materials and work meet contract requirements and “approved for construction” plans/specifications. He will manage the onsite construction team, including Project Controls, Construction QC Manager, superintendents, and project field staff, including scheduling, safety, environmental compliance, utilities and MOT. Greg will be assigned to this project and be onsite full time throughout construction. He will play a key role in conjunction with the Design/Construction Integrator and Design Manager in design constructability reviews, work with Ryan Gorman to coordinate between the design and construction forces with regard to environmental commitments, utilities, ROW, and MOT. Along with his staff, Greg will focus on ensuring construction is performed safely, and along with our Construction QC Manager, that materials and work are in accordance with the approved plans/contract documents. He will coordinate with the Design Manager during construction for the accurate and timely issuance and review of any RFRs and shop drawings, as well as field visits, preparation of as-built and plan revisions. Greg holds a Virginia Department of Environmental Quality (DEQ) Responsible Land Disturber (RLD) Certification and a VDOT Erosion and Sediment Control Contractor Certification (ESCCC).

Keys to Success are communication and coordination between the many parties involved: Corman-Branch | WRA Team, VDOT, review agencies, and stakeholders. This is based upon open and honest communication, frequent meetings, and updates. The Corman-Branch | WRA Team will have internal weekly meetings during design with key construction and design staff present. Tracking sheets will track progress of utilities, ROW, and design disciplines, as well as environmental and design approvals. Once construction starts, design participants will remain involved. Added to the weekly meetings as construction begins are the superintendents, field surveyors, MOT Manager, and Construction QC Manager. Key stakeholder representatives, including utility companies (Dominion Virginia Power, Comcast, Verizon, Columbia Gas, Stafford County Water and Sewer), Stafford County Schools, Stafford Hospital, EMS responders, and others will be invited. Monthly meetings will also be held with the Corman-Branch | WRA Team, VDOT, QAM,
stakeholders and others to enhance partnering and resolve issues quickly and efficiently. Quality assurances will be coordinated with, but independent of, daily QC and construction. The QAM will be given timely notice of construction activities so his QA staff can be onsite to document compliance. He will have access to all meetings and records he feels are required to provide independent assurance that the construction complies with contractual and design requirements. The QAM will report to the DBPM and provide VDOT and the Executive Committee with the reports and assurances required. He will have unrestricted access to the construction and fabricator sites/facilities. A Corman-Branch | WRA Management Team representative will contact the QAM monthly to confirm project compliance. Team members were selected because of their firsthand knowledge of the site and their ability to handle their duties and minimize VDOT/other agency involvement. The Team has effectively delivered design-build projects together and will bring the proven management procedures learned to this project.

Figure 3: Organizational Chart
Corman, Branch, and WRA have successfully teamed on Virginia, Washington, DC, and Maryland Design-
Build projects totaling over $500 million collectively. DBPM Scott Szympruch and WRA are currently
collaborating on two $40 Million Design-Build projects in Washington, D.C. WRA has recently completed
two Design-Build projects with Branch: GMU Campus Connector and the Route 636 Extension, and is
providing QAM services on Branch’s Greenview Drive project. Corman and E.V. Williams (a wholly owned
subsidiary of Branch Highways) are working together on VDOT’s Design-Build Military Highway CFI and
two Hampton Roads road, utility, and bridge projects; one for VDOT. This existing collaboration raises the bar
in terms of quickly identifying, openly discussing, and solving issues as they arise. Team members already
know each other and have trust and effective working relationships in place.

Corman Construction Inc. (Corman) is a privately-held family business since
1920 and licensed heavy civil contractor specializing in highway, bridge,
restoration, and heavy utility construction. With a corporate headquarters in
Annapolis Junction, MD, and offices in Colonial Heights and Chesapeake, VA,
Corman has constructed projects in Virginia for over 30 years and delivers projects on time and on budget
without lingering disputes. We hold employee and public safety to a high standard and our 0.72 EMR validates
this commitment.

In recent years, Corman received 20 local and national awards, including the 2015 DBIA National and Mid-
Atlantic Region Merit Awards for the I-64/Route 15 (Zion Crossroads) DDI Interchange Improvements project,
2015 and 2014 Hampton Roads Utility and Heavy Contractors Association (HRUHCA) Safety Award, 2011
Maryland Washington Minority Contractors Association Prime Contractor of the Year Award, 2014 VTCA
Transportation Contractor Safety Award Honorable Mention, and 2011 ARTBA Women Leadership in
Transportation Glass Hammer Award.

Corman is experienced with challenging MOT and utility issues on VDOT projects (with many setting a
precedent regarding the first of its kind in Virginia). Current or recent VDOT Design-Build projects include:
• Route 1 Improvements at Fort Belvoir a joint FHWA/Eastern Federal Lands/VDOT project, Lorton, VA
• I-64/Route 15 DDI, Zion Crossroads, VA – Virginia’s First Diverging Diamond Interchange
• Fall Hill Avenue and Mary Washington Boulevard Extension, Fredericksburg, VA
• I-64 Widening and Route 623 Interchange Improvements, Short Pump, VA
• Military Highway (CFI), Norfolk, VA – Virginia’s First Continuous Flow Intersection
• Route 29 Solutions, Albemarle, County, VA – VDOT’s First Project with a Responsible Charge Engineer
  as a Key Personnel

Branch Highways, Inc. is a member of The Branch Group of employee-
owned companies, incorporated in 1986. Company headquarters are in
Roanoke, Virginia with a regional office in the Manassas area. Branch is a
full service heavy highway contractor with hundreds of successful projects
throughout the mid-Atlantic region. Branch has maintained a high level of client satisfaction and works with
public and private owners on large and complex projects. Branch continuously makes the Engineering News-
Record (ENR) Top 400 Contractors in the US, currently ranked No. 195 overall nationally. As one of the largest
Virginia-based contractors, our goal is to efficiently and fully serve our clients through our commitment to
project success. Branch’s Design-Build experience includes managing designers, ROW acquisition, utility
relocation and coordination and environmental permit acquisition and monitoring with an impressive portfolio
of successful Virginia Design-Build projects, including:
• I-95 Express Lanes Extension and Interstate Widening, VDOT Mega Projects, NOVA District, VA
- George Mason University Campus Connector, Fairfax, VA
- Route 636 Improvements PPTA, Augusta County, VA
- US Route 58 PPTA, Phase I, II & III VDOT Salem District, VA
- Stafford County PPTA Truslow Road & Garrisonville Road, Stafford County, VA
- James Madison Highway (Route 15) PPTA, Prince William County, VA
- Route 3 Widening and Improvements, VDOT Culpeper District, VA
- Heritage Center Parkway, Prince William County, VA
- Prince William Parkway, Prince William County, VA

**Whitman, Requardt & Associates, LLP (WRA)** has provided transportation design services to VDOT for over 60 years and engineering, planning and construction management services in the Mid-Atlantic region for over 100 years. WRA is currently ranked #114 by *Engineering News Record* and has one of the largest design groups in Virginia and the region. WRA is a multi-disciplined engineering firm that has experienced staff for interchange, interstate, roadway, bridge, retaining wall, drainage, river mechanics analysis, traffic engineering, TMP, ITS, utility and geotechnical engineering that is currently providing design services to VDOT on numerous projects. Our interchange experience includes the design and analysis of four DDIs in the Mid-Atlantic region. Additionally, WRA has provided design, QAM and QC inspection services on seven VDOT Design-Build projects including five projects with Corman and Branch ensuring a proven team for the I-95 Route 630 project.

**RATIONALE FOR WORK HISTORY PROJECT SELECTION**

We selected projects for the Work History Forms to address the unique elements of the I-95/Route 630 innovative interchange, Route 630 widening and the relocation of Route 630 on new location (Greenfield project) and the optional I-95 southbound widening. Each have unique design and construction aspects, which are addressed.

**I-95/Route 630 DDI/Interchange:** I-64/Route 15 Zion Crossroads DDI brings direct experience with the Design-Build complexities and an Interstate Modification Report (IMR) of a DDI. The Fairfax County Parkway Interchange at Fair Lakes Parkway is similar in size and required a complex TMP to maintain traffic through the active interchange during construction and included all the project elements of the proposed project.

**Route 630 Widening and the relocation of Route 630 on new location:** Complex widening Design-Build project – Similar to the Route 1 Improvements at Fort Belvoir and the Fall Hill Avenue Widening and Mary Washington Boulevard Extension projects. These Design-Build projects have extensive ROW, utility relocations and MOT requirements that will directly relate to the challenges anticipated on the Route 630 Widening and are similar in size and complexity. The projects are located in similar geology and the Fall Hill Avenue project also has a major bridge over I-95.

**Optional I-95 Southbound Widening:** Branch has recently completed a major portion of the I-95 Express Lane extension just to the north of the proposed I-95 SB widening. The projects have similar challenges and complexities. WRA’s I-81 Widening project has similar size and complexity. This experience will ensure the Corman-Branch JV Team will develop a quality and economical project.

The combined experience of these six projects ensure the Corman-Branch | WRA Team have the current experience and resources to successfully deliver the I-95/Route 630 Reconstruction and Widening project.
3.5 PROJECT RISKS

The Corman-Branch | WRA Team will employ the Construction Management Association of America (CMAA) endorsed approach to risk management through a “Risk Register,” which includes a list of identified risks, potential impacts and mitigation for each. A robust risk management process considers risks throughout the project’s life and delivery processes. Our Team’s risk management process has sprung into action, will evolve throughout design and construction, and position us to respond to changes as specific issues unfold.

The Corman-Branch | WRA Team employs a five-step Risk Management Approach:

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

We have reviewed the available information, visited the project site during various traffic and weather conditions, and jointly discussed the major risks. With the mindset of project risk being defined as an issue that has the potential to impact the schedule, budget, or both, we have identified the three most critical risks we will face during the project:

**RISK NO. 1: MAINTENANCE OF TRAFFIC**

This endeavor consists of many inter-related pieces to create the overall project. The centerpiece is the new I-95/Route 630 Diverging Diamond Interchange (DDI) to be constructed 600-700-ft. south of the existing interchange. In its present condition, the interstate is bridged over Route 630. At the new interchange, Route 630 will be bridged over the interstate. This change in elevation relative to the interstate of 35 to 40-ft. requires constructing the new ramps at conflicting locations and substantially different elevations from the existing ramps while maintaining traffic on the existing ramps and Route 630. With this, the Traffic Management Plan/Maintenance of Traffic must consider traffic impacts of each construction phase from the vertical and horizontal aspects, and provide proper drainage in all the temporary condition.

Additional maintenance of traffic challenges are west of I-95 throughout the widening section of Route 630 due to proposed changes in the profile elevation of the roadway and the significant reconstruction of driveways with grades up to 20%. Of particular concern is the portion west of the new DDI through the new realigned intersection with Austin Ridge Drive where relocated Route 630 intersects back to the existing roadway. The design requires vigilant consideration of phase construction of the intersection while maintaining traffic on Route 630 and access to the I-95 interchange ramps. These design elements will require opening the proposed ramps to traffic in phases thereby increasing the complexity of traffic through the proposed DDI.

The optional widening of I-95 southbound as included in Addendum No.1 will be straightforward from an MOT perspective due to the existing full depth 12-foot paved shoulder and will needs to be coordinated with the I-95 Express Lanes Extension project to the north including the extension of the ITS systems south of the Route 630 interchange. Access to the median for the I-95 widening is the major risk.

**Why Critical:** A major factor in project success is keeping motorists and the construction team safe. An increase in the number of traffic shifts/detours during interchange construction or access points to the I-95 median increases the potential for traffic delays that could back up traffic onto I-95 or result in wrong way movements onto I-95. Additional construction phases also significantly impacts the project cost and duration and exposes the construction team to tight work zones and potential traffic conflicts. The public will also respond negatively to an increase in construction time.

**Impact:** Not managing MOT from day one of design through the final ribbon cutting will have a major impact on project success. Safety, cost, schedule, and public acceptance will be impacted. The severity is significantly increased due to high traffic volumes on I-95, the existing ramps and anticipated increase in traffic from ongoing development along the Route 630 corridor and the extension of the Express Lanes. Opening the DDI in phases could be impacted and may result in a negative perception of the innovative interchange design.
Mitigation: The Corman-Branch | WRA Team’s mitigation is based on our past experience with similar interchange projects requiring multiple construction phases and interstate widening. Our Team has started this evaluation process on the I-95/Route 630 project and believe there are approaches that can improve the phasing or constructability. The key element is to minimize the number of construction phases and changes in traffic patterns. Often, cost increases in construction on one element can be offset by improved constructability and reducing construction time. A reduced number of phases virtually always reduces risk to the project as well as motorists and improves safety. While there still needs to be substantial additional analysis, our team has formulated two possible solutions to date:

1. **Evaluate the Bridge Design over I-95 and the Conflicts with the Existing Ramps to and from Route 630:**
   The design must provide for the bridge to be built in Phase 2 of construction so traffic can be shifted to the realigned Route 630 in Phase 3. This requires temporarily shifting the existing ramps closer to I-95 and/or increasing the bridge length. **Cost Increase vs. Offset:** Although lengthening the bridge will increase cost, cost may be more than offset by the reduced number of construction phases and traffic detours. **Benefit:** The reduced time will improve safety and provide a safer sequence of opening the DDI to traffic.

![Figure 4: Project phasing](image)

2. **Realigning Ramps Accessing I-95 to and from the North:** The proposed new ramps will have a substantial different elevation than the existing ramps, which will require carefully considering revising the location of the proposed ramps or constructing temporary ramps outside the footprint of the proposed ramps. Again, to reduce the number of traffic shifts, we would first evaluate the potential to locate the new ramps to the inside of the existing ramps while maintaining traffic on the existing ramps. **Cost Increase vs. Offset:** Although this may require the increased cost of temporary sheeting and shoring, it would be offset by the **Benefit** of reduced number of phases and the elimination of temporarily relocating the ramp. Either approach detours traffic between the existing and proposed interchange ramps similar to Figure 4.

The Corman-Branch | WRA Team’s approach would also reduce the duration of traffic in this pattern in Phase 3 by constructing as much of the ramps as possible outside of Route 630, so once traffic is shifted to the relocated Route 630, the missing portion of the ramps can be constructed in an accelerated short duration.

The I-95 southbound widening will require minimizing construction access points from I-95 to reduce impacts to traffic operation and improve safety of the corridor.
These solutions are examples of how we would evaluate each construction phase to ensure we have developed the safest, most cost effective, and shortest construction time for the project. We also understand that we need to coordinate with other projects along the I-95 corridor and the future extension of the I-95 Express Lanes.

**Role of VDOT and other Agencies:** VDOT’s role will be the standard review/approval of the project designs and the TMP.

**RISK NO. 2: GEOTECHNICAL**

The Corman-Branch | WRA Team has reviewed the Geotechnical Data Report (GDR) for the Route 630 project, visited the project site and considered our recent experience on projects in the area on Route 1 (Corman and AMT) and Fall Hill Avenue (WRA and Corman) and along I-95 to the north of the project (Branch). We anticipate the subgrade conditions to be similar and include generally over consolidated highly plastic fine grain soils with pressures higher than current overburden (geostatic) pressures. Therefore, the design will need to carefully consider settlement of embankments and stability of cut slopes. In addition, the GDR indicates that acidic soils are present at the project site. Based on Branch’s experience on the I-95 HOT/Express Lanes 3 miles to the north there is a potential to encounter waste/unsuitable areas that will need improvements for the I-95 widening from the original interstate construction. This becomes critical because the GDR has not been completed in this area.

**Why Critical:** The Route 630 widening and relocation project and optional I-95 southbound widening have large cut and fill slopes requiring careful consideration during design. The risk on the widening portion increases since the right-of-way has already been purchased and the dry utilities are currently being relocated. This limits the potential to change the design of the proposed roadway profile and the associated slopes, which may result in a more complex ground improvement and slope stability design, thereby increasing project cost and duration. Additionally, the design and construction of the bridge abutments will need to consider settlement of the approach embankment, which can increase construction time and cost and require the bridge foundation design to account for drag forces on the proposed piles.

**Impact:** Based on our Team’s review of the data, we identified these major geotechnical issues to be considered during design and construction:

1. Global stability of cut slopes impacted by over-consolidated clays.
2. Acidic soils.

Each has the potential to impact the cost, schedule, constructability, and future maintenance cost and must be managed throughout design and construction.

**Mitigation:** Based on the Corman-Branch | WRA Team’s past experience mitigating geotechnical risk, a thorough field investigation based on a detailed geotechnical boring and testing program is Step One. WRA will review existing geotechnical borings and testing data to determine the need to collect additional information. On Corman’s Design-Build Route 1 project with similar soils, stabilization required “stitching of the slopes” - by driving H-piles to provide global stability.

**Long-Term Slope Stability and Over-Consolidated Clays:** We anticipate constructing a number of cut slopes on over-consolidated highly plastic fine grain soils. The long-term stability needs to be addressed as slope soil strength decays from highly over-consolidated values (peak strength) to normally consolidated values (fully soften/critical) due to removal of overburden for slope construction. Strength values may even decrease to residual values if pre-existing failure planes exist.

It is crucial to identify the correct design soil strength parameters when evaluating the long-term stability for the designed slopes. The GDR lists friction angle values for the slope design ranging from 20 to 28 degrees for fully soften state (critical state) and 5 to 26 degrees for residual state. If conservative soil parameters are not utilized, slopes may be designed without the correct resistance to failure in the long-term and maintenance issues could develop. Alternatively, if overly conservative soil parameters are utilized, slope limits might...
extend beyond the ROW currently allotted for the project requiring either additional ROW or installing costly retaining walls and/or the possible relocation of the newly-installed overhead dry utilities. Our Team will take soil samples and test to accurately analyze and determine the correct “in-situ” conditions.

**Acidic Soils in Design and Construction:** Our Team has extensive experience with the geology in the region and the prevalence of acidic soils in the area. We can identify the presence of these soils through pH, and acid-base accounting tests. Issues associated with acidic soils are generally addressed in design and construction by:

- **Reuse of Acidic Soil from Cut Area:** Encapsulate and use proper long-term vegetative cover.
- **Run-off Control from Acidic Soils during Construction:** Provide lined ditches to convey the drainage away from open excavations.
- **Pipes, foundation, structural elements and SWM Facility Elements:** Encapsulate structural elements with select material/clean material.

Analysis during design needs to be performed to mitigate the risk posed by acidic soils and construction needs to be coordinated so possible acidic run-off does not adversely impact on-going operations. On the I-95 Express Lanes widening to the north acidic soils were encountered and needed to be encapsulated.

**Soft Soils and Settlements:** Due to the presence of a high percentage of fine grained soils, we will encounter soft soils within subgrade cut areas of new road alignment, Route 630 and I-95 widening subgrades. The soft soils will need to be undercut and replaced with select borrow, in order to provide stable pavement subgrades. We can mitigate the undercut by implementing a subgrade stabilization measure, such as lime or cement mixing or increasing the pavement section.

Embankments for the proposed DDI bridge abutments will be constructed of new fill. Due to the new loads, time-dependent consolidated settlements of clayey subgrade (virgin and/or recompression) are expected. The deep foundation for the bridge abutment support should be designed and constructed to mitigate negative skin friction on the piles. Estimation and monitoring of embankment settlement and duration are key to effective and economical foundation design. Issues resulting from not properly evaluating the settlement can result in:

- Installing undersized piles, which would settle under the combination of structure and downdrag loads if under estimated.
- Schedule delays for casting coping for the MSE retaining wall and installing final pavement if consolidation time is under estimated.

**Role of VDOT and other Agencies:** VDOT’s role will be to provide all existing geotechnical data during the RFP stage to allow full evaluation of the project risk and to review the final geotechnical report for the project.

**RISK NO. 3: UTILITIES AND ASSOCIATED EASEMENTS**

Relocating utilities and acquiring the required ROW and easements for the relocations are traditionally the riskiest element of the VDOT Design-Build process. This is because the Design-Builder is dependent upon third parties for performance that they have no direct control over. Utility companies have their own priorities that may not match the proposed projects’. This will be one of the first VDOT design-build projects where the ROW acquisitions and utility relocations are (on the Route 630 widening portion west of I-95) to be managed by VDOT District personnel. Utility relocations on the Route 630 widening are currently underway and scheduled to be completed after the Design-Build contract is signed. At first glance, this gives the Design-Builder an opportunity to accelerate construction. However, basing utility relocation plans on VDOT’s roadway design introduces additional challenges that can limit design changes to the plans, which have the possibility to reduce costs and time to the Design-Builder’s. It also takes full and timely cooperation between the Design-Builder and the VDOT District Personnel to facilitate changes in the utility company plans and estimates if changes in the roadway designs require the utilities to alter their approved relocation plans. The proposed I-95 interchange and Route 630 improvements to the east of I-95 will have the traditional high ROW and utility risk.

**Why Critical:** To sequence the project to minimize MOT impacts and eliminate adverse schedule impacts, utility relocations and acquiring associated ROW and easements must be coordinated seamlessly with the design and construction. West of I-95 on the Route 630 widening project, the ROW acquisition and utility relocations are being completed by VDOT based on the ROW plans and the plans included in the RFQ. Corman and WRA are experienced with Maryland Design-Build projects where the Maryland State Highway Administration is routinely responsible for purchasing the ROW and relocating the utilities. Our experience has been that the risk of unforeseen utility conflicts/relocations runs high and can impact schedule and cost. Furthermore, any utility relocation plan changes may need to be coordinated through the VDOT District Personnel and can potentially impact the project schedule.
East of I-95, utilities to be relocated are predominately along Route 1, at the new Park and Ride facility, and along existing Route 630. Early relocation of the Park and Ride facility is critical to the schedule and must be relocated early in Phase 1 of construction. The remaining portion of the interchange and the improvements to the east need to be completed with the opening of traffic to the relocated interchange, which is critical to the project schedule and cost.

**Impact:** As stated earlier, the Corman-Branch | WRA Team has limited control over the entire utility and ROW process. In addition, some utilities are being relocated prior to approval of the design-build “Approved for Construction” plans. Project impacts may include:

- Relocated utilities may not be clear of the envelope required by the Corman-Branch | WRA Team’s final design or means and methods of construction requiring them to be relocated again at the Corman-Branch JV’s expense with the potential to impact existing utility easements and require new easements. The potential of requiring flatter slopes or other mitigation measures, due to the limited nature of geotechnical investigations, is high and will need to be addressed during the RFP preliminary design phase.
- Inaccurate utility relocations requiring additional schedule impacts. This recently occurred on Corman’s Route 1 Design-Build project where a line of overhead Dominion poles were relocated, with the design signed off by Verizon and Cox. After Dominion and Cox placed their cables on the new poles, Verizon determined the Dominion cables were placed incorrectly and must be relocated before they could relocate their lines to the new poles. This issue greatly impacted Corman’s schedule and operations.
- A major underground utility is the fiber line for the County to the high school currently located within the existing ROW. Our understanding is the proposed relocation is to be underground within the proposed ROW. This relocation has a potential to be in conflict with the Route 630 widening/reconstruction, especially the new cross drainage.
- Conflicts may still exist with overhead or underground utilities that require new unplanned relocations. If not identified early on, sufficient time or cost may not have been allocated for these additional utility impacts.
- Utility plan and estimates have been approved without containing final design information to eliminate conflicts requiring utility designers to perform additional work — again affecting schedule and budget.

**Mitigation:** The Corman-Branch | WRA Team is made up of experienced individuals who know how to navigate utility provider procedures and resolve issues timely. To mitigate, we will utilize the following:

- Assign the responsibility to our Dry Utility Design Engineer Paul Martin who has extensive experience working with the Fredericksburg District utility relocation group and with the local utility owners along the project corridor and “lessons learned” from past projects. Place high emphasis on coordination with VDOT utility staff for preparation, submittal, and review of utility relocations to comply with VDOT policies/procedures.
- Review utility relocations and utility ROW acquisition planned to be completed by VDOT prior to construction. During final design, closely monitor and observe the relocation and either notify others of any issues or adjust the design to match the actual relocations.
- Obtain as-built utility information on relocation completed for VDOT on the widening project.
- Allow sufficient design and review time for utility providers in the project schedule. Partner with providers to answer questions and facilitate their reviews.
- Identify which utilities will most likely be impacted during procurement. Include timeframes for coordination and utility designs/reviews in the baseline schedule. Show each potential utility relocation as a separate task in the Work Breakdown Structure (WBS).
- Identify required utility test holes and include as early as possible in the schedule.
- Develop mitigation strategies after project award to minimize/eliminate utility relocations; engage utility owners early; work with providers and offer recommendations/solutions; and set schedule milestones where utility relocation decisions must be made.
- Partner with reviewing agencies and utility owners during design by setting up bi-weekly Utility Task Force meetings. This keeps the Corman-Branch | WRA Team aware of utility company/reviewer schedules, potential issues that could result in project delays, and the need for additional information/clarification to complete their designs/reviews and remain on schedule.
- Utilize design-build staff for utility designs or support should utility companies not have the resources to perform the work per the proposed project schedule.

**Role of VDOT and other Agencies:** Assist the Corman-Branch | WRA Team as necessary to ensure the utility and ROW processes are proceeding per RFP requirements and VDOT policies.
Offerors shall furnish a copy of this Statement of Qualifications (SOQ) Checklist, with the page references added, with the Statement of Qualifications.

<table>
<thead>
<tr>
<th>Statement of Qualifications Component</th>
<th>Form (if any)</th>
<th>RFQ Cross reference</th>
<th>Included within 15-page limit?</th>
<th>SOQ Page Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statement of Qualifications Checklist and Contents</td>
<td>Attachment 3.1.2</td>
<td>Section 3.1.2</td>
<td>no</td>
<td>16-18</td>
</tr>
<tr>
<td>Acknowledgement of RFQ, Revision and/or Addenda</td>
<td>Attachment 2.10 (Form C-78-RFQ)</td>
<td>Section 2.10</td>
<td>no</td>
<td>19</td>
</tr>
<tr>
<td>Letter of Submittal (on Offeror’s letterhead)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authorized Representative’s signature</td>
<td>NA</td>
<td>Section 3.2.1</td>
<td>yes</td>
<td>1</td>
</tr>
<tr>
<td>Offeror’s point of contact information</td>
<td>NA</td>
<td>Section 3.2.2</td>
<td>yes</td>
<td>1</td>
</tr>
<tr>
<td>Principal officer information</td>
<td>NA</td>
<td>Section 3.2.3</td>
<td>yes</td>
<td>1</td>
</tr>
<tr>
<td>Offeror’s Corporate Structure</td>
<td>NA</td>
<td>Section 3.2.4</td>
<td>yes</td>
<td>1</td>
</tr>
<tr>
<td>Identity of Lead Contractor and Lead Designer</td>
<td>NA</td>
<td>Section 3.2.5</td>
<td>yes</td>
<td>1</td>
</tr>
<tr>
<td>Affiliated/subsidiary companies</td>
<td>Attachment 3.2.6</td>
<td>Section 3.2.6</td>
<td>no</td>
<td>20</td>
</tr>
<tr>
<td>Debarment forms</td>
<td>Attachment 3.2.7(a) Attachment 3.2.7(b)</td>
<td>Section 3.2.7</td>
<td>no</td>
<td>21-29</td>
</tr>
<tr>
<td>Offeror’s VDOT prequalification evidence</td>
<td>NA</td>
<td>Section 3.2.8</td>
<td>no</td>
<td>30-34</td>
</tr>
<tr>
<td>Evidence of obtaining bonding</td>
<td>NA</td>
<td>Section 3.2.9</td>
<td>no</td>
<td>35-44</td>
</tr>
</tbody>
</table>
### ATTACHMENT 3.1.2

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

**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

<table>
<thead>
<tr>
<th>Statement of Qualifications Component</th>
<th>Form (if any)</th>
<th>RFQ Cross reference</th>
<th>Included within 15-page limit?</th>
<th>SOQ Page Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCC and DPOR registration documentation (Appendix)</td>
<td>Attachment 3.2.10</td>
<td>Section 3.2.10</td>
<td>no</td>
<td>45-76</td>
</tr>
<tr>
<td>Full size copies of SCC Registration</td>
<td>NA</td>
<td>Section 3.2.10.1</td>
<td>no</td>
<td>45-54</td>
</tr>
<tr>
<td>Full size copies of DPOR Registration (Offices)</td>
<td>NA</td>
<td>Section 3.2.10.2</td>
<td>no</td>
<td>55-71</td>
</tr>
<tr>
<td>Full size copies of DPOR Registration (Key Personnel)</td>
<td>NA</td>
<td>Section 3.2.10.3</td>
<td>no</td>
<td>73-76</td>
</tr>
<tr>
<td>Full size copies of DPOR Registration (Non-APELSCIDLA)</td>
<td>NA</td>
<td>Section 3.2.10.4</td>
<td>no</td>
<td>72</td>
</tr>
<tr>
<td><strong>DBE statement within Letter of Submittal</strong> confirming Offeror is committed to achieving the required DBE goal</td>
<td>NA</td>
<td>Section 3.2.11</td>
<td>yes</td>
<td>1</td>
</tr>
<tr>
<td><strong>Local and Veteran Hiring statement within Letter of Submittal</strong> confirming Offeror is committed to achieve the required local worker and veteran new hire participation goal</td>
<td>Attachment 3.2.12</td>
<td>Section 3.2.12</td>
<td>yes</td>
<td>1</td>
</tr>
<tr>
<td><strong>Offeror’s Team Structure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identity of and qualifications of Key Personnel</td>
<td>NA</td>
<td>Section 3.3.1</td>
<td>yes</td>
<td>3, 6-7</td>
</tr>
<tr>
<td>Key Personnel Resume – DB Project Manager</td>
<td>Attachment 3.3.1</td>
<td>Section 3.3.1.1</td>
<td>no</td>
<td>77-78</td>
</tr>
<tr>
<td>Key Personnel Resume – Responsible Charge Engineer</td>
<td>Attachment 3.3.1</td>
<td>Section 3.3.1.2</td>
<td></td>
<td>79-80</td>
</tr>
<tr>
<td>Key Personnel Resume – Quality Assurance Manager</td>
<td>Attachment 3.3.1</td>
<td>Section 3.3.1.3</td>
<td>no</td>
<td>81-82</td>
</tr>
<tr>
<td>Key Personnel Resume – Design Manager</td>
<td>Attachment 3.3.1</td>
<td>Section 3.3.1.4</td>
<td>no</td>
<td>83-84</td>
</tr>
</tbody>
</table>
### ATTACHMENT 3.1.2

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

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

<table>
<thead>
<tr>
<th>Statement of Qualifications Component</th>
<th>Form (if any)</th>
<th>RFQ Cross reference</th>
<th>Included within 15-page limit?</th>
<th>SOQ Page Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Personnel Resume – Construction Manager</td>
<td>Attachment 3.3.1</td>
<td>Section 3.3.1.5</td>
<td>no</td>
<td>85-86</td>
</tr>
<tr>
<td>Organizational chart</td>
<td>NA</td>
<td>Section 3.3.2</td>
<td>yes</td>
<td>8</td>
</tr>
<tr>
<td>Organizational chart narrative</td>
<td>NA</td>
<td>Section 3.3.2</td>
<td>yes</td>
<td>5-8</td>
</tr>
</tbody>
</table>

#### Experience of Offeror’s Team

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead Contractor Work History Form</td>
<td>Attachment 3.4.1(a)</td>
<td>Section 3.4</td>
<td>no</td>
</tr>
<tr>
<td>Lead Designer Work History Form</td>
<td>Attachment 3.4.1(b)</td>
<td>Section 3.4</td>
<td>no</td>
</tr>
</tbody>
</table>

#### Project Risk

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify and discuss three critical risks for the Project</td>
<td>NA</td>
<td>Section 3.5.1</td>
</tr>
</tbody>
</table>
ATTACHMENT 2.10

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

RFQ NO. C00013558DB83
PROJECT NOS.: 0095-089-F09 and 0630-089-202

ACKNOWLEDGEMENT OF RFQ, REVISION AND/OR ADDENDA

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

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

1. Cover letter of RFQ 10/27/2015 (Date)

2. Cover letter of RFQ Addendum No. 1 01/14/16 (Date)

3. Cover letter of (Date)

Arthur C. Cox, III
Vice President

SIGNATURE
DATE

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

- **The Offeror does not have any affiliated or subsidiary companies.**
- **Affiliated and/or subsidiary companies of the Offeror are listed below.**

<table>
<thead>
<tr>
<th>Relationship with Offeror (Affiliate or Subsidiary)</th>
<th>Full Legal Name</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affiliate (Parent Company to Corman Construction, Inc.)</td>
<td>CG Enterprises, Inc.</td>
<td>12001 Guilford Road, Annapolis Junction, MD 20701</td>
</tr>
<tr>
<td>Affiliate (Sister)</td>
<td>Corman Marine Construction, Inc.</td>
<td>711 East Ordnance Road, Suite 715, Baltimore, MD 21226</td>
</tr>
<tr>
<td>Affiliate (Joint Venture)</td>
<td>CK Constructors, A Joint Venture</td>
<td>12001 Guilford Road, Annapolis Junction, MD 20701</td>
</tr>
<tr>
<td>Affiliate (Joint Venture)</td>
<td>Intercounty Constructors Joint Venture</td>
<td>120 White Plains Road, Suite 310, Tarrytown, NY 10591</td>
</tr>
<tr>
<td>Affiliate (Joint Venture)</td>
<td>MD 200 Constructors, A Joint Venture</td>
<td>450 Dividend Drive, Peachtree City, GA 30269</td>
</tr>
<tr>
<td>Affiliate (Joint Venture)</td>
<td>Wagman, Corman, McLean Joint Venture</td>
<td>3290 North Susquehanna Trail, York, PA 17406</td>
</tr>
<tr>
<td>Affiliate (Joint Venture)</td>
<td>Corman-Wagman, A Joint Venture</td>
<td>12001 Guilford Road, Annapolis Junction, MD 20701</td>
</tr>
<tr>
<td>Affiliate (Joint Venture)</td>
<td>KC Constructors, A Joint Venture</td>
<td>1800 South Bell Street, Suite 300, Arlington, VA 22202</td>
</tr>
<tr>
<td>Affiliate (Joint Venture)</td>
<td>LANE/Corman Joint Venture</td>
<td>14500 Avion Parkway, Suite 200, Chantilly, VA 20151</td>
</tr>
<tr>
<td>Affiliate (Joint Venture)</td>
<td>Corman-E.V. Williams, a Joint Venture</td>
<td>925 S. Military Highway, Virginia Beach, VA 23464</td>
</tr>
<tr>
<td>Affiliate (Joint Venture)</td>
<td>Kiewit-Corman-Greenbelt, a Joint Venture</td>
<td>7250 Parkway Drive, Suite 310, Hanover, MD 21076</td>
</tr>
<tr>
<td>Affiliate (Parent Company to Branch Highways, Inc.)</td>
<td>The Branch Group, Inc.</td>
<td>P.O. Box 40004, Roanoke, Virginia 24022</td>
</tr>
<tr>
<td>Affiliate</td>
<td>Branch and Associates, Inc.</td>
<td>P.O. Box 40051, Roanoke, Virginia 24022</td>
</tr>
<tr>
<td>Affiliate</td>
<td>G.J. Hopkins, Inc.</td>
<td>P.O. Box 12467, Roanoke, Virginia 24025</td>
</tr>
<tr>
<td>Affiliate</td>
<td>E.V. Williams, Inc.</td>
<td>925 South Military Hwy, Virginia Beach, Virginia 23464</td>
</tr>
<tr>
<td>Affiliate</td>
<td>Branch Daffan, Inc.</td>
<td>8428 Quarry Road Suite 101, Manassas, Virginia 20110</td>
</tr>
</tbody>
</table>
ATTACHMENT NO. 3.2.7(a)

CERTIFICATION REGARDING DEBARMENT PRIMARY COVERED TRANSACTIONS

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

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

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

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

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

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

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

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

[Signature] 1.12.16 Vice President

Date Title

Corman-Branch, a Joint Venture

Name of Firm
ATTACHMENT NO. 3.2.7(a)

CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS

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

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

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

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

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

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

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

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

[Signature] 1.12.16  [Vice President]
[Date]  [Title]

Corman Construction, Inc.

Name of Firm
ATTACHMENT NO. 32.7(a)

CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS

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

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

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

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

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

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

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

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

Signature Date

President
Title

Branch Highways, Inc.

Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

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

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

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

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

[Signature] 12/16/15  Senior Vice President
Date

Title

Whitman, Requardt & Associates, LLP
Name of Firm

24
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

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

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

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

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

[Signature] December 9, 2015 [Principal]

[Signature] [Date] [Title]

A. Morton Thomas and Associates, Inc.

Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

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

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

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

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

Mary Wiedorfer, PE, CCM, PMP, LEED AP
Vice President
Title

Signature Date

KCI Technologies, Inc.
Name of Firm
ATTACHMENT NO. 3.2.7(b)
CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

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

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

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

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

[Signature] 12/31/15 [President]
Signature Date Title

Athavale, Lystad & Associates, Inc.
Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

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

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

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

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

[Signature] December 8, 2015 [Vice President]
[Date] [Title]

H&B Surveying and Mapping, LLC
Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

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

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

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

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

[Signature] [Date: 12/8/2015] [Title: President]

Diversified Property Services, Inc.

Name of Firm
CERTIFICATE OF QUALIFICATION

CORMAN CONSTRUCTION, INC.

Vendor Number: C097

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

PREQUALIFIED

Your firm specializes in the noted Classification(s):

GRADING; MAJOR STRUCTURES; MINOR STRUCTURES; UNDERGROUND UTILITIES

Issue Date: March 31, 2016

Suzanne F. Lucas, State Prequalification Officer

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

Vendor Number: B319

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

PREQUALIFIED

Your firm specializes in the noted Classification(s):

GRADING; MAJOR STRUCTURES; UNDERGROUND UTILITIES

Issue Date: February 28, 2015

Suzanne F.R. Lucas, State Prequalification Officer

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

From: Patricia Langley
Sent: Monday, December 21, 2015 11:27 AM
To: Karen Countiss
Cc: Louis Robbins; Angela Brinkley
Subject: FW: Joint Venture Bidding Agreement - Corman-Branch, a Joint Venture

Importance: High

Karen,

The JV prequal # for Corman-Branch is JV073 (see below).

Thank you.
Patty

From: Prequalification (VDOT) [mailto:Prequalification@VDOT.Virginia.gov]
Sent: Monday, December 21, 2015 11:14 AM
To: Patricia Langley <PLangley@CormanConstruction.com>
Cc: Lucas, Suzanne F., CAPM (VDOT) <SFR.Lucas@VDOT.Virginia.gov>
Subject: RE: Joint Venture Bidding Agreement - Corman-Branch, a Joint Venture

Good Morning Patricia.

Per our conversation, the Joint Venture # is JV073.

Thank you
Kris

Thank you for your firm’s inquiry

Prequalification

Construction Division
Virginia Department of Transportation
1401 East Broad Street
Richmond, Virginia 23219
Prequalification Officer: (804) - 786-2941
Prequalification Assistant: (804) - 786-2938

Email: Prequalification@VDOT.Virginia.gov


From: Patricia Langley [mailto:PLangley@CormanConstruction.com]
Sent: Monday, December 21, 2015 10:51 AM
To: Prequalification (VDOT)
Cc: Ken Pena; Louis Robbins; Karen Countiss  
Subject: FW: Joint Venture Bidding Agreement - Corman-Branch, a Joint Venture  
Importance: High  

Good morning Suzanne,

I received your message. Please send the prequalification number to my e-mail address plangley@cormanconstruction.com. It would be greatly appreciated if we could have this today or tomorrow.

Thank you,

Patty Langley
Assistant Controller
Corman Construction, Inc.
12001 Guilford Road
Annapolis Junction, MD 20701
Office: (410) 792-9400 Ext. 237
Cell: 443-790-9000
email: plangley@cormanconstruction.com

From: Patricia Langley
Sent: Thursday, December 17, 2015 2:59 PM
To: 'Prequalification (VDOT)' <Prequalification@VDOT.Virginia.gov>
Subject: RE: Joint Venture Bidding Agreement - Corman-Branch, a Joint Venture

Sounds great. Thank you 😊

From: Prequalification (VDOT) [mailto:Prequalification@VDOT.Virginia.gov]
Sent: Thursday, December 17, 2015 2:58 PM
To: Patricia Langley <Plangley@CormanConstruction.com>
Subject: RE: Joint Venture Bidding Agreement - Corman-Branch, a Joint Venture

My coordinator will be in the office tomorrow & it will be finalized. If all goes well, I will be able to email you the JV# tomorrow

Thank-you for your firm’s inquiry.

Suzanne Lucas, CAPM

State Prequalification Supervisor
Construction Division
Virginia Department of Transportation
1401 East Broad Street
Hi Suzanne,

Just checking in to see what the status is on this. We have not received the JV prequal number yet.

Thank you.
Patty

Hi Suzanne,

Please see the attached. We have another Joint Venture project that we need a prequalification number for. I will place the originals in the mail for you tomorrow.

Thank you for your assistance.

Patty Langley
Assistant Controller
Corman Construction, Inc.
12001 Guilford Road
Annapolis Junction, MD 20701
Office: (410) 792-9400 Ext. 237
Cell: 443-790-9000
email: plangley@cormanconstruction.com

CONFIDENTIALITY NOTICE: This communication may contain privileged or other confidential information. If you are not the intended recipient, or believe you have received this communication in error, please do not print, copy, retransmit, disseminate or otherwise use the information. Also, please indicate to the sender that you have received this message in error and delete the copy you received. Thank you.
February 2, 2016

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

Re: Corman Construction, Inc. – Surety Qualification
In Association with a JV Proposal with Branch Highways, Inc.
Request for Qualifications for the Design/Build
I-95/Route 630 Reconstruction and Widening Project
State Project Nos.: I-95/Route 630 Interchange Relocation (0095-089-F09), UPC 13558
Route 630 Widening (0630-089-202), UPC 4632
Federal Project Nos.: I/95/Route 630 Interchange Relocation (NH-095-2)
Route 630 Widening (STP-089-6)
Contract ID Number: C00013558DB83

Dear Mr. Daoulas:

As Surety for Corman Construction, Inc., Fidelity and Deposit Company of Maryland and Zurich
American Insurance Company with A.M. Best Financial Strength Ratings “A+” and Financial Size
Category “XV” are capable of providing 100% Performance Bond & 100% Labor and Materials Payment
Bond in the anticipated amount of $95,000,000.00 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.

If Corman Construction, Inc., as a member of the Joint Venture, is short-listed and/or awarded a contract
for the referenced project and requests that we provide the necessary Bid and Performance and Payment
Bonds, we will be prepared to execute the bonds subject to our acceptable review of the contract terms
and conditions, bond forms and any other underwriting considerations at the time of the request.

Fidelity and Deposit Company of Maryland and Zurich American Insurance Company are proud to have
represented Corman Construction, Inc.’s as its surety for over twenty (20) years. Based on Corman
Construction, Inc.’s financial strength and track record, we are prepared to consider jobs of $150,000,000
single/$400,000,000 aggregate total program.

Our consideration and issuance of bonds is a matter solely between Corman Construction, Inc. and
ourselves, and we assume no liability to third parties or to you by the issuance of this letter.
We trust that this information meets with your satisfaction. If there are further questions, please feel free
to contact me.

Sincerely,

Robert A. Chlada,
Attorney-in-Fact
STATE CORPORATION COMMISSION

July 1, 2015

FIDELITY AND DEPOSIT COMPANY OF MARYLAND
600 RED BROOK BLVD
OWINGS MILLS MD 21117-5153

is hereby licensed to transact the business of

Aircraft Liability
Auto Liability
Auto Physical Damage
Boiler & Machinery
Burglary & Theft
Commercial Multi-Peril
Credit
Credit Property Insurance
Fidelity
Fire

Glass
Homeowners Multi-Peril
Inland Marine
Liability Other than Auto
Misc Property & Casualty
Ocean Marine
Surety
Water Damage
Workers Compensation & Employers'

in the Commonwealth of Virginia through the thirtieth day of June next succeeding the date hereof unless this license shall be sooner revoked or otherwise cancelled.

ID: 39306

State Corporation Commission
Bureau of Insurance

By: [Signature]
Commissioner
FIDELITY AND DEPOSIT COMPANY
OF MARYLAND
600 Red Brook Blvd., Suite 600, Owings Mills, MD 21117

Statement of Financial Condition
As Of December 31, 2014

ASSETS

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonds</td>
<td>$ 142,720,308</td>
</tr>
<tr>
<td>Stocks</td>
<td>21,816,223</td>
</tr>
<tr>
<td>Cash and Short Term Investments</td>
<td>2,077,768</td>
</tr>
<tr>
<td>Reinsurance Recoverable</td>
<td>10,375,303</td>
</tr>
<tr>
<td>Other Accounts Receivable</td>
<td>46,778,921</td>
</tr>
<tr>
<td><strong>TOTAL ADMITTED ASSETS</strong></td>
<td><strong>$ 223,768,523</strong></td>
</tr>
</tbody>
</table>

LIABILITIES, SURPLUS AND OTHER FUNDS

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reserve for Taxes and Expenses</td>
<td>$ 1,321,332</td>
</tr>
<tr>
<td>Ceded Reinsurance Premiums Payable</td>
<td>49,965,411</td>
</tr>
<tr>
<td>Securities Lending Collateral Liability</td>
<td>4,009,064</td>
</tr>
<tr>
<td><strong>TOTAL LIABILITIES</strong></td>
<td><strong>$ 55,295,807</strong></td>
</tr>
<tr>
<td>Capital Stock, Paid Up</td>
<td>$ 5,000,000</td>
</tr>
<tr>
<td>Surplus</td>
<td>163,472,717</td>
</tr>
<tr>
<td>Surplus as regards Policyholders</td>
<td>168,472,716</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$ 223,768,523</strong></td>
</tr>
</tbody>
</table>

Securities carried at $58,191,540 in the above statement are deposited with various states as required by law.

Securities carried on the basis prescribed by the National Association of Insurance Commissioners. On the basis of market quotations for all bonds and stocks owned, the Company’s total admitted assets at December 31, 2014 would be $227,936,393 and surplus as regards policyholders $172,640,586.

I, DENNIS F. KERRIGAN, Corporate Secretary of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing statement is a correct exhibit of the assets and liabilities of the said Company on the 31st day of December, 2014.

[Signature]
Corporate Secretary

State of Illinois
City of Schaumburg  SS:

Subscribed and sworn to, before me, a Notary Public of the State of Illinois, in the City of Schaumburg, this 15th day of March, 2015.

[Signature]
Notary Public
STATE CORPORATION COMMISSION

July 1, 2015

ZURICH AMERICAN INSURANCE COMPANY
ONE LIBERTY PLAZA
165 BROADWAY
NEW YORK NY 10006-1404

is hereby licensed to transact the business of

Accident & Sickness  Fire
Aircraft Liability    Glass
Aircraft Physical Damage Homeowners Multi-Peril
Auto Liability      Inland Marine
Auto Physical Damage Legal Services
Boiler & Machinery Liability Other than Auto
Burglary & Theft    Misc Property & Casualty
Commercial Multi-Peril Ocean Marine
Credit             Surety
Credit Accident & Sickness Water Damage
Farmowners Multi-Peril Workers Compensation & Employers'
Fidelity           Liability

in the Commonwealth of Virginia through the thirtieth day of June next succeeding the date hereof unless this license shall be sooner revoked or otherwise cancelled.

ID: 16535

State Corporation Commission
Bureau of Insurance

By: [Signature]
Commissioner
### Assets

<table>
<thead>
<tr>
<th></th>
<th>12/31/2014</th>
<th>12/31/2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonds</td>
<td>$17,933,136,241</td>
<td>$18,990,565,123</td>
</tr>
<tr>
<td>Preferred Stock</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Common Stock</td>
<td>3,213,594,517</td>
<td>2,411,753,638</td>
</tr>
<tr>
<td>Other Invested Assets</td>
<td>2,602,435,930</td>
<td>2,505,333,631</td>
</tr>
<tr>
<td>Short-term Investments</td>
<td>707,396,303</td>
<td>327,019,681</td>
</tr>
<tr>
<td>Receivable for securities</td>
<td>20,334,654</td>
<td>123,767,865</td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>9,155,828</td>
<td>(65,045,469)</td>
</tr>
<tr>
<td>Securities lending reinvested collateral assets</td>
<td>167,993,212</td>
<td>208,060,537</td>
</tr>
<tr>
<td>Employee Trust for Deferred Compensation Plan</td>
<td>140,606,132</td>
<td>142,420,097</td>
</tr>
<tr>
<td><strong>Total Cash and Invested Assets</strong></td>
<td><strong>$24,794,652,816</strong></td>
<td><strong>$24,643,676,503</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>12/31/2014</th>
<th>12/31/2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premiums Receivable</td>
<td>$3,317,513,374</td>
<td>$3,358,946,105</td>
</tr>
<tr>
<td>Funds Held with Reinsurers</td>
<td>2,357,701</td>
<td>2,383,155</td>
</tr>
<tr>
<td>Reinsurance Recoverable</td>
<td>492,689,641</td>
<td>391,812,478</td>
</tr>
<tr>
<td>Accrued investment Income</td>
<td>116,594,177</td>
<td>113,886,701</td>
</tr>
<tr>
<td>Federal Income Tax Recoverable</td>
<td>941,023,188</td>
<td>940,033,456</td>
</tr>
<tr>
<td>Due from Affiliates</td>
<td>83,575,591</td>
<td>183,892,738</td>
</tr>
<tr>
<td>Other Assets</td>
<td>561,819,984</td>
<td>549,410,052</td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td><strong>$30,310,026,672</strong></td>
<td><strong>$30,184,001,188</strong></td>
</tr>
</tbody>
</table>

### Liabilities and Policyholders' Surplus

**Liabilities:**

<table>
<thead>
<tr>
<th></th>
<th>12/31/2014</th>
<th>12/31/2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss and LAE Reserves</td>
<td>$13,922,765,027</td>
<td>$13,894,112,327</td>
</tr>
<tr>
<td>Unearned Premium Reserve</td>
<td>4,502,895,029</td>
<td>4,321,146,577</td>
</tr>
<tr>
<td>Funds Held with Reinsurers</td>
<td>191,291,330</td>
<td>185,460,548</td>
</tr>
<tr>
<td>Loss in Course of Payment</td>
<td>306,093,345</td>
<td>357,922,606</td>
</tr>
<tr>
<td>Commission Reserve</td>
<td>79,627,248</td>
<td>68,132,284</td>
</tr>
<tr>
<td>Federal Income Tax Payable</td>
<td>115,512,376</td>
<td>290,773,995</td>
</tr>
<tr>
<td>Remittances and Items Unallocated</td>
<td>123,759,621</td>
<td>117,710,350</td>
</tr>
<tr>
<td>Payable to parent, tabs and affiliates</td>
<td>154,224,238</td>
<td>154,428,297</td>
</tr>
<tr>
<td>Provision for Reinsurance</td>
<td>59,189,897</td>
<td>43,942,761</td>
</tr>
<tr>
<td>Ceded Reinsurance Premiums Payable</td>
<td>721,709,366</td>
<td>807,651,125</td>
</tr>
<tr>
<td>Securities Lending Collateral Liability</td>
<td>167,993,212</td>
<td>208,060,537</td>
</tr>
<tr>
<td>Other Liabilities</td>
<td>1,949,225,451</td>
<td>1,942,241,242</td>
</tr>
<tr>
<td><strong>Total Liabilities</strong></td>
<td><strong>$22,294,290,200</strong></td>
<td><strong>$22,385,582,849</strong></td>
</tr>
</tbody>
</table>

**Policyholders' Surplus:**

<table>
<thead>
<tr>
<th></th>
<th>12/31/2014</th>
<th>12/31/2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common Capital Stock</td>
<td>$5,000,000</td>
<td>$5,000,000</td>
</tr>
<tr>
<td>Paid-In and Contributed Surplus</td>
<td>4,394,131,321</td>
<td>4,394,131,321</td>
</tr>
<tr>
<td>Surplus Notes</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Special Surplus Funds</td>
<td>57,824,000</td>
<td>34,865,600</td>
</tr>
<tr>
<td>Cumulative Unrealized Gain</td>
<td>572,072,362</td>
<td>505,130,565</td>
</tr>
<tr>
<td>Unassigned Surplus</td>
<td>2,986,708,790</td>
<td>2,839,285,454</td>
</tr>
<tr>
<td><strong>Total Policyholders' Surplus</strong></td>
<td><strong>$8,015,736,472</strong></td>
<td><strong>$7,758,418,359</strong></td>
</tr>
</tbody>
</table>

**Total Liabilities and Policyholders' Surplus:**

<table>
<thead>
<tr>
<th></th>
<th>12/31/2014</th>
<th>12/31/2013</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>$30,310,026,672</strong></td>
<td><strong>$30,184,001,188</strong></td>
</tr>
</tbody>
</table>

I, Dennis F. Kerigan, Corporate Secretary of ZURICH AMERICAN INSURANCE COMPANY do hereby certify that the foregoing statement is a correct exhibit of the assets and liabilities of the said Company, on the 31st day of December, 2014, according to the best of my information, knowledge and belief.

State of Illinois
County of Cook

[Signature]

Notary Public - State of Illinois
My Commission Expires February 24, 2018
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 Joseph A. PIERSON, Robert A. CHLADA, Cynthia M. CHARVAT, Dennis C. OURAND, Steven A. DZURIK, JR., John J. MARKOTIC and Diane S. LOUGHRY, all of Hunt Valley, Maryland, 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 24th day of August, A.D. 2015.

ATTEST:

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

By: 

Secretary
Eric D. Barnes

Vice President
Thomas O. McClellan

State of Maryland
County of Baltimore

On this 24th 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, deposes and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

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

Constance A. Dunn, Notary Public
My Commission Expires: July 9, 2019

POA-F 025-0056C
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 2nd day of February, 2016.

[Signature]
Michael Bond, Vice President
February 2, 2016

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

Re: Branch Highways, Inc. in association with a JV Proposal with Corman Construction, Inc.

Request for Qualifications for the Design-Build
I-95/Route 630 Reconstruction and Widening
State Project Nos: I-95/Route 630 Interchange Relocation (0095-089-F09), UPC 13558
Route 630 Widening (0630-089-202), UPC 4632
Federal Project Nos: I-95/Route 630 Interchange Relocation (NH-095-2)
Route 630 Widening (STP-089-6)
Contract ID Number: C00013558DB83

Dear Mr. Daoulas:

The Hartford, through its operating entities, has issued surety bonds to Branch Highways, Inc., a subsidiary of The Branch Group since 1995. During this time we have favorably considered projects up to $150,000,000 with an aggregate program of $850,000,000 for member companies of The Branch Group. Our experience with Branch Highways, Inc. has been excellent, and we highly recommend them to you.

As surety for Branch Highways, Inc., The Hartford will favorably consider providing a 100% Performance Bond and a 100% Labor and Materials Payment Bond for the referenced project in the estimated project amount of $95,000,000 and said bonds will cover the Project and any warranty periods as provided for in the Contract Documents on behalf of the Contractor, provided a contract is awarded to, and executed by Branch Highways, Inc. in association with JV proposal with Corman Construction, Inc.

Please understand that any arrangement for any bonds is a matter between Branch Highways, Inc. and The Hartford and we assume no liability to third parties or you if, for any reason, we do not issue requested bonds.

The Hartford expressly reserves the right to review the terms and conditions of the contract, contract amount and bond form, evaluate pertinent underwriting data, and verify the adequacy of project financing prior to the issuance of bonds for the referenced project.
Branch Highways, Inc. bonds are issued through Hartford Fire Insurance Company which is listed on the U.S. Treasury Department List and has an A.M. Best Rating of “A+” with Financial Size Category: XV ($2 Billion or greater). They are licensed to do business in the State of Virginia.

This letter will expire one hundred and eighty (180) days from the above date.

Sincerely,

Theresa S. Stump, Attorney-In-Fact

cc: Branch Highways, Inc.
    Hartford Fire Insurance Company
POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS THAT:

1. Hartford Fire Insurance Company, a corporation duly organized under the laws of the State of Connecticut
2. Hartford Casualty Insurance Company, a corporation duly organized under the laws of the State of Indiana
3. Hartford Accident and Indemnity Company, a corporation duly organized under the laws of the State of Connecticut
4. Hartford Underwriters Insurance Company, a corporation duly organized under the laws of the State of Connecticut
5. Twin City Fire Insurance Company, a corporation duly organized under the laws of the State of Indiana
6. Hartford Insurance Company of Illinois, a corporation duly organized under the laws of the State of Illinois
7. Hartford Insurance Company of the Midwest, a corporation duly organized under the laws of the State of Indiana
8. Hartford Insurance Company of the Southeast, a corporation duly organized under the laws of the State of Florida

having their home office in Hartford, Connecticut, (hereinafter collectively referred to as the "Companies") do hereby make, constitute and appoint, up to the amount of unlimited:


their true and lawful Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign its name as surety(ies) only as delineated above by X, and to execute, seal and acknowledge any and all bonds, undertakings, contracts and other written instruments in the nature thereof, on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

In Witness Whereof, and as authorized by a Resolution of the Board of Directors of the Companies on 10/1/98, 9/19/00, 7/21/03, 1/22/04, 3/1/07, 8/1/09 or 8/1/12 the Companies have caused these presents to be signed by its Vice President and its corporate seals to be hereto affixed, duly attested by its Assistant Secretary. Further, pursuant to Resolution of the Board of Directors of the Companies, the Companies hereby unambiguously affirm that they are and will be bound by any mechanically applied signatures applied to this Power of Attorney.

STATE OF CONNECTICUT
COUNTY OF HARTFORD

On the 1st day of March, 2013, before me personally came Gary W. Stumper, to me known, who being by me duly sworn, did depose and say, that said Parties in the County of Hartford, State of Connecticut; that (s)he is the Vice President of the Companies, the corporations described in and which executed the above instrument; that (s)he knows the seals of the said corporations; that the seals affixed to the said instrument are said Corporate seals; that they were so affixed by authority of the Boards of Directors of said corporations and that (s)he signed his/their name thereon as authority.

CERTIFICATE

I, the undersigned, Assistant Vice President of the Companies, DO HEREBY CERTIFY that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which is still in full force effective as of

February 2, 2016

Kathleen T. Maynard
Notary Public
My Commission Expires July 31, 2016

Kevin Heckman, Assistant Vice President
Alert to corporations regarding unsolicited mailings from VIRGINIA COUNCIL CORPORATIONS is available from the Bulletin Archive link of the Clerk's Office w
Alert to corporations regarding unsolicited mailings from VIRGINIA COUNCIL CORPORATIONS is available from the Bulletin Archive link of the Clerk’s Office with:

```
<table>
<thead>
<tr>
<th>CORP ID:</th>
<th>0295618 - 3</th>
<th>STATUS:</th>
<th>00 ACTIVE</th>
<th>STATUS DATE:</th>
<th>11/25/86</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORP NAME:</td>
<td>BRANCH HIGHWAYS, INC.</td>
<td>DATE OF CERTIFICATE:</td>
<td>11/25/1986</td>
<td>PERIOD OF DURATION:</td>
<td></td>
</tr>
<tr>
<td>STATE OF INCORPORATION:</td>
<td>VA VIRGINIA</td>
<td>STOCK INDICATOR:</td>
<td>S STOCK</td>
<td>CONVERTION/DOMESTICATION IND:</td>
<td></td>
</tr>
<tr>
<td>MERGER IND:</td>
<td>CONVERSION/DOMESTICATION IND:</td>
<td>MONITOR INDICATOR:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GOOD STANDING IND:</td>
<td>Y</td>
<td>MONITOR INDICATOR:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHARTER FEE:</td>
<td></td>
<td>MONITOR DTE:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R/A NAME:</td>
<td>MELANIE F WHEELER</td>
<td>R/A STATUS:</td>
<td>2 OFFICER</td>
<td>EFF. DATE:</td>
<td>01/11/08</td>
</tr>
<tr>
<td>STREET:</td>
<td>442 RUTHERFORD AVE NE</td>
<td>CITY:</td>
<td>ROANOKE</td>
<td>STATE:</td>
<td>VA</td>
</tr>
<tr>
<td>R/A STATUS:</td>
<td>2 OFFICER</td>
<td>EFF. DATE:</td>
<td>01/11/08</td>
<td>LOC:</td>
<td>217</td>
</tr>
<tr>
<td>ACCEPTED AR#:</td>
<td>215 17 2182</td>
<td>DATE:</td>
<td>11/16/15</td>
<td>ROANOKE CITY</td>
<td></td>
</tr>
<tr>
<td>CURRENT AR#:</td>
<td>215 17 2182</td>
<td>DATE:</td>
<td>11/16/15</td>
<td>STATUS:</td>
<td>A</td>
</tr>
<tr>
<td>ASSESSMENT INDICATOR:</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>YEAR</td>
<td>FEES</td>
<td>PENALTY</td>
<td>INTEREST</td>
<td>TAXES</td>
<td>BALANCE</td>
</tr>
<tr>
<td>15</td>
<td>100.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

https://cisiweb.scc.virginia.gov/z_container.aspx
CERTIFICATE OF FACT

I Certify the Following from the Records of the Commission:

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

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

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
July 15, 2015

Joel H. Peck, Clerk of the Commission
STATE CORPORATION COMMISSION

Richmond, August 10, 2000

This is to Certify that the statement of registration of

Whitman, Requardt & Associates, LLP

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

State Corporation Commission
Attest:

[Signature]
Clerk of the Commission
Dear Customer:

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

The annual continuation report was filed on June 19, 2015.

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

Sincerely,

Joel H. Peck
Clerk of the Commission
Alert to corporations regarding unsolicited mailings from VIRGINIA COUNCIL CORPORATIONS is available from the Bulletin Archive link of the Clerk’s Office w

Commonwealth of Virginia
State Corporation Commission

CISM0180 CORPORATE DATA INQUIRY

12/09/15
CISM0180 CORPORATE DATA INQUIRY
10:54:44

CORP ID: F049431 - 2 STATUS: 00 ACTIVE
STATUS DATE: 12/15/09

CORP NAME: THOMAS & ASSOCIATES, INC., A. MORTON

DATE OF CERTIFICATE: 11/26/1997 PERIOD OF DURATION: INDUSTRY CODE: 00
STATE OF INCORPORATION: MD MARYLAND STOCK INDICATOR: S STOCK
MERGER IND:
GOOD STANDING IND: Y
CONVERSION/DOMESTICATION IND:
MOTO

CHARTER FEE:
R/A NAME: NATIONAL CORPORATE RESEARCH, LTD.

STREET: 250 BROWNS HILL COURT
AR RTN MAIL:

CITY: MIDLOTHIAN STATE : VA ZIP: 23114-0000
R/A STATUS: 5 B.E. AUTH IN VI EFF. DATE: 09/30/15 LOC : 120
ACCEPTED AR#: 215 15 3245 DATE: 10/05/15

CURRENT AR#: 215 15 3245 DATE: 10/05/15 STATUS: A ASSESSMENT INDICATOR: 0
YEAR FEES PENALTY INTEREST TAXES BALANCE TOTAL SHARES
15 400.00


12/9/2015
CISM0180 CORPORATE DATA INQUIRY

CORP ID: F059869 - 0 STATUS: 00 ACTIVE STATUS DATE: 01/18/06
CORP NAME: KCI TECHNOLOGIES, INC.

DATE OF CERTIFICATE: 12/19/1988 PERIOD OF DURATION: INDUSTRY CODE: 00
STATE OF INCORPORATION: DE DELAWARE STOCK INDICATOR: S STOCK
MERGER IND: S SURVIVOR CONVERSION/DOMESTICATION IND:
GOOD STANDING IND: Y MONITOR INDICATOR:
R/A NAME: CORPORATION SERVICE COMPANY

STREET: Bank of America Center, 16th Floor AR RTN MAIL:
1111 East Main Street
CITY: RICHMOND STATE: VA ZIP: 23219-0000
R/A STATUS: 5 B.E. AUTH IN VI EFF. DATE: 04/29/11 LOC: 216
ACCEPTED AR#: 214 17 7020 DATE: 12/29/14 RICHMOND CITY
CURRENT AR#: 214 17 7020 DATE: 12/29/14 STATUS: A ASSESSMENT INDICATOR: 0
YEAR FEES PENALTY INTEREST TAXES BALANCE TOTAL SHARES
15 100.00 100.00 1,000

(Screen Id: Corp_Data_Inquiry)
Alert to corporations regarding unsolicited mailings from VIRGINIA COUNCIL CORPORATIONS is available from the Bulletin Archive link of the Clerk's Office w

<table>
<thead>
<tr>
<th>CORPORATE DATA INQUIRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORP ID: F060584</td>
</tr>
<tr>
<td>STATUS: 00 ACTIVE</td>
</tr>
<tr>
<td>STATUS DATE: 03/02/89</td>
</tr>
<tr>
<td>CORP NAME: ATHAVALLE, LYSTAD &amp; ASSOCIATES, INC.</td>
</tr>
<tr>
<td>DATE OF CERTIFICATE: 03/02/1989</td>
</tr>
<tr>
<td>STATE OF INCORPORATION: MD MARYLAND</td>
</tr>
<tr>
<td>MERGER IND: CONVERSION/DOMESTICATION IND:</td>
</tr>
<tr>
<td>GOOD STANDING IND: Y</td>
</tr>
<tr>
<td>CHARTER FEE: MON NO:</td>
</tr>
<tr>
<td>R/A NAME: REES BROOME, PC</td>
</tr>
<tr>
<td>STREET: 1900 GALLOWS RD STE 700</td>
</tr>
<tr>
<td>CITY: TYSONS CORNER</td>
</tr>
<tr>
<td>R/A STATUS: 5 B.E. AUTH IN VI EFF. DATE: 09/01/12</td>
</tr>
<tr>
<td>ACCEPTED AR#: 215 05 1891 DATE: 03/12/15</td>
</tr>
<tr>
<td>CURRENT AR#: 215 05 1891 DATE: 03/12/15</td>
</tr>
<tr>
<td>YEAR FEES PENALTY INTEREST TAXES BALANCE TOTAL SHARES</td>
</tr>
<tr>
<td>15 100.00</td>
</tr>
</tbody>
</table>

(Screen Id: /Corp_Data_Inquiry)
LLCH3220

LLC ID: 5290866 - 4 STATUS: 00 ACTIVE STATUS DATE: 04/27/09

LLC NAME: H & B Surveying and Mapping, LLC

DATE OF FILING: 04/27/2009 PERIOD OF DURATION: 

STATE OF FILING: VA VIRGINIA INDUSTRY CODE: 00

PRINCIPAL OFFICE ADDRESS

STREET: 612 HULL STREET STE 101B

CITY: RICHMOND STATE: VA ZIP: 23224-0000

REGISTERED AGENT INFORMATION

R/A NAME: TIMOTHY H GUARE

STREET: TIMOTHY H GUARE PLC

6802 PARAGON PL STE 100

CITY: HENRICO STATE: VA ZIP: 23230-0000

R/A STATUS: 4 MEMBER OF VSB EFF DATE: 07/02/09 LOC: 143 HENRICO COUNTY

YEAR FEES PENALTY INTEREST BALANCE
15 50.00
An ALERT to Virginia Corporations Regarding Solicitations from VIRGINIA COUNCIL FOR CORPORATIONS is available from the Bulletin Archive link of the Clerk's Office website.

02/23/15
CISM0180 CORPORATE DATA INQUIRY 12:15:59

CORP ID: FL30410 - 6 STATUS: 00 ACTIVE STATUS DATE: 07/01/09

CORP NAME: DIVERSIFIED PROPERTY SERVICES OF VIRGINIA, INC. (SED IN VA BY: DIVERSIFIED PROPERTY SERVICES, INC.)

DATE OF CERTIFICATE: 08/05/1997 PERIOD OF DURATION: INDUSTRY CODE: 00

STATE OF INCORPORATION: MD MARYLAND STOCK INDICATOR: S STOCK
MERGER IND: CONVERSION/DOMESTICATION IND:
GOOD STANDING IND: Y MONITOR INDICATOR:

CHARTER FEE: 50.00 MON NO: MON STATUS: MONITOR DTE:

R/A NAME: BRENDAN R HANTZES

STREET: 3771 VERMACCHIA DR AR RTN MAIL:

CITY: CHANTILLY STATE: VA ZIP: 20151-0000

R/A STATUS: 2 OFFICER EFF. DATE: 08/09/02 LOC : 129

ACCEPTED AR#: 214 11 7551 DATE: 08/07/14 FAIRFAX COUNTY

CURRENT AR#: 214 11 7551 DATE: 08/07/14 STATUS: A ASSESSMENT INDICATOR: 0

YEAR FEES PENALTY INTEREST TAXES BALANCE TOTAL SHARES
14 100.00

(Screen Id:/Corp_Data_Inquiry)
Annapolis Junction, MD 20701-0160
12001 Guilford Rd
Comman Construction Inc

Classification: H/H
Class A Contractor
Board for Contractors

Telephone: (804) 967-8500
9960 Mercury Drive, Suite 400, Richmond, VA 23233

Commonwealth of Virginia

2701014784
Number

03-31-2017
Expires On

(See reverse side for privileges and restrictions)
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA
9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

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

BRANCH HIGHWAYS INC
PO BOX 40004
ROANOKE, VA 24022-0004
WHITMAN REQUARDT AND ASSOCIATES
9030 STONY POINT PKWY STE 220
RICHMOND, VA 23235

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)
BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS
BUSINESS ENTITY BRANCH OFFICE REGISTRATION

PROFESSIONS: ENG

WHITMAN, REQUARDT AND ASSOCIATES LLP
300 SEVEN FIELDS BOULEVARD
SUITE 130
SEVEN FIELDS, PA 16046

Nick A. Christoer
Interim Director

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)
BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS
BUSINESS ENTITY BRANCH OFFICE REGISTRATION

PROFESSIONS: ENG

WHITMAN REQUARDT AND ASSOCIATES
3701 PENDER DRIVE
SUITE 450
FAIRFAX, VA 22030-6045

Nick A. Chistner, Interim Director

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)
BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS
BUSINESS ENTITY BRANCH OFFICE REGISTRATION

PROFESSIONS: ENG

WHITMAN REQUARDT & ASSOCIATES LLP
1700 KRAFT DRIVE
SUITE 1200
BLACKSBURG, VA 24060

Nick A. Christner, Interim Director

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)
WRA submitted a renewal to DPOR on December 16, 2015 for this license; however, we have not received a new license from DPOR as of January 7, 2016. Our renewal documentation is attached.
Renew online at: www.dpor.virginia.gov

RE: REGISTRATION NUMBER: 0407001676

Regulatory Town Hall - You may sign up to receive automatic notification of regulatory action at
www.townhall.virginia.gov. Regulatory boards are required to post notices of all meetings and regulatory actions
on this website. You will receive all notices by e-mail as soon as the information is posted to the Town Hall.

RENEWAL APPLICATION – BUSINESS ENTITY REGISTRATION

** ALL FEES ARE NON REFUNDABLE **
A TOTAL OF $50 AND THE ACCOMPANYING RESPONSIBLE PERSON VERIFICATION FORM ARE DUE BY DECEMBER 31,
2015. IF PAYMENT AND THE SIGNED VERIFICATION ARE NOT RECEIVED BY JANUARY 30, 2016, A LATE FEE OF $25 WILL

BY SUBMITTING THE VERIFICATION FORM AND RENEWAL FEE, YOU CERTIFY CONTINUED COMPLIANCE WITH THE
BOARD’S STANDARDS OF PRACTICE AND CONDUCT INCLUDING REGULATION 18 VAC 10-20-780 AND ALL OTHER
REGULATIONS AND STATUTES.

BOARD REGULATIONS AND THE BOARD’S NEWSLETTER MAY BE VIEWED AT WWW.DPOR.VIRGINIA.GOV. SELECT YOUR
PROFESSION FROM THE "PROFESSIONS AND OCCUPATIONS" ON THE LEFT-HAND SIDE OF THE MAIN PAGE. FROM THE
BOARD PAGE, YOU CAN VIEW THE BOARD’S "LAWS AND REGULATIONS" AS WELL AS ITS "NEWS AND PUBLICATIONS."

IN ORDER TO RENEW YOUR BUSINESS ENTITY REGISTRATION, THE RESPONSIBLE PERSON VERIFICATION FORM MUST
ACCOMPANY THE RENEWAL CARD AND PAYMENT. ONLINE RENEWAL IS NOT AVAILABLE FOR BUSINESS ENTITY
REGISTRATION RENEWALS.

Renewal Card – Detach and Return

Commonwealth of Virginia

Department of Professional and Occupational Regulation

P.O. Box 26792, Richmond, VA 23261

Renew online at www.dpor.virginia.gov OR enclose this card with your mailed payment. Make check
payable to: Treasurer of Virginia. Do not send certified or overnight mail to the PO Box address.

☐ Check here for name or address change and complete the back of this card.

WHITMAN, REQUARDT AND ASSOCIATES LLP

801 SOUTH CAROLINE STREET

BALTIMORE, MD 21231
REGISTRATION NUMBER: 0407001676
NAME: WHITMAN, REQUARDT AND ASSOCIATES LLP

INSTRUCTIONS: Our records indicate that the responsible person(s) listed below are associated with your business at this location and therefore your business is permitted to practice the following specialties at this location. For each specialty, please have the listed responsible person(s) sign the form in the space provided. If any responsible person is no longer associated with your business, please place a line through their information. If a new responsible person has joined your business and is not listed on this form for one of the listed specialties, please use the space below to print his name, individual Virginia license number and have him sign in the space provided. If you are adding any specialty other than what is on this form, have changed the name or structure of the business, or need further assistance, please call the Board office at (804) 367-8506.

<table>
<thead>
<tr>
<th>Specialty</th>
<th>VA License</th>
<th>Responsible Person</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG</td>
<td>0401002557</td>
<td>KNIGHT, RICHARD LEA</td>
<td></td>
</tr>
<tr>
<td>LS</td>
<td>0402026707</td>
<td>HASSON, DENNIS JUDE</td>
<td></td>
</tr>
<tr>
<td>LA</td>
<td>0403002231</td>
<td>KING, GREGORY</td>
<td></td>
</tr>
<tr>
<td>AI</td>
<td>0400000536</td>
<td>PALM, HERBERT WILLIAM</td>
<td></td>
</tr>
<tr>
<td>API</td>
<td>0401161167</td>
<td>KEOC, NICKS NUN</td>
<td></td>
</tr>
</tbody>
</table>
Account Number: 5501382193  
Account Name: Whitman Requardt & Associates  
Post Date: 12/23/2015  
Amount: $50.00  

Transaction Type: Checks/Debits  
Seq/Ref#: 84646653  
Check #: 311458  

Whitman, Requardt and Associates LLP  
801 S Caroline St  
Baltimore, MD 21201  
(443) 224-1173  

PAY TO THE ORDER OF:  
Treasurer of Virginia  
P.O. R  
PO Box 29792  
Richmond, VA 23261-0792  

December 16, 2015  

$50.00  

Retrieved: Wednesday, January 06, 2016 11:48:10 AM  
Image On-Demand
Check Requisition Form

Employee Name: Dan Voeltner
Department: Accounting

Date Requested: Dec 16, 2015
Date Required: Dec 16, 2015

Make Check Payable To:

Name: Treasurer of Virginia
Address: DPOR PO Box 26792
City: Richmond
State: VA Zip Code: 23261

Reason Required | Billable | Project No. | Phase | Task | Org | Amount
--- | --- | --- | --- | --- | --- | ---
Baltimore Office Renewal | No | 0 | | | | $50.00

Special Delivery Instructions if any:
Return to Dan V

Comments:
2016BALT

Approval:

Requested By:
Approved By:

Vendor ID | GL Code |
--- | ---
441655 | 85100 |

Internal A/P Use Only

Amount Paid
Check No.
Date

65
DPOR License Lookup  License Number 0411001228

License Details

Name: WHITMAN, REQUARDT AND ASSOCIATES LLP
License Number: 0411001228
License Description: Business Entity Branch Office Registration
Rank: Business Entity Branch Office
Address: 100 5TH ST STE L2000, BRISTOL, TN 37620
Initial Certification Date: 2015-11-06
Expiration Date: 2016-02-29

Related Licenses

<table>
<thead>
<tr>
<th>License Number</th>
<th>License Holder Name</th>
<th>License Type</th>
<th>Relation Type</th>
<th>License Expiry</th>
</tr>
</thead>
<tbody>
<tr>
<td>0402024814</td>
<td>RUSSELL, MICHAEL</td>
<td>Professional Engineer License</td>
<td>Engineering</td>
<td>2016-02-29</td>
</tr>
</tbody>
</table>

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 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 Jan 07 02:50:18 EST.

The disciplinary action information in this application was last updated at Thu Jan 07 02:50:18 EST.

DPOR License Lookup build 1,161 (built 2015-10-27 02:21:24).
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

9960 Mayland Dr., Suite 400, Richmond, VA 23223
Telephone: (804) 357-8500

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

PROFESSIONS: ENG, LS

A MORTON THOMAS AND ASSOCIATES INC
100 GATEWAY CENTRE PKWY
SUITE 200
RICHMOND, VA 23235

Nick A. Christner
Interim Director

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

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

PROFESSIONS: ENG

KCI TECHNOLOGIES INC
6802 PARAGON PLACE
SUITE 410
RICHMOND, VA 23230

Nick A. Christos
Division Director

Alteration of this document, use after expiration or use by persons other than those named may result in criminal prosecution under the code of Virginia.

See reverse side for name and/or address change.
COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation
9960 Mayland Drive, Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

NUMBER
0407002804

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

PROFESSIONS-ENG

ATHAVALE, LYSTAD AND ASSOCIATES INC
8180 GREENSBORO DRIVE
#550
MCLEAN, VA 22102

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)
REAL ESTATE APPRAISER BOARD
APPRaisal BUSINESS REGISTRATION

DIVERSIFIED PROPERTY SERVICES OF VIRGINIA INC
20 E TIMONIUM ROAD
SUITE 111
TIMONIUM, MD 21093-0000

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)

ALTERNATION OF THIS DOCUMENT, USE AFTER EXPIRATION, OR USE BY PERSONS OR FIRMS OTHER
THAN THOSE NAMED MAY RESULT IN CRIMINAL PROSECUTION UNDER THE CODE OF VIRGINIA.
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
05-31-2017

NUMBER
0402043482

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

M DOW LASITTER III
8605 OAKCROFT DR
RICHMOND, VA 23229

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

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)
COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation
9960 Mayland Drive, Suite 400, Richmond, VA 23223
Telephone: (804) 357-8500

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

JOHN PATRICK MADDOX
2825 WILLBROOK DRIVE
RICHMOND, VA 23233

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

BOARD FOR APELSCIDLA
PROFESSIONAL ENGINEER LICENSE
NUMBER: 0402026613 EXPIRES: 01-31-2018

JOHN PATRICK MADDOX
2825 WILLBROOK DRIVE
RICHMOND, VA 23233

Status can be verified at http://www.dpor.virginia.gov
**ATTACHMENT 3.3.1**

**KEY PERSONNEL RESUME FORM**

<table>
<thead>
<tr>
<th>Brief Resume of Key Personnel anticipated for the Project.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. Name &amp; Title:</strong> Scott Szymbpruch, PE, Division Manager, Corman Mid-Atlantic</td>
</tr>
<tr>
<td><strong>b. Project Assignment:</strong> Design-Build Project Manager</td>
</tr>
<tr>
<td><strong>c. Name of Firm with which you are now associated:</strong> Corman Construction, Inc.</td>
</tr>
<tr>
<td><strong>d. Employment History:</strong> With this Firm 15 Years With Other Firms 4 Years</td>
</tr>
<tr>
<td>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):</td>
</tr>
<tr>
<td>Corman Mid-Atlantic Division Manager/Design-Build Project Manager….Corman Construction 2011-Present</td>
</tr>
<tr>
<td>As Design-Build Project Manager, he oversees construction from start up to close out, manages the project team, equipment &amp; material procurement, objectives and goals, work plans, and budgets &amp; resources; procures/coordinates subcontractors; monitors schedules; conducts progress meetings; minimizes exposures &amp; risks; mitigates issues; reviews/approves deliverables, RFIs, and change orders; administers contracts; oversees budget, safety, and quality compliance; and steers projects to successful completion per contract. As Division Manager, Scott oversees engineering and project management of all division projects.</td>
</tr>
<tr>
<td>Design Build Project Manager/ Project Manager/Construction Manager …Corman Construction 2004-2011</td>
</tr>
<tr>
<td>Provides management, supervision, professional engineering designs, field layout, subcontract negotiations/ administration, quality control, materials control/procurement, safety management, environmental compliance management, cost accounting and scheduling for compliance and successful completion.</td>
</tr>
<tr>
<td>Sr. Project Engineer………………………………..Corman Construction 2000-2003</td>
</tr>
<tr>
<td>Assigned onsite on four road and bridge projects, including one Design-Build where he developed schedules, worked with project superintendents and worked with owners on submittals, payments and RFIs.</td>
</tr>
<tr>
<td>Field Engineer……………………………………………Clark Construction 1999-2000</td>
</tr>
<tr>
<td>Field Engineer for construction of a Food Distribution Warehouse in Denver, PA.</td>
</tr>
<tr>
<td><strong>e. Education:</strong> Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</td>
</tr>
<tr>
<td>University of Maryland</td>
</tr>
<tr>
<td><strong>f. Active Registration: Year First Registered/ Discipline/VA Registration #:</strong></td>
</tr>
<tr>
<td>2005</td>
</tr>
<tr>
<td>PE</td>
</tr>
<tr>
<td>PE</td>
</tr>
<tr>
<td>2012</td>
</tr>
<tr>
<td><strong>g. Document the extent and depth of your experience and qualifications relevant to the Project.</strong></td>
</tr>
<tr>
<td>1. <strong>Note your role, responsibility, and specific job duties for each project, not those of the firm.</strong></td>
</tr>
<tr>
<td>2. <strong>Note whether experience is with current firm or with other firm.</strong></td>
</tr>
<tr>
<td>3. <strong>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</strong></td>
</tr>
<tr>
<td>(List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)</td>
</tr>
<tr>
<td><strong>Project Name:</strong> Design-Build Route 1 Improvements at Fort Belvoir, Lorton, VA</td>
</tr>
<tr>
<td><strong>Dates:</strong> Month Year – July 2013-Present</td>
</tr>
<tr>
<td><strong>Project Role:</strong> Design-Build Project Manager</td>
</tr>
<tr>
<td><strong>With Current Firm?</strong> Yes</td>
</tr>
<tr>
<td><strong>Responsibility/Specific Job Duties:</strong> As Design-Build Project Manager for this project that constructs/widens US Route 1 from four to six lanes with left and right turn lanes at intersecting roadways, intersection improvements, and bridge demolition/construction. Scott oversees design and construction from start up to close out, manages the project team, equipment &amp; material procurement, objectives &amp; goals, work plans, &amp; budgets &amp; resources; procures/coordinates subcontractors; monitors schedules; conducts progress meetings; minimizes exposures &amp; risks; mitigates issues; reviews/approves deliverables, RFIs, &amp; change orders; administers contracts; oversees budget, safety, &amp; quality compliance; &amp; steering project to successful completion per contract. This 3.5 mile stretch is home to some of the region’s worst rush hour traffic where 80,000 vehicles pass through Ft. Belvoir’s gates every day. It is highly visible to local authorities &amp; is a major focus of local &amp; federal elected officials, with an emphasis on maintenance of traffic, stakeholder communication, protecting the environment, &amp; historical significance. Project is currently scheduled for completion this spring. <strong>Client:</strong> FWHA/Eastern Federal Lands Highway Division / VDOT</td>
</tr>
<tr>
<td><strong>Relevancy:</strong> Design-Build, intersection relocation/reconstruction, roadway alignment/widening, bridge construction, new connector roads, ROW acquisition, MOT, bridge/demolition construction, excavation, utility coordination/relocations (Dominion, Verizon, Fiber Optics, Comcast, Washington Gas, Fairfax Water &amp; Sewer), shared-use path, traffic signal, median crossovers with turn lane, survey, environmental, geotechnical (Potomac clay in side slopes), hydraulics, traffic control devices, TMP, pedestrian accommodations (adds bicycle lanes &amp; safer crosswalks), public involvement/communications, contractor QA/QC, construction engineering &amp; inspection.</td>
</tr>
</tbody>
</table>
**Project Name:** Design-Build Intercounty Connector  
**Project Role:** Construction Manager  
**Dates:** Month Year - Jan. 2007-Jan. 2011  
**With Current Firm?** Yes

**Responsibility/Specific Job Duties:** As **Construction Manager** for this $483 Mil Design Build 7.2 mile controlled access six-lane divided highway project, Scott provided management, supervision, field layout, subcontract negotiation / administration, QC, materials control / procurement, safety management, environmental compliance management, cost accounting & scheduling for compliance & successful completion. He oversaw construction of the entire project, contributed to partnering & progress meetings, attended community outreach meetings, worked with environmental teams on environmental stewardship, & coordinated inspections/resolutions with our independent QC team. During procurement, he authored the schedule & was a leader in conceptual design development. Upon NTP, Scott participated in design development task force undertakings & provided constructability reviews. He worked with the DB coordinators & Construction Project Engineers leading the bridge, drainage, roadway, environmental, utility & subcontracting areas. Scott participated in the geotechnical task force team efforts, provided professional engineering designs (support of excavation & temporary work) & supervised field layout, construction work, QC, & safety management. He was highly involved in the CPM schedule, oversaw the Construction Quality Manager & coordinated with adjacent projects. **Client:** Maryland State Highway Administration  
**Cost:** $483.4 Million

**Relevancy:** Design-Build, three interchanges, interstate widening from 3 to 4 lanes (I-370), roadway alignment/widening, 18 steel girder or precast concrete girder bridge construction, ROW acquisition, MOT, building demolition, utility relocations (Pepco, Verizon, Comcast, Columbia & Washington Gas), shared-use path, traffic signalization, survey, environmental, geotechnical, hydraulics, traffic control devices, TMP, pedestrian accommodations, public involvement/communications to 10,000 residents surrounding the corridor, QA/QC, construction engineering & inspection.

---

**Project Name:** Woodrow Wilson Bridge VA Approach  
**Dates:** Month Year – 2003-2006

**Project Role:** Project Manager/Structures Engineer  
**With Current Firm?** Yes

**Responsibility/Specific Job Duties:** As **Project Manager** for this joint venture project which was constructed on the I-95/495 Capital Beltway, Scott provided management, supervision, professional engineering designs, field layout, subcontract negotiation / administration, QC, materials control / procurement, safety & environmental compliance management, cost accounting & scheduling for compliance & successful completion. He staffed / oversaw onsite personnel & managed a team of 13 construction professionals. Two-phase construction included segmental bridge with onsite casting & erection of 364 precast concrete substructure segments & 64 precast concrete tie beams for the V-piers, placed two 2,300’ long, 145’ wide CIP concrete bridge decks, & foundation construction of inner loop bridges. Scott conducted daily job schedule / safety meetings with the General Superintendent & Safety Manager & created, updated, & modified the schedule. He oversaw interaction with owner's representative & facilitated monthly partnering meetings with owner, owner’s rep., & Designer. He participated in coordination with adjacent Woodrow Wilson Bridge projects by attending weekly scheduling meetings. Prior to the Project Manager position, Scott was the **Structures Engineer** who oversaw the precast & post-tensioned segments of the bridge v-piers erection. He managed the Erection Engineer Consulting Firm & assisted in developing techniques / procedures for segment erection, post-tensioning & grouting. Scott developed the project-specific post-tensioning & grouting procedure manuals & designed the CIP concrete formwork, erection caddy for installing the deck overhang form system, lifting beams, & work platforms. **Client:** Maryland State Highway Administration  
**Cost:** $126.8 Million

**Relevancy:** Bridge construction, interstate widening (I-95/495), MOT on Capital Beltway with over 230,000 ADT, roadway and drainage construction, demolition/removal of a six-lane structure, shared-use path, survey, environmental, TMP, pedestrian accommodations (Mount Vernon Trail), public involvement/communications.

---

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

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

a. Name and Title: Ryan Gorman, PE, DBIA, Design-Build Manager

b. Project Assignment: Responsible Charge Engineer | Design/Constructor Integrator

c. Name of Firm with which you are now associated: Corman Construction, Inc.

d. Employment History: With this Firm 19 Years With Other Firms 1 Years
   Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below):

   Design-Build Manager/Responsible Charge Engineer ..................Corman Construction Jan. 2012-Present
   Ryan leads Corman South’s Design-Build efforts and estimating where he works on Corman design-build procurements and project coordination of Engineering and Construction teams.

   Design-Build Project Manager ...........................................................Corman Construction Feb. 2007-Present
   Ryan was assigned on VDOT and NCDOT Design-Build projects as an estimator, manager, and coordinator/integrator.

   Oversaw the Corman South office where he provided personnel supervision, assisted in evaluating current/proposed systems, policies and procedures, determined labor requirements, outlined project plans, inspected/reviewed projects for safety and quality compliance and ensured DB and DBB projects are completed on time.

   Project Engineer/Superintendent/Project Manager/Sr. Project Manager…Corman Construction Oct. 1996-July 2009:
   Progressed from Project Engineer to Superintendent, Project Manager and Sr. Project Manager assigned to road, road widening, bridge, and combined sewer overflow projects (DB and DBB) for VDOT, City of Richmond, and Henrico County.

   Board Member/Virginia Transportation Construction Alliance (VTCA): Board Member and is serving as Vice Chair on the Contractor Leadership Committee.

e. Education: Name and Location of Institution(s)/Degree(s)/Year/Specialization:
   Virginia Polytechnic Institute and State University | 2001 | Transportation Construction Management Institute
   Clarkson University, Potsdam, NY | BS | 1995 | Civil Engineering

f. Active Registration: Year First Registered/ Discipline/VA Registration #:
   2002 | PE | VA Registration #0402033522

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

(List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)

| Project Name: Design-Build Route 29 Solutions, Albemarle County, VA | Dates: Jan. 2015-Present | With Current Firm? | Yes |
|-------------------|------------------------|-------------------|
| Project Role: Responsible Charge Engineer (RCE) / Design/Construction Integrator | Apr. 2013-Sept. 2015 | |

Responsibility/Specific Job Duties: This is the first VDOT Design-Build project requiring a Responsible Charge Engineer (RCE) consists of three project elements to increase mobility and improve safety along the US Route 29 corridor: A grade separated interchange at the intersection of US Route 29 and Rio Road, including utility relocations; widening/improving US Route 29 to complete a six-lane roadway; and extending Berkmar Drive (Designed by WRA), and an urban collector road, including a bridge spanning the South Fork of the Rivanna River. As Responsible Charge Engineer (RCE), Ryan accepts full professional responsibility for engineering decisions relating to the final work product and facilitates coordination between the design and construction teams. Working with the Design Manager and Construction Manager, Ryan ensures that what is designed for each project element is constructible and meets VDOT’s needs. He oversees coordinating the design elements from both a design and construction perspective and works shoulder-to-shoulder with the Design Manager in a co-located project office. The design is just about complete and his duties are being reduced to part-time. Ryan is available to perform as the RCE on the Design-Build I-95 / Route 630 Reconstruction and Widening Project immediately upon award. Client: VDOT | Cost: $116.7 Million
Relevancy: VDOT Design-Build, interchange construction, roadway alignment/widening, bridge construction, extending a connector road, ROW, utility relocations (Dominion, Verizon Century Link, installed conduits for a school to pull their fiber optics through, Comcast, Columbia Gas and City of Charlottesville Gas), survey, environmental, including permitting, geotechnical, hydraulics, traffic control devices, TMP, public involvement/communications, QA/QC, construction engineering and inspection.

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Dates: Month Year - Month Year</th>
<th>With Current Firm?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design-Build I-64 Widening and Route 623 Interchange Improvements, Short Pump, VA</td>
<td>Oct. 2013-Present</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Responsibility/Specific Job Duties: As Design/Constructability Reviewer, Ryan performed design/constructability reviews for roadway widening and replacement of I-64 bridge. He coordinated with the designer to improve the bridge and roadway (MOT) designs from a compliance and constructability perspective. This project widened 4.52 miles of I-64 from a four to a six-lane divided highway, improvements to the I-64/Route 623 interchange, including traffic signal upgrading, widening the I-64 westbound ramp to Route 623 for an additional turn lane, adding a left turn lane on Route 623 southbound to I-64 eastbound, and widening the I-64 eastbound off-ramp to Route 623 for an additional turn lane.  

Client: VDOT | Cost: $33.2 Million

Relevancy: VDOT Design-Build, interchange improvements, roadway widening, working with utilities to obtain power for the camera and signals from DVP, MOT, upgrading traffic signal, survey, environmental, geotechnical, hydraulics, traffic control devices, TMP, public involvement/communications, QA/QC, and construction engineering and inspection.

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Dates: Month Year - Month Year</th>
<th>With Current Firm?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Route 1 Tie-In to Woodrow Wilson Bridge Urban Deck VA-4, Alexandria, VA</td>
<td>Jan. 2003-April 2008</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Responsibility/Specific Job Duties: Two-phased, multi-level bridge and roadway demolition/reconstruction project. Widened ½ mile of the I-95 / 495 Beltway from six lanes to the final 14-lane configuration, one mile reconstruction of Washington Street and a new South Washington Street Urban Deck Bridge over I-495. **Design-build elements used an augmented geotechnical investigation program to develop an alternative MOT plan, which eliminated a full urban deck construction phase and replaced it with a temporary low density cementitious fill ramp and eliminated a major structure proposed for MOT.** This innovation shortened construction, reduced cost, shortened detours on the Capital Beltway (I-95/I-495) and enhanced environmental stewardship. Designed and constructed the temporary low-density cementitious fill ramp bridge and with the sound wall producer to design and construct specialty noise walls. As **Project Manager,** Ryan was responsible for the project, managed design completion and review (formwork, access platforms, support of excavation, utility support systems, temporary bridges, sound walls, value engineering proposals, MOT staging and erection drawings), ensured timely and accurate completion of office and project engineering requirements, as well as technical supervision of field operations. He managed engineers, superintendents, and subcontractors and was responsible for short/long-range scheduling, purchasing, cost control, safety management, QC oversight, resource management, and troubleshooting. Project completed on schedule, on budget and all eight project schedule milestones were met. **Ryan received a VDOT Commissioner’s Award for Outstanding Achievement.** 

Client: VDOT | Cost: $62.7 Million

Relevancy: VDOT Design-Build elements, Coordination with Design Engineers, grade separated interchange, roadway widening, bridge construction, new traffic signal, MOT, new connector roads accessing the Beltway to the newly constructed outer loop Woodrow Wilson Bridge, demolished two office and three apartment buildings, utility relocations, installed duct banks for Dominion to pull their lines through, environmental, geotechnical, hydraulics, traffic control devices, TMP, pedestrian accommodation, including two jogging and bicycle trails on the George Washington Parkway to access Jones Point Park and ADA sidewalks on the bridge and along Washington Street, and public involvement/communications.

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

h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. N/A
**ATTACHMENT 3.3.1**

**KEY PERSONNEL RESUME FORM**

### Brief Resume of Key Personnel anticipated for the Project.

**a. Name & Title:** M. Dow Lasitter, III, PE, CCM, Practice Leader

**b. Project Assignment:** Quality Assurance Manager

**c. Name of Firm with which you are now associated:** KCI Technologies, Inc.

**d. Employment History:** With this Firm 3 Years With Other Firms 16 Years

- Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below):

  **Sr. Construction Manager** .................................................KCI Technologies, Inc.  Jan. 2013–Present

  Dow supervises/manages Inspectors, Office Engineers, Project Managers and Construction Managers. He provides project management and construction inspection coordination for CEF / QA services for agencies, including VDOT and FHWA Design-Build and Design-Bid-Build projects. He provides project deliverables, construction inspection and staff augmentation services for Virginia agencies through a statewide Dept. of General Services, prepares independent cost estimates, value engineering studies, construction project management and inspection services.


  Dow managed, coordinated, and oversaw staff Engineers, Inspectors and Technicians on construction projects throughout central Virginia for public and private clients. He provided QA, QC, and independent assurance inspection and project management services for VDOT roadway and bridge projects, including acting as QAM and Responsible Charge Engineer for Virginia transportation projects for VDOT, Charlottesville Airport, and the Dept. of Defense.

  **Branch Manager** .............................................................S&M, Inc., Fayetteville, NC  2004–2007

  Dow managed, coordinated, and oversaw up to 20 Engineers, Inspectors, and Technicians. He implemented and maintained specific Project Safety Management Plans, reviewed accident reports, employee safety training, including conducting safety meetings, and monitored/observed safe or “at-risk” behavior on construction projects. Dow served as Responsible-Charge-Engineer on projects, including design and construction reviews of roadways, utilities, and foundation elements. He monitored flexible and rigid concrete paved roadways, deep foundations, subgrade preparation/repair, reinforced concrete pavement, hot-mix asphalt pavement, structural steel and masonry elements. Dow executed and managed materials testing and inspection contracts; provided engineering recommendations for retaining wall, pavement designs and dewatering. He routinely performed cost-time impact analyses to determine, which design or field recommendation would minimize project impacts.

  **Construction Professional** .............................................S&M, Inc., Raleigh, NC  2001–2004

  Dow provided construction project management and engineering services, including subgrade stability evaluations, shallow and deep foundation monitoring, rock-quantity estimates, structural fill, concrete, and asphalt testing. He routinely provided recommendations for repair of deficient items, i.e. bearing soil, concrete, asphalt, crushed aggregate, reinforcing steel, and structural steel.

**e. Education:**

- **Name & Location of Institution(s)/Degree(s)/Year/Specialization:**
  - North Carolina State University, Raleigh, NC | Diploma | 2011 | Construction Management
  - University of Richmond, Richmond, VA | M-MBA | 2009
  - North Carolina State University, Raleigh, NC | BS | 1998 | Biological & Agricultural Engineering

**f. Active Registration:**

- Year First Registered/Discipline/VA Registration #:
  - 2007 | PE Geotechnical | VA Registration #43482  2015 | Certified Construction Manager (CCM)
  - 2003 | PE Geotechnical | NC Registration #29356

**g. Document the extent and depth of your experience and qualifications relevant to the Project.**

1. **Note your role, responsibility, and specific job duties for each project, not those of the firm.**
2. **Note whether experience is with current firm or with other firm.**
3. **Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.**

(List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>Design-Build Route 1 Improvements at Fort Belvoir, Lorton, VA</th>
<th>Dates: Month Year – Jan. 2014–Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Role:</td>
<td>Quality Assurance Coordinator</td>
<td>With Current Firm?</td>
</tr>
</tbody>
</table>

**Responsibility/Specific Job Duties:** Provides **Quality Assurance Coordination** services as the Owner’s representative on this project that constructs/widens US Route 1 from four to six lanes with left and right turn lanes at intersecting roadways, intersection improvements, and bridge demolition/construction. Dow oversees Quality Assurance inspection and testing services per FHWA and VDOT specifications for all work elements, including traffic control, environmental controls, layout, construction methods, and materials. He reviews/recommends to accept or reject daily work reports by the Contractor (a Corman joint venture), inspects their QC procedures, and verifies procedures are in conformance with the Quality Control Plan. Dow is responsible for staff performing and documenting daily activities, including as-built drawings, daily diary, and Inspector’s Daily Reports (IDRs). CEI duties also include informing the Client of possible...
constructive changes and recommending technical solutions; performing independent estimates, precondition surveys, material submittal and testing procedures reviews, as well as measuring material quantities used and updating the project Material Register. Corman is JV lead of the Design-Build team.

This 3.5 mile stretch is home to some of the region’s worst rush hour traffic where 80,000 vehicles pass through Ft. Belvoir’s gates every day. It is highly visible to local authorities and is a major focus of local and federal elected officials, with an emphasis on maintenance of traffic, stakeholder communication, protecting the environment, and historical significance. **Client:** FW/H/Eastern Federal Lands Highway Division | **Cost:** $75.7 Million

**Relevancy:** Design-Build (Corman-led joint venture project) with VDOT involvement, intersection relocation/reconstruction, roadway alignment/widening, bridge construction, new connector roads, ROW acquisition, MOT, bridge/building demolition, excavation, utility coordination/relocations (Dominion, Verizon, Fiber Optics, Comcast, Washington Gas, Fairfax Water & Sewer), shared-use path, traffic signal, median crossovers with turn lane, survey, environmental, geotechnical (Potomac clay in side slopes), hydraulics, traffic control devices, TMP, pedestrian accommodations (adds bicycle lanes and safer crosswalks), public involvement/communications, contractor QA/QC, construction engineering and inspection.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Role:</td>
<td>Quality Assurance Coordinator</td>
<td>With Current Firm? Yes</td>
</tr>
</tbody>
</table>

**Responsibility/Specific Job Duties:** This project includes compliance with VDOT and FHWA standards and consists of constructing a multi-span off-ramp bridge over the I-95 southbound general purpose lanes, HOV lanes, Backlick Road, and over Field Lark Branch. Work includes earthwork, aggregate base, Superpave asphalt concrete pavement, drilled shafts, steel H-pile pile driving, structural steel girder bridge construction with high-performance concrete deck, MSE retaining walls, vibro-compaction column supported embankments, contaminated soil removal, drainage improvement, and site work. Work is being performed per VDOT and FHWA specifications. As **Quality Assurance Coordinator,** Dow oversaw construction QA inspection services, including Daily Report Writing, maintaining RFIs, materials, meeting minutes and agendas, schedule reviews, submittals, and DEQ E&SC Inspections. **Client:** Eastern Federal Lands Highway Division | **Cost:** $10.7M

**Relevancy:** Design-Build with VDOT involvement, roadway alignment/widening, bridge construction, ROW acquisition, structure demolition, utility relocations (Dominion, Verizon, Comcast, Columbia Gas), shared-use path, traffic signal, geotechnical, traffic control devices, TMP, pedestrian accommodations, public involvement/communications, construction engineering and inspection.

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>Design-Build Multiple Bridge Superstructure Replacement Project, Lynchburg &amp; Salem Districts, VA</th>
<th>Dates: Month Year – June 2010-Jan. 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Role:</td>
<td>Quality Assurance Manager</td>
<td>With Current Firm? No</td>
</tr>
</tbody>
</table>

**Responsibility/Specific Job Duties:** **Quality Assurance Manager** responsible for overseeing Quality Assurance inspections and testing for VDOT Region II’s first-ever Design-Build multiple bridge replacement project. This 12 structure project included substructure rehabilitations and super-structure replacement at locations throughout the VDOT Lynchburg and Salem Districts. The new superstructures consisted of three steel girder/concrete cast-in-place deck bridges over a controlled-access highway (Route 29), with the remaining eight bridges on secondary roads. The secondary road superstructures included five concrete voided slabs decks, one steel truss with cast-in-place concrete deck, one glue-laminated timber structure, and one SS-8 steel girder and timber deck.

Duties included assisting with the development, review, and implementation of the project’s construction QA/QC Plan, coordination and performance of QA inspections and testing of construction materials, review and tracking inspection reports, construction material quantities, material certifications and maintaining the project’s Materials Notebook. Dow provided review and approval of Contractor pay requests to confirm work and materials were in conformance with contract requirements prior to payment, on-site evaluations and field recommendations to the Contractor for repair of observed structural deficiencies, was responsible for issuing “non-conformance reports,” requests for information and oversaw implementation of the actions. Dow performed “punch-list” inspections, reviewed and maintained as-built drawings, and provided documentation to VDOT during project closeout. **Client:** VDOT | **Cost:** $10.8

**Relevancy:** VDOT Design-Build, bridge construction, structure demolition, utility relocations (Dominion, Verizon, Comcast, Columbia Gas), survey, environmental, geotechnical, hydraulics, traffic control devices, pedestrian accommodations, public involvement/communications, QA/QC, construction engineering and inspection.

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

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

### Brief Resume of Key Personnel anticipated for the Project.

| a. Name & Title: | John Maddox – Senior Vice President |
| b. Project Assignment: | Design Manager |
| c. Name of Firm with which you are now associated: | Whitman, Requardt & Associates, LLP |
| d. Employment History: | With this Firm 20 Years With Other Firms 10 Years |
| e. Education: | West Virginia Institute of Technology (is now a division of West Virginia University) – Montgomery, West Virginia | B.S. | 1985 | Civil Engineering |
| f. Active Registration: | Year First Registered/ Discipline/VA Registration #: | 1996 | Professional Engineer | VA Registration #0402026613 |
| g. Project Assignment: | Project Name: | Dates: |
| | Design Manager | With Current Firm? | Yes |
| **Responsibility/Specific Job Duties:** | As Design Manager, John was responsible for the design, which widened Fairfax County Parkway (FCP) from four to six lanes for 2.3 miles, and provided an innovative split diamond interchange at Fair Lakes Parkway and Monument Drive. The interchange included two new bridges and over 43,000 SF of retaining walls. There were also minor modifications to the interchanges at I-66 and Route 50. John oversaw and coordinated all design elements, including interchange roadway, hydraulic, river mechanics, SWM, structural, utility relocation, traffic engineering, environmental permits, traffic forecast and analysis, public involvement, geotechnical engineering for retaining walls and bridge foundations, and Quality Assurance. He provided a leadership role in stakeholder outreach to the Homeowners’ Associations, Fair Lakes League and the Fairfax County Park Authority to minimize ROW impacts. Extensive coordination with FHWA for the traffic forecasting and analysis due to the potential for operational impacts to the I-66 interchange. During construction, John attended progress and partnering meetings with the construction team, shop drawing review and technical support. **Client:** VDOT |
| **Construction Cost:** | $44 Million |
| **Relevancy:** | Design of an innovative interchange providing access to the community and allowing traffic operations to be maintained during all construction phases, developed a complex TMP for MOT with multiple construction phases through the proposed interchange, designed bridges and over 70,000 SF of sound barriers along the 2.3 mile corridor, VDOT interchange, roadway widening, bridge, cul-de-sac, ROW, structure demolition, utility design water and sewer, shared-use path, traffic signal, median crossovers with turn lane, permit sketch, geotechnical, hydraulic, traffic control devices, TMP, pedestrian accommodations, public involvement/communications, QA/QC, and construction engineering. |
| **Project Assignment: | Project Name: | Dates: |
| | I-81 Widening and Bridge Replacements over Buffalo Creek and Maury River, Rockbridge County, VA | August 1999 – December 2007 |
| | Design Manager | With Current Firm? | Yes |
| **Responsibility/Specific Job Duties:** | Mr. Maddox was the Design Manager responsible for the design of both projects under a single design contract. The project construction included widening 2 miles of I-81 from four to six lanes. The project included the replacement of the I-81 Bridge over Buffalo Creek with an approximate length of 600 |
feet and the bridge over Maury River with an approximate length of 800 feet. The design included a complex maintenance of traffic plan to maintain two lanes of traffic in each direction during all phases of construction. Mr. Maddox provided oversight and coordination for all elements of the design, including roadway, hydraulic, SWM, structural, hydraulics, traffic control devices, TMP, public involvement/communications, QA/QC, construction and engineering.

**Project Name:** Design-Build Fall Hill Avenue Widening and Mary Washington Boulevard Extension, Fredericksburg, VA  

**Project Role:** Design Manager  
*With Current Firm?* Yes

**Responsibility/Specific Job Duties:** As Design Manager, John is responsible for WRA’s design and construction inspection roles for this widening and reconstruction project of 2.2 miles of Fall Hill Avenue (FHA) and Mary Washington Blvd. (MWB), including a roundabout at the intersection with FHA and MWB. There is a five span, 419-ft. long bridge over I-95 and future CD lanes. The proposed roadway is a four-lane divided curb and gutter section with a sidewalk on the south side and a shared-use path on the north side. The project has significant 4(f) coordination requirements and includes relocating/reconstructing Snowden Park with baseball fields and basketball courts. John is overseeing design elements, including roadway, hydraulic, SWM, bridge, retaining walls, sound barriers, utility relocation and coordination, traffic engineering, lighting, environmental coordination of permits, public involvement, ROW acquisition, park design, quality assurance and coordination during construction. **Design is completed on this Design-Build project with Corman.** Client: VDOT | Total Cost: $30.8 million

**Relevancy:** VDOT Design-Build, design of 3 sound barriers, ROW acquisition on over 40 parcels with multiple utility easements requiring extensive coordination between the design, dry utility relocation, wet utility design, ROW acquisition to maintain the aggressive project schedule, proposed bridge over I-95 will be constructed in two phases requiring extensive temporary shoring/support system to phase construct the proposed MSE retaining wall abutments, geology in the project area is similar to the I-95/Route 630 Interchange requiring the evaluation of retaining walls and slopes in Potomac clays, roadway alignment/widening, bridge design, new connector road, structure demolition, utility relocations (Dominion, Verizon, Comcast, Columbia Gas), shared-use path, traffic inspection.

**Project Name:** Design-Build I-64/Route 15 Diverging Diamond Interchange Preliminary Design & Final Design Review, Zion Crossroads, VA  
*Dates:* Jan. 2010 – April 2014

**Project Role:** Design Manager  
*With Current Firm?* Yes

**Responsibility/Specific Job Duties:** As Design Manager, John was responsible for WRA’s preliminary design of VDOT’s first Diverging Diamond Interchange (DDI) under contract to VDOT. **The design team assisted VDOT in developing the design guidelines for DDIs.** A study was completed analyzing interchange alternatives, including traffic forecasting and analyses, conceptual alternative interchange design and selection of the DDI as the recommended solution. The efforts included the completion of an Interchange Modification Report (IMR) for the project. For the Design Public Hearing displays and traffic simulations were developed to assist the public in understanding the traffic operations of the DDI. John led the design team in the development of the 30% plans for the interchange, roadway, storm drainage, SWM, signing and signals. WRA assisted VDOT in the development of the RFQ & RFP documents and was retained by VDOT to review the Design-Builder final plans. Corman was selected as the Design-Builder for the project. Client: VDOT | Total Cost: $6.9 million

**Relevancy:** VDOT Design-Build, WRA’s research, traffic analysis and DDI design criteria established for the project assisted VDOT in successfully delivering the first DDI in Virginia and built a solid foundation for the design of future DDIs, the expertise in developing quality traffic simulations was critical to the public’s understanding of the traffic operations and success of the project, reconstruction of an interchange, roadway widening, traffic signal, median crossovers with turn lane, hydraulics, traffic control devices, TMP, pedestrian accommodations, public involvement/communications, QA/QC.

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

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

- **Name & Title:** Greg Suttle, Project Manager
- **Project Assignment:** Construction Manager
- **Name of Firm with which you are now associated:** Branch Highways, Inc.

#### Employment History: With This Firm 26 Years With Other Firms 2 Years

Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below):

**Construction Manager/Project Manager** .......................... Branch Highways, Inc.  May 2010–Present

Greg is responsible for managing the construction process, including Quality Control (QC) and executing the work in accordance with “approved for construction” plans and specifications. He also is accountable for compliance with all material and construction requirements. Additional responsibilities include planning, scheduling, and allocation of manpower and equipment resources. Management of Owner/subcontractor/supplier contracts also fall under Greg’s direct charge. He supports EEO compliance, enforcement & compliance with corporate safety regulations & associated training. Clients consist of state and local departments of transportation, federal government agencies and private corporations. Typical projects incorporate one or more of the following: interstate widening, primary and secondary road widening/relocation, and interchange work. Greg is well versed in both Design-Bid-Build and Design-Build projects.

**Construction Manager/General Superintendent** ................. Branch Highways, Inc.  June 1998–April 2010

Greg was jointly responsible with the Project Manager for project success. He was accountable for meeting schedule, controlling costs, Quality Control (QC), and hands-on management of manpower, equipment, and subcontractors on assigned projects. He placed an emphasis on workplace safety and training while meeting or exceeding owner’s expectations. Greg’s direct involvement with the work on a daily basis created a solid foundation for his understanding and working knowledge of the impacts associated with Geotechnical Challenges, Maintenance of Traffic, and Utility Relocation issues.

#### Education:

- **Name & Location of Institution(s)/Degree(s)/Year/Specialization:**
  - West Virginia Institute of Technology | BS | 1987 | Mining Engineering

#### Active Registration:

- **Year First Registered/Discipline/VA Registration #:**
  - 2003 | Virginia DEQ Responsible Land Disturber | RDL03021
  - 1995 | VDOT Erosion Sediment Control Contractor Certification (ESCCC) | I-01135
  - 1999 | Virginia Blaster – Unrestricted | E269250
  - 2013 | ACI Concrete Certification | 01273969

#### Document the extent and depth of your experience and qualifications relevant to the Project.

1. **Note your role, responsibility, and specific job duties for each project, not those of the firm.**
2. **Note whether experience is with current firm or with other firm.**
3. **Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.**

(List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.)

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Dates:</th>
<th>With Current Firm?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design-Build Route 3 Widening, Culpeper, VA</td>
<td>Oct. 2013 – Present</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Respectibility/Specific Job Duties:** Greg is the **Design-Build Construction Manager** for this five-mile section of road widening from 2 to 4-lane divided highway on Route 3 in Culpeper. He and his staff have worked closely with VDOT & its project staff to coordinate scheduling & work flow as various stages of the project become accessible for construction activities. One critical responsibility is the coordination of extensive utility relocations throughout the entire corridor. Service providers include Verizon, AT&T, Level 3, Qwest, Century Link, Dominion Virginia Power, Transco/Williams Gas, and Columbia Gas. Greg’s continuing responsibility and participation in the environmental permitting and compliance process from its inception have been essential. Remediation of substantial geotechnical issues resulting from unsuitable soils, rock, and highly plastic clays have been one of Greg’s primary foci throughout the project. Maintaining effective communication with residents and several local commercial, agricultural, and industrial businesses has also been an important consideration in Greg’s overall strategy to effectively mitigate impacts to these shareholders. It can be anticipated that Greg’s Construction Manager duties on the I-95/630 Project will include interfacing with the same categories of shareholders and utility providers, as well as dealing with similar geotechnical challenges.

**Client:** VDOT | **Cost:** $23.5M
Relevancy: VDOT Design-Build, FHWA guidelines and requirements, primary roadway widening and relocation, ROW acquisition, multiple concurrent utility relocations, environmental permitting and monitoring, geotechnical challenges/mitigation, Traffic Management Plan development and execution, public involvement/communications, QA/QC coordination.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Role:</td>
<td>Construction Manager</td>
<td>With Current Firm?</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Responsibility/Specific Job Duties: As Design-Build Construction Manager, Greg directed Branch Highways’ efforts as a key subcontractor for this project. The ~9 miles of new I-95 HOT Lanes [including 1.5+ miles of interstate widening] within Branch Highways’ scope of work is a mere 3 miles from the I-95/630 Interchange. Consequently, Greg and the Branch Project Team successfully mitigated similar Geotechnical and Maintenance of Traffic challenges as can be expected on the I-95/630 Project. Other specific duties that required Greg’s focus entailed coordinating Branch’s work with the concessionaire, contractors, and sub-tier specialty contractors to accommodate a very aggressive construction schedule for this multifaceted project. His diligent communication, effective planning, and global awareness of the project and its needs created an environment where resources were allocated as needed to maximize efficiency of operation.

Relevancy: Same I-95 Corridor Location/Traffic Volume, VDOT Design-Build, FHWA guidelines and requirements, relocation/reconstruction of an interchange, interstate alignment/widening, bridge construction, ROW acquisition, utility relocations, environmental monitoring, geotechnical challenges/mitigation, Traffic Management Plan development and execution, public involvement/communications, QA/QC coordination.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Role:</td>
<td>Construction Manager/Project Superintendent</td>
<td>With Current Firm?</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Responsibility/Specific Job Duties: As Construction Manager/Project Superintendent for this project Greg directed the project team, including 3 area superintendents along with foremen, project engineers and staff. Greg’s duties included constructability reviews during the design phases for the 5 distinct and separate roadway segments adjacent to the I-66/US-15 Interchange, including 5 bridge structures, which comprised this project. He was also instrumental in developing and enforcing the Quality Control Program prior to and during construction, much as he will do for the I-95/630 Project. Coordinating with DEQ and USACE, Greg created and executed Construction Sequencing Plans that allowed for early starts to construction activities in each segment of the project. These plans included Maintenance of Traffic coordination with VDOT and Prince William County. This 22-Lane-Mile project had Utility Relocations throughout. Greg scheduled Branch crews and clearing to expedite initial critical relocation activities such as pole installations and underground conduits/trenching. Another similar and significant feature of this project to the I-95/630 Project involves Geotechnical challenges and associated remedies. There were intermittent segments of highly plastic, light, and/or saturated soils and rock in all 5 segments and each required a unique approach for mitigation. These approaches included removal and replacement, mechanical manipulation, and chemical stabilization. Greg’s duties also required him to meet with local businesses, communities, and developers through public outreach and simple face-to-face communications to address concerns and create a team atmosphere with shareholders.

Client: Prince William County | Cost: $55M

Relevancy: Design-Build, Interface with an interchange, roadway alignment/widening, bridge construction, ROW acquisition, extensive utility relocations, shared-use path, multiple signalizations, environmental permitting and monitoring, geotechnical challenges, pedestrian accommodations, Traffic Management Plan development and execution, public involvement/communications, QA/QC coordination.

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

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

<table>
<thead>
<tr>
<th>CURRENT ASSIGNMENT(S)</th>
<th>ANTICIPATED DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Route 3 Widening, Construction Manager</td>
<td>Current – March 2017*</td>
</tr>
<tr>
<td>I-81 Exit 150 Interchange, Project Manager</td>
<td>Current – April 2017*</td>
</tr>
</tbody>
</table>

*Note: Construction of I-95/Route 630 to commence Summer 2017
presented the opportunity to utilize mechanical and chemical manipulation to generate suitable roadway fill. These FDC’s resulted in reductions to both cost and schedule. Branch also coordinated with and provided additional access grading for the bridges & abutments, soundwalls, concrete barrier walls, ITS & VDOT utilities, paving, signage, guardrail, and pavement markings performed by other subcontractors, such that all phases of work could achieve their respective milestones. One of the first contractors to join the project, Branch participated in working design review meetings, providing constructability analysis before and during construction. The schedule for this project was critical, requiring precise coordination between all major work types in order to bring the project to a successful completion in such a short amount of time. Through careful planning and extensive coordination, Branch was able to accelerate the schedule for their contractual work, which included:

- All Earthwork including access and final grading
- Subbase
- MSE Retaining Walls/Bridge Approaches
- Soil Nail Retaining Wall
- RW3 Retaining Walls

Branch also coordinated with and provided additional access grading for the bridges & abutments, soundwalls, concrete barrier walls, ITS & VDOT utilities, paving, signage, guardrail, and pavement markings performed by other subcontractors, such that all phases of work could achieve their respective milestones. Branch played an active role in mitigating various conflicts and challenges throughout the project. Numerous Field Design Changes (FDC) were initiated to resolve design conflicts and make efficient use of on-site material. These FDC’s resulted in reductions to both cost and schedule. One of the first priorities was designing safe ingress/egress throughout the project. Construction entrances were designed to minimize impacts to the traveling public and reduce cost by utilizing existing guardrail and shoulder facilities wherever possible. Diligent maintenance of these entrances ensured that minimal repairs were needed at the conclusion of the project.

High plasticity clay, highly weathered acidic rock, and saturated materials each posed its own set of geotechnical concerns, and were dealt with on a case-by-case basis. Although offsite disposal was employed for the worst material encountered, thorough analysis of in-situ materials presented the opportunity to utilize mechanical and chemical manipulation to generate suitable roadway fill. These methods accelerated schedule, and in some cases reduced cost. It is likely that similar conditions will be encountered on the proposed I-95/630 Project, and Branch has the proven knowledge and experience to mitigate them efficiently and effectively.

The extensive soundwall requirements on this project placed an enormous demand on available design and fabrication resources. While Branch did not control the processes associated with those activities on this project, our grading and final backfilling operations were impacted by associated delays. These and other experiences with soundwall construction will assist us with better and earlier coordination efforts for the I-95/630 Project.

ITS and electrical work was another key component that this project shares with the I-95/630 Project; coordination with the design and construction of the roadway prism was critical to allow for ample time for installation and testing of ITS and electrical facilities.

*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.
LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
<th>b. Name of the prime design consulting firm responsible for the overall project design.</th>
<th>c. Contact information of the Client or Owner and their Project Manager who can verify Firm’s responsibilities.</th>
<th>d. Contract Completion Date (Original)</th>
<th>e. Contract Completion Date (Actual or Estimated)</th>
<th>f. Contract Value (in thousands)</th>
<th>g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improvements at Fort Belvoir</td>
<td>Name: A. Morton Thomas &amp; Associates (AMT)</td>
<td>Contact: Phone: (703) 393-5454; Project Manager: Timothy M. Brown; Email: <a href="mailto:Timothy.Brown@dot.gov">Timothy.Brown@dot.gov</a></td>
<td>02/2016</td>
<td>11/2016 Due to changes in owner accepted &amp; directed scope</td>
<td>$69,391</td>
<td>$75,732</td>
</tr>
</tbody>
</table>

Name of Client/Owner: FHWA/EFL - Highway Division

Project Description/Narrative:

The project constructs and/or widens from four to six lanes totaling 3.68 miles of roadway with left and right turn lanes at intersecting roadways, adds bicycle lanes and safer crosswalks, route realignments, intersection improvements, bridge demolition/construction, retaining and noise walls, street lighting, stormwater management, Potomac clay slope stabilization, utility relocations, ROW acquisition, and traffic signalization.

The project site is highly visible to local authorities and is a major focus of local and federal elected officials, with an emphasis on maintenance of traffic, stakeholder communication, protecting the environment, and historical significance.

A Traffic Management Plan provides multiple stages and coordination with VDOT, County, Fort authorities, and EMS personnel. MOT includes daily lane closures along US Route 1 and shifting traffic to the newly-constructed southbound lanes as the northbound lanes were constructed.

ROW acquisition was on the critical path and included 36 parcels, numerous utility easements, 86 relocations of residents and commercial establishments. Weekly meetings were held with all stakeholders including Project team, County, Local and regional VDOT officials to maintain focus and schedule.

There are many stakeholders, including VDOT, Fairfax County, Dept. of the Army, Ft. Belvoir, SHPO, National Historic Trust, environmental permitting agencies, local residents and community groups, and EMS. Community meetings explained the project scope and solicited input on the work within the Historic District. Bi-weekly progress meetings were held with most of the stakeholders attending during the entire progress of the project (including design and construction).

Proposed Team Members

- Proposed DBPM Scott Szmybruch, PE is the DBPM on this project.
- Proposed DDI/Alternative Interchange Designer Laura Meheil, PE is the Design Manager on this project.
- Proposed Structural/Bridge Engineer Dan Walsh is a bridge engineer on this project.
- Proposed QAM Dow Lasitter, III, PE, CCM is the Quality Assurance Coordinator on this project.
- Proposed ROW Manager Vanessa Ringgold is the ROW Manager on this project.

Scope & Complexity Similarities

- Design-Build
- Intersection Relocation/Reconstruction
- Roadway Realignment/Widening
- Bridge Construction
- New Connector Roads
- ROW Acquisition and Relocations
- MOT
- Utility Coordination/Relocations (Dominion, Verizon, Fiber Optics, Comcast, Washington Gas, Water & Sewer)
- Shared-Use Path
- Traffic Signals
- Survey
- Environmental
- Geotechnical – Potomac Clay in Side Slopes
- Hydraulics
- Traffic Control Devices
- TMP
- Pedestrian Accommodations – Bicycle Lanes & Safer Sidewalks
- Public Involvement/Communications
- Contractor QA/QC
- Construction Engineering & Inspection

Verifiable Evidence of Good Performance

- The same project approach (task forces) will be utilized for the design of Route 630 east of I-95.
- Detailed traffic analyses of each phase of construction resulted in improved traffic operations during construction.
- Innovative approach to stormwater management eliminated three SWM ponds and reduced right-of-way impacts and costs.

Proposed ROW Manager Vanessa Ringgold is the ROW Manager on this project.

*For a project with multiple phases or multiple contracts, only one phase or one contract will be considered. If additional phases or contracts are shown under the same Work History Form, only the first phase or contract listed will be evaluated.
**ATTACHMENT 3.4.1(a)**

**LEAD CONTRACTOR - WORK HISTORY FORM**

(LIMIT 1 PAGE PER PROJECT)

<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
<th>b. Name of the prime design consulting firm responsible for the overall project design.</th>
<th>c. Contact information of the Client or Owner and their Project Manager who can verify Firm’s responsibilities.</th>
<th>d. Contract Completion Date (Original)</th>
<th>e. Contract Completion Date (Actual or Estimated)</th>
<th>f. Contract Value (in thousands)</th>
<th>g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-64/Route 15 (Zion Crossroads) Diverging Diamond Interchange Location: Zion Crossroads, VA</td>
<td>Parsons Transportation Group</td>
<td>Name: Parsons Transportation Group</td>
<td>04/2014</td>
<td>04/2014</td>
<td>$6,883</td>
<td>$6,905</td>
</tr>
<tr>
<td>Name:</td>
<td></td>
<td>Phone: (434) 987-5367</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Project Manager: John Glass</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Phone: (434) 987-5367</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Email: <a href="mailto:johnglass@vdot.virginia.gov">johnglass@vdot.virginia.gov</a></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.

**Corman's Role:** As Design-Build, Corman was responsible for design and construction, including developing the Transportation Management Plan (TMP), roadway, drainage and Maintenance of Traffic (MOT) plans, Quality Assurance/Quality Control (QA/QC), public relations/outreach, site survey, environmental permits and protection, ROW, utility verification/relocations, drainage, erosion and sediment control, stormwater management, lighting, signage, road markings, signal installation, and site worker and public safety.

**Project Description/Narrative:** This project improves the I-64 Interchange on Route 15 at Zion Crossroads and reconstructs the 0.49 mile stretch of Route 15, improving the Route 15 and Spring Creek Parkway intersection and realigning the standard diamond interchange into a Diverging Diamond Interchange (DDI); the first one in Virginia. By briefly shifting vehicles to the opposite side of the road, this interchange design eliminates traditional left turns that must cross oncoming traffic. It improves safety by reducing the number of spots where vehicles can collide and handles more than 600 left turns per hour; twice the capacity of a conventional interchange. Project included revisions of the Interchange Modification Report.

The switchover from the existing to new configuration consisted of multiple stages and was meticulously planned, including hold points, timing, resource and truck staging, dry-runs, and final verification of signal operations. The plan for this step-by-step overnight transition was practiced and implemented a 4-phase, 64-step Operations Plan that executed a complicated Traffic Control Plan, all while maintaining traffic.

MOT and construction phasing, especially during the steps leading up to and during the traffic pattern switch over, were extremely arduous. Through innovative construction sequencing, the team was able to reduce the number of MOT phases. The final switch over occurred over a single weekend.

**Virginia's first Diverging Diamond Interchange**

Instead of multiple or extended phases. The extra attention to detail and preparatory efforts resulted in the successful completion and smooth transition to the new interchange.

We coordinated with local businesses to ensure minimal impacts and explained construction phase configurations, detours, and final configuration to the professional drivers and general public for smooth traffic and help them understand final configuration and travel paths.

Utility impacts were reviewed early with VDOT input and the utility owners to further refine improvements, reduce impacts and explained construction phase configurations, detours, and final configuration to the professional drivers and general public for smooth traffic and help them understand final configuration and travel paths.

**Verifiable Evidence of Good Performance**

- Project completed on schedule & budget.
- 2015 DBIA National Award of Merit
- 2014 VDOT Culpeper District Project of the Year Honor Award
- 2015 DBIA-MAR DB Merit Award
- 2014-2015 ACEC/MW Engineering Excellence Honor Award
- 2014 VDOT Culpeper District Project of the Year
- VDOT presented the DBPM with an Appreciation Plaque commemorating her contributions towards the success of this innovative project.

**Proposed Team Members**

- Proposed DDI Technical Design Team Member John Epperly was the Lead Designer for the preliminary design & final plan review for VDOT for this project
- Proposed DDI Technical Design Team Member Scott Thompson-Graves, PE, PTOE performed traffic analysis
- H&B performed the surveying
- Proposed DM – John Maddox was Project Manager for the Preliminary Design

*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)*

<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
<th>b. Name of the prime/ general contractor responsible for overall construction of the project.</th>
<th>c. Contact information of the Client and their Project Manager who can verify Firm’s responsibilities.</th>
<th>d. Construction Contract Start Date</th>
<th>e. Construction Contract Completion Date (Actual or Estimated)</th>
<th>f. Contract Value (in thousands)</th>
<th>g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mary Washington Blvd. Construction</td>
<td>WRA’s Role: Prime design firm responsible for the final engineering design documents and approvals for major improvements to the existing Fall Hill Avenue corridor and extension of Mary Washington Boulevard (MWB). Existing Fall Hill Avenue is largely a two-lane roadway with no bike facilities and limited pedestrian facilities. Along the project alignment are several historic resources that are impacted by the project construction requiring strict adherence to all commitments in the environmental document. The project was led from the WRA Richmond, VA office. Services included highway design, hydrologic and hydraulic design, stormwater management (SWM) design, erosion and sediment control design, geotechnical engineering, pavement evaluation and design, maintenance of traffic, signing, lighting, movement markings, traffic signalization, bridge, retaining walls, noise barriers, park design, utility relocation/coordination, public involvement, permitting and coordination with project stakeholders. Also, WRA is providing quality control and construction inspection related services.</td>
<td>Name: Design-Build Fall Hill Avenue Widening and Mary Washington Boulevard Extension Location: Fredericksburg, VA</td>
<td>Name of Client: VDOT</td>
<td>Name of Project Manager: Michael T. Coffey, P.E.</td>
<td>Phone: (540) 899-4214</td>
<td>Project Manager: Michael T. Coffey, P.E.</td>
</tr>
</tbody>
</table>

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.

WRA’s Role: Prime design firm responsible for the final engineering design documents and approvals for major improvements to the existing Fall Hill Avenue corridor and extension of Mary Washington Boulevard (MWB). Existing Fall Hill Avenue is largely a two-lane roadway with no bike facilities and limited pedestrian facilities. Along the project alignment are several historic resources that are impacted by the project construction requiring strict adherence to all commitments in the environmental document. The project was led from the WRA Richmond, VA office. Services included highway design, hydrologic and hydraulic design, stormwater management (SWM) design, erosion and sediment control design, geotechnical engineering, pavement evaluation and design, maintenance of traffic, signing, lighting, movement markings, traffic signalization, bridge, retaining walls, noise barriers, park design, utility relocation/coordination, public involvement, permitting and coordination with project stakeholders. Also, WRA is providing quality control and construction inspection related services.

**Proposed Team Members**

- John Maddox – Design Manager
- Jeremy Schlussel – Bridge Design
- Gail Kuttesch – Roadway Design
- Mark Vasco – Design QA/QC
- Dana Trone – Traffic and MOT
- Jeff Baxford – Geotechnical
- Dusan Golice – Project Engineer

**Public Involvement**

- A key element of the success of the project is communicating the goals of the project and how the project affects the public. The project included significant access management controls restricting movements to and from developments, which was a major discussion item at the “Pardon Our Dust” public meeting and the public’s concern with the traffic operations at the proposed roundabout. Being able to address these concerns quickly and effectively with the VDOT Team resulted in the project moving forward with minimal redesign efforts.

**Verifiable Evidence of Good Performance**

- The project design was completed on schedule with minimal VDOT comments.
- WRA’s innovative design approach to the bridge reduced construction and future maintenance costs, improve constructability, by eliminating the longitudinal joints across the bridge, utilizing the MSE wall abutments, and providing semi-integral abutments.

**Fall Hill Avenue Approach to Bridge (Phase I of Construction)**
ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
<th>b. Name of the prime/ general contractor responsible for overall construction of the project.</th>
<th>c. Contact information of the Client and their Project Manager who can verify Firm’s responsibilities.</th>
<th>d. Construction Contract Start Date</th>
<th>e. Construction Contract Completion Date (Actual or Estimated)</th>
<th>f. Contract Value (in thousands)</th>
<th>g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement (in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fairfax County Parkway Interchange Fair Lakes Parkway</td>
<td>Shirley Contracting Company, LLC</td>
<td>VDOT (Phone: 703-259-1723, Project Manager: Mr. Nasser Obeed)</td>
<td>10/2010</td>
<td>12/2013</td>
<td>$43,961</td>
<td>$3,736</td>
</tr>
</tbody>
</table>

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.

WRA’s Role: Whitman, Requardt & Associates, LLP was selected as the prime designer to provide engineering services to VDOT for the study and final design of an interchange at the intersection of the Fairfax County Parkway and Fair Lakes Parkway/Person Drive intersection. WRA completed approximately 90% of the design services from our Virginia offices. The project was partially funded with ARRA funding for construction, which required extensive coordination with FHWA. The project features include:

- **Project Description/Narrative:** Roadway Reconstruction and Widening – 2.3 miles of Fairfax County Parkway (FCP) was widened to the median increasing the number of lanes from 4 to 6 and 0.7 miles was totally reconstructed to facilitate raising FCP up and over Fair Lakes Parkway and Monument Drive. Over 3,000 feet of Fair Lakes Parkway was widened/reconstructed to provide additional turn lanes.

- **Interchange Design** – The project included the design of a Split-Diamond Interchange to provide access to both Fair Lakes Parkway and Monument Drive. The four ramps intersected with both Fair Lakes Parkway and Monument Drive at coordinated signalized intersections with multi-lane approaches.

- **Hydraulic Analysis** – The project contained a major drainage outfall to the Rocky Run Stream through an 800-foot long triple 8’ x 10’ box culvert under Ramps B and C and Fair Lakes Parkway. The project also included a single 400-foot long 7’ x 8’ box culvert under Ramps B and C and Fairfax County Parkway. Additionally, Fairfax County Parkway and Fair Lakes Parkway are located on dams for regional stormwater management lakes, which are regulated by DEQ. The dam was being modified by the project and a new stormwater outfall was extended into the existing lake to provide water quality requirements for the project. This required WRA to complete a dam break analysis and coordination for review of the dam modification with DEQ and Fairfax County.

- **Structural Design** – The bridge design efforts included the complete design of two single-span structures consisting of precast hull tee beams spanning 116’ and 142’, each with a width of 124’. Abutments consisted of semi-integral concrete seats on steel piles with MSE retaining walls imprinted with an architectural finish of ashlar stone. The design included under bridge lighting for the sidewalks and pedestrian movements. The project also included widening the Fairfax County Parkway bridge over Route 50 by adding two additional travel lanes in the median. The bridge widening consisted of two span structural steel plate girders totaling 220’ in length set on a new concrete pier aesthetically similar to the existing piers. The design included over 43,000 sq ft of retaining walls including MSE, Pile Panel, Soil Nails and over 70,000 sq ft of sound barriers. The ashlar stone finish from the bridge abutments was carried through to all wall elements to create an appealing appearance to this gateway to the Fair Lakes Community. The geotechnical design efforts included an evaluation of all of the walls and the final design of bridge foundations. The retaining wall’s second floor was utilized by VDOT.

- **Traffic Control Devices** – The project included freeway overhead signing for the I-66, Fair Lakes Parkway and Route 50 interchanges including ITS facilities. Signals were designed for 7 intersections with coordinated signal timing plans to ensure the efficient flow of traffic through the project.

- **TMP Plan** – The project consisted of multiple phases of construction with a complex TMP analyzing each phase. The design required the detour of existing turning movements.

- **Public Involvement** – Since the 1980s, the Fair Lakes Community has maintained the VDOT right-of-way with landscaping, decorative signage, mowing, and reserved the right-of-way for the future interchange project. WRA led a series of meetings with the Fair Lakes League that resulted in the acceptance of the project, donation of right-of-way easements and utilization of existing private regional stormwater management facilities for the project. Resulting in significant cost savings to the project. The finished project will enhance the community and provide significant improvements to traffic operations. WRA also developed materials for both a Citizens’ Information Meeting and a Design Public Hearing.

*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.*
**LEAD DESIGNER – WORK HISTORY FORM**

**LIMIT 1 PAGE PER PROJECT**

### a. Project Name & Location

Name: Buffalo Bridges over Buffalo Creek and Maury River – VDOT Contract No. 99LD299
Location: Rockbridge County, VA

### b. Name of the prime/general contractor responsible for overall construction of the project.

Name: Buffalo Fairfields Echols, Inc. (Fairfield Skanska, Inc.)
Orders Construction Company

### c. Contact information of the Client and their Project Manager who can verify Firm’s responsibilities.

Name of Client: VDOT
Phone: (540) 332-7724
Project Manager: Mr. Wayne Nolde
Phone: (540) 332-7724
Email: Wayne.Nolde@VDOT.Virginia.gov

### d. Construction Contract Start Date

Buffalo: 07/2004
Maury: 01/2004

### e. Construction Contract Completion Date (Actual or Estimated)


### f. Contract Value (in thousands)

Buffalo: $27,151
Maury: $17,736

### g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement (in thousands)

$2,221

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

WRA’s Role: WRA was the prime designer for the I-81 bridge replacement projects for both the Buffalo Creek and Maury River bridges under a single design contract No. 99LD399. WRA completed approximately 98% of the design from our Virginia offices. The existing bridges had reduced shoulder width and were classified as functional obsolete. The projects were to be the first part of the I-81 reconstruction efforts and were designed to widen I-81 from 4 to 6 lanes.

**Project Description/Narrative: Roadway Design** – Both projects required the reconstruction of approximately one mile of the interstate facility. The design required total replacement of the existing pavement section, which required the roadway typical section to be shifted to ensure two travel lanes where maintained during construction. Hydraulic Analysis – The projects required a detailed hydraulic analysis of both Buffalo Creek and Maury River to ensure the project had no impact to the 100-year flood elevation. Additionally, the analysis included the evaluation of temporary causeways into the stream during construction. The project design needed to carefully consider the karst geologic features along the corridor. Five stormwater management facilities were designed for the projects and all existing CM drainage pipes were replaced requiring the boring and jacking of several pipes. The projects also included the design of the extension of three box culverts.

**Geotechnical Engineering** – WRA provided all geotechnical engineering services for the projects, which included an extensive testing and boring program to locate potential karst features. Our geologists performed extensive site visits and used dye testing to identify underground stream features that may impact the project design. At the Buffalo Creek Northbound Bridge it was determined the existing median contained a major underground stream network. The bridge and roadway improvements were shifted to the outside of the existing northbound I-81 lanes to avoid the karst features. WRA provided a detailed geotechnical report including the design of a major embankments, rock cut slopes and bridge foundations.

Structural Design – The structural design of the two I-81 bridges over the Buffalo Creek gorge with a depth well over 100 feet on I-81 was a main focus of the design. The bridges were on independent alignments and grading with approximately 1,000’ distance between the roadways. The NBL bridge was the more challenging design due to the requirement that it be constructed in two stages just downstream from the existing bridge, and due to the site topography. Alignment studies also revealed the need to raise the profiles of the bridges approximately 8 feet to meet current FHWA Interstate Design Standards. The design consists of continuous hybrid steel plate girder bridges with the following span configurations: NBL Bridge: 137'-106’-166’-137” = 600’ and the SBL Bridge: 138’-154’-154’-138” = 584’. The NBL Bridge is on a curved alignment while the SBL Bridge is on a tangent alignment. Both bridges required tall piers of up to 110 feet in height due to the depth of the gorge. The Maury River bridges are three lanes wide with 14-foot wide shoulders on each side. The new bridges are on parallel alignments and are of different lengths and layouts due to the topography and constraints of the site. The NBL Bridge is 825 feet in length with have spans (193’-177’-177’-193’) and the SBL Bridge is 743 feet in length with four spans (193’-177’-177’-193’). They are on tangent alignments, but the NBL bridge has a 1’45” curve in the southermost end span. The bridges have fully-continuous hybrid steel superstructures with 73-inch deep plate girders. Both the Buffalo Creek and Maury River bridges featured an innovative design element for the treatment of the deck joints at the abutments. The ends of the steel girders are encased in a concrete diaphragm that is integral with the deck and located just beyond the bearings. The deck joints are tooth expansion joints that are located on the abutment side of the concrete diaphragm. VDOT has since included the detail in the Design Guidelines as a special alternative joint detail.

**Maintenance of Traffic** – The sequence of construction and MOT required all existing travel lanes to remain open during construction. This required a phased construction of the bridges. The Buffalo Creek northbound bridge was constructed in two phases, while the southbound bridge was shifted into the road and constructed in a single phase. The Maury River bridges were replaced by first constructing the new northbound bridge to the east and then shifting the northbound traffic onto the new structure. The southbound traffic was then shifted onto the old existing northbound bridge while the new southbound structure was constructed.

Proposed Team Members
- John Maddox – Design Manager
- Jeremy Schlussel – Bridge Design
- Jeff Basford – Geotechnical
- David Gertz – Drainage/SWM

*For a project with multiple phases or 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.*