

ORIGINAL

STATEMENT OF QUALIFICATIONS

Design-Build Route 7 and Battlefield Parkway Interchange

State Project No.: 0007-253-009, P101, R201, C501, B601 Federal Project No.: STP-5A01(704) Contract ID Number: C00106573DB101







JANUARY 31, 2018

3.2 Letter of Submittal





January 31, 2018

Mr. Stephen D. Kindy, P.E. Alternate Project Delivery Division Virginia Department of Transportation 1401 East Broad Street Richmond, VA 23219

Letter of Submittal | Design Build | Route 7 and Battlefield Parkway Interchange | Town of RE: Leesburg, VA | State Project No.: 0007-253-009, P101, R201, C501, B601 | Federal Project No.: STP-5A01(704) | Contract ID Number C00106573DB101

Dear Mr. Kindy:

3.2.1 Corman Construction, Inc. (Corman), 12001 Guilford Road, Annapolis Junction, MD 20701 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 our original SOQ

3.2.2 Point of Contact	Secondary Point of Contact	3.2.3 Principal Officer of Legal Entity
Scott Szympruch, PE	Lou Robbins, PE, DBIA	Arthur C. Cox, III
Vice President of Engineering &	Vice President Design-Build	President
Estimating	Corman Construction, Inc.	Corman Construction, Inc.
Corman Construction, Inc.	12001 Guilford Road	12001 Guilford Road
12001 Guilford Road	Annapolis Junction, MD 20701	Annapolis Junction, MD 20701
Annapolis Junction, MD 20701	703-772-8566 -Cell	410-792-9400 -Telephone
301-343-5476 -Cell	301-953-0384 -Fax	ccox@cormanconstruction.com
301-953-0384 -Fax	lrobbins@cormanconstruction.com	
sszympruch@cormanconstruction.com		

3.2.4 Corporate Structure: Corman will be the design-build contracting entity for this project. Corman is a corporation titled in Delaware and a wholly-owned subsidiary of CG Enterprises, Inc. and will be the sole major participant firm and responsible party to the design-build contract with VDOT. Corman will hold all financial responsibility for the contract.

3.2.5 Lead Contractor: Corman Construction, Inc. | Lead Designer: Rummel Klepper & Kahl, 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 signed and are in the Appendix.

3.2.8 Corman's VDOT Prequalification Evidence (C097-Active) is in the Appendix.

- **3.2.9** Surety Letter is 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 is committed to achieving a 13% DBE participation goal for the entire value of the contract.

Sincerely,

CORMAN CONSTRUCTION, INC.

Arthur C. Cox, III, President

3.3 Team Structure



3.3 TEAM STRUCTURE

With a track record of successfully delivering over \$2 billion in design-build (DB) roadway and bridge projects, Corman comes to VDOT with the hands-on experience and top-notch personnel needed to effectively execute the design and construction, as well as manage the risks of the Route 7 and Battlefield Parkway Interchange Design-Build Project. During our 15-year design-build history, Corman has exceeded owners' expectations in the on-time, on-budget delivery of high-quality projects, while meeting some of the most strenuous maintenance of traffic and environmental commitments. Out of these ventures, over \$1 billion have included contractor-led QC programs.



CORMAN CONSTRUCTION, INC.

Construction & Project Management

RUMMEL, KLEPPER & KAHL, LLP

Lead Designer

CARDNO, INC. Utility Coordination

ERM & ASSOCIATES, LLC Right-of-Way

H & B SURVEYING & MAPPING, LLC (DBE) Surveying

QUINN CONSULTING SERVICES, INC. (DBE)

Quality Assurance

RHODESIDE & HARWELL, INC. (DBE)

Landscape Architecture

SCHNABEL ENGINEERING, LLC Geotechnical

> SPECIALIZED ENGINEERING

QA Laboratory

UNDELAND MANAGEMENT Stakeholder Coordination



Through the years, Corman has built a solid reputation of strategically aligning with the design-build partners most suited to meet the specific needs and requirements of the project at hand. For the Rt. 7 / Battlefield project, we selected Rummel, Klepper & Kahl, LLP (RK&K) as our lead design firm with the added depth of sub-consultants: Cardno, Inc., ERM & Associates, LLC, H & B Surveying and Mapping, LLC, Rhodeside & Harwell, Inc., Quinn Consulting Services, Inc., Schnabel Engineering, LLC, Specialized Engineering, and Undeland Management. Together these firms make up the **Corman | RK&K DB Team**.

The **Corman** | **RK&K DB Team** will deliver success with seasoned professionals and resources, providing the highest level of quality to ensure that the project will be completed within our promised budget and schedule.

Over the last several years, Corman has successfully worked with RK&K on the following design-build projects:

PROJECTS (* Award Winning)		
* Intercounty Connector Contracts A & B (Montgomery County, MD)		
* Rt. 29 Solutions (Charlottesville, VA)	DB	
* I-64 / Rt. 623 Widening & Interchange (Short Pump, VA)	DB	
* MD Rt. 216 US 29 to I-95 (Howard County, MD)	DB	
* Frederick Douglass Bridge and South Capitol Street over Anacostia River (Washington, DC)	DB	
Military Highway Widening & Continuous Flow Intersection (CFI) Reconstruction (Norfolk, VA)	DB	
Salisbury Bypass Bridge Reconstructions (Salisbury, MD)	DB	

Four of the above Design-Build (DB) projects included Schnabel as the lead Geotechnical Engineer. H & B was the lead surveyor on the I-64 / Route 623 Widening & Interchange DB Project with Corman/RK&K. As evidenced above, the **Corman** | **RK&K DB Team** have strong pre-established working relationships going back 15 years, and therefore understand each other's strengths and abilities. This existing relationship will assist in getting the Route 7/Battlefield Project off to a fast start and ensure smooth communication between the lead contractor and designer.

3.3.1 KEY PERSONNEL

The **Corman** | **RK&K DB Team** has assembled a team of highly-qualified and experienced individuals, and structured them accordingly for optimal performance. These key staff and design firms come together with a shared past history on award winning successful projects, have established working relationships, and are ready to hit the ground running. Though our task leaders and technical staff are responsible for items such as design, public involvement

and/or construction, everyone is ultimately responsible for the total success of the project. The chart below introduces our Key Personnel (resumes in Appendix - Attachment 3.3.1):

Design-Build Project Manager	Scott Szympruch, PE - Corman
Quality Assurance Manager	John Vicinski PE - Quinn
Design Manager	Owen Peery, PE - RK&K
Construction Manager	Kyle Kern - Corman
Lead Utility Coordination Manager	Mike Woods - Cardno

Our key personnel team is comprised of experienced design-build professionals that will manage the project risks through personal accountability and competence. Each individual is a seasoned professional with at least 21 years of experience within the industry and proven design-build experience. In addition, our Design Manager has served in the same position on two recent and successful Corman DB projects for VDOT: Route 29 Solutions and I-64 / Route 623 Widening and Interchange Projects.

Value Added Design and Construction Staff

In addition to the key personnel listed, we have assembled a *value added* team of professionals to lead design disciplines and construction management. They were selected because of their proven expertise in engineering, and construction on past VDOT design-build projects. Listed below you will find short biographies on each of these professionals. Each individual was hand-selected based on their experience relative to the Rt. 7 / Battlefield project's scope and complexities, as well as their familiarity working together. A DB has been placed next to the names of the individuals with design-build experience.

DB Stakeholder Coordination Manager (SCM), John Undeland, PE (Undeland), has more than 20 years' experience with some of the region's most high-profile, high-stakes projects. Due to the critical nature and project risk of not properly keeping the driving public, elected officials and local community groups informed and engaged, we have asked John to lead this effort. John has worked in a similar capacity with Corman and/or RK&K on numerous high-profile, design-build projects including the Intercounty Connector, Woodrow Wilson Bridge, and the Frederick Douglass Bridge and South Capitol Street over Anacostia River. He has also led public outreach efforts for the Tappan Zee/Cuomo Bridge replacement in New York and the New York Avenue Bridge project in Washington, D.C. For his work on transportation projects in the Washington, D.C. metropolitan area, John has been honored with two Thoth Awards for Community Relations from the Public Relations Society of America. John will report to the DBPM with an open line of communication to the VDOT PM.

Design/Construction Integrator (DCI), Lou Robbins, PE, DBIA (*Corman***)**, has been involved with regional design-build projects since 1986 and has over 45 years of experience. He has led design-build teams as the General Contractor (GC), Lead Designer, and Quality Control Manager. Lou's unique experiences as both the lead designer and GC will greatly assist in coordinating the efforts of the **Corman | RK&K DB Team** to ensure the project's success in meeting VDOT's requirements. He will review all design submittals for conformance to project requirements, constructability and specific project scheduling needs. Lou lives in NOVA near the Project and is familiar with the project environs. He has worked with RK&K on over a dozen projects and knows their staff's strengths and weakness, allowing him to spend the time on the areas that need him the most. This association has included many of those listed on the Organizational Chart, including the DM. Lou will report to the DBPM. He is also a current member of VTCA's DB committee.

DB Right-of-Way Manager, Craig Anderson (*ERM*), has over 15 years' experience in ROW acquisition and will lead preparing the ROW Acquisition and Relocation Plan. Craig, and ERM Associates, are a VDOT Pre-qualified Right-of-Way consulting firm. He is working with Corman on the DB I-64 Widening Exits 200-205 facilitating utility relocations. He has performed ROW services, similar to Rt. 7 / Battlefield, for the following municipal / utility clients: Loudoun Water, Fairfax Water, City of Falls Church, and Prince William County. This experience will enhance his ability to expedite ROW easements on this new project. Craig will report to Owen Peery, the Design Manager (DM).

DB Safety Manager, Steve Simpson, CSP, CHST (*Corman*), reports to Kyle Kern, Construction Manager (CM). Steve will provide regular oversight of plans and field activities to provide a safe environment for VDOT, construction workers and the traveling public. Steve, has over 30 years of experience, and over six years working on DB projects, including three with RK&K – Fall Hill Avenue & Mary Washington Blvd., Extension for VDOT CSX's Arkendale to Powell's Creek third track installation, and Rehabilitation of 11 bridges on Rt. 13 in Salisbury, MD. He will provide all needed safety training for the project and aid in developing a job-specific safety plan to address unique project hazards that will enhance our standard Corman policies, including subcontractor protocols. Steve has the authority to stop work which does not meet Corman's strict safety requirements.



DB Roadway Engineer, John McDowell, PE, Associate DBIA (*RK&K*), brings his more than 37 years of experience in the transportation field, focusing on complex roadway and intersection design for this contract. John's interchange projects include: the preliminary design of the Route 7 and Route 9 interchange (a barbell roundabout); interchange design for the I-395/Boundary Channel Drive improvements; preliminary design of the Jones Branch Connector/I-495 Express Lanes interchange; final design of I-10/Hammond Boulevard PARCLO in Jacksonville, FL; and design of the I-95/J Turner Butler Boulevard directional interchange in Jacksonville, FL. He is currently developing a preliminary design for converting the existing interchange of Route 7 and Route 123 into a raised roundabout interchange. He will report to Owen Peery, DM, and serve as the second point of contact for the design team. Based in RK&K's Fairfax office, John will lead the roadway design work. He is serving as Project Manager for the Richmond Highway Multimodal Improvements in Fairfax County for VDOT, as well as providing Quality Control for the DB I-64 Widening / Rt. 623 Interchange Improvements with Corman. John also has experience working with the Town of Leesburg and Loudoun County on roadway projects in the vicinity of the Rt. 7 / Battlefield Parkway interchange and understands the issues related to accommodating design in the right-of-way, including utility relocations and properly maintaining traffic during construction.

DB Structural/Bridge Engineer, John (JJ) Farley, PE (*RK&K*), will report directly to the DM and will be in charge of structural engineering for the project, including but not limited to bridge, foundation, and retaining and sound wall designs. John, with 24 years of experience, will lead production efforts for all structural engineering plans, estimates, and specifications for the project including the phased demolition of the existing bridge. He will also review structural shop drawings and assist the DBPM, CM and DM during construction, as needed, for structural engineering project questions that arise. John will collaborate with the entire design and construction team leadership for constructability characteristics, inter-operability of bridge/ roadway/ utilities/ drainage aspects, and project cost control. John is currently leading the design of the Great Bridge Boulevard Bridge over I-64 and all noise barriers, signs structures, retaining walls and drainage structures on Corman's joint venture DB High Rise Bridge Project for VDOT.

DB Traffic Management, Stuart Samberg, PE, PTOE, *(RK&K)***,** is an experienced transportation and traffic engineer. Stuart is familiar with all aspects of transportation planning and brings 12 years of experience, predominately in the Commonwealth of Virginia, to this contract. He has experience with Corman on other recent design-build projects, including the Route 29 Solutions Project in Charlottesville and the I-64 Widening project in Goochland and Henrico Counties. Stuart has been the lead traffic or MOT engineer for multiple interchange projects, including designs for Single Point Urban Interchanges such as Route 29 at Rio Road and I-40 Business at Macy Grove Road in Forsyth County, NC. Stuart will report to Owen Peery, DM, and collaborate with the Construction MOT Manager, John Burgess to resolve any unexpected MOT issues during construction.

DB Geotechnical Engineer/Pavement Design, Ed Drahos, PE (*Schnabel*), will be in charge of all aspects of geotechnical engineering and evaluation for the project, including but not limited to bridge, retaining wall and soundwall foundations; evaluation of potentially unsuitable soils; cut slope stability, embankment stability and settlement, pavement design and geotechnical construction considerations. He will also assist the DM and CM during construction, as needed, for earthwork and geotechnical project questions. Ed has over 25 years of experience in geotechnical engineering related directly to similar transportation projects for VDOT and various localities in Virginia. He has teamed with Corman on several DB projects including Military Highway CFI, Route 1 at Fort Belvoir, Route 29 Solutions, and is currently the Lead Geotechnical Engineer on the Corman/RK&K I-64 High Rise Bridge Project. Ed will report to Owen Peery, DM.

Drainage/Hydraulics Design Engineer, Brian Finerfrock, PE (*RK&K***)**, reports to Owen Peery, DM, and has more than 15 years of advanced drainage and hydrologic and hydraulic analysis experience in the NOVA area. He spent six years serving as the VDOT River Mechanics Engineer in the NOVA District. His project experience includes overseeing drainage design and H&HA on the Battlefield Parkway Design-Build project during his tenure at VDOT. Brian also has extensive experience leading and overseeing complex drainage designs for VDOT and local clients. He is DEQ certified as a SWM administrator and plan reviewer, and has established relationships with Town of Leesburg staff. Brian's relevant consultant DB experience includes I-64 Widening / Rt. 263 Interchange Improvements, the Route 29 Solutions (both with Corman), and the Route 250 Bypass Interchange at McIntire Road.

Erosion and Sediment Control Engineer, Alice Ortman, PE (*RK&K*), is experienced in erosion and sediment control design and other water resources engineering services for transportation projects. She will report to Owen Peery, DM. Alice has 14 years' experience in stormwater, erosion and sediment control design and other water resources engineering services for transportation projects. She served eight years at VDOT as an Associate Hydraulic and River Mechanic Engineer. Alice's experience includes the design of roadway drainage



systems, stormwater management design, stormwater pollution and prevention plans, and erosion and sediment control plans for both rural and urban projects, as well as Hydrologic and Hydraulic Analyses (H&HA's) and scour computations. She was the Hydraulic Engineer for the VDOT DB I-64 Widening / Rt. 623 Interchange Improvements Project with Corman.

DB Lead Environmental Design & Permitting Coordinator, Ricky Woody, II, PWS (*RK&K*), has 28 years' experience providing project management and preparation of various NEPA documents, securing wetlands and water quality permits and promoting compliance with environmental clearances for both large and small transportation projects. He has a strong foundation in environmental resource studies which is required for successful document/permit approvals. Ricky has experience in performing project reviews and providing corrective action recommendations to remain compliant with project specific environmental commitments. He has been involved in numerous VDOT projects providing environmental engineering and services and has managed all environmental aspects of several major and minor infrastructure projects, including the DB projects of the High Rise Bridge / Widening, I-64 Widening / Rt. 623 Interchange Improvements, Route 29 Solutions, all with Corman, as well as the King Street Improvements, Woodrow Wilson Bridge, Manassas Bypass, and Fairfax County Parkway. Ricky will report to Owen Peery, DM.

Utility Design Engineer, Jeffrey Kapinos, PE (*RK&K*), will be responsible for utility impact analysis and utility relocation design. He will verify and mitigate conflicts; determine costs and responsibilities; conduct utility field inspections; review third party utility relocation designs; verify and modify designs, as necessary, based on field conditions and construction activities; and ensure continuity of service. He will work hand in hand with Lead Utility Coordination Manager, Mike Woods. Jeff was the Lead Utility Engineer on the VDOT DB I-64 Widening / Rte.623 Interchange Improvements Project with Corman, the City of Fairfax drainage and utility relocation project in the Old Town District, and the utility projects along State Route 3 in King George County. Jeff, while reporting directly to Owen Peery, DM, will interact closely with the Lead Utility Coordination Manager, Mike Woods.

3.3.2 ORGANIZATIONAL CHART

The **Corman | RK&K DB Team** organizational chart, at the end of this section, illustrates our "*chain of command*" and notes key personnel team members. 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 between Design and Construction team, and obligations to the owner and/or Corporate Management. The chart also shows that a clear separation exists between QA and Construction QC inspection and field/laboratory testing.

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 ultimately lead to client satisfaction. Our Design/Construction Integrator (DCI), Lou Robbins, PE, DBIA, will ensure the required interface between Corman's management/field crews and the designers occurs in a timely manner with the concerns of each openly discussed. Having a dedicated DCI work on the project during the early design stages 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. Additional ways in which our team will be fully integrated include:

- Inter-disciplinary design reviews prior to milestones to ensure design disciplines are coordinated
- Corman constructability reviews of design, especially for MOT, Utilities, Drainage and Bridge Foundation Plans
- Weekly schedule meetings to review the previous weeks work and develop the three week look ahead, and monthly scheduling meetings to review CPM progress during design development and construction
- Weekly foreman meetings to discuss the schedule, safety and coordination
- Morning huddles with the crews to set the safety and production goals for the day
- Weekly progress meetings with the owner to review and discuss quality, submittals, and progress payments once construction begins
- Monthly partnering meetings with all stakeholders for issue resolution

Design-Build Project Manager (DBPM) Scott Szympruch, PE (*Corman***)** is responsible for project design and construction, quality management, safety and environmental compliance, contract administration, and all other services required including procuring/furnishing materials, equipment, services, and labor required by the contract documents. He will attend all monthly progress meetings and be available to VDOT



as required. Scott also 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 and will coordinate, integrate, and administrate the Corman / RK&K DB 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 DM, DCI, CM, QAM, Lead Utility Coordination Manager, *and manage/coordinate any public outreach and public meetings through John Undeland.* He will be involved with preconstruction, design, construction, and punch out and will answer questions from stakeholders, citizens, elected officials, etc. Scott will assist with constructability reviews, safety audits, and oversee the quality management program, purchasing, and construction operations.

DB Quality Assurance Manager (QAM), John Vicinski, PE (*Quinn***)**, reports directly to the DBPM and will have direct, independent access to VDOT. He will ensure all work is performed in conformance with contract requirements, *Minimum Requirements for QA and QC on Design-Build and Public-Private Transportation Act Projects*, approved designs, and "*approved for construction*" plans/specifications. He will be responsible for development and adherence to the QA Plan, QA inspection and testing of all materials used and work performed. As an independent entity, John will audit and monitor Corman's Construction Quality Control Program. He will have the ability to stop construction, enforce compliance with all specifications, and issue/require resolution of all Non-Conformance Reports (NCRs). John will manage all aspects of 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 with the construction quality control team. He will maintain project quality records and approve and submit pay estimates. In addition, John will submit monthly written reports to the VDOT project manager and Corman's Executive Committee. John is a current member of the DB committee for VTCA and former member of the ECLC.

Design Manager (DM) Owen Peery, PE (*RK&K***), will also report directly to the DBPM. He will be responsible for providing a quality engineering product, meeting design milestones, continual Corman** | **RK&K DB Team** coordination and ensuring the Design QA/QC Manager and independent reviewers are not tasked with other project responsibilities. Owen will develop and oversee a rigorous QC and QA program to ensure design work is performed in accordance with the contract, current VDOT Policies, Procedures and Guidelines. He will manage the design elements including roadway, structural, hydraulic, traffic, MOT, ROW, utilities, environmental, and geotechnical. Owen will allocate and assign resources, oversee H & B Surveying & Mapping for surveying, coordinate design and review schedules, develop and implement corrective measures, if necessary, and integrate environmental compliance measures into the design. He will coordinate design and construction with each discipline lead to achieve commitments. Owen will remain involved once construction starts to oversee any plan modifications, ensure field changes/modifications meet the approved design(s), revisions are documented in As-Built plans, response to Requests for Information (RFIs), review shop drawings, and review construction / MOT activities with the CM as work progresses to see if there are unrealized opportunities or needs for change. Owen

DB Construction Manager (CM), Kyle Kern (*Corman***)** will report directly to the DBPM. Kyle has 29 years of the 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 comprised of Project Controls, Construction QC Manager, superintendents, and project field staff including scheduling, safety, environmental compliance, utilities and MOT. *Kyle will only 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 QA/QC Manager in design constructability reviews, and work with DCI Lou Robbins to coordinate between the design and construction forces with regard to environmental commitments, utilities, ROW, and MOT. Along with his staff, Kyle 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 DM during construction for the accurate and timely issuance and review of any RFIs and shop drawings, as well as field visits, preparation of as-builts and plan revisions. Kyle was the CM on several past Corman DB projects including I-70 Reconstruction, Frederick, MD, Rehabilitation / Reconstruction of 11 bridges in Salisbury, MD (designed by RK&K), and CM Structures ICC-A in Gaithersburg, MD.

DB Lead Utility Coordination Manager (LUCM), Mike Woods (*Cardno*), reports directly to the DBPM and is responsible for coordination of all utility relocations. With 32 years of experience working with utility engineering and coordination services, Mike will coordinate utility relocation design, review/recommend approval of utility relocation plans and estimates, and ensure inspection of utility relocation construction. He will review



utility relocation designs prepared by a PE for contract utility relocations and to verify/modify designs based on field conditions and construction activities. Mike will verify conflicts, determine cost responsibilities, conduct utility field inspections, coordinate utility relocation design, review/recommend approval of utility relocation plans and estimates and ensure inspection of utility relocation construction and provide regular updates to the VDOT Project Manager. He worked on the VDOT side of the Route 29/Rio Road project and the Intercounty Connector with RK&K. Mike is currently working with Corman / RK&K on VDOT's largest DB project to date – Replacement of High Rise Bridge, Chesapeake, VA.

Keys to Success

Proper communication and coordination between the many parties involved in this project (i.e. **Corman | RK&K DB Team**, VDOT, review agencies, all stakeholders) are the keys to success. This cooperation will be based upon open and honest communication plus frequent meeting and updates. The **Corman | RK&K DB Team** will have internal weekly meetings during the design phases with key construction and design staff present. Tracking sheets will be developed to track progress of utilities, various design disciplines efforts, and environmental and design approvals. Once construction starts, the design participants will be reduced to the DM, DCI, Design QA/QC Manager, and key design discipline leaders. Added to the weekly meetings as the construction begins will be the superintendents, field surveyors, MOT Manager and Construction QC Manager. Key stakeholder representatives including Business and Commercial establishments, Town of Leesburg, County Staff, utility companies, EMS responders, etc. maybe invited to these weekly meetings. Monthly meetings will also be held with the **Corman | RK&K DB Team**, as well as VDOT, QAM, stakeholders and others required to enhance the partnering effort and resolve any pertinent issues.

Quality assurance efforts will be coordinated with, but independent of the day-to-day QC and construction efforts. The QAM, John Vicinski, PE, will be given timely notice of all construction activities so his QA staff can be onsite at the appropriate and required times 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 all contractual and design requirements. John will report directly to the DBPM and provide VDOT and the project's Executive Committee with the reports and assurances required. He will have unrestricted access to the construction and fabricator sites/facilities. A representative of Corman's management team will contact the QAM monthly to confirm the project is in compliance.



Solid lines identify the reporting relationships of our team VDDT 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 between Design and Construction team, and obligations to the owner and/or Corporate Management. 3rd Party Stakeholders Stakeholder **Design-Build Project** Executive Committee VDOT, Dominion Virginia Power, Comcast, Verizon, Columbia Gas, County Water & Sewer, Loudon County, Town of Leesburg, Federal Aviation Administration, County Public Schools, Homeowners, Local Commercial Retail Businesses, Commuters, Pedestrians, Custor First Fuer EMS, Pedies **Coordination Manager** Manager Arthur C. Cox, III - President (CCI) Miriam "Mimi" Kronisch, PE, CCM (RKK) ▲ John Undeland (UM) Scott Szympruch, PE (CCI) Cyclists, Fire, EMS, Police **Construction Management Quality Assurance** Design Management **Quality Control** - Design Manager Design QA/QC Manager + QA Manager - Construction Manager Owen Peery, PE (RKK) Eric Mellor, PE (RKK) John Vicinski, PE (Q) Kyle Kern (CCI) **Roadway Engineer Erosion / Sediment Control Construction OC Manager OA** Inspection ▲ John McDowell, PE, Assoc. Engineer Project Controls / Zachary Traywick (CCI) DBIA (RKK) OA Lab ▲ Alice Ortman, PE (RKK) **DBE** Compliance **OC** Inspection Dusan Golac (CCI) Specialized Engineering Noise Analysis / Designer Structural/Bridge Engineer Joe Rauseo (RKK) ▲ John (JJ) Farley, PE (RKK) QC Lab Safety Manager ▲ Steve Simpson, CSP, CHST Surveying / Plats ITS / Traffic Signals Leslie (Les) Byrnside, LS (HB) (CCI) Barry Brandt, PE, PTOE Subsurface Utility Locating **Design/Construction Right of Way** (RKK) Superintendents & Foremen Cardno Integrator Drainage / Hydraulics Signing / Striping **ROW Manager Design Engineer** Jeffrey Kuttesch, PE, PTOE ▲ Craig Anderson Lou Robbins, PE, DBIA ▲ Brian Finerfrock, PE (RKK) (RKK) (ERM) (CCI) Utility Manager Utility Design Engineer Geotechnical Engineer / Appraisals / Offers / Richard Young (CCI) ▲ Jeffrey Kapinos, PE (RKK) **Pavement Design** ► Lead Utility Negotiations / Title ▲ Ed Drahos, PE (S) **Coordination Manager** Lead Environmental Design Reports / **Construction Environmental** Mike Woods (CN) Settlements & Permitting Coordinator Controls Lighting ▲ Ricky Woody, II, PWS Heather Henke, PE, PTOE Jeff Walton (CCI) (RKK) (RKK) **Traffic Management** Landscape Architecture **MOT Manager** Mark Mastalerz, RLA (RHI) Stuart Samberg, PE, PTOE John Burgess (CCI) (RKK) LEGEND ▲ Value Added - Key Personnel Direct Report Indirect Report RKK = Rummel, Klepper & Kahl CN = CardnoERM = ERM & Associates HB = H&B Surveying (DBE) CCI = Corman Construction O =Quinn Consulting (DBE) RHI = Rhodeside & Harwell (DBE) S = Schnabel Engineering UM = Undeland Management SE=Specialized Engineering

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3.4 Team Experience



3.4 TEAM EXPERIENCE

The **Corman** | **RK&K DB Team** have successfully teamed on similar past, complex projects including two highly successful VDOT Design-Build projects – Route 29 Solutions in Charlottesville and I-64 / Rt. 623 Interchange in Short Pump, VA. We are currently working together on two other VDOT DB projects – Military Highway in Norfolk VA, and High Rise Bridge in Chesapeake VA. This work history will enhance the **Corman** | **RK&K DB Team's** ability to identify, openly discuss and solve issues as they arise on the project.



Corman Construction, Inc. (Corman) will serve as the Lead Design-Build Contractor. A privately-held family business since 1920, Corman is a licensed heavy civil contractor specializing in highway, bridge, restoration, and heavy utility construction. Corman

prides itself as a "Best in Class" contractor where our "A" ratings confirm the quality in our projects. Known for unparalleled partnering, Corman delivers projects on-time and on-budget without lingering disputes. We hold employee and public safety to a high standard and our 0.86 EMR ranks Corman in the top of the upper quartile of civil contractors validating our commitment to quality. Throughout the last few years, Corman received 20 local and national awards on three design-build projects. Other honors include the 2016 VTCA Transportation Contractor Safety Award Honorable Mention, 2011 Maryland Washington Minority Contractors Association Prime Contractor of the Year Award, and the 2011 ARTBA Women Leadership in Transportation Glass Hammer Award. Corman has constructed projects in Virginia for over 30 years.

Corman has successfully delivered over \$2B of design-build roadway and bridge projects, many of similar scope and complexity to this project, including those for VDOT, DDOT, NCDOT, and MSHA. Current or recent VDOT Design-Build projects (with some setting a precedent regarding the first of its kind in Virginia) include:

- I-64 Widening / Replacement of High Rise Bridge, Chesapeake VA VDOT's first use of ATCs in the selection process and largest VDOT DB project to date
- Route 29 Solutions, Albemarle, County, VA VDOT's First Project with a Responsible Charge Engineer as a Key Personnel and second flash track project
- Military Highway (CFI), Norfolk, VA Virginia's First Continuous Flow Intersection
- I-64 / Route 15 DDI, Zion Crossroads, VA Virginia's First Diverging Diamond Interchange

Rummel, Klepper & Kahl, LLP (RK&K), will serve as Lead Designer and will provide overall project management for all design activities. RK&K is ranked 76th on the 2017 Engineering News Record's listing of the "Top 500 Design Firms," and serves an array of federal, state, and local clients from four Virginia offices and multiple offices throughout the Mid-Atlantic and Southeast US. RK&K has provided professional engineering and construction support services on assignments to be procured and administered in accordance with design-build, public-private partnership (P3), general engineering consultant (GEC) or program management consultant (PMC) for more than for 20 years. With more than \$2.7B of designbuild projects in the region, the firm has significant design-build and alternative delivery project experience. Services on design-build projects have included, but are not limited to: providing complete location survey, supplemental survey, updating existing plans, developing right of way and construction plans, roadway design, hydraulic and drainage design, stormwater management design, traffic engineering and analysis, utility design, structure and bridge design, geotechnical and geophysical services, preparations of environmental documents (NEPA), permit drawings, public involvement, constructability reviews, cost estimating, schedules, special provisions, project audits, claims support services, development / preparation of RFQs and RFPs, and engineering support in the evaluation of SOQs and EOIs. RK&K has relevant experience delivering road and bridge DB projects as well as a solid reputation of strategically aligning teams to meet the specific needs and requirements of this project.

Our Team has carefully selected sub-consultants to further enhance our team capabilities. RK&K has enjoyed long standing relationships in the design arena with Schnabel, H & B, and Rhodeside & Harwell, and look forward to delivering another successful project. In addition, H & B, Rhodeside & Harwell, and Quinn bring W/DBE participation to our team. *Corman has worked with all the sub-consultants listed in the Organizational Chart*!



3.5 Project Risks



3.5 PROJECT RISKS

The **Corman | RK&K DB 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 procedures. Our Team's risk management process has already sprung into action and will evolve throughout design and construction, positioning us to respond quickly and effectively as issues unfold.

The **Corman** | **RK&K DB Team** will employ a five-step risk management approach to the project including the following stages:

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

Identify Monitor / Review MANAGEMENT PLAN Manage (Analyze

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

Risk No. 1 – Maintenance of Traffic

Risk Identification: Maintenance of Traffic (MOT) is a risk because an improperly executed plan could lead to driver frustration, gridlock, the potential for crashes, and the subsequent erosion of public confidence in VDOT.

Why this Risk is Critical: Route 7 currently carries over 84,000 vehicles per day and is a major commuter route between Loudoun County and the greater Washington, DC area. Battlefield Parkway carries more than 20,000 vehicles per day and connects Route 7 to growing residential and retail areas, and the Dulles Greenway. Since the proposed improvements are being constructed on top of the existing Route 7 travel lanes, significant care must be taken to maintain traffic flow while the interchange improvements are safely constructed.

All types of travelers will be impacted including commuters, shoppers, family activities, and delivery drivers. Driver frustration often results in them taking chances that further increase delays and the likelihood of crashes. Creating delays and bottlenecks in the construction zone will also entice drivers to use alternate roads that may increase congestion and hazards on these other routes. For example, drivers may use Potomac Station Drive where John W. Tolbert Jr. Elementary School and Harper Park Middle School are located. The interaction of school access, a school crossing and additional commuters and shoppers may result in an untenable conflict between the activities. Also, Route 7 is designated as a National Highway System (NHS) roadway, and VDOT requires that the level of service of the road not be significantly degraded by construction.

Risk Impact to the Project: There are three tenets to a successful MOT plan:



Mobility Safety is paramount – this is reflected to the traveling public and the construction team. The MOT plan must reflect an orderly and well executed plan so traffic can flow through the construction zone, while minimizing potential harm to everyone; *Mobility* is important because construction must ensure that traffic can pass through the work zone efficiently, minimizing any temptation for motorists to engage in risky driving or diverting to local residential streets; and *Access* must be considered as people and businesses need to continue their activities as road improvements are constructed.

The Rt. 7/Battlefield Parkway MOT plan must be prepared to enhance these important tenets. The **Corman | RK&K DB Team** will devise a MOT plan with these major considerations in mind. As it is developed and executed, we will focus on the following challenges:

1. Gridlock due to traffic not being able to pass through the construction zone. Vigilant oversight of traffic flow will ensure that traffic keeps moving due to planned or unforeseen encroachments into the travel lanes.



- 2. Monitoring traffic flow continuously to identify congestion impacts that can result in delay and economic consequences to commuters and businesses. We will incorporate adaptability into our MOT plan to swiftly react to unforeseen conditions.
- 3. Preventing crashes and provisions for emergency vehicle access so the health and welfare of the community is not compromised.
- 4. Maintaining a positive public opinion of the project to prevent a diminished perception of VDOT and the design-build team and/or an outcry to their elected officials.

The **Corman** | **RK&K DB Team** is poised to manage and be responsive to the challenges that will inevitably occur during construction. Of primary importance will be to facilitate traffic flow with the least disruption to the traveling public. Constructing a new bridge and embankment on top of the existing active intersection will require temporary pavements and employing several MOT stages. Complicating this strategy are several challenges:

- Temporary construction easements may be needed to reroute traffic with temporary pavements. We will negotiate these easements with the adjacent property owners timely.
- Transmission towers are immovable and several utilities are present along Route 7 and Battlefield Parkway. Our MOT team will prepare an MOT plan that will "thread the needle" to avoid utilities and minimize impacts to their right of way.
- Responsible environmental stewardship is a hallmark of our responsible and conscientious team, especially considering there is a stream crossing just west of the intersection. The footprint of any temporary embankments and pavements will be kept within the limits of construction of the proposed road to prevent the need for additional environmental permitting.

Since each of these factors could impact the schedule, cost and the success of this project, each will be managed as the project is designed and moved into construction.

Risk Mitigation Strategies and Team Experience That will Ensure Successful Delivery of the Project: As part of design development, the designers and construction personnel will work shoulder-to-shoulder to design a MOT plan that will safely and efficiently handle traffic while the project is built. Since preparing an effective MOT plan is much like solving a jigsaw puzzle, a multi-phase MOT plan will be developed that will create temporary traffic shifts while the bridge and overpass embankments are constructed in phases. This is where the shoulder-to-shoulder approach is essential to success as the designers can interact with those constructing the project to ensure staging strategies can be developed without impacting Corman's ability to construct the improvements.

Our team has worked together in the past resulting in highly successful, complex projects that were completed efficiently and with the least impact to the traveling public. The Route 29 Solutions / Rio Road Grade Separated Intersection in Charlottesville, VA completed 57 days early and earning a \$7+ Million incentive bonus, is a prime example. This success was a result of our team taking the following steps which will also be used on the Battlefield project as appropriate:

- Developed a detailed Work Zone Traffic Impact Study (WZTIA) that included queue lengths and signal timings for detour routes for the partial closure of the Rio intersection.
- Implemented temporary signals and detour signing and routes ahead of the partial closure so that driver behavior could be changed and they would get used to the new routes. This allowed us, in conjunction with VDOT, to refine signal timings ahead of this major phase of the work.
- Worked with VDOT in developing graphics and information for a *Get Around Map* that was distributed through public outreach and local businesses. It showed how to get to businesses in the area and/or how to travel through the area during the partial closure.
- Developed an Incident Management Plan with pre-selected messages, signage and implementation plans for potential incidents. This covered smaller, localized incidents all the way to regional incidents that included advance messaging as far away as Northern Virginia.

As we undertake the planning for our MOT strategy, we will first consider time-of-year implications of our work. While daily commuter and business traffic is ongoing throughout the year, we see this area as being particularly congested during the holiday season when shoppers frequent the Leesburg Corner Premium Outlet, the Battlefield Center and other shops near the Route 15 Leesburg Bypass at Fort Evans Road and Edwards Ferry Road, as well as businesses at the intersection of Route 7 and Battlefield Parkway, including Lowes Home Improvement and Marketplace at Potomac Station. Since Battlefield Parkway provides roadway connections to these businesses, we will consider traffic flow and access as essential to minimizing business economic impacts and patron frustration. We will implement lane closures and traffic stoppages to minimize construction impacts. This will be closely coordinated with VDOT NRO and the Town of Leesburg to ensure that construction has the least impacts during these periods.



Our MOT approach has already started with strategy sessions to evaluate ways to build the proposed improvements on top of the existing congested roadway and intersection. We will reroute the traffic flow to temporary roadway just east of the intersection so that the bridge and a portion of the embankments can be built. Subject to a traffic operational analysis, we propose a temporary five-lane roadway section that will fit between the proposed bridge structure/roadway embankment and the existing transmission tower located at the southeast quadrant of the intersection, approximately 270-ft. from the centerline of Battlefield Parkway. This will allow two-way operation of the roadway without the need for utility relocations as the bridge and west side of the interchange is built. As we develop temporary pavements that will encroach on adjacent properties and utilities, our team will be out in front of the process by contacting the property and utility owners to discuss their requirements and concerns, as well as to negotiate an agreement that satisfies all involved. Since the proposed traffic shift will be one of the first steps in the project construction, we will immediately contact these parties and initiate discussions as to how we can come to agreement on constructing the temporary road. We will be able to start upon Notice-to-Proceed as we have already identified a strategy for constructing the project and have an initial scheme for building the temporary roads.

While our strategy is to maintain traffic at the intersection, there is a substantial grid of adjacent roadways (as depicted in the map to the right) that we expect local travelers may use to avoid the construction zone. Therefore,

as part of our MOT success strategy, we will review those route alternatives to determine ways to facilitate traffic flow and discourage traffic through neighborhoods or places of high pedestrian traffic. For example, Potomac Station Drive runs between a residential area and two schools. Since pedestrian traffic could be significant, we will work with VDOT and the town to develop a plan to discourage cut-through traffic along this road during construction. One strategy may be to work with VDOT NRO to adjust traffic signals on alternate routes to enhance throughput during construction.

Environmental concerns will be mitigated by keeping the proposed roadway improvements within the footprint of the proposed final roadway improvements where the project encroaches on environmentally-sensitive areas. To ensure we are not surprised by an unforeseen issue, we will coordinate with our environmental teammates throughout design to make sure that no additional environmental concerns arise.

Of principal concern with any MOT strategy is to minimize traffic flow impacts. Our team of traffic professionals will engage throughout design to minimize traffic impacts. This will involve using traffic models to evaluate the impacts of any proposed traffic shifts or lane reductions. Using the requirements set forth in the TOSAM manual, the design team will develop



Street Grid in Vicinity of Rt. 7 / Battlefield Parkway

models, such as VISSIM to predict traffic flow and demonstrate that the proposed MOT strategy will not create undue inconvenience to the traveling public.

Role of VDOT and other Agencies: Our strategy is to minimize the amount of involvement needed by VDOT, Town of Leesburg, and Loudon County in developing, implementing and managing our MOT plan. The most significant involvement is to be a partner in reviewing our MOT strategies to ensure concurrence that the strategy is acceptable to them.

Risk No. 2 – Utility Impacts on Schedule

Risk Identification: There are a significant number of utility facilities within the project corridor. While none individually will pose a significant project risk, all coupled together will cause the existing utilities to be a significant risk to the schedule. The culmination of the following utility impacts creates a significant schedule risk:

- The magnitude of relocations
- Number of utility owners involved
- Location of existing facilities with regard to preferred MOT phasing
- Number of other VDOT and private projects with similar relocation timeframes (Route 7 widening to the east for example)
- Time, sequencing, and right-of-way necessary

Why this Risk is Critical: The risk to the project will come in the Corman | RK&K DB Team's ability to manage and coordinate the number of relocations necessary through the Route 7 corridor. The existing gas main in the median area, as well as the aerial facilities along the south side of Route 7, will require significant coordination to manage the sequencing and impacts to the project schedule. Additional schedule impacts will be



timely securing necessary utility right-of-way that may require multiple owners to occupy a relatively small joint corridor. Sequencing relocations will also take close coordination between owners and the **Corman | RK&K DB Team** that may not be under our complete control.

Risk Impact to the Project: Utility relocations can significantly impact the critical path of construction, but yet are outside of the direct control of the **Corman | RK&K DB Team**. This results in an inability to fully manage the risks associated with schedule delays. To keep the project moving may require us to perform work out of sequence, perform clearing, grading or duck bank installation work for the utility companies, confirm utility relocations prior to starting many ROW acquisition efforts, redo drainage design or installations, etc.

Risk Mitigation Strategies and Team Experience That will Ensure Successful Delivery of the Project: Engaging utility stakeholders early will be paramount to mitigating the risk associated with the utility relocations. The ability to identify right-of-way needs and manage schedules, well in advance of the need to clear the corridor for roadway construction, will determine the success of the mitigation. Our utility team will:

- Perfect the design to avoid all possible utility conflicts as a mandate and not a goal. On our Military Highway project, numerous offsets to a 16-in. gas transmission main would have been required based on the RFP and our initial drainage designs. Upon discussions with the utility, and understanding the limited resources available locally to perform the relocation work, we redesigned the drainage to install parallel drainage truck lines with no offsets of the large diameter gas main required. This strategy (designing around the utilities) also worked well on the Route 29 Solutions Project where our designers avoided relocation of a gas distribution line alongside the Route 29 SB which was shown in the RFP conceptual plans. Relocating that line would have seriously impacted the schedule.
- With **Right-of-Way** being at a premium, it will be important for the team to be innovative in the approach to the utility relocations. Creating a joint-use utility corridor that establishes specific locations for each affected party, while maintaining the integrity of their facilities, will be the first critical step. This strategy was also used successfully on our Route 29 Solutions Project.
- Utilizing innovative approaches, such as **joint-use conduit systems** installed by the design-builder vs. the several individual utilities for communication relocations will help to minimize the need for multiple right-of-way and potential delays of the utilities performing their own work. This will put some control of the schedule / phasing back under the **Corman | RK&K DB Team's** control. We have found on past VDOT Design-Build projects (Fall Hill and Route 1 near Ft. Belvoir) that the utilities only have so much staff available to perform installations, and there is no guarantee they have adequate resources to meet the schedule demands of all the area's ongoing projects. Having the design-builder install the conduit in joint ROW / Easements helps avoid this resource issue as we found on our Route 29 Solutions Project.
- Another mitigation strategy that worked well on our VDOT Military Highway project was a **dedicated fulltime utility coordinator** leading the communication between the designer, utility owners and construction operations, holding **weekly utility coordination meetings** from the initial NTP to the completion of all utility conflicts. We will staff the Rt. 7 / Battlefield Project with this same full-time individual to address utility issues immediately as they become known. These meetings will include drainage, roadway and structural designers, and permitting leads, as well as the construction team and QA/QC, ROW team members. The coordinators task will be to ensure communication of needs and resources, as well as eliminating as many conflicts as is possible during the design phase.
- Maintain the Lead Utility Coordination Manager presence on site well into the actual construction to ensure communication and coordination does not end with the issuance of the relocation plans. Their work will continue through design into the actual construction and project close out.
- **Prioritize the utility relocations** of all utilities and ensure they are working together and reviewing each other's work and signing off as the project progresses.
- Integrate the Lead Utility Coordination Manager into the design team have him work in the designer's office, review the design, MOT and ROW.
- **Develop the schedule** and sequencing / phasing with input from the Lead Utility Coordination Manager and utility companies.

By working closely with the utility stakeholders to jointly establish scheduling and phasing, as well as the utilities construction needs and resources, the **Corman | RK&K DB Team** can facilitate construction of a system that will allow control of the schedule and construction to be our hands rather than the utility stakeholder. While some aspects of the utility relocations will still need to be accomplished by the stakeholder forces, minimizing this work to the extent possible will mitigate this risk.



Role of VDOT and other Agencies: VDOT's role will be to assist in the dialogue with the utility stakeholders in emphasizing the use of the joint utility corridor and potential conduit system.

Risk No. 3 – Stakeholder Outreach

Risk Identification: VDOT's public reputation is the key stakeholder outreach risk. With traffic a perennial issue to Leesburg/Loudoun stakeholders (both jurisdictions having approximately doubled in population since 2000), communicating how the project may affect traffic, and steps we are taking to mitigate such impacts, is essential. Additionally, constituencies directly affected by construction need to be involved and continuously informed.

Why this Risk is Critical: While the project currently enjoys strong support from the public and elected officials, it can turn negative rapidly if outreach is not handled skillfully. The following can harm VDOT's public reputation:

- Excessive traffic congestion
- Negative publicity
- Increased complaints to VDOT
- Poor relations with the Leesburg Town Council and Loudoun County Board of Supervisors
- Harm to the working relationship with Town and County transportation staff
- Harm to VDOT and the **Corman** | **RK&K DB Team's** public reputation
- Potential legal challenge

Adverse outcomes of these above could delay project delivery and increase cost.

Risk Impact to the Project: To mitigate, it is important to identify the key external audiences we need to engage, and address them in ways most effective to each. The following are the primary constituencies:

Route 7 and Battlefield Parkway Users: With Route 7 and Battlefield Parkway (connecting to the Dulles Greenway) being major commuting routes, keeping traffic moving is critical. Informing commuters in advance of impactful changes is paramount to project success. Loudoun County is one of the most auto-reliant suburban counties in Northern Virginia. The majority of local commuters do not have many appealing alternatives to driving Route 7 and the Battlefield Parkway. First responders who rely on the corridor to access emergencies, including the Loudoun County Volunteer Rescue Squad, the Leesburg Volunteer Fire Department and the Leesburg Police Station, are among those we need to reach.

Direct-Impact Neighborhoods: While adjacent properties are primarily commercial, several hundred single-family homes are located off Battlefield Parkway less than a half-mile north and south of Route 7. While they will ultimately benefit from the project, they face the prospect of two years of construction noise, delays, and other impacts. Involving and informing HOAs early and often is essential.

Large Entities (Leegate Development, Businesses, Schools, Places of Worship, Etc.): Effective interaction with the Leegate mixed-use development, which in addition to providing right of way to the project, will add nearly 500 residential units, almost 500,000 SF of office, major retail and a large hotel at the Rt. 7 / Battlefield Parkway junction, is a key priority. The project area also includes small and big box businesses and shopping centers, including Lowes and Best Buy, that will be impacted by traffic and/or changed access to their properties. The area also includes places of worship, including the 5,000-congregant Cornerstone Chapel, which hosts sessions on weekends and weekday evenings. Nearby schools include Tolbert Elementary and Harper Middle, which could be impacted by cut-through traffic seeking to avoid construction impacts. These schools and places of worship have sizeable and passionate constituencies that can generate negative public and/or political pressure if their transportation needs are not being met adequately or safely.

Risk Mitigation Strategies and Team Experience That will Ensure Successful Delivery of the Project: VDOT's successful cultivation of external stakeholders to date sets the stage for a productive future relationship. Through public meetings, HOA briefings, elected official outreach, the webpage and other mechanisms, fundamentals are in place to maintain and enhance positive relations with the public and other stakeholders.

With the transition from planning to design and construction, we propose a Design Advisory Group in which members are selected for their proximity to and interest in the project. This group would meet with project designers during the initial months of design. We propose evening meetings to be bi-monthly or at key milestones during the initial six months of the project. Subject to VDOT preference, we would act as behind-the-scenes, take-care-of-the-details advisors, while a VDOT project manager is the public-facing facilitator of the group, but if VDOT desires, we can also be the public-facing facilitator. Engaging stakeholders in a defined and disciplined process can:



- Empower stakeholders to have a genuine impact on matters, such as the appearance of noise barriers, landscaping and potentially more significant design elements with minimal to no cost and schedule impact.
- Identify and clarify points of sensitivity early, enabling them to be addressed with care and deliberation, before they have major schedule or budget impacts.
- Generate public Good Will and establish a "favorability bank" that can be drawn against during particularly impactful construction.
- Participants who are satisfied with the process can become third-party advocates.

A well-executed advisory process gives supporters additional reasons to back the project, wins over fence-sitters and reasonable opponents and can leave those remaining in opposition fewer in number and isolated.

Successful design stakeholder processes require transparency, the setting of realistic expectations and a clear definition of the process. The following are key to a successful stakeholder involvement process:

- **Define Scope** Clearly explain what is on and off the table to stay on point and does not produce recommendations that are out of scope and budget.
- **Define Membership** Identify and approach representative stakeholders and seek elected official input on who should sit on the panel. To be productive, limit panel to a workable size; approximately eight members.
- **Define Calendar** Communicate that when the stakeholder panel can have input is necessarily brief and finite so that the design can solidify to keep the project on schedule.
- Define How Input will be Considered In exchange for volunteering their time and effort, stakeholders deserve to know how their input will be considered, so explicitly explaining how VDOT and the Corman | RK&K DB Team will evaluate recommendations is essential.

Once the design matures to the point where major changes are not possible, we advise continuing the working group, but operating it on an informational rather than participatory basis. It would also meet less frequently, possibly quarterly. The group would continue to serve as one of the primary conduits to the community on progress milestones, advance notice about upcoming construction work and other updates.

Additionally, HOA and elected official briefings and an augmented webpage are proposed to keep these constituencies informed of the project's status, particularly during construction. Special effort must be employed to provide advance notice to businesses about access changes well prior to going into effect. To inform the broader public, we propose three primary strategies:

- 1. Foster positive and informative news coverage by hosting periodic briefings with outlets, such as the *Loudoun Times-Mirror, Loudoun Now* and *Inside NOVA*. This will generate accurate news coverage that informs the public about the project. Cultivate positive relationships with reporters when they are not under deadline. One-on-one briefings, or providing input and constructive comment on their other stories, can pay dividends in terms of story tone and balance when reporters are covering controversial aspects, such as an aggrieved resident asserting unfair treatment or an interest group claiming violation of environmental regulations. Such discussions would be with VDOT's prior approval and participation.
- 2. Extensive deployment of dynamic message signs will inform the public about upcoming construction and heighten awareness. We recommend clever, amusing messaging to get the public's attention and cultivate goodwill, such as *"TEXTING & DRIVING IS CLEVER, SAID NO ONE EVER."*
- 3. Social media to reach the broader public. We propose drafting a series of messages to be disseminated via VDOT's Twitter handle (@*VaDOTNOVA*). We also recommend to explore creating a Facebook page, but caution that in doing so sets the public expectation that it will be updated regularly and that comments will be responded to quickly.

The team has extensive experience managing public outreach for a variety of VDOT projects. Undeland Management has performed services on projects, such as the Woodrow Wilson Bridge including VA Approach Spans, VAC, MD 210 MB-3, Route 1 Tie-in to Woodrow Wilson Bridge Urban Deck VA-4, and I-95 Telegraph Road Interchange Improvements with Corman, and I-395 Seminary Road ramps. Corman's DB projects with major outreach efforts are: Route 29 Solutions, High Rise Bridge-Phase 1, Military Highway CFI, Frederick Douglass Bridge and South Capitol Street over Anacostia River, and the Intercounty Connector Contracts A & B.

Role of VDOT and other Agencies: VDOT's role could be the public-facing leader of the project, if desired, with the **Corman | RK&K DB Team** doing the legwork and providing back up.



ATTACHMENT 3.1.2

Project: 0007-253-009 STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

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

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15- page limit?	SOQ Page Reference
Statement of Qualifications Checklist and Contents	Attachment 3.1.2	Section 3.1.2	no	16-18
Acknowledgement of RFQ, Revision and/or Addenda	Attachment 2.10 (Form C-78-RFQ)	Section 2.10	no	19
Letter of Submittal (on Offeror's letterhead)				
Authorized Representative's signature	NA	Section 3.2.1	yes	1
Offeror's point of contact information	NA	Section 3.2.2	yes	1
Principal officer information	NA	Section 3.2.3	yes	1
Offeror's Corporate Structure	NA	Section 3.2.4	yes	1
Identity of Lead Contractor and Lead Designer	NA	Section 3.2.5	yes	1
Affiliated/subsidiary companies	Attachment 3.2.6	Section 3.2.6	no	20
Debarment forms	Attachment 3.2.7(a) Attachment 3.2.7(b)	Section 3.2.7	no	21-30
Offeror's VDOT prequalification evidence	NA	Section 3.2.8	no	31
Evidence of obtaining bonding	NA	Section 3.2.9	no	32-34

ATTACHMENT 3.1.2

Project: 0007-253-009 STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15- page limit?	SOQ Page Reference
SCC and DPOR registration documentation (Appendix)	Attachment 3.2.10	Section 3.2.10	no	35-36
Full size copies of SCC Registration	NA	Section 3.2.10.1	no	37-47
Full size copies of DPOR Registration (Offices)	NA	Section 3.2.10.2	no	48-57
Full size copies of DPOR Registration (Key Personnel)	NA	Section 3.2.10.3	no	58-59
Full size copies of DPOR Registration (Non- APELSCIDLA)	NA	Section 3.2.10.4	no	N/A
DBE statement within Letter of Submittal confirming Offeror is committed to achieving the required DBE goal	NA	Section 3.2.11	yes	1
Offeror's Team Structure				
Identity of and qualifications of Key Personnel	NA	Section 3.3.1	yes	3, 5-7
Key Personnel Resume – DB Project Manager	Attachment 3.3.1	Section 3.3.1.1	no	60-61
Key Personnel Resume – Quality Assurance Manager	Attachment 3.3.1	Section 3.3.1.2	no	62-63
Key Personnel Resume – Design Manager	Attachment 3.3.1	Section 3.3.1.3	no	64-65
Key Personnel Resume – Construction Manager	Attachment 3.3.1	Section 3.3.1.4	no	66-67
Key Personnel Resume – Utility Coordination Manager	Attachment 3.3.1	Section 3.3.1.5	no	68-69

ATTACHMENT 3.1.2

Project: 0007-253-009 STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15- page limit?	SOQ Page Reference
Organizational chart	NA	Section 3.3.2	yes	8
Organizational chart narrative	NA	Section 3.3.2	yes	5-7
Experience of Offeror's Team				
Lead Contractor Work History Form	Attachment 3.4.1(a)	Section 3.4	no	70-72
Lead Designer Work History Form	Attachment 3.4.1(b)	Section 3.4	no	73-75
Project Risk				
Identify and discuss three critical risks for the Project	NA	Section 3.5.1	yes	10-15

Form C-78-RFQ

ATTACHMENT 2.10

COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION

RFQ NO.	C00106573DB101		
PROJECT NO .:	0007-253-009		

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 – December 8, 2018 (Date)		
2.	Cover letter of	(Date)		
3.	Cover letter of			
	1	(Date)		
	SIGNATURE	24	1/31/18	DATE
Arthur C. Core III	Ŧ		D (1	
Artnur C. Cox, II	<u> </u>		President	
	PRINTED NAM	ME		TITLE

ATTACHMENT 3.2.6

State Project No. 0007-253-009

Affiliated and Subsidiary Companies of the Offeror

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

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

Relationship with Offeror (Affiliate or Subsidiary)	Full Legal Name	Address
Affiliate (Parent)	CG Enterprises, Inc.	12001 Guilford Road, Annapolis Junction, MD 20701
Affiliate (Sister)	Corman Marine Construction, Inc.	711 East Ordnance Road, Suite 715, Baltimore, MD 21226
Affiliate (Joint Venture)	CK Constructors, A Joint Venture	12001 Guilford Road, Annapolis Junction, MD 20701
Affiliate (Joint Venture)	Intercounty Constructors Joint Venture	120 White Plains Road, Suite 310, Tarrytown, NY 10591
Affiliate (Joint Venture)	MD 200 Constructors, A Joint Venture	450 Dividend Drive, Peachtree City, GA 30269
Affiliate (Joint Venture)	Wagman, Corman, McLean Joint Venture	3290 North Susquehanna Trail, York, PA 17406
Affiliate (Joint Venture)	Corman-Wagman, A Joint Venture	12001 Guilford Road, Annapolis Junction, MD 20701
Affiliate (Joint Venture)	KC Constructors, A Joint Venture	450 Dividend Drive, Peachtree City, GA 30269
Affiliate (Joint Venture)	Corman-E.V. Williams, a Joint Venture	12001 Guilford Road, Annapolis Junction, MD 20701
Affiliate (Joint Venture)	LANE/Corman Joint Venture	14500 Avion Parkway, Suite 200, Chantilly, VA 20151
Affiliate (Joint Venture)	Kiewit-Corman-Greenbelt, a Joint Venture	7250 Parkway Drive, Suite 310, Hanover, MD 21076
Affiliate (Joint Venture	Corman-Branch, A Joint Venture	12001 Guilford Road, Annapolis Junction, MD 20701
Affiliate (Joint Venture	Granite-Parsons-Corman Joint Venture	120 White Plains Road, Suite 310, Tarrytown, NY 10591

<u>CERTIFICATION REGARDING DEBARMENT</u> <u>PRIMARY COVERED TRANSACTIONS</u>

Project No.: 0007-253-009

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 proposal.

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

Signature

1/31/18

Date

Title

President

Corman Construction, Inc.

Name of Firm

<u>CERTIFICATION REGARDING DEBARMENT</u> <u>LOWER TIER COVERED TRANSACTIONS</u>

Project No.: 0007-253-009

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

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

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

Signature

January 4, 2018 Date

Partner Title

Rummel, Klepper & Kahl, LLP

Name of Firm

CERTIFICATION REGARDING DEBARMENT LOWER TIER COVERED TRANSACTIONS

Project No.: 0007-253-009

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

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

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

imm January 31, 2018 President Date Title hature

Quinn Consulting Services, Inc. Name of Firm

<u>CERTIFICATION REGARDING DEBARMENT</u> LOWER TIER COVERED TRANSACTIONS

Project No.: 0007-253-009

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

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

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

Cilludente 9/2018 Director Title

Rhodeside & Harwell, Incorporated Name of Firm

CERTIFICATION REGARDING DEBARMENT LOWER TIER COVERED TRANSACTIONS

Project No.: 0007-253-009

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

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

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

1-15-18 Assi Via President.

Signature

nc

CERTIFICATION REGARDING DEBARMENT LOWER TIER COVERED TRANSACTIONS

Project No.: 0007-253-009

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

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

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

gnature

Name of Firm

CERTIFICATION REGARDING DEBARMENT LOWER TIER COVERED TRANSACTIONS

Project No.: 0007-253-009, P101, R201, C501, B601

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

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

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

Edward G. Drahos, PE1-9-18Senior Vice PresidentSignature / Edward G. Drahos, PEDateTitle

Schnabel Engineering, LLC Name of Firm

CERTIFICATION REGARDING DEBARMENT LOWER TIER COVERED TRANSACTIONS

Project No.: 0007-253-009

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

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

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

<u>Signature</u> Joes Undeland 1/22/18 President

Name of Firm

<u>CERTIFICATION REGARDING DEBARMENT</u> <u>LOWER TIER COVERED TRANSACTIONS</u>

Project No.: 0007-253-009

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

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

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

Witanan January 9, 2018 Date President Signature Title

H&B Surveying and Mapping, LLC Name of Firm

<u>CERTIFICATION REGARDING DEBARMENT</u> <u>LOWER TIER COVERED TRANSACTIONS</u>

Project No.: 0007-253-009

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

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

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

1/9/2018 VP of Business Development Signature Date Title DIW Group, Inc. t/a Specialized Engineering

Name of Firm



COMMONWEALTH OF VIRGINIA



CERTIFICATE OF QUALIFICATION

CORMAN CONSTRUCTION, INC.

Vendor Number: C097

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

PREQUALIFIED

Your firm specializes in the noted Classification(s):

GRADING; MAJOR STRUCTURES; MINOR STRUCTURES; UNDERGROUND UTILITIES

Issue Date: March 31, 2017

Suzanne FR Lucas, State Prequalification Officer

This Rating and Classification will Expire: March 31, 2018

Don E. Silies, Director of Contracts

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


January 31, 2018

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

> Re: Corman Construction, Inc. – Surety Qualification Request for Qualifications – A Design-Build Project Route 7 and Battlefield Parkway Interchange From: 0.75 Miles W, of Battlefield Pkwy Along Rte. 7 To: 0.75 Miles E of battlefield Pkwy Along Rte.7 From: 0.25 Miles S of Rte. 7 Along Battlefield Pkwy To: 0.40 Miles N, of Rte. 7 Along Battlefield Pkwy Contract ID No.: C00106573DB101 State Project No.: 0007-253-009, P101, R201, C501, B601 Federal Project No: STP-5A01(704)

Dear Mr. Kindy:

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 \$42,000,000.00 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. 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

Gallagher CRS 11311 McCormick Road | Suite 450 Hunt Valley, MD 21031 p 449,798.7499 ajg.com

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 **DAVID MCVICKER**, 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 15th day of May, A.D. 2017.

ATTEST:

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



Vice President David McVicker

Br:

Assistant Secretary Joshua Lecker

State of Maryland County of Baltimore

On this 15th day of May, A.D. 2017, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, DAVID MCVICKER, Vice President, and JOSHUA LECKER, Assistant Secretary, of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, deposeth and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

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

mating a Dunn



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

EXTRACT FROM BY-LAWS OF THE COMPANIES

"Article V, Section 8, <u>Attorneys-in-Fact</u>. 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 of 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 3/5 thay of 20/18.



Michael Bond, Vice President

TO REPORT A CLAIM WITH REGARD TO A SURETY BOND, PLEASE SUBMIT ALL REQUIRED INFORMATION TO:

Zurich American Insurance Co. Attn: Surety Claims 1299 Zurich Way Schaumburg, IL 60196-1056

34

ATTACHMENT 3.2.10

State Project No. 0007-253-009

SCC and DPOR Information

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

SCC & DPOR INFORMATION FOR BUSINESSES (RFQ Sections 3.2.10.1 and 3.2.10.2)							
	SCC Information (3.2.10.1)			DPOR Information (3.2.10.2)			
Business Name	SCC Number	SCC Type of Corporation	SCC Status	DPOR Registered Address	DPOR Registration Type	DPOR Registration Number	DPOR Expiration Date
Corman Construction, Inc.	F046798-7	Foreign	Active/In Good Standing	12001 Guilford Road Annapolis Junction, MD 20701	Class A Contractor H/H	2701014794	10.31.19
				12600 Fair Lakes Circle Suite 300 Fairfax, VA 22030	ENG	0411000577	2.28.18
DV %-V	V000417 8	Limited Liphility	Active/In	2100 E. Cary St., Ste 309 Richmond, VA 23223	ENG	0411000271	2.28.18
KK&K K000417-8	K000417-8	Partnership	Standing	700 E. Pratt St., Ste. 500 Baltimore, MD 21202	ENG	0407002860	12.31.19
				900 Ridgefield Dr. Suite 350 Raleigh, NC 27609	ENG	0411001046	2.28.18
Quinn Consulting Services, Inc.	0492551-7	Incorporated	Active/In Good Standing	14160 Newbrook Dr. Suite 220 Chantilly, VA 20151	ENG	0407003733	12.31.19
Rhodeside & Harwell, Inc.	0278356-1	Incorporated	Active/In Good Standing	510 King St., Ste. 300 Alexandria, VA 22314	LA	0407004045	12.31.19
Cardno, Inc.	F188215-0	Foreign	Active/In Good Standing	10988 Richardson Road Ashland, VA 23005	LS, ENG	0411001139	2.28.18
ERM & Associates, LLC	S431583-6	LLC	Active/In Good Standing	N//A	N/A	N/A	N/A
Schnabel Engineering, LLC	S088912-3	LLC	Active/In Good Standing	9800 Jeb Stuart Parkway Suite 100 Glen Allen, VA 23059	ENG	0411000322	2.28.18

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ATTACHMENT 3.2.10

State Project No. 0007-253-009

SCC and DPOR Information

Undeland Management (Undeland Associates)	0796273-1	Incorporated	Active/In Good Standing	N/A	N/A	N/A	N/A
H & B Surveying and Mapping, LLC	S290560-4	LLC	Active/In Good Standing	612 Hull St., Ste. 101B Richmond, VA 23224	LS	0407005432	12.31.19
Specialized Engineering (DIW Group, Inc.)	F128190-8	Foreign	Active/In Good Standing	4845 International Blvd. #104 Frederick, MD 21703	ENG	0407004748	12.31.19

DPOR INFORMATION FOR INDIVIDUALS (RFQ Sections 3.2.10.3 and 3.2.10.4)						
Business Name	Individual's Name	Office Location Where Professional Services will be Provided (City/State)	Individual's DPOR Address	DPOR Type	DPOR Registration Number	DPOR Expiration Date
Quinn Consulting Services, Inc.	John Vicinski, PE	Chantilly VA	4609 Marble Rock Ct. Chantilly, VA 20151	PE	0402026380	8.31.19
RK&K	Owen Peery, PE	Richmond VA	2100 East Cary St. Suite 309 Richmond, VA 23223	PE	0402046882	10.31.19





COMMONWEALTH OF VIRGINIA STATE CORPORATION COMMISSION

Office of the Clerk

June 28, 2017

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

RECEIPT

- RE: RUMMEL, KLEPPER & KAHL, LLP
- ID: K000417 8
- DCN: 17-06-28-0508

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 28, 2017.

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

Sincerely,

Joel H. Peck Clerk of the Commission

GPACCEPT CISKMP



COMMONWEALTH OF VIRGINIA STATE CORPORATION COMMISSION

VIRGINIA OR FOREIGN REGISTERED LIMITED LIABILITY PARTNERSHIP

Filing Due Date: July 01, 2017 Filing Fee: \$50

2

MH:

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UPA-134-GP (04/13)

2017 ANNUAL CONTINUATION REPORT

The undersigned, on behalf of the partnership set forth below, pursuant to Title 50, Chapter 2.2, Article 9.1 of the Code of Virginia, states as follows:

1. The name of the partnership, which is registered as a registered limited liability partnership in Virginia, is:

RUMMEL, KLEPPER & KAHL, LLP

- 2. The partnership's SCC ID number is K000417 8.
- 3. The jurisdiction in which the partnership is registered as a registered limited liability partnership, is JLN 28 MARYLAND.
- 4. The principal office address of the partnership according to the records of the Commission is:

81 W MOSHER ST BALTIMORE, MD 21217

(Mark the appropriate box.)

- The address listed above is the current address of the partnership's principal office.
- ď The address listed above is not the current address of the partnership's principal office. The current address, including the street and number, if one is associated with the location, is:

700 East Pratt Street	, Suite: 500	
(number/street)	(a post office box is not acceptable - s	see Instructions)
Baltimere	MD	21202
(city or town)	(state)	(zip)

Signed on behalf of the partnership by the following partner, receiver or trustee:

(sigfiature)	<u> </u>
Mark M. Duriler	
(printed name)	(telephone number (optional)
Partner	
(title)	

Personal Information, such as a social security number, should NOT be included in a business entity document submitted to the Office of the Clerk for filing with the Commission. For more information, see Notice Regarding Personal Identifiable Information at www.scc.virginia.gov/clk/index.aspx.

SEE INSTRUCTIONS ON THE REVERSE

The State Corporation Commission will be closed Friday, January 12, 2018 in observ of Lee-Jackson Day, a state holiday. The SCC will also be closed Monday, January 2018 in observance of Martin Luther King Jr. Day. We will resume normal business h Tuesday, January 16, 2018.

	Commonwealth of Virginia State Corporation Commis	sion Sion
		01/10/18
CIS	SM0180 CORPORATE DATA INQU	IRY 15:18:54
CORP ID: CORP NAME:	0492551 - 7 STATUS: 00 ACTIVE QUINN CONSULTING SERVICES INCORPORA	STATUS DATE: 12/01/08
DATE OF CERTIN STATE OF INCOM MERGER IND: S	FICATE: 10/24/1997 PERIOD OF DURATION RPORATION: VA VIRGINIA STOCK SURVIVOR CONVERSION/DOM	INDUSTRY CODE: 00 INDICATOR: S STOCK 4ESTICATION IND:
CHARTER FEE: R/A NAME:	IND: I MONITOR INDICA 50.00 MON NO: MON ST JOHN H QUINN JR	TATUS: MONITOR DTE:
STREET:	2208 S KNOLL ST	AR RTN MAIL:
CITY: R/A STATUS: ACCEPTED AR#:	ARLINGTON STATE: VZ 4 ATTORNEY EFF. DATE: 10/2 217 14 2844 DATE: 09/14/17 217 14 2044 DATE: 00/14/17	A ZIP: 22202-2134 24/97 LOC: 106 ARLINGTON COUNT
YEAR FEES	PENALTY INTEREST TAXES	BALANCE TOTAL SHARES 5,000

ATTENTION: CISIWeb will be unavailable beginning Saturday, January 20, at 5:45 a.m. through 3:00 p.m., for system maintenance. We apologize for the inconvenience and thank you for your patience.

Commonwealth State Cor	of Virginia poration Commission	SCC Home Contact SCC Site Map Search
CI	SM0180 CORPORATE DATA INQUIRY	Virginia.gov 01/17/18 18:06:56
CORP ID: CORP NAME:	0278356 - 1 STATUS: 00 ACTIVE ST RHODESIDE & HARWELL, INCORPORATED	ATUS DATE: 12/12/16
DATE OF CERTI STATE OF INCO MERGER IND: GOOD STANDING CHARTER FEE: R/A NAME:	FICATE: 11/14/1985 PERIOD OF DURATION: RPORATION: VA VIRGINIA STOCK INDICATOR CONVERSION/DOMESTICATIC IND: Y MONITOR INDICATOR: 25.00 MON NO: MON STATUS: M CORPORATION SERVICE COMPANY	INDUSTRY CODE: 00 .: S STOCK N IND: NONITOR DTE:
STREET: CITY:	100 SHOCKOE SLIP 2ND FLOOR RICHMOND STATE : VA ZIP: 2	AR RTN MAIL: 3219-0000
R/A STATUS: ACCEPTED AR#: CURRENT AR#: YEAR FEES 17 130.	5 B.E. AUTH IN VI EFF. DATE: 01/01/18 LOC 217 17 5546 DATE: 11/27/17 217 17 5546 DATE: 11/27/17 STATUS: A ASSE PENALTY INTEREST TAXES BALANCE 00	: 216 RICHMOND CITY SSMENT INDICATOR: 0 TOTAL SHARES 10,000

ATTENTION: CISIWeb will be unavailable beginning Saturday, January 20, at 5:45 a.m. through 3:00 p.m., for system maintenance. We apologize for the inconvenience and thank you for your patience.

Commonwealth State Cor	of Virginia Doration Commission	SCC Home Contact SCC Site Map Search
		01/17/18
CIS	CORPORATE DATA INQUIRY	10:53:48
CORP ID:	F188215 - 0 STATUS: 00 ACTIVE STATUS	DATE: 12/13/11
CORP NAME:	Cardno, Inc.	
DATE OF CERTI	FICATE: 12/13/2011 PERIOD OF DURATION:	NDUSTRY CODE: 00
STATE OF INCO	RPORATION: DE DELAWARE STOCK INDICATOR: S	STOCK
MERGER IND:	CONVERSION/DOMESTICATION IN	D:
GOOD STANDING	IND: Y MONITOR INDICATOR:	
CHARTER FEE:	50.00 MON NO: MON STATUS: MONIT	OR DTE:
R/A NAME:	CT CORPORATION SYSTEM	
STREET:	4701 COX ROAD, SUITE 285 AR	RTN MAIL:
CITY:	GLEN ALLEN STATE : VA ZIP: 23060	-0000
R/A STATUS:	5 B.E. AUTH IN VI EFF. DATE: 10/04/13 LOC : 1	43
ACCEPTED AR#:	217 18 1081 DATE: 12/08/17 H	ENRICO COUNTY
CURRENT AR#:	217 18 1081 DATE: 12/08/17 STATUS: A ASSESSME	NT INDICATOR: 0
YEAR FEES	PENALTY INTEREST TAXES BALANCE	TOTAL SHARES
17 100.	00	1,000

ATTENTION: CISIWeb will be unavailable beginning Saturday, January 20, at 5:45 a.m. through 3:00 p.m., for system maintenance. We apologize for the inconvenience and thank you for your patience.

Commonwealth State Cor	h of Virginia poration C	Commiss	sion		SCC Home Contact SCC Site Map Search
I	LCM3220	LLC D.	ATA INQUIRY		01/17/18 11:00:58
LLC ID:	S431583 - 6	STATUS: 00	ACTIVE	STATUS DAT	'E: 12/03/12
LLC NAME:	ERM & ASSOCIA	TES, LLC			
DATE OF FILIN	G: 12/03/2012	PERIOD OF	DURATION:	INDUSTF	RY CODE: 00
STATE OF FILI	NG: VA VIRGIN	IA	MERGER IN	IDICATOR:	
	CO	NVERSION/DO	MESTICATION IN	IDICATOR:	
	PRINCIP	AL OF	FICE AD	DRESS	
STREET:	7047 WINTERGR	EEN CT			
CITY:	WARRENTON		STATE: VA Z	SIP: 20187-0000	
R	EGISTER	ED AGE	NT INFO	O R M A T I O N	
R/A NAME:	CRAIG J. ANDE	RSON			
STREET:	15 MAIN STREE	т			
				RTN	MAIL:
CITY:	WARRENTON		STATE: VA Z	IP: 20186-0000	
R/A STATUS: 1	MEMBER/MANAGE	R EFF DAT	E: 11/30/16 I	OC: 130 FAUQUI	ER COUNTY
YEAR	FEES	PENALTY	INTEREST	BALANCE	
17	50.00				

(Screen Id:/LLC_Data_Inquiry)

43

ATTENTION: CISIWeb will be unavailable beginning Saturday, January 20, at 5:45 a.m. through 3:00 p.m., for system maintenance. We apologize for the inconvenience and thank you for your patience.

Commonwealth State Cor	of Virginia poration Co	ommiss	ion	SCC Home Contact SCC Site Map Search
L	LCM3220	LLC DA	ATA INQUIRY	01/17/18 18:15:36
LLC ID:	S088912 - 3	STATUS: 00	ACTIVE	STATUS DATE: 11/15/10
LLC NAME:	Schnabel Engin	eering, LL	2	
DATE OF FILIN	G: 12/19/2002	PERIOD OF I	DURATION:	INDUSTRY CODE: 00
STATE OF FILI	NG: VA VIRGINI.	A	MERGER IND	ICATOR: S SURVIVOR
	CON	VERSION/DOM	MESTICATION IND	ICATOR:
	PRINCIP.	AL OF H	FICE ADD	RESS
STREET:	9800 JEB STUAR	T PARKWAY		
	SUITE 200			
CITY:	GLEN ALLEN		STATE: VA ZI	P: 23059-0000
R	EGISTERE	D A G E	NT INFO	RMATION
R/A NAME:	CT CORPORATION	SYSTEM		
STREET:	4701 COX ROAD,	SUITE 285		
				RTN MAIL:
CITY:	GLEN ALLEN		STATE: VA ZI	P: 23060-0000
R/A STATUS: 5	ENTITY AUTHORI	Z EFF DATE	E: 10/04/13 LO	C: 143 HENRICO COUNTY
YEAR	FEES	PENALTY	INTEREST	BALANCE
17	50.00			

SCC Home Contact SCC Site Map



(Screen Id:/Corp_Data_Inquiry)

45

ATTENTION: CISIWeb will be unavailable beginning Saturday, January 20, at 5:45 a.m. through 3:00 p.m., for system maintenance. We apologize for the inconvenience and thank you for your patience.



ATTENTION: CISIWeb will be unavailable beginning Saturday, January 20, at 5:45 a.m. through 3:00 p.m., for system maintenance. We apologize for the inconvenience and thank you for your patience.

Commonwealth State Cor	of Virginia poration Commission	ome SCC Map earch
CIS	SM0180 CORPORATE DATA INQUIRY 01/18/18 SM0180 CORPORATE DATA INQUIRY 13:37:40	
CORP ID: CORP NAME:	F128190 - 8 STATUS: 00 ACTIVE STATUS DATE: 01/30 DIW GROUP, INC.	/97
DATE OF CERTIN STATE OF INCON MERGER IND: GOOD STANDING CHARTER FEE:	FICATE: 01/30/1997 PERIOD OF DURATION: INDUSTRY CODE RPORATION: MD MARYLAND STOCK INDICATOR: S STOCK CONVERSION/DOMESTICATION IND: IND: Y MONITOR INDICATOR: 2500.00 MON NO: MON STATUS: MONITOR DTE:	: 00
R/A NAME: STREET:	C T CORPORATION SYSTEM 4701 COX ROAD AR RTN MAIL: SUITE 285 CLEN ALLEN STATE : VA 71D: 23060-0000	
R/A STATUS: ACCEPTED AR#: CURRENT AR#: YEAR FEES 18 1,700.0	5B.E. AUTH IN VIEFF. DATE: 12/12/13LOC: 143218017040DATE: 01/03/18HENRICO COUNT218017040DATE: 01/03/18STATUS: AASSESSMENT INDICATORPENALTYINTERESTTAXESBALANCETOTAL SHA002,000	Y .: 0 .RES ,000

EXPIRES ON 10-31-2019 COMMONWEALTH of VIRGINIA

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

NUMBER 2701014794

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

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

DPOR-LIC (02/2017)

(DETACH HERE)

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

POK COMMONWEALTH of VIRGINIA Department of Professional and Occupational Regulation

CLASS A BOARD FOR CONTRACTORS CONTRACTOR

CLASSIFICATIONS H/H NUMBER: 2701014794 EXPIRES: 10-31-201

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

48

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

DPOR-PC (02/2017)

Firm DPOR Licenses



(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (05/2015)



COMMONWEALTH of VIRGINIA Department of Professional and Occupational Regulation

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

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



50

RUMMEL KLEPPER & KAHL LLP 700 E PRATT ST STE 500 BALTIMORE, MD 21202

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



DP OR

NUMBER

0407002860

DPOR-LIC (02/2017)





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

DPOR-PC (02/2017)

From:	Jennifer Straub
To:	Karen Countiss
Subject:	RHI Renewed DPOR License ***
Date:	Wednesday, January 24, 2018 10:44:19 AM

See attached.

Virginia.gov Agene	ies Governor	
Department of Professional an	O Ccupational Regulation	
Home > License Lookup > Licens	e Lookup & Disciplinary Actions	
License Lookup	License Lookup	
Online Renewal & Services	License Search Advanced License Search Di	sciplinary Action Search
Boards	100 C	
Professions & Occupations	License Details Related Licenses	٠
Forms & Applications	Name	RHODESIDE & HARWELL, INCORPORATED
Points & Applications	License Number	0407004045 Business Entity Devictration
Fair Housing Office	Firm Type	Corporation
Community Associations	Rank	Business Entity
	Address	510 KING STREET STE # 300, ALEXANDRIA, VA
File a Complaint	Initial Contification Date	22314
Records & Documents	Expiration Date	2019-12-31
News & Information		
About DPOR	The license information in this application w	as last updated at Wed Jan 24 02:50:20 EST.
Contact	License Lookup	o logal disclaimar
-		

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COMMONWEALTH of VIRGINIA Department of Professional and Occupational Regulation

BOARD FOR APELSCIDLA BUSINESS ENTITY BRANCH OFFICE REGISTRATION NUMBER: 0411000322 EXPIRES: 02-28-2018 PROFESSIONS: ENG SCHNABEL ENGINEERING, LLC 9800 JEB STUART PKWY STE 100 GLEN ALLEN, VA 23059

DPOR-LIC (05/2015) (DETACH HERE)

H & B SURVEYING & MAPPING LLC 612 HULL ST SUITE 101B RICHMOND, VA 23224 DPDR

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.			
a. Name & Title: SCOTT SZYMPRUCH, PE, VICE PRESIDENT OF ENGINEERING & ESTIMATING			
b. Project Ass	ignment: DESIGN-BUILD PROJECT MAN	AGER	
c. Name of al	Firms with which you are employed at the	time of submitting SOC	2. In addition, please denote the type of
employment (F	ull time/Part Time): CORMAN CONSTRUC	TION, INC. – FULL T	IME
d. Employmer	t History: With this Firm $\frac{17}{2}$ Years With Othe	er Firms 4 Years	
Please list	chronologically (most recent first) your empl	oyment history, positio	n, general responsibilities, and
duration of emp	ployment for the last fifteen (15) years. (NOI	E: If you have less that	n 15 years of employment history,
please list the h	history for those years you have worked. Pro	ject specific experienc	e shall be included in Section (g)
below):			
Corman Constr	uction, Inc., Vice President of Engineering &	Estimating / DBPM —	→ 2017-Present
Scott is responsil	ble for in house engineering and design work. H	e works with design-buil	d projects from their inception to assist and
review design ac	tivities. Scott also manages estimating and proje	ect selection activities for	Corman and Corman Marine.
Cormon Constr	uction Inc. Cormon Mid-Atlantic Division M	Innager / DRPM	> 2013-2016
Scott oversaw en	gineering and project management, including sch	edules, resources, manno	ower, temporary designs, budget and change
orders.	geneering and project manufernent, meruding ser		
Corman Constr	uction, Inc., Project Manager/Sponsor / DBP	M	→ 2011-2013
Scott was assign	ed to projects where he oversaw start up, long-	range planning/schedulii	ig, design, cost analysis/ monthly reviews,
Owner relationsh	ips, change orders/craims reviews and steered pr	ojects toward successful	innai completion.
Corman Constr	uction, Inc., Project Manager/Construction M	Ianager ———	▶ 2004-2011
Scott was assigned	ed onsite on projects, including two design-build	ls where he provided pro	ject management, supervision, professional
engineering desi	gns, field layout, subcontract negotiations/ adu	ninistration, quality con	trol, materials control/procurement, safety
management, en	vironmental compliance management, cost accou	inting and scheduling for	compliance and successful completion.
Corman Constr	uction Inc. Sr. Project Engineer ———		▶ 2000-2003
Scott was assign	ied onsite on road and bridge projects, including	ng one Design-Build wh	here he developed schedules, worked with
superintendents a	and worked with owners on submittals, payments	s and RFIs.	1 /
e. Education:	Name & Location of Institution(s)/Degree(s)	/Year/Specialization:	
University of	f Maryland, College Park, MD BS 1995 C	ivil Engineering	
f. Active Reg	istration: Year First Registered/ Discipline/V	A Registration #:	
2005 Profe	ssional Engineer VA #0402041661		
g. Document	the extent and depth of your experience and	l qualifications relevant	to the Project.
1. Note ye	our role, responsibility, and specific job dutie	s for each project, not	those of the firm.
2. Note w	nether experience is with current firm or with	1 Other Tirm.	
3. Provide	e beginning and end dates for each project; ,	projects older than tifte	en (15) years will not be considered for
evaluai	(101). a (2) relevent prejector for which you have	a norformed a similar	r function If additional projects are
(List only three	e (3) relevant projects for which you hav	red non-responsive	In any case, only the first three (2)
projects listed	will be evaluated)	reu non-responsive.	in any case, only the first thee (5)
Project:	Design-Build Route 1 Improvements at Fort	Dates	July 2013-Sept 2017
110jeet.	Belvoir Lorton VA	Dates.	July 2013-50pt. 2017
Project Role:	Design-Build Project Manager Project	With Current Firm?	Ves
roject Role.	Executive	that Current I fint.	
As Design-Build Project Manager (July 2013-Jan 2017) Project Executive (Jan Sent 2017) Scott oversaw construction from			
start up to close out. He managed the project team equipment material and labor procurement objectives and goals work plans and			
budgets and reso	urces, procured/coordinated subcontractors, mon	itored schedules, conduct	ted progress meetings, minimized exposures
and risks, mitigat	ted issues, reviewed/approved deliverables, RFIs	, and change orders, adm	inistered contracts, oversaw budget, safety,
and quality com	and quality compliance, met obligations and avoided/resolved disputes under the contract, and steered the project to successful		
completion per	contract. Scott and the design team coordina	ted "Pardon our Dust"	meetings where he spoke and answered
questions/inquiri	es about the project. This project constructed and	d/or widened Route 1 fro	m 4-6 lanes for 3.68 miles, a multi-use trail,
bicycle lanes and	safer crosswalks, route realignment, intersection	improvements, bridge de	molition/construction, including underpass,
retaining walls, r	oise walls, street lighting, stormwater managem	ent, drainage, utility relo	cations, right of way acquisition, and traffic
signals. Led coo	ordination with relocation of overhead utilities (Dominion / Verizon and	Cox) facilities for the entire length of the

project. The project was constructed in coordination with VDOT, Fairfax County, and the Army Garrison at Fort Belvoir, was highly visible to local authorities and was a major focus of local and federal elected officials, with an emphasis on MOT, stakeholder

CORMAN RKK

communication, protecting the environment, and historical significance. Client: Federal Highway Administration | Eastern Federal Lands Highway Division | Cost: \$82 Million

Similarities to Rt. 7 / Battlefield Project: Design-Build, roadway, survey, bridge and retaining walls, environmental permitting, commitments, compliance, mitigation, geotechnical, E & S control, hydraulics and SWM, landscaping, roadway lighting, traffic control devices, transportation management plan, extensive MOT, ROW acquisition, utility relocations, stakeholder coordination, public involvement/public relations, QA/QC, construction engineering and inspection, overall Project management

Project:	Woodrow Wilson Bridge VA Approach Spans VAC, Alexandria, VA	Dates:	2003-2006
Project Role:	Project Manager	With Current Firm?	Yes

As **Project Manager**, Scott provided project management, supervision, professional engineering designs, field layout, subcontract negotiation / administration, quality control, materials control / procurement, safety management, environmental compliance management, cost accounting and scheduling for compliance and successful completion. He oversaw all construction, including contract administration, procuring and furnishing all materials, equipment, services, and labor timely. Scott also staffed / oversaw onsite personnel and managed a team of 13. He conducted daily job schedule and safety meetings with the General Superintendent and Safety Manager, and created, updated, and modified the schedule. Scott oversaw interaction with the owner's representative, Potomac Crossing Consultants (PCC), including correspondence and change orders. He facilitated monthly partnering meetings with the owner, General Engineering Consultant (GEC) and Section Designer. Scott participated in extensive coordination with adjacent Woodrow Wilson Bridge projects by attending weekly scheduling meetings with the GEC.

The project was constructed adjacent to heavily-traveled I-95/495 Capital Beltway. Two-phase construction included segmental bridge, placed two 2,300-ft. long, 145-ft. wide CIP concrete bridge decks, demolished/ removed a six-lane structure and foundation construction of inner loop bridges. There was noise wall construction, utility relocations, lighting, coordination with local parks, and environmental compliance. Mt Vernon and Jones Point Park Trail was within and across project limits and required public access and maintenance at all times. There was an urban residential community requiring constant communication with residents and close attention to noise, dust and traffic ordinances. **Client: Maryland Department of Transportation | State Highway Administration | Cost: \$126.8 Million**

Similarities to Rt. 7 / Battlefield Project: Survey, bridge and retaining walls with architectural treatments, E & S control, roadway lighting, transportation management plan, utility relocations, stakeholder coordination, public involvement, construction engineering and inspection, overall Project management

Project:	Design-Build Intercounty Connector	Dates:	Jan. 2007-Jan. 2011
	Contract A, Montgomery County, MD		
Project Role	Design-Build Construction Manager	With Current Firm?	Yes

As Design-Build Construction Manager, Scott oversaw construction of the entire project, contributed to partnering and progress meetings, worked with environmental teams on environmental stewardship, and coordinated inspections/resolutions with our independent QC team. During procurement, he authored the schedule and was a leader in conceptual design development. Upon Notice to Proceed, Scott led the design development task force undertakings and provided constructability reviews. He worked with design-build coordinators and construction project engineers leading the roadway, bridge, drainage, environmental, utility and subcontracting areas. Scott participated in the geotechnical task force team efforts and oversaw drilling. He provided professional engineering designs (support of excavation and temporary work) and supervised field layout, construction, quality control, and safety management. Scott was involved in the CPM schedule, oversaw the Construction Quality Manager and coordinated with adjacent projects. He coordinated with the Quality Assurance Manager regarding quality compliance, scheduled and allocated resources for materials, equipment, services, and labor. Scott participated in public meetings where he answered questions/inquiries relevant to the project. This project constructed 7.2 miles of controlled-access tri-lane divided highway with motorists entering/exiting through three interchanges. Two major interchanges - I-370/Metro Access Road and Shady Grove Road - were constructed in phases to accommodate the two lanes of traffic in each direction while the roadway was widened to the inside and outside, making three lanes in each direction. Major utility relocations were completed at 106 locations, including water, sewer, power/ electrical, cable lines, and fiber optic (underground and overhead), and coordinated/relocated critical transmission lines for Columbia and Williams Gas. The MAR Interchange was redesigned from a three-level to a two-level eliminating retaining walls and saving the owner millions of dollars long-term. There was also stormwater management/drainage systems, 130,000 SF retaining and MSE walls, and community outreach to approximately 10,000 residents surrounding the corridor. This is a Corman and RK&K project. Client/Owner: Maryland State Highway Administration | Cost: \$483.4 Million

Similarities to Rt. 7 / Battlefield Project: Design-Build, ATCs, roadway, survey, bridge and retaining walls with architectural treatments, environmental permitting, commitments, compliance, mitigation, and sound barrier, geotechnical, E & S control, hydraulics and SWM, landscaping, roadway lighting, traffic control devices (including, among other things, overhead sign structures), Intelligent Transportation Systems, transportation management plan, ROW acquisition, utility relocations, stakeholder coordination, public involvement/public relations, QA/QC, construction engineering and inspection, overall Project management

* 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 Pr	oject.			
a. Name & Title: JOHN VICINSKI, PE, DBIA, VICE PRESIDENT				
b. Project Assignment: QUALITY ASSURANCE MANA	AGER			
c. Name of all Firms with which you are employed at th of employment (Full time/Part Time): QUINN CONSULT	e time of submitting S ING SERVICES, INC.	OQ. In addition, please denote the type (FULL TIME)		
 d. Employment History: With this Firm <u>9</u> Years With Oth Please list chronologically (most recent first) your em duration of employment for the last fifteen (15) years. (NO please list the history for those years you have worked. P below): 	er Firms <u>25</u> Years ployment history, pos DTE: If you have less t Project specific experie	ition, general responsibilities, and than 15 years of employment history, ence shall be included in Section (g)		
Quinn Consulting Services, Inc., Vice President Design-Build Quality Assurance \longrightarrow 2008-Present Quality Assurance Manager. John is a professional engineer and design-build professional with over 34 years of experience in transportation and heavy construction including quality assurance management and inspection on interstates, primary and secondary roads, and rural roadways. Since joining Quinn Consulting, he has worked as a Quality Assurance Manager (QAM) on VDOT and FHWA Design-Build projects where he has written, overseen, and implemented project-specific QA/QC Plans that conformed with the VDOT Minimum Requirements for Quality Assurance and Quality Assurance and Quality Control on Design-Build and Public-Private Transportation Projects				
Alpha Corporation, Vice President and Director of Transportation Services and man services on design-build, district-wide, and project specific pro-	ortation Services aged up to 25 contracts iects for VDOT and othe	1995-2008 simultaneously primarily providing CEI er transportation clients.		
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization	:		
f Active Registration: Year First Registered/Discipline	VA Registration #	itering recinology		
1992 Professional Engineer VA #402-026380	2001 Professional Eng	gineer MD #4737559		
 a. Document the extent and depth of your experience a 	nd qualifications releva	ant to the Project.		
a. Note your role, responsibility, and specifi	ic job duties for each p	project, not those of the firm.		
b. Note whether experience is with current	firm or with other firm.	older then fifteen (15) years will not be		
c. Provide beginning and end dates for ea		bider than inteen (15) years will not be		
(List only three (3) relevant projects* for which you ha	ave performed a simi	lar function. If additional projects are		
shown in excess of three (3), the SOQ may be rende	ered non-responsive	e. In any case, only the first three (3)		
projects listed will be evaluated.)	•			
Project: Design-Build Route 1 Improvements at Fort Belvoir, Lorton, VA	Dates:	March 2014-Dec. 2017		
Project Role: Quality Assurance Manager	With Current Firm?	Yes		
As Quality Assurance Manager , John was responsible for the QA and oversight of the construction operations, including the QA testing technicians. He checked test, daily, safety, and environmental reports; determined and certified to VDOT whether the materials and work complied with the Contract Documents; conducted preparatory inspection meetings prior to the start of any new work; oversaw and directed the independent QA testing and inspections; and compared the QA and QC tests to ensure they were within the tolerances established by VDOT's Minimum QA/QC Requirements Manual. John monitored the contractor's QC program to ensure it was per the contract, the Minimum Requirements for QA/QC on Design-Build and Public-Private Transportation Act Projects, reviewed working plans/shop drawings, for preparatory meetings, and QA inspection of all materials used. Reported to Scott Szympruch DBPM as he will on this new project. This project widened US Route 1 to relieve heavy traffic near the Ft. Belvoir military installation. It constructed and/or widened Route 1 from 4-6 lanes, a multi-use trail, route realignment, intersection improvements, bridge demolition/construction, retaining walls, noise walls, street lighting, stormwater management, drainage, utility relocations, right of way acquisition, and traffic signals. There were improvements to accommodate bicycles and pedestrians, pedestrian signals, bicycle lanes, sidewalks, curb ramps and safer crosswalks. MOT included daily lane closures along US Route 1 and shifting traffic to the newly-constructed southbound lanes as the northbound lanes were constructed. The project was constructed in coordination with VDOT, Fairfax County, and the				

lanes as the northbound lanes were constructed. The project was constructed in coordination with VDOT, Fairfax County, and the Army Garrison at Fort Belvoir, was highly visible to local authorities and was a major focus of local and federal elected officials, with an emphasis on MOT, stakeholder communication, protecting the environment, and historical significance. *Corman was the Design-Build Lead Contractor in a joint venture partnership.* Client: Federal Highway Administration | Eastern Federal Lands Highway Division | Cost: \$82 Million Construction Value

Similarities to Rt. 7 / Battlefield Project: Design-Build, roadway, survey, bridge and retaining walls with architectural treatments, environmental permitting, commitments, compliance, mitigation, geotechnical, E & S control, hydraulics and SWM, landscaping, roadway lighting, traffic control devices (including overhead sign structures), Intelligent Transportation Systems,

transportation management plan, extensive MOT, ROW acquisition, utility relocations, stakeholder coordination, public involvement/public relations, quality assurance and quality control, construction engineering and inspection, overall Project management

Project:	Design-Build Route 27/244 Interchange, Arlington, VA	Dates:	March 2012-Aug. 2015
Project Role:	Ouality Assurance Manager	With Current Firm?	Yes

As **Quality Assurance Manager**, John oversaw all of the QA oversight and testing, monitored the QC program for compliance with the project-specific QA/QC plan and VDOT Minimum Requirements for QA/QC on Design-Build & Public-Private Transportation Act Projects. He monitored the contractor's QC program to ensure it was per the contract, reviewed working plans/shop drawings, for preparatory meetings, and QA inspection of all materials used.

This project replaced the Washington Boulevard Bridge over Columbia Pike which has many architectural/aesthetic features including a concrete block pattern on retaining and abutment walls, decorative pylons in each corner, haunched steel fascia girders with a two-tone paint scheme to mimic the previous arch, a relief pattern incorporated into the vertical outer surfaces, and medallions with images reflecting the historical significance of Freedmen's Village. Reconfigured several ramps to improve access, replaced a box culvert that conveyed Long Branch through the center of the interchange, and constructed a sidewalk and shared-use path. **Client: Virginia Dept. of Transportation | State Highway Administration | Cost: \$50 Million**

Similarities to Rt. 7 / Battlefield Project: VDOT Design-Build, roadway, survey, bridge and retaining walls with architectural treatments, environmental permitting, compliance, mitigation, geotechnical, E & S control, hydraulics and SWM, landscaping, extensive MOT, roadway lighting, traffic control devices (including overhead sign structures), transportation management plan, ROW acquisition, utility relocations, stakeholder coordination, public involvement/public relations, QA/QC, construction engineering and inspection, Project management

Project:	Design-Build Fairfax County Parkway,	Dates:	Feb. 2010-March 2013
	Northern Virginia		
Project Role:	Quality Assurance Manager	With Current Firm?	Yes

As **Quality Assurance Manager**, John oversaw QA and QC staff to ensure the project was completed per contract and the VDOT Design-Build Minimum Standards. He facilitated preparatory meetings before new activities were begun, documented asphalt and aggregate testing within the FHWA QL Pay System, and coordinated QA laboratory testing services as required. He monitored the contractor's QC program to ensure it was per the contract, the Minimum Requirements for QA/QC on Design-Build and Public-Private Transportation Act Projects, reviewed working plans/shop drawings, etc., and QA inspection of all materials used.

This project constructed a six-lane divided limited access highway; the Franconia-Springfield Parkway interchange improvements; a shared-use path along a portion of relocated Rolling Road; sound barriers along relocated Rolling Road and Ramp D; and a new bridge over the Fairfax County Parkway while maintaining traffic on the Parkway below. **Client/Owner: Federal Highway Administration | Virginia Dept. of Transportation Cost: \$22 Million**

Similarities to Rt. 7 / Battlefield Project: VDOT Design-Build, roadway, survey, bridge and retaining walls with architectural treatments, environmental permitting, compliance, mitigation, geotechnical, E & S control, hydraulics and SWM, landscaping, roadway lighting, traffic control devices (including overhead sign structures), transportation management plan, extensive MOT, ROW acquisition, utility relocations, stakeholder coordination, public involvement/public relations, QA/QC, construction engineering and inspection, Project management

* 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: OWEN L. PEERY, PE, DIRECTOR, TRANSPORTATION

b. Project Assignment: DESIGN MANAGER

c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part time): **RK&K** (FULL TIME)

d. Employment History: With this Firm >30 Years With Other Firms 4 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):

RK&K, Director, Transportation

▶ 2002 – Present

Owen leads RK&K's transportation efforts throughout Virginia, has been the Design Manager on several design-build projects, and assisted VDOT preparing Design-Build and P3 contract documents. He has 34 years of combined experience in civil design and project management where he has been the Project Manager, Design Manager and/or Lead Project Engineer on a wide range of transportation and civil engineering projects for VDOT, local transportation agencies, and private sector clients through planning, design and construction. He also has extensive inter-agency, stakeholder, utility and owner coordination required experience with urban improvements. Additionally, he is a current member of the VTCA Design-Build Committee and has formerly served as a member of the VTCA Engineering Consultant Leadership Committee (ECLC). His extensive experience assures VDOT that he is more than capable of leading the design management of the Route 7 and Battlefield Parkway Interchange project to a successful conclusion.

- e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:
- Virginia Military Institute | Lexington, VA | BS | 1983 | Civil Engineering
- f. Active Registration: Year First Registered/ Discipline/VA Registration #:
- 2009 | Professional Engineer | VA | #0402 046882

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

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

(List only three (3) relevant projects^{*} for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)

Project:	Design-Build Route 29 Solutions – Rio Road Grade Separation Intersection (GSI), Albemarle, VA	Dates:	Jan. 2015-Jul. 2017
Project Role:	Design-Build Design Manager	With Current Firm?	Yes

As **Design Manager** for Route 29 / Rio Road Grade Separated Intersection (GSI), Owen was responsible for leading and overseeing the design and construction services portions of the project. This complex project that included numerous design sub consultants and specialists, consisted of a complex **SPUI** grade separated intersection to allow traffic to move efficiently on the Route 29 corridor, and the construction of four through lanes underneath Rio Road to carry traffic north or south. Owen coordinated the structural engineering design with other project elements including roadway, storm water and maintenance of traffic. The innovative bridge design on this project, the first of its kind in Virginia, was designed with the superstructure functioning as a compression strut, allowing the bridge abutments to be an integral part of the retaining walls below the bridge and reducing the overall length of the bridge. Owen led and coordinated the individual design disciplines including the coordination of bridge and roadway designs, drainage, utilities, right-of-way, and environmental permitting and compliance, which reported directly to him. Owen worked closely with the project's DBPM to ensure the project design was completed in accordance with the contract documents. Through construction he coordinated the review and response to shop drawings, RFIs and field questions. He coordinated with adjacent project elements to ensure that project stayed within budget and on schedule. *He was also the QA/QC Manager for this Corman and RK&K project.* Client: Virginia Department of Transportation | Cost: \$46.3 Million

Similarities to Rt. 7 / Battlefield Project: VDOT Design-Build; roadway; survey; bridge and retaining walls with architectural treatments; environmental permitting; geotechnical; erosion and sediment control; hydraulics and stormwater management; landscaping; roadway lighting; traffic control devices; ITS; transportation management plan; extensive MOT, ROW; utility

relocations; stakeholder coordination; public involvement/public relations; QA/QC; construction engineering and inspections; shop drawing review; RFIs; as-built drawings, overall Project management

Project:	Design-Build I-64 Widening & Route 623 Interchange,	Dates:	Oct. 2013-Nov. 2015
	Henrico and Goochland Counties, VA		
Project Role:	Design Manager	With Current Firm?	Yes

As **Design Manager**, Owen led a multi-disciplined team through design and construction, with RK&K providing full-time quality assurance during construction. Traffic was maintained through this busy corridor at all times, while constructing additional through lanes to the median, thus widening of I-64 in both directions. The interchange improvements included upgrading the existing traffic signal, widening the I-64 westbound ramp to Route 623 to provide an additional turn lane, adding a left turn lane on Route 623 to I-64 eastbound, and widening the I-64 eastbound off ramp to Route 623 to provide an additional turn lane. Owen worked closely with the project's DBPM to ensure the project design was completed in accordance with the contract documents. He also provided VDOT with design plans for review and approval. In addition to being the DM on this project, Owen also served as Design Quality Manager establishing and overseeing the Quality Assurance/Quality Control (QA/QC) Program for design, including design review, VDOT review coordination, specifications and constructability. Through construction he coordinated the review and response to shop drawings, RFIs and field questions. The management of a multi-discipline team, phasing of construction and the successful delivery of a design-build project are directly relevant to the Route 7 project. *This is a Corman & RKK project*. Client: Virginia Department of Transportation | Cost: \$33 Million

Similarities to Rt. 7 / Battlefield Project: VDOT Design-Build; roadway; survey; bridge and retaining walls; environmental permitting; geotechnical; erosion and sediment control; hydraulics and stormwater management; landscaping; roadway lighting; traffic control devices; ITS; transportation management plan; ROW; utility relocations; stakeholder coordination; public involvement/public relations; QA/QC; construction engineering and inspections; shop drawing review; RFIs, as-built drawings, overall Project management

Project:	VDOT Route 250 Bypass Interchange at McIntire Road, City of Charlottesville, VA	Dates:	Mar. 2006-Nov. 2012
Project Role:	Design Manager	With Current Firm?	Yes

Owen served as **Design Manager** on this new diamond-shaped, grade-separated interchange that eliminates an existing at grade Tintersection, improving connectivity and alleviating congestion by providing a free-flowing traffic pattern through this area. He was responsible for planning, environmental documentation, preliminary engineering, final engineering public outreach and coordination between federal, state and local agencies to complete this project that included roadway design; interchange layout and design; bridge design; environmental studies; traffic data collection and analysis; drainage design, stormwater management and hydraulics, and landscape/hardscape design and engineering support during construction. In conjunction with the City's project manager, he led a City Council-selected Steering Committee through the process, including the analysis of 15 interchange options during the planning stage. Owen led an outreach program that included directing the Steering Committee through over 40 public meetings and outreach opportunities for public design input. Public outreach was so critical to this project that, under Owen's direction, RK&K maintained a project web site that contained all project information, that was linked to the City and VDOT web sites, and that was updated nearly real-time keeping the community apprised of information and updates.

Like the Route 7 / Battlefield Parkway project, MOT was complex and critical as the interchange had to be constructed in the middle of an existing at-grade intersection while maintaining existing traffic capacity and lanes on the intersecting roadways; coordinating/maintaining access to the regional rescue squad; and maintaining community access. Owen supervised the preparation of landscaping planting plans and cultural resource mitigation commitments. The roadway design was optimized to limit right-of-way requirements, avoid parkland and historic property acquisition, to best-fit the roadway profiles to the existing topography and provide a grade separation at this urban intersection. The project opened ahead of schedule. **Client: Virginia Department of Transportation** | **Cost: \$25 Million**

Similarities to Rt. 7 / Battlefield Project: VDOT Design-Build; roadway; survey; bridge and retaining walls with architectural treatments; environmental permitting; geotechnical; erosion and sediment control; hydraulics and stormwater management; landscaping; roadway lighting; traffic control devices; ITS; transportation management plan; ROW; utility relocations; stakeholder coordination; public involvement/public relations; QA/QC; construction engineering and inspections; RFIs, shop drawing review, overall Project management

* 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: KYLE KERN - SENIOR SUPERINTENDENT b. Project Assignment: CONSTRUCTION MANAGER c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time): CORMAN CONSTRUCTION, INC. (FULL TIME) Employment History: With this Firm 29 Years With Other Firms 0 Years Please list chronologically (most recent first) your employment history, position, general responsibilities, and duration of employment for the last fifteen (15) years. (NOTE: If you have less than 15 years of employment history, please list the history for those years you have worked. Project specific experience shall be included in Section (g) below): Corman Construction, Inc., Senior Superintendent | Construction Manager ▶ 2000-Present Assigned to roadway and bridge projects, including four design-builds, Kyle develops work plans that comply with contract specifications, oversees material procurement and supplier coordination, reviews the schedule with management teams, advises / directs field crews, and schedules / manages subcontractors, construction, equipment, safety, and quality control. He coordinates field activities with the Quality Control team and inspects construction for compliance and schedule adherence.

e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization:

f. Active Registration: Year First Registered/ Discipline/VA Registration #: 2014 | Virginia DEQ Responsible Land Disturber Certification #08623 2014 | VDOT Erosion & Sediment Control Contractor Certification #1-06762

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

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

(List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)

Project:	US 29 & East Randolph Road Cherry Hill Road, Burtonsville, MD	Dates:	Dec. 2002-Sept. 2005
Project Role:	Construction Manager	With Current Firm?	Yes

As Construction Manager for this new-grade separated Single Point Urban Interchange (SPUI) constructed at the intersection of US 29 with East Randolph Road, a major North/South route connecting the Baltimore and Washington Beltways, part of an overall grade separation effort by MSHA to eliminate all grade crossing on the busy roadway, Kyle oversaw the entire project, including roadway widening, stormwater management ponds, utility relocations (electric, phone, cable, signals), MSE wall, bridge and piping crews and coordinated the traffic switches. Project included two bridges and nine retaining walls with decorative finishes. New bridge was constructed over an active roadway (US 29) similar to the Battlefield Project over US 7. The superstructure consists of structural steel beams and cast-in-place deck with decorative ashlar stone-line concrete parapet walls. Each end of the ridge is signalized and lined with decorative street lighting. The retaining walls, varying 3-ft. to 20-ft. high and 100-ft. to 600-ft. long, support the ramps leading to the structure and consist of 54,200 SF of MSE walls with decorative limestone and ashlar stone finishes with pilasters spaced at 50-ft. intervals and ashlar-lined cast-in-place end transitions ranging up to 100-ft. long. The second bridge accommodates a future ramp from Musgrove Road to Southbound US 29. Kyle developed work plans that complied with contract specifications, oversaw material procurement and supplier coordination, reviewed the schedule with management teams, advised / directed field crews, and scheduled / managed subcontractors, construction, equipment, safety, and quality control. He ensured that materials used and work performed met contract requirements, approved for construction plans/specifications, and ensured safety and environmental compliance. Kyle coordinated field activities with the Quality Control team and inspected construction for compliance and schedule adherence. Client: Maryland Department of Transportation / State Highway Administration | Cost: \$19 Million

Similarities to Rt. 7 / Battlefield Project: Roadway; survey; bridge and retaining walls with architectural treatments; environmental permitting; geotechnical; erosion and sediment control; hydraulics and stormwater management; landscaping; roadway lighting; traffic control devices; transportation management plan; utility relocations; stakeholder coordination; public involvement/public relations; QA/QC; construction engineering and inspections; overall Project management

As **Construction Manager** for this project that designed/reconstructed/widened a two-mile section of dual-divided I-70 and replaced two narrow bridges on I-70, Kyle oversaw field work, including roadway widening on South Street, cross slope correction, MSE and retaining walls, utility relocations, traffic signals, stormwater management, bridge construction, lane closures, and traffic switches. The roadway was widened one lane in each direction to eliminate traffic backups from merging lanes. On- and off-ramps were reconfigured as dedicated lanes to maintain flow from exiting and merging traffic. Work involved complex horizontal and vertical geometry and phased construction of the roadway, ramps, and bridge, including phased construction of cross culverts spanning I-70. There were MSE and decorative retaining walls, utility relocations (sanitary, CCTV, and gas), and new traffic signals. Kyle developed work plans that complied with contract specifications, oversaw material procurement and supplier coordination, reviewed the schedule with management teams, advised / directed field crews, and scheduled / managed subcontractors, construction, equipment, safety, and quality control. He ensured that materials used and work performed met contract requirements, approved for construction plans/specifications, and ensured safety and environmental compliance. Kyle coordinated field activities with the Quality Control team and inspected construction for compliance and schedule adherence. Project was completed on time and on budget. **Client: Maryland Department of Transportation | Cost: \$37.5 Million**

Similarities to Rt. 7 / Battlefield Project: Design-Build; roadway; survey; bridge and retaining walls with architectural treatments; environmental permitting; geotechnical; erosion and sediment control; hydraulics and stormwater management; landscaping; roadway lighting; traffic control devices; ITS; transportation management plan; utility relocations; stakeholder coordination; public involvement/public relations; QA/QC; construction engineering and inspections; overall Project management

Project:	Design-Build Rehabilitation of Eleven (11) Bridges on US 13 (Salisbury Bypass), Wicomico County, MD	Dates:	June 2017-Present
Project Role:	Construction Manager	With Current Firm?	Yes

As **Construction Manager**, Kyle supervises field operations, evaluates safety exposures and risks, and participates in developing the project-specific safety program, work plans, and Job Hazard Analyses. He ensures that materials used and work performed meet contract requirements, approves for construction plans/specifications, and ensures safety and environmental compliance. Kyle conducts weekly safety inspections with the project manager and project engineer, submits weekly Safety Inspection Reports, oversees quality control compliance and project close out. He coordinates labor, equipment, and subcontractors, schedules, and conducts pre-construction staff meetings establishing goals and responsibilities. Kyle reviews scope to identify any specialized safety training needs, reviews Toolbox Talks, Take Fives, Morning Huddles, and Site Inspections weekly. The project consists of rehabilitating eleven (11) 40-year old concrete and steel beamed bridges on the Salisbury bypass which leads to Ocean City, MD. Bridges are being reconstructed in phases with northbound traffic relocated to share the southbound lanes of the bypass in the first phase during the winter months, thereby limiting traffic impacts during the busy summer tourist season. It also includes the design and construction of the Maintenance of Traffic (MOT) required to complete the bridge rehabilitation, design and construction of potential stormwater management facilities, and relocating utilities, as needed. *This is a Corman and RK&K project.* Client: Maryland State Highway Administration | Cost: \$23.9 Million

Similarities to Rt. 7 / Battlefield Project: Design-Build; roadway; survey; bridge; environmental permitting; geotechnical; erosion and sediment control; hydraulics and stormwater management; landscaping; roadway lighting; transportation management plan; Extensive MOT on US 13 / US 50 – main corridor to the MD and DE beaches; ROW; utility relocations; stakeholder coordination; public involvement/public relations; QA/QC; construction engineering and inspections; overall Project management

* 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.

Current Assignment	Role	Anticipated Duration
DB Rehabilitation of Eleven (11) Bridges on US 13 (Salisbury Bypass)	Construction Manager	Current thru June, 2018

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

a. Name & Title: MIKE WOODS, ASSISTANT VICE PRESIDENT, PRINCIPAL

b. Project Assignment: LEAD UTILITY COORDINATION MANAGER

c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time): CARDNO, INC. (FULL TIME)

d. Employment History: With this Firm 20 Years With Other Firms 12 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):

Cardno, Inc., Assistant Vice President, Principal

▶ 1998 – Present

Mike is manager of Cardno's Richmond, Virginia office, which provides subsurface utility engineering and utility coordination services to clients in Virginia, Maryland, Delaware and West Virginia. He has extensive experience in the area of utility engineering as it relates to highway projects. Mike is keenly aware of the VDOT policies and procedures related to utility coordination and involvement.

Virginia Department of Transportation (VDOT), Transportation Engineer, Right-of Way and Utilities / Location and Design Divisions > 1986-1998

During his 12 years at VDOT, Mike worked in both the Right of Way and Location and Design Divisions. Most importantly, during his 6 years in the Utilities Section, he was responsible for the relocation of utilities that were determined to be in conflict with the roadway design. Mike is thoroughly familiar with the VDOT UFI process and all aspects of the relocation process. Utilizing many of the tools developed with the Department, Mike has helped to create many of the procedures used by Cardno today.

- e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Virginia Commonwealth University, Richmond, VA | 3 Years Undergraduate Study | 1992 | Urban Planning Virginia Polytechnic Institute, Blacksburg, VA | 3 Years Undergraduate Study | 1986 | Architecture
- f. Active Registration: Year First Registered/ Discipline/VA Registration #:

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

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

(List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)

Project:	Design-Build Route 29 Solutions – Rio Road Grade	Dates:	Aug. 2015 – Aug. 2016
	Separation Intersection (OSI), Albemane, VA		
Project Role:	Utility Coordination Manager	With Current Firm?	Yes

As Utility Coordination Manager, Mike provided oversight to Cardno's efforts on behalf of VDOT for this individual task order which was assigned under the Statewide Utility Field Inspection and Utility Coordination contract with VDOT. He verified conflicts, determined cost responsibilities, coordinated utility relocation design, reviewed/recommended approval of utility relocation, plans and estimates, and ensured inspection of utility relocation construction. Mike managed the Cardno team that provided Utility Coordination and Utility Relocation Inspection support on behalf of the owner for this design-build contract. He supervised the Utility Relocation Inspection services to ensure that all relocations were being performed according to the approved utility relocation plans to include limitations on right-of-way and the strict parameters of the contract and ensuring compliance with the VDOT Utilities Manual. Mike reviewed utility relocation designs prepared by a PE for contract utility relocations and verified / modified designs, if necessary, based on field conditions and construction activities.

This project constructed a grade-separated intersection at Route 29 and Rio Road that carries Route 29 thru traffic beneath Rio Road via a **modified Single Point Urban Interchange (SPUI).** Approximately 1 mile long, it was designed to ease traffic congestion at the intersection. Work included installing a drainage system under the bridge, sidewalks/pedestrian crossings around the intersection, and concrete retaining walls north/south of the intersection and bridge deck. There was significant roadway design for different roadway types and typical sections with a mix of rehabilitation, widening, and new construction. A grade separated interchange was constructed on an existing signalized intersection in a congested urban area where the team maintained traffic, access to adjacent properties, and relocated utilities. **Client: Virginia Department of Transportation | Cost: \$46.3 Million**



Similarities to Rt. 7 / Battlefield Project: VDOT Design-Build; roadway; survey; bridge and retaining walls with architectural treatments; environmental permitting; geotechnical; erosion and sediment control; hydraulics and stormwater management; landscaping; roadway lighting; traffic control devices; ITS; transportation management plan; extensive MOT, ROW; utility relocations; stakeholder coordination; public involvement/public relations; QA/QC; construction engineering and inspections; overall Project management

Project:	Route 1 / Route 123 Interchange, Woodbridge, VA	Dates:	June 2012 – May 2016
Project Role:	Contract Manager	With Current Firm?	Yes

As **Contract Manager**, Mike provided oversight and guidance for all aspects of the Utility Field Inspection process for the project. The project also resulted in an advance utility relocation contract being advertised in order to facilitate the duct bank construction prior to the roadway advertisement. Mike helped to facilitate the coordination of multiple utility owners while managing the changes from overhead conversions to underground design and construction. This task was performed under the Statewide Utility Field Inspection and Utility Coordination contract with VDOT. Mike was responsible for assisting the Department with Utility Coordination and Utility Field Inspection services for the purposes of coordinating the necessary utility relocations. He verified conflicts, determined cost responsibilities, coordinated utility relocation design, reviewed and recommended approval of utility relocation, plans and estimates, and ensured inspection of the utility relocation construction. Mike reviewed utility relocation designs prepared by a PE for contract utility relocations and verified / modified designs, if necessary, based on field conditions and construction activities.

The VDOT design project was to widen Route 1 and Route 123, adding underground utilities, and construction of a new interchange. Determining that the project was a good candidate for undergrounding of all utility facilities through the entire corridor, an advance combined duct system was installed prior to construction. This was coordinated within the limitations of the acquired right-of-way for Dominion Power, Verizon and Cox Communication throughout the project to facilitate the undergrounding of these facilities. The new interchange built Route 123 over Route 1, and the CSXT railroad, separates through traffic, and connects Route 123 to Belmont Bay Drive east of the railroad. Route 123 was widened from four to six lanes, and Express Drive was raised to connect to the new Route 123/Belmont Bay Drive. Route 1 was widened from four to six lanes, improving Occoquan Road with median and turn lanes from the Route 1. The project eliminated two signalized intersections on Route 1 at Route 123 and Annapolis Way. The project also enhanced access to the Woodbridge VRE/Amtrak Station for vehicles, bikes and pedestrians during the project's first phase. It also constructed an important segment of the Potomac Heritage National Scenic Trail from the intersection at Route 123 and Annapolis Way to the Belmont Bay community. **Client: Virginia Department of Transportation | Cost: \$194,000** (*Fee*)

Similarities to Rt. 7 / Battlefield Project: Roadway; survey; bridge and retaining walls with architectural treatments; erosion and sediment control; hydraulics and stormwater management; ROW; utility relocations; stakeholder coordination; construction engineering and inspections; overall Project management

Project:	Design Build - US 460, City of Suffolk, VA to Prince George County, VA	Dates:	Aug. 2013 – April 2014
Project Role:	Consultant Utility Manager	With Current Firm?	Yes

As **Consultant Utility Manager**, Mike was responsible for Cardno's utility coordination services. Many of the initial tasks related to the Utility Engineering portion of the work were completed including 100% of the Subsurface Utility Engineering required for the project. Mike also administered the creation and initiation of all of the Utility Agreements with the affected utility owners within the project. He verified conflicts, determined cost responsibilities, and coordinated utility relocation design. Mike supervised that the conflict matrices were created for the entire alignment and cost responsibility was determined for a majority of the utility impacts within the project corridor.

The DB project was to construct of a new 55-mile, four-lane divided, limited access highway from the City of Suffolk to Prince George County/Petersburg at I-295. It would have been a tolled expressway to run parallel to the existing US 460 lanes. It was envisioned as a way to accommodate freight vehicles, provide traffic relief, and create another Hampton Roads evacuation route. Ultimately the project was terminated by VDOT due to the environmental concerns within the project corridor. **Client: Virginia Department of Transportation | Cost: \$1.4 Million (Fee)**

Similarities to Rt. 7 / Battlefield Project: VDOT Design-Build; roadway; survey; bridge and retaining walls; environmental permitting; geotechnical; erosion and sediment control; hydraulics and stormwater management; landscaping; roadway lighting; traffic control devices; ITS; transportation management plan; utility relocations; stakeholder coordination; overall Project management

* 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 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

a. Project Name & Location	b. Name of the prime design	c. Contact information of the Client or Owner	d. Contract	e. Contract	f. Contract	Value (in thousands)	g. Dollar Value of Work
	consulting firm responsible	and their Project Manager who can verify Firm's	Completion	Completion Date	Original	Final or Estimated Contract	Performed by the Firm
	for the overall project design	responsibilities	Date	(Actual or	Contract Value	Value	identified as the Lead
	for the overall project design.	responsionnies.	(Original)	(Actual of Estimated)	Contract value	value	Contractor for this
			(Original)	Estimated)			
							procurement.(in thousands)
Name: Design-Build Route 29	Name: Rummel, Klepper & Kahl	Name of Client/ Owner: Virginia Department of		7/21/17*		\$129,027*	
Solutions-US 29 & Rio Road	(RK&K)	Transportation		*Route 29 Solutions	\$116,746*	*Route 29 Solutions project	
Grade Separated Intersection		Phone: 434-422-9860 Desiret Manager Desired Contington DE	10/20/17	completed ahead of	*Route 29 Solutions	\$46,336**	\$46.226
Location: Albemarle County, VA		Project Manager: David Covington, PE	10/30/17	schedule 12/2/16**	<i>project</i>	**Rio Road portion	\$40,550
Location. Albeinarie County, VA		Final: Dave Covington@VDOT Virginia gov		**Rio Road completed	**Pio Pood portion	Owner changes and early	
		Linan. Dave.Covingtone vDO1.virginia.gov		46 days early	κιο κουά ροπιοπ	completion incentive payments	
h Narrative describing the Work	Performed by the Firm identified a	s the Lead Contractor for this procurement. If the Offero	r chooses to submit	work completed by an a	filiated 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 t	he relevancy of that work can be considered accordingly	The Work History	<i>i</i> Form shall include only	one singular project	Projects/contracts with multiple	nhases segments elements
(projects) and/or contracts shall a	they will have on <u>this</u> Project, so t	Projects/contracts with multiple phases, segments, clama	nts (projects) and/	or contracts shall not be	olie singulai project.	piect on this form. If the Offerer	phases, segments, elements
(projects), and/or contracts shall be	identify how the Joint Venture on J	Projects/contracts with indupie phases, segments, eleme	a nontion of the use	of contracts shall not be a	a Offener's firm	Sjeet on this form. If the Offeror	chooses to submit work performed
as a joint venture of Partnership,	Corman was a Lead Con	rathership was structured and provide a description of it	as structured as a two	ork perioritied only by un	e Offeror's fiffil.	ted in	
SIMILAR SCOPE	constructing the bridges,	retaining walls and road work, and provided VDOT's first Re	sponsible Charge En	gineer key personnel, proje	ct engineers, superinten	dents,	THE & THE PARTY
✓ VDOT Design-Build	foremen, operators and c	raft labor.					
✓ Modified SPUI	PROJECT NARRATIV Point Urban Interchand	(E: Constructed a grade-separated intersection at Rt. 29 and Ri (SPUI) About a mile long, it eases intersection congestion	0 Rd. that carries Rt. Work included a drai	29 through traffic beneath I	K10 Kd. v1a a modified S dewalks/pedestrian cros	sings	
✓ Roadway	constructing concrete ret	aining walls north/south of the intersection and bridge deck. I	This intersection is s	<i>imilar to the Rt. 7/Battlefi</i>	eld intersection – Majo	r thru	
✓ Survey	traffic on highway main	line, substantial volume on the crossing street with a high pe	rcentage of turning	movements, adjacent shop	oping/schools, vocal/inv	polved	
✓ Bridge and Retaining Walls w	ith <i>local town, and many ut</i> 7/Battlefield Parkway, cou	ulty conflicts. Designed roadway for different types and typical structed a grade senarated interchange on an existing signalized	intersection in a cons	of rehabilitation, widening, a	and new construction. Li	ke Rt.	E The second
Architectural Treatments	to adjacent properties, and	relocated utilities.	intersection in a cong	sested aroun area where the	team manumet trante,		No the sector
 Environmental, including Perr 	nitting, ENVIRONMENTAL C	OMPLIANCE, SAFETY, QUALITY, WORKMANSHIP:	Environmental desig	gn/permitting including: we	etland delineations and s	tream	
Commitments, Compliance, M	litigation assessments; determination clearances/permits, Rt. 7	/Battlefield Parkway project has similar permitting. Rega	rements; secured rai	re/inreatened/endangered s	ersection approaches to	other	- the main of
✓ Geotechnical	motorists, design/constr	action of bike lanes and multi-use paths and on Rio Rd., and	separating local and	through traffic at this inter-	section, which had high	crash	
 E & S Control Hudroulios & Stormuster Mar 	rates. For quality/workm	anship, retaining walls were sealed/stained to resemble dry-st	acked stone. The River	o Rd. intersection pedestria	an crosswalks have a sta	amped	
Hydraunes & Stormwater Man Eacilities	INNOVATIVE DESIG	N SOLUTIONS CONSTRUCTION TECHNIQUES: For	the Rio Rd. grade ser	parated Intersection, an innov	vative design method wa	s used	2 Pio Pood Medified Steele
✓ Landscaping	which was not constructed	l in Virginia. The abutments were placed on top of the soldier pil	e retaining wall to min	nimize the bridge's footprint	and keep Rt. 29 open to	traffic	& Rio Road Modified Surgie-
✓ Roadway Lighting	during construction. Design the limited space in the init	gned the superstructure to act as a strut to support the retaining w	alls horizontally while and retaining walls we	e supporting traffic vertically	y. Chose this design beca	use of emely	Politi Groan Intersection
✓ Traffic Control Devices	tight schedule. Likewise,	Rt. 7/Battlefield Parkway requires construction of bridges, emba	nkments and retaining	g walls within existing roads/	intersection. Maintained	tight schedule to maintain traffic at al	l times with summer detours to open the
✓ ITS	road to traffic in time for l	University of Virginia's fall semester. To get a jump start on the	project, overhead/un	derground utilities were rel	ocated while completin	g final design work.	ted with determine Die's left turn and
✓ TMP/MOT	through movements and i	ncluded 2 temporary U-turns on Rt 29 to improve operations	TMP included re-tim	ing/phasing of Rt 29 corrid	G CONSTRUCTION: lor signals to facilitate th	wZIIA predicted impacts associate modified traffic patterns developed	ed queue lengths at the U-turn locations
✓ ROW	and the use of detours to	reduce the number of U-turning vehicles. It included outreach	in conjunction with	VDOT to publicize the de	tours and re-timed signa	als. Traffic impacts were monitored	after implementing each traffic change
✓ Utility Relocations	and made adjustments to	fit actual conditions. The Rt. 7/Battlefield Parkway project v	vill require a MOT P	lan with temporary roadwa	y pavements and signal	ls, minimize traffic impacts, minimu	in the median to remove asphalt and
✓ Stakeholder Coordination	excavated 60.000 CY of	dirt while setting 47 concrete beams for the bridge deck. This in	tersection provided t	through traffic on Rt. 29 ma	ior cross traffic with sub	stantial turning movements in the ce	enter of a commercial shopping district.
✓ Public Involvement/Relations	Most initial construction	was completed at night without impacting traffic. Once the s	ummer MOT was in	place, the project team wo	rked 24 hours a day, 6 d	lays a week. There were major traff	ic pattern changes, with night closures
✓ QA/QC	reducing Rt. 29 to one la	intersection and right turns were maintained. Business entran	of southbound traffi	c and 3 lanes of northbound	d traffic were maintaine	d on Rt. 29. Rio Rd. traffic could no	ot cross Rt. 29, but Rio Road remained
✓ Construction Engineering & In	an intersection. The proje	ct was completed ahead of schedule which minimized impacts.	The aggressive intering	m requirement to complete	the grade separation in	103 days was completed in 57 days.	There may be a similar strategy on Rt.
PROPOSED PERSONNEL ON	7/Battlefield Parkway to	minimize impacts on the congested traffic lanes during constr	uction. Due to comm	nercial/retail operations along	g this corridor, a construe	ction plan provided access during the	busy holiday season and was developed
PROJECT DKK: Origin Design DE Stream Son	with local commercial est	ablishments and coordinated in the field to avoid undue surprises	or disruption to moto	orists/shoppers.	MENTS. Utilized san	be utility strategy proposed for Rt	7/Battlefield_including_weekly_utility
Alice Ortman Bieley Woody Per	coordination meetings, fu	ill-time onsite utility coordinator, and joint use duct banks. A	t the request of Sam	is Club and in close coordi	nation with VDOT, our	ROW team facilitated a land swap	so they could construct delivery truck
Loe Rauseo Brian Finerfrock	access enhancements to t	heir property.	-			1	· · ·
soe Rauseo, Bhan Filemoek	COMMUNICATION S	TRATEGIES WITH BUSINESS OWNERS AND OTHER	STAKEHOLDERS	S: There was an outreach p	rogram in place prior to	bidding and our project team was in	volved once selected. We collaborated
Schnabel: Ed Drahos, PE	with local politicians, bu	sinesses, merchants and the public. Implemented protocols to	communicate with	residents, adjacent busines	ses, and other stakehold	lers and communicated ahead of th	e work to avoid surprises. Distributed
weekly/monthly public communications in close coordination with vDOL. Face-to-face communication was held for critical operations so business owners understood the timing of impacts and what the site would look like once under							
developments/upcoming events. There were many visits before construction activities were about to impact a property/facility. With Rt. 7/Battlefield Parkway, similar needs are anticipated since there is high commuter traffic, a concerned/engaged residential/commercial community,							
and the Town of Leesburg leadership	that will be overseeing the project thr	oughout design/construction. SUCCESSFUL PROJECT D	CLIVERY: Project v felv. We have a let	was completed ahead of sch	hedule and on budget. C	ompleted the bridge and through lan	hes in only 57 days which reopened the
intersection to traffic 40 days allead	estone accomplishment." – Dave Cov	ington, PE, Regional Program Manager, VDOT	iciy. We have a lot	more work to do to comp	icie uno projeci, anu u	rest of the Route 27 Solutions pl	ogram, but reopening the Nio Koau

(LIMIT 1 PAGE PER PROJECT)





ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

			<u>(LIMIT 1 PAGE PER</u>	<u> PROJECT)</u>				
a. Project Name &	b. Name of the prime	c. Contact information of the	d. Contract Completion	e. Contract Completion	f. Contract Value	e (in thousands)	g. Dollar Value of Work	
Location	design consulting firn	Client or Owner and their	Date (Original)	Date (Actual or	Original Contract Value	Final or Estimated	Performed by the Firm	
	responsible for the ov	erall Project Manager who can		Estimated)		Contract Value	identified as the Lead	
	project design.	verify Firm's		,			Contractor for this	
	FJ8	responsibilities					procurement (in thousands)	
Name: Design-Build Intercounty	Name: Parsons	Name of Client/ Owner: Maryland				+	procurement.(in thousands)	
Connector Contract B (ICC-B)	Transportation Group, I	nc. State Highway Administration				\$560.970*		
		Phone: 410-545-8644				Owner directed changes		
Location:		Project Manager: Rob Shreeve	11/11/11	11/11/11	\$558,000	and environmental	\$111,600	
Montgomery County, MD		Phone: 410-545-8644				incentive payments		
		Email: rshreeve@sha.state.md.us						
h. Narrative describing the Work Per and the role they will have on <u>this</u> Pr single project. Projects/contracts wit Partnership was structured and provid	n. 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. The Work History Form shall include only one singular project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form. If the Offeror chooses to submit work performed as a Joint Venture or Partnership, identify how the Joint Venture or Partnership was structured and provide a description of the portion of the work performed only by the Offeror's firm.							
SIMILAR SCOPE	construction, e	arthwork, MOT, environmental, utility reloc	cation/coordination, public relations,	, coordinating with the other ICC p	projects, and was involved with d	efining ROW	Colesville Depot	
✓ Design-Build	requirements a	nd preparing plats.				Anton		
✓ SPUI Interchange	PROJECT N	RRATIVE: Constructed a new 7.1 mile 6	lane divided highway which is part	of a critical link between the I-270	/370 technology corridor to the w	est and the I-		
 ✓ AICS ✓ Interchange Justification Res 	95/US I comm traffic on maio	ercial corridor to the east. It reportes communication of 5	arterial roadways with pedestrian a	s onto 6 lanes of controlled-access h	nghway, improves mobility/safety	roads and 3		
✓ Roadway	miles of a ped	estrian/bicycle shared-use path along the roa	dway. There were several new inters	sections, with 5 modified to accom	nmodate new traffic patterns. A m	ajor element	Intercounty Connector (UCOUS	
✓ Survey	was a Single H	oint Urban Interchange (SPUI) at MD 650) with a bridge, major MOT phasing	g on MD 650, lighting, and comple	ex traffic signalization.	(bac		
✓ Bridge and Retaining Walls w	ith ENVIRONM	ENTAL COMPLIANCE, SAFETY, QUA	LITY, AND WORKMANSHIP: IC	C-B crosses watersheds and Chesar	peake Bay Watershed protection a	rea, crowning		
Architectural Treatments	it the most env	st environmentally-sensitive ICC segment. Support of excavation was put up for major bridge, utility and roadway construction to minimize impacts and drilled shafts						
 Environmental, including Perm Commitmental Compliance 	nitting, reduced enviro	c or even setting foot on the site which stress	compliance and awareness training w	vnere vendors, subcontractors, supp l policies/compliance and streamlin	ed environmental stewardship/co	mpliance into	ASE CALLER AND	
Mitigation and Sound Barrier	daily activities	When filtering construction water, the pro-	ject team used a cutting	pendgetypæbile t	fieltration the system with sand and b	ag filters and	Route 650 SPUI Bridge	
✓ Geotechnical	injected an org	anic flocculant/coagulant into the waste str	eam to reduce turbidity within regul	latory discharge standards. It is cap	pable of swiftly reducing 2000 N	TU sediment	Colesville	
✓ E & S Control	prepare for the	next storm. This minimized environmental	impacts, enhanced our ability to mee	et the schedule, and granted excelle	ent compliance ratings.	in storm and facilitated pumping	g sediment basins to gain capacity and	
✓ Hydraulics & Stormwater	Soil moisture	was a challenge due to an extremely wet seas	son and in situ moisture of native soi	ils. Field personnel raised concerns	and our project team managers d	iscussed it with the ICC Team.	Geotechnical engineers made	
Management	recommendation significant from	ons which led to a new specification that allo	owed soils 2	ld have had to transport soil on los	Θ 4 %convertoption	unotodobleausse take thied get romai te	stingote/ithonetythTshiesevastalso	
 Landscaping Poodway Lighting 		E DESIGN SOLUTIONS CONSTRUCT	Ton TECHNIQUES, Dealers 14	in have had to transport son on loca	(D. 11 TCOS en las Street			
 ✓ Traffic Control Devices 	drilled shafts	upport of excavation for major bridge utili	ty and roadway construction and re	wo new practices for E&S devices evised profiles to minimize impacts	(Double IGOS and new filter pla s. The last 2 miles of roadway we	stic material for clean water div ere constructed through a speci	al protection area considered the most	
✓ ITS	environmental	y-sensitive. Basins were designed not to have	ve a permanent pool of water, which	minimized thermal impacts in the s	summer. Added a thermal element	it to maintain natural water tem	peratures prior to discharge preserving	
✓ TMP/MOT	aquatic species	. Design/constructed a cooling system for	water runoff. Instead of water runnin	ng from paved surfaces into the coo	oler streams, the structures directed	ed water runoff into undergrour	id SWM facilities where it was cooled	
✓ ROW Acquisition	before dischar	e, minimizing water temperature changes a	nd protecting fish/plants.					
✓ Utility Relocations	MINIMIZIN for padastrians	G TRAVELING PUBLIC, BUSINESS, AI	ND COMMUNITY IMPACTS, IN	CLUDING CONGESTION DUI	RING CONSTRUCTION: Main	tained multi-modal access with	temporary roads and walkways/paths	
 Stakeholder Coordination Public Involvement/Palations 	and interchang	e points. Traffic Control/MOT, including for	or work in major roadway medians	and RFP MOT plan changes for s	afer conditions and reduced patte	ern changes. Coordinated signa	ils and construction with bus routes to	
\checkmark OA/OC	accommodate	ransit service.	5	1 0	Ĩ			
✓ Construction Engineering & Ir	spection COMMUNIC	ATION STRATEGIES WITH BUSINE	SS OWNERS AND OTHER STA	AKEHOLDERS: Each stakeholde	er was assigned a project team	"champion." Some stakeholde	rs had their own team representative	
PROPOSED PERSONNEL ON	"championing"	their issues/concerns. This made us aware	of any issues in meeting agency nee	eds/requirements. Impacted elected	officials were kept up	-and v	atten no bom stressition tactions ties the new	
PROJECT	highway. Con	munity meetings provided information on we kept them informed when working outside	sound barriers and landscaping adja e normal timeframes and mitigated in	acent to residents along the corrid	lor. Conducted construction sche	dule update meetings with cor	nmunities. With residents so close to	
RK&K: Heather Henke, PE, PTO		DOW AND LITH TWO ADDA OT A COM	DDINATION OF COMPLEX V			al Amain a star (1 1		
Undeland Management: John Und	eland WINIVIIZIN Working with	TROW AND UTILITY IMPACTS COU stakeholders, we minimized ROW impacts t	hrough median/ROW width reduction	ons via innovative SWM and geom	etry improvements Coordinated	gn 4 main waterways, wetlands with over 10 utility companies	, undularies, parks/neighborhoods, etc.	
Schillabel	congested area	s. 47 utilities were relocated requiring coordinates	rdination and redesigning prior to re	elocating. While constructing the h	highway, temporary relocations v	vere often done and then move	ed to permanent locations. Maintained	
systems/services along the 7-mile hig	shway stretch, including ele	ctric, cable, telephone, fiber-optics, commun	nication lines, signals, lighting, gas, v	water, and sanitary sewer lines.	*		-	
- 27 Enhanced Value Charge D	agale was complet	a on and on ourget.	and a sector day of the t	and Companyation				

- 27 Enhanced Value Change Proposals were approved resulting in the owner receiving an award winning project and a cost savings for the Lead Contractor.
 Received E&S Control quarterly incentives for high E&S ratings, received incentives to minimize environmental impacts, and earned "A" cumulative ratings on over 150 E&S control inspections. The project team earned a 95% conformance rating and met all key project goals.
 Awards: 2012 MdQI Award of Excellence Partnering Silver Award | 2012 ARTBA Globe Environmental Award –Major Highway | 2012 ENR Mid-Atlantic Best Transportation Project



ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a Project Name &	h Nama of the pr	rimo	a Contact information of the Client	d Contract Completion	a Contract Completion	f Contract Val	in thousands)	a Dollar Value of Work
a. Floject Name &	design somewiting	fille	c. Contact information of the Chent	u. Contract Completion	Pate (A stual or		E (III III00sallus)	g. Donal value of work
Location	design consulting	g mrm	or Owner and their Project Manager	Date (Original)	Date (Actual of	Original Contract	Final or Estimated	Performed by the Firm identified
	responsible for th	ne overall	who can verify Firm's		Estimated)	Value	Contract Value	as the Lead Contractor for this
	project design.		responsibilities.					procurement.(in thousands)
Name: US 29 & East	Name: Jacobs		Name of Client/ Owner: Maryland Dept.					
Randolph Road Cherry			of Transportation				\$10.040*	
Hill Road			Phone: 410-841-1031	<u>8/21/05</u>	9/6/05*	\$17.540	*Owner directed	\$10.040
			Project Manager: Jamie Folden	0/31/03	*Owner directed changes	\$17,549	ohangas	\$19,049
Location:			Phone: 410-841-1031				Changes	
Burtonsville, MD			Email: jfolden@sha.state.md.us					
h. Narrative describing the	Work Performed by	the Firm ide	ntified as the Lead Contractor for this proc	urement. If the Offeror chooses	to submit work completed by an af	filiated or subsidiary con	mpany of the Lead Contr	actor, identify the full legal name of the
affiliate or subsidiary and t	the role they will hav	ve on this Pro	ject, so the relevancy of that work can be c	onsidered accordingly. The Wor	k History Form shall include only	one singular project. Pro	jects/contracts with mul	tiple phases, segments, elements
(projects), and/or contracts	shall not be conside	ered a single p	project. Projects/contracts with multiple p	hases, segments, elements (proje	ects), and/or contracts shall not be o	claimed as a single proje	ct on this form. If the Of!	feror chooses to submit work performed
as a Joint Venture or Partne	ership, identify how	the Joint Ver	nture or Partnership was structured and pro	vide a description of the portion	of the work performed only by the	Offeror's firm.		*
		Corman as Lea	d Contractor oversaw construction and self-per	formed the MSE walls, concrete wo	ork, deck, roadway and pipework.			
SIMILAR SCOPE	D	DO IECT NA	DDATIVE: A Single Point Urban Diamond	rada concrated interchange at the	a US Douto 20 and East Dandolph D	nd intersection with diam	and ramps running	US Route 29 and the Single-
✓ Modified SPUI		long both side	s of Route 29 to carry traffic safely between Ro	ute 29 and East Randolph Road/Che	erry Hill Road realigned Route 29 and	paior north/south route con	necting Baltimore	Point Urban Diamond Interchange
✓ Roadway	a	nd Washington	n Beltways, to improve the curvature along ma	ainline, and widened East Randolph	n Road/Cherry Hill Road to accommo	date turning and bicycle-c	ompatible outside	And and a second fill
\checkmark Bridge and Retaining	g Walls with la	anes. The inter	change was part of an grade separation effort by	owner to eliminate grade crossings	on a busy roadway. Route 29, like Ro	ute 7 in Leesburg, is a prin	hary state highway	
Architectural Treatm	ients se	erving commu	ters to Washington, DC and Baltimore from re	sidential areas of Howard, Montgon	nery, and Prince George's Counties. F	andolph Road is a major a	rterial connecting	and a state of the second
✓ Fnvironmental		ommercial are	as on either side of Route 29 and acts as a $\frac{1}{2}$	but through for motorists from the	College Park/Beltsville area to Mon	gomery County. Constru	cted two bridges,	
✓ Geotechnical		onstruction of	Λ ramps to access the interchange bridge an	I constructed a new bicycle path by	etween an intersection This new in	arsection is similar to the	Rt 7/Rattlefield	Primary RecEstrics
\checkmark E & S Controls	in	ntersection – N	<i>A lamps to access the interchange of dige, and</i> <i>Iaior thru traffic on the highway mainline. su</i>	bstantial volume on the crossing st	reet with a high percentage of turnin	g movements. maior adiad	ent shopping and	
· Las Controis	sc	chools, vocal/i	nvolved local agencies, and substantial utility	conflicts.	······································			
 Hydraunes & Storm 	water	NVIRONME	NTAL COMPLIANCE SAFETY OUALT	V AND WORKMANSHIP Nine	retaining walls support the ramps lead	ling to the structure and co	print of 54 200 SE	
Management Faciliti	es N	ASE walls with	decorative limestone and ashlar stone finishes	with pilaster spaced at 50-ft, increm	nents and ashlar-lined cast-in-place en	d transitions ranging up to	100-ft. long. The	
 Landscaping 	tv	wo-span, conci	rete single-point urban diamond bridge has a d	ecorative form-lined poured arch pie	er with bicycle accommodations and a	accommodates a future ran	np. It consists of a	
✓ Roadway Lighting	ca	ast-in-place de	ck with decorative ashlar stone-line concrete	parapet walls. Decorative cast-in-pl	lace columns with ashlar stone finish	embellish each corner and	a decorative iron	
✓ Traffic Control Devi	ces ra	ailing rests ato	p the parapet. Quality workmanship of archite	ctural center arched pier. There was	E&S controls and permanent stormw	ater management ponds fo	r the quantity and	
✓ TMP/MOT	q	uality manage	ment associated with roadway improvements a	nd extensive night work to safely ac	commodate traffic.		* S.L.	
✓ Utility Relocations	I	NNOVATIVE	DESIGN SOLUTIONS CONSTRUCTIO	N TECHNIOUES: Modified traff	fic control to eliminate a split traffic i	pattern on Route 29. This	reduced mainline	Geogle
✓ Stakeholder Coordin	ation re	econstruction (ime by several months while providing a safe	er travel and work zone. Also rede	esigned a crucial storm drain system	which avoided potential c	ostly and lengthy	
✓ Project Management	W	Vashington Su	burban Sanitary Commission (WSSC) delays.		-	-		
			TO A VELINIC DUDI LC DUCINECC AND		UDING CONCERTION DUDING	CONCEDUCEION. Th		
PROPOSED PERSON	NEL ON	JINIVIZING	IRAVELING PUBLIC, BUSINESS, AND	COMMUNITY IMPACTS, INCL	LUDING CONGESTION DURING	maintain traffic at all time	project's objective was to e	k zones were clear for rush hour and devices
PROJECT		vere in compli	nce. Safely performed traffic switches with n	inimal impact to the traveling publi	ic which was well-planned out for sea	maintain traffic at an time mless execution There wa	s extensive night work to a	ccommodate traffic. Constructed temporary
Corman: Kyle Kern	pa	avement in the	Route 29 median and at the southeastern corne	r of Cherry Hill and Prosperity Driv	e intersection, revised temporary signi	ng, pavement markings, ar	d traffic signals for each ph	ase, and maintained pedestrian and bicyclist
	a	ccess through	each phase. Modified traffic control to eliminat	e a split traffic pattern on Route 29.	This reduced mainline reconstruction t	ime by several months whi	le providing a safer travel a	nd work zone. Work was performed without
	m	najor traffic tie	ups.					
COMMUNICATION STRA communicating with the trave	ATEGIES WITH BU eling public through me	SINESS OW essage boards,	NERS AND OTHER STAKEHOLDERS: and public meetings.	Although the formal stakeholder co	ommunication program was led by th	e Owner, Corman maintai	ned close coordination with	n the adjacent businesses and assisted with
MINIMIZING ROW AND with BGE to de-energize/wor	UTILITY IMPACTS k around their power li	S COORDIN ines conflictin	ATION OF COMPLEX UTILITY RELOC g with our equipment. Similar to Rt. 7/Battled	ATIONS/ADJUSTMENTS: There ield, ROW was required to fit the	e were numerous utility relocations in new facilities.	cluding electric, telephone	e, cable, and ITS/ signals.	During bridge construction, we coordinated
SUCCESSFUL PROJECT	DELIVERY: Project	was complete	d on time and on budget					
 Received all "A" Perform 	nance Ratings over a th	hree-year cons	truction period					
 Maintained a "D" Average 	in Fracion & Sadim	ant Control In	mastions and a "P " Average in Maintenance.	f Troffic Increations				

- Maintained a "B" Average in Erosion & Sediment Control Inspections and a "B+" Average in Maintenance of Traffic Inspections
 Awards: 2006 MdQI Award of Excellence for New Bridge Construction | 2006 MdQI Award of Excellence for Partnering Interchange Reconstruction





ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)							
a. Project Name & Location	b. Name of the prime/ general	c. Contact information of the Client and	d. Construction	e. Construction	f. Contr	act Value (in thousands)	g. Design Fee for the Work
-	contractor responsible for overall	their Project Manager who can verify	Contract	Contract	Construction	Construction Contract Value	Performed by the Firm
	construction of the project.	Firm's responsibilities.	Start Date	Completion	Contract Value	(Actual or Estimated)	identified as the Lead
	1 0	Ĩ		Date (Actual or	(Original)		Designer for this
				Estimated)	(8)		procurement.(in thousands)
		Name of Client: VDOT		7/21/17*		¢120.025*	
Name: Design-Build Route 29	Name: LANE/Corman	Phone: 434.422.9860		*Route 29 Solutions	\$116,746*	\$129,027* *Pouto 20 Solutions project	
Solutions-US 29 & Rio Road		Project Manager: David Covington, PE		completed ahead of	*Route 29 Solutions	*Koule 29 Solutions project \$46 336**	\$10 444 -Entire Contract
Grade Separated Interchange		Phone: 434.422.9860	03/2015	schedule	project	**Rio Road portion	\$2,900 -Rio Road
Location: Albemarle County,		Email: Dave.covington@vdot.virginia.gov		12/2/16** **D:- D	\$39,336** **Dia Dandaratian	Owner changes and early completion	φ2,200 ΙΠΟ ΙΚΟΙΙΙ
VA				46 days early	**Kio Koaa portion	incentive payments	
h. Narrative describing the Work	Performed by the Firm identified as the Le	ad Designer for this procurement. Include the off	ice location(s) where	the design work was pe	erformed and whethe	r the firm was the prime designer or a s	subconsultant. The Work
History Form shall include only o	ne singular project. Projects/contracts with	multiple phases, segments, elements (projects),	and/or contracts sha	ll not be considered a sin	ngle project. Projects	contracts with multiple phases, segme	ents, elements (projects), and/or
contracts shall not be claimed as a	a single project on this form.						
SIMILAR SCOPE	RK&K was Lead Designer and Desi	sign Manager for Route 29 Solutions, which includes 3 Berkmar Dr. Extension, This Work History showcases	b distinct elements bund the Rt 29/Rio Rd elements	lled into one DB contract:	Rt. 29 and Rio Rd. Gra	de Separated	
✓ VDOT Design-Build	Richmond and Fairfax, VA offices.	. Contract required depressed travel lanes and bridge a!	long Rt. 29 in the center	er of the Rio Rd. intersection	on be constructed withi	n 103 days –	
✓ Modified SPUI	RK&K's innovative design was con	<i>upleted early allowing LANE/Corman to open the inter</i>	rsection in 57 days; 46	days ahead of schedule!	Pio Rd via a modified	Single Point	TAL
✓ Roadway	Urban Interchange (SPUI). About	it a mile long, it eases intersection congestion. Work i	ncluded a drainage sys	tem, intersection sidewalk	s/pedestrian crossings,	constructing	and the second states in the second states
✓ Survey	concrete retaining walls north/sour	th of the intersection and bridge deck. This intersect	tion is similar to Rt.	7/Battlefield's intersection	ı – Major thru traffic	on highway	
 Bridge and Retaining Walls with 	h <i>conflicts.</i> Designed roadway for di	fferent types and typical sections with a mix of rehabil	itation, widening, and	new construction. Like Rt.	7/Battlefield Parkway,	constructed a	
Architectural Treatments	grade separated interchange on an ex	kisting signalized intersection in a congested urban area	where the team maintai	ned traffic, access to adjace	ent properties, and reloc	ated utilities.	
Commitments Compliance Mi	tigation and stream assessments: determin	ation of wetlands and stream compensatory mitigati	on requirements: secu	red rare/threatened/endang	gered species clearance	es; and other	
✓ Geotechnical	clearances/permits. Rt. 7/Battlefie	ld Parkway project has similar permitting. Regard	ling safety, there are s	hields on the intersection	approaches to guide m	otorists, and	
✓ E & S Control	workmanship, retaining walls were	$\frac{1}{2}$ sealed/stained to resemble drv-stacked stone. The R ^{i}	and through traffic a local traffic a	estrian crosswalks have a	stamped brick pattern f	For quality/	Point Unit an Internetion
✓ Hydraulics & Stormwater Man	agement business entrances within the inters	section area have a similar stamped pattern.	I		I I I I I I I I I I I I I I I I I I I	Single	-Point Oroan Intersection
Facilities	INNOVATIVE DESIGN SOLUT	FIONS CONSTRUCTION TECHNIQUES: RK&	K performed the struct	ural engineering of the Ric	Rd. Grade Separated	Intersection using an innovative design method	nod not constructed in Virginia. The
 Landscaping Deadway Lighting 	abutments were placed on top of th	e soldier pile retaining wall to minimize the bridge's for this design because of the limited space in the intersection	potprint and keep Rt. 29	9 open to traffic during con ain traffic at all times. The	nstruction. Designed the	superstructure to act as a strut to support the support of the sup	the retaining walls horizontally while OW in an extremely tight schedule
 Koadway Lighting Traffic Control Devices 	Likewise, Rt. 7/Battlefield Parkway	requires construction of bridges, embankments and ret	aining walls within exis	sting roads/intersection. Ma	aintained tight schedule	to maintain traffic at all times with summer	detours to open the road to traffic in
✓ ITS	time for University of Virginia's fall	semester. To get a jump start on the project, overhead	l/underground utilities	were relocated while comp	pleting final design wo	·k.	
✓ TMP/MOT	MINIMIZING TRAVELING P	UBLIC, BUSINESS, AND COMMUNITY IMPA(CTS, INCLUDING C	ONGESTION DURING	CONSTRUCTION:	RK&K provided traffic engineering, the	regional TMP, and MOT. WZTIA
✓ ROW	predicted impacts associated with traffic patterns, developed queue l	detouring Rio's left turn and through movements and enotes at the U-turn locations and the use of detours	included 2 temporary to reduce the number	U-turns on Rt. 29 to impi of U-turning vehicles. It	included outreach in c	ncluded re-timing/phasing of Rt. 29 corridon in the dependent of the depen	or signals to facilitate the modified
✓ Utility Relocations	monitored traffic impacts after imp	lementing each traffic change and made adjustments to	o fit actual conditions.	The Rt. 7/Battlefield Parky	way project will require	a MOT Plan with temporary roadway pave	ements and signals, minimize traffic
 Stakeholder Coordination 	impacts, minimum term detours an schedule in the median to remove	d a public outreach program that educates and garner	s support. Through tra	ffic on Rt. 29 was relocate	ed to the outer lanes an	d temporary pavement while crews worked	d "Around the Clock" under a tight
V Public Involvement/Relations	the center of a commercial shoppin	g district. Most initial construction was completed at	night without impactin	g traffic. Once the summe	er MOT was in place, th	e project team worked 24 hours a day, 6 da	ys a week. There were major traffic
 ✓ Construction Engineering & Ind 	pattern changes, with night closure	s reducing Rt. 29 to one lane each direction. During t	he traffic restriction per	eriod, 2 lanes of southbour	d traffic and 3 lanes of	northbound traffic were maintained on Rt.	29. Rio Rd. traffic could not cross
PROPOSED PERSONNEL ON	a temporary 3-way stop at an inters	section. The project was completed ahead of schedule v	which minimized impac	ts. The aggressive interim	requirement to comple	te the grade separation in 103 days was con	mpleted in 57 days. There may be a
PROJECT	similar strategy on Rt. 7/Battlefield	1 Parkway to minimize impacts on the congested traff	ic lanes during constru	iction. Due to commercial	/retail operations along	this corridor, a construction plan provided ac	ccess during the busy holiday season
RKK: Owen Peery, PE, Stuart Samb	berg,		na analae surprises of a	ISTUPLION TO MOTORISIS/SHOP			
PE, Alice Ortman, PE, Ricky Wood	y, minimizing ROW AND UTIL meetings, full-time on site utility of	oordinator, and joint use duct banks. At the request of	Sams Club and in clo	se coordination with VDO	T. our ROW team facil	ty strategy proposed for Rt. //Battlefield, in its tated a land swap so they could construct of	delivery truck access enhancements
PWS, Barry Brandt, PE, PTOE, Joe	to their property.				,		
kauseo, Brian Finerfrock, PE	COMMUNICATION STRATEC	JIES WITH BUSINESS OWNERS AND OTHER §	STAKEHOLDERS: '	There was an outreach pro	gram in place prior to b	idding and our project team was involved o	once selected. We collaborated with
Schnabel: Ed Drahos, PE	local politicians, businesses, merch	ants and the public. Implemented protocols to commu	inicate with residents, a	djacent businesses, and of	her stakeholders and co	mmunicated ahead of the work to avoid sur	prises. Distributed weekly/monthly
Public Relations Manager worked alo	ongside VDOT's Public Outreach Manager, pro	viding support to the Project Development Advisory F	Panel and updates to VI	DOT. This person handled	Hot Line calls, met wit	h citizens, business owners, HOAs to brief	on project developments/upcoming
events There were many visits befo	re construction activities were about to impact	a property/facility With Rt. 7/Battlefield Parkway.	similar needs are ant	icinated since there is high	ph commuter traffic, a	concerned/engaged residential/commer	cial community, and the Town of

Leesburg leadership that will be overseeing the project throughout design/construction. SUCCESSFUL PROJECT DELIVERY: Project was completed ahead of schedule and on budget. Completed the bridge and through lanes in only 57 days which reopened the intersection to traffic 46 days ahead of schedule. "Lane-Corman accomplished the work efficiently, quickly and most importantly, safely. We have a lot more work to do to complete this project, and the rest of the Route 29 Solutions program, bur reopening the Rio Road intersection early was a major milestone accomplishment." – Dave Covington, PE, Regional Program Manager, VDOT





ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a Project Name & Location	h Nama of the prime/general	a Contact information of the Client and	d Construction	a Construction	f Contract Va	lua (in thousands)	g Design Fee for the Work
a. I toject Name & Location	contractor responsible for overall	their Project Manager who can verify Firm's responsibilities	Contract Start	Contract	Construction Contract Value	Construction Contract Value	Performed by the Firm identified as the Lead Designer for this
	construction of the project.		Duit	Date (Actual or Estimated)	(Original)	(Actual or Estimated)	procurement.(in thousands)
Name: Design-Build Route 250 Bypass Interchange at McIntire Road Location: Charlottesville, VA	Name: General Excavation, Inc.	Name of Client: City of Charlottesville Phone: 434-970-3182 Project Manager: Jeannette Janiczek Phone: 804-558-9721 Email: janiczek@charlottesville.org	03/2013	02/2015	\$20,377	\$24,459* *Owner requested scope change	\$5,900
h. Narrative describing the Wo subconsultant. The Work Histo multiple phases, segments, eler	rk Performed by the Firm identified as ory Form shall include only one singula ments (projects), and/or contracts shall	the Lead Designer for this procurement. Incl r project. Projects/contracts with multiple ph not be claimed as a single project on this form	ude the office location nases, segments, elen n.	on(s) where the designer the designer (projects), and	gn work was performe for contracts shall not	ed and whether the firm be considered a single	was the prime designer or a project. Projects/contracts with
SIMILAR SCOPE ✓ Design-Build ✓ Roadway	As Prime Consultant, RK&K prov Rd. Phase I: Developed Conceptu design and assisted the City with p elements included environmental/n analysis and design, graphic/comp	ided planning, engineering, and construction managen al Alternatives, Detailed Alternatives and a Preferred roject bidding/procurement. Phase III: Construction VEPA documentation, public involvement, traffic data uter renderings, and website hosting. The project was	nent services on a new gr Alternative through Publ management and inspect collection/analysis, road closely coordinated with	ade separated interchang lic Hearing and complete ion, and construction en lway and structural design vDOT and the FHWA	ge on the Rt. 250 Bypass ed the Environmental Doo gineering in coordination n, traffic engineering, hy from RK&K's Richmond	at the intersection of McIntir cuments. Phase II: Final with the contractor. Project draulic and hydrologic I, VA office.	re
 ✓ Survey ✓ Bridge and Retaining Walls ✓ Environmental, including Permitting, Commitments, Compliance, Mitigation ✓ Geotechnical PROJECT NARRATIVE: Ma culverts including stream diversi design was optimized to limit R this urban intersection. As with thru traffic on US 29 as well as 		or interchange design features include roadway reconf is, extensive utility relocations, and retaining walls. R W requirements, avoid parkland and historic property e Rt. 7/Battlefield Parkway Interchange, the overpase way turning movements).	iguration/reconstruction, K&K prepared landscap acquisition, to best-fit th s was constructed at the	new roadway construct ing planting plans and c ne roadway profiles to th e existing intersection, r	ion, a single span–semi-i: ultural resource mitigatio e existing topography and equiring phased constru	ntegral abutment bridge, 2 b n commitments. The roadw d provide a grade separation ction to maintain traffic (bo	ox ay at oth
 ✓ E & S Control ✓ Hydraulics & Stormwater Management ✓ Landscaping ✓ Traffic Control Devices 	ENVIRONMENTAL COMPLIA plans. The final report included a Branch. Final results were then in Hydrologic and Hydraulic Analysis culvert under Battlefield Parkwa management pond. E&S plans we	NCE, SAFETY, QUALITY, AND WORKMANSH n independent hydrologic analysis of the 425-acre w corporated with the plans including modification of la s and scour analysis were conducted for a new bridge of ay at Russell Branch Rd. SE. A combination of stor re developed in multiple phases in with the TMP.	IIP: Conducted hydrolo atershed, storm event ro ke parameters and outfal ver Schenks Branch and rmwater measures were	gy calculations conductor uting for the proposed l ll structure to attain the p to replace a double 8'x8 implemented to minimiz	ed for a 2.8-acre lake that ake, and HEC-2 analysis proper lake performance c 'box culvert beneath Rt. 2 te impacts to ROW and h	was incorporated into the ro of the lake outfall at Schen lesired during storm events. 250. The Rt. 7/Battlefield P istoric features, including m	ad ks A Parkway has similar issues with an undersized hanufacturers filtering devices and a stormwater
 ✓ TMP/MOT ✓ ROW ✓ Utility Relocations ✓ Stakeholder Coordination ✓ Dublic Implyment/Polations 	INNOVATIVE DESIGN SOLU was a single-span bridge using sterequirements for aesthetics/durabil parallel to each other facilitated the clearances and how the ramps co	CIONS CONSTRUCTION TECHNIQUES: The l el plate girders for a lighter, thinner and more transp ity. The abutments were aligned with McIntire Rd. a structure's design/construction. Similarly, the Rt. 7 / ome together on top of the bridge. Every effort was	Rt. 250 Bridge Bypass Si arent structure which se nd set parallel to each ot Battlefield Parkway br made to eliminate or mir	tructure over McIntire R rves as the gateway to c her to simplify the fram idge will need to be eva nimize the use of joints o	d. was examined for spar lowntown Charlottesville ing of the bridge. While luated to determine the n the structure; semi-inte	a lengths and superstructure The design for a bridge ty they were skewed with resp most cost-effective structur gral abutments were selected	styles to lower project costs. The final solution ype weighed the cost estimates with the overall ect to the superstructure, the fact that they were re, considering the required spans, horizontal d and designed.
 Public Involvement/Relations QA/QC Construction Engineering & Ins PROPOSED PERSONNEL ON 	spection MINIMIZING TRAVELING PU an at-grade intersection into an i plan and lay out temporary traffic register, so minimizing impacts to proposed development in all four	IS, INCLUDING CON ed/maintained Synchro a ct had to minimize impac or part of the purpose an ignificant footprint for th	GESTION DURING C nd SimTraffic traffic mo cts and footprint due to a nd need for the project. ne proposed interchange,	ONSTRUCTION: Simulates assist in planning an many constraints. Most s Similarly, the Rt. 7/Ba leading to the need for in	ilar to the Rt. 7/Battlefield d maintaining traffic during ignificantly, part of the proj ttlefield Parkway Interchar inovative ramp configuration	Parkway Interchange, this project converted construction. This allowed the RK&K Team to ect impacted a city park eligible for the historic nge is being built in an area with existing or ns.	
PROJECT RK&K: Owen Peery, PE, Jeff Kutto PE, PTOE, Stuart Samberg, PE, PTO Brian Finerfrock, PE	MOT was complex and multi-phason open with short-term lane closur work as box culverts and bridge el- in this limited ROW. As the Rt. 7/ and staging during construction, sho	sed allowing construction of a grade separation in the es at night or during off-peak hours. Our MOT and ements had to be built in small phases, allowing traffic Battlefield Parkway will also require a multi-phase app ort-term lane closures, and off-peak detours while brid	middle of an urban inter TMP plan accounted for to be relocated/shifted. roach so that traffic can be dge elements are constru-	rsection. Like Rt. 7/Ba r motorists to move thro Our design took into ac be maintained on tempor cted will be required.	ttlefield Parkway Interough and around the bridge count support for excavate ary pavements during bridge	change, all lanes of the Rt. e work while allowing room ion, contractor equipment, a lge and embankment constru	250 Bypass and McIntire Rd. had to remain for construction. This required many phases of nd materials so the project could be constructed action, a TMP plan that addresses traffic capacity
COMMUNICATION STRATEGI outreach program for this project inc clear direction had not been reached Manager, led the Steering Committee project and was key to successful con must ensure that the public understan	ES WITH BUSINESS OWNERS AND OTH luding administering a Steering Committee har by the Steering Committee and a recommend e through the evaluation of 15 interchange alte mpletion. Public Outreach will also be essentia ids the impacts to their travels during construct	ER STAKEHOLDERS: The Rt. 7/Battlefield Parkw d-appointed by City Council, made up of proponents ation provided to City Council recommending the pr rnatives to the point where two similar interchanges v l on the Rt. 7/Battlefield Parkway Interchange, as man ion.	vay will be prominent in and opponents of the pro- eferred alternative. In the vere recommended to Cin- ny concerns are anticipat	the public eye, requiring ject, and provided over e face of significant put ty Council for a final de ed from the commuters,	an intensive/thoughtful p 40 opportunities for public blic opposition to this pro- cision. This led to a final business owners and the	bublic outreach program. Sin c input into the design. This ject, RK&K's Project Mana consensus and avoided a ne Town of Leesburg leadership	milarly, RK&K managed/oversaw a tremendous project would have failed/not moved forward if ager, Owen Peery, along with the City's Project egative outcome which would have derailed this p. Therefore, a robust Public Outreach program

MINIMIZING ROW AND UTILITY IMPACTS | COORDINATION OF COMPLEX UTILITY RELOCATIONS/ADJUSTMENTS: The Rt. 7/Battlefield Parkway corridors are congested with utilities. Similarly, this project had many utility relocations including Natural Gas – 6,300-ft. of high- and medium pressure gas transmission mains including relocation/reconstruction of a gas regulator station; City Sewer – relocation of 1,200-ft. of sewer mains and laterals; Regional Sewer – replaced 1,300-ft. of 21-in. concrete and clay sewer main with a 30-in. gravity interceptor sewer including crossing of Schenks Branch and boring 400-ft. under the existing Rt. 250 Bypass; and Water – relocation of 4,600-ft. of water mains. Since conventional construction pile driving would have resulted in unacceptable levels of vibrations being put on the existing water line, and the owner desired no piles in the easement, an innovative design concept was incorporated into the water line replacement. A grade beam, coupled with pre-drilling the adjacent piles, was used. This allowed the entire easement to be spanned, while pre-drilling the top 15-ft. of the piles lowered the pile driving vibrations to below the elevation of the utility. Rt. 7/Battlefield Parkway also has many utility issues to address, including relocating overhead lines, maintaining/avoiding underground utility vault, and avoiding/relocating a gas line in the median of Rt. 7.

SUCCESSFUL PROJECT DELIVERY: Project was delivered on budget and ahead of schedule. The City of Charlottesville demonstrated RK&K's exceptional performance by extending our contract through all phases of planning, design and construction management. "RK&K has raised the bar as to the quality of work the City expects from its consultants," Jeanette Janiczek, the City of Charlottesville's Project Manager.



ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/ general	c. Contact information of the Client and	d. Construction	e. Construction	f. Contract Valu	ue (in thousands)	g. Design Fee for the Work
	contractor responsible for overall	their Project Manager who can verify	Contract Start	Contract	Construction	Construction	Performed by the Firm identified
	construction of the project.	Firm's responsibilities.	Date	Completion	Contract Value	Contract Value	as the Lead Designer for this
				Date (Actual	(Original)	(Actual or	procurement.(in thousands)
				or Estimated)		Estimated)	
Name: Design-Build US 13/	Name: E.V. Williams	Name of Client.: North Carolina Dept.					
US 158 Widening From US		of Transportation		12/2015*			
158 / NC 43 to US 158		Phone: 919.707.6610	7/2012	An extension of	¢=< 000	¢=< 000	¢5 200
Location: Hertford and		Project Manager: Teresa Bruton, PE	7/2012	project limits and	\$50,000	\$56,800	\$5,300
Gates Counties, NC		Phone: 919.707.6610		scope was requested by the Owner			
,		Email: tbruton@ncdot.gov		by the Owner			
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							

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. The Work History Form shall include only one singular project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form.

 SIMILAR SCOPE ✓ Design-Build ✓ Roadway ✓ Survey ✓ Bridge and Retaining Walls 	As Lead Designer, RK&K worked from our Raleigh, NC office, with assistance from our Virginia offices to partner with the contractor and deliver this project which included converting an existing intersection into a partial clover leaf interchange with 3 ramps and 1 loop, widening 7.1 miles of roadway from 2-lanes to a 4-lane median divided partial-controlled access freeway, a major water bridge, intersections with restricted left turns, utility relocations, extensive MOT and public outreach. PROJECT NARRATIVE: The project included multiple types of roadway design. <i>Similar to the Rt. 7/Battlefield project, this project converted a major</i> <i>signalized at-grade intersection to a grade-separated partial clover leaf interchange, mainline widening, and eliminated existing signalized intersections vidential clover leaf interchange.</i>
 ✓ Environmental ✓ Permitting ✓ Geotechnical ✓ E & S Control 	multiple intersection designs including directional cross-overs and median U-turns to improve safety and traffic flow. The proposed interchange was designed as a partial clover leaf with 3 ramps and 1 loop (southeast quadrant) including dual bridges over NC 43 which were designed with MSE wall abutments and concrete girders. This intersection is similar to the Rt. 7/Battlefield Parkway intersection in that the proposed bridge was built over an active roadway with utility and ROW constraints.
 ✓ Hydraulics & Stormwater Management ✓ Traffic Control Devices ✓ MOT ✓ ROW 	ENVIRONMENTAL COMPLIANCE, SAFETY, QUALITY, AND WORKMANSHIP: Minimized impacts to wetlands, streams, and low swampy areas Reduced wetland/stream impacts by performing exhaustive studies comparing designs for widening along both sides of the roadway. These studies resulted in an overall decrease in impacts compared to the Department's original design during the planning phase. Environmental issues are similar relating to the minor stream crossings near the Rt. 7/Battlefield Parkway interchange. Enhanced safety by designing ramps within the interchange to temporarily accommodate mainline traffic during interchange bridge construction, restricting the number of driveways, eliminating left turns at intersections, adding right-turn tapers at intersections, and flattening mainline horizontal curvature. This project resulted in an excellent roadway project: The interchange and intersections operate well and the overall ride very smooth and safe for the traveling public.
 ✓ Utility Relocations ✓ Stakeholder Coordination 	INNOVATIVE DESIGN SOLUTIONS CONSTRUCTION TECHNIQUES: Mitigating existing soil conditions on the northeast side of the Chowan River organic "muck" adjacent to a swampy area which reached a depth of 15' to 20'. After studying several options for stabilizing this area, undercut utilizing a trench
 ✓ Public Involvement/Relations ✓ QA/QC 	MINIMIZING TRAVELING PUBLIC, BUSINESS, AND COMMUNITY IMPACTS, INCLUDING CONGESTION DURING CONSTRUCTION: S Potomac Station), left turns were restricted at intersections, our design team worked with the Department to provide designs of adjacent median U-turn converted into a controlled-access facility, the team worked with the Department and property owners to properly and safely locate all accesses along the project.
interchange to safely accommodate mainline tra maintaining traffic safely for a roadway with hea	affic on US 13/158 while the bridges were constructed over NC 43. Special consideration included alignments, grades, sight distance, and turn lane lengths and avy commuter and truck volumes.

COMMUNICATION STRATEGIES WITH BUSINESS OWNERS AND OTHER STAKEHOLDERS: RK&K supported the Department at public meetings to address community concerns over an intersection located at a historic area along the project. They were concerned with the design relative to the restriction of left turn lanes. To resolve the issue, RK&K prepared design alternatives and cost estimates and meeting participation. The result was a new design that allowed left turns utilizing a signal and concrete islands.

MINIMIZING ROW AND UTILITY IMPACTS | COORDINATION OF COMPLEX UTILITY RELOCATIONS/ADJUSTMENTS: RK&K worked with the Department and property owners to minimize Right-of-Way impacts to properties and locate driveway access at safe locations. The horizontal alignment was also designed to consider impacts to a major gas transmission line that ran the entire length of the project.

SUCCESSFUL PROJECT DELIVERY: Utility Relocation: Similar to Battlefield Parkway, the numerous utilities, number of utility owners, and project terrain resulted in providing a full time, aggressive, but respectful utility coordinator. Many compliments were received from the owner and contractor for this effort and performance by RK&K | Design Submittals: Few design submittals resulted in "Revise and Resubmit". The majority resulted in "Comments as Noted" which proceeded the design process quickly and was critical to obtaining the environmental permit timely so construction could begin as scheduled.



r was a design and construction challenge. These soil conditions include the box proved to be the best option.

Similar to Rt. 7/Battlefield Interchange (left out of Marketplace at rns to accommodate vehicles in this movement. Since this project was tt. Designed/constructed the 2 ramps (60-mph) along the west side of the d radii for turning movements. These design elements were critical for