 Statement of Qualifications

INTERSTATE 64 CAPACITY IMPROVEMENTS – SEGMENT I
Newport News, Virginia

State Project No.: 0064-965-264, P101, R201, C501, B616, B617, B618, B619, B620, B621, D601, D602
Federal Project No.: NHS-064-3
Contract ID Number: C00104905DB75

April 17, 2014
3.2 LETTER OF SUBMITTAL
LETTER OF SUBMITTAL FOR STATEMENT OF QUALIFICATIONS
INTERSTATE 64 CAPACITY IMPROVEMENTS – SEGMENT I

Dear Mr. Clarke,

G.A. & F.C. Wagman Inc. (Wagman) is pleased to present our Statement of Qualifications in response to the Virginia Department of Transportation (VDOT) Request for Qualifications for the Interstate 64 Capacity Improvements – Segment I project in Newport News, VA. Enclosed please find our proposal specifically aligned with VDOT’s goals for the successful completion of this project.

Wagman will be the Prime Contractor and the entity with whom VDOT will be contracting. We have assembled a strong and efficient team of highly-qualified professionals with the necessary expertise to successfully meet the goals and objectives of this project. KCI Technologies, Inc. (KCI) will be the Lead Design Firm and will be responsible for managing all design team members – McCormick Taylor, Inc., Volkert, Inc., Schnabel Engineering Consultants, Inc., ECS Mid-Atlantic, LLC, Stantec Consulting Services, Dominion Realty Advisors, Inc., and Appraisal Review Specialists, LLC.

Our team has a proven track record of successful performance with similar design-build projects throughout the Mid-Atlantic and Southeastern regions and has a working knowledge of VDOT design-build practices and procedures. Wagman’s acquisition of Key Constructors, Inc., Key Construction, and DW Lyle further strengthens our team in the Virginia market. The management for Key and DW Lyle will support the project with their experience, management skills and a workforce familiar with VDOT specifications. Our excellent record of performance on design-build projects is a result of effective project management, quality assurance/quality control procedures, budget/cost controls and compliance with client schedules.

We have the knowledge, experience, resources, and expertise to successfully complete this project per VDOT requirements as outlined in the RFQ. As requested in Section 3.2, we have included the information on the following pages as part of our Letter of Submittal.

3.2.2 OFFEROR'S POINT OF CONTACT INFORMATION | Our team has designated an official point of contact relative to this project; his information is as follows:

<table>
<thead>
<tr>
<th>NAME &amp; TITLE</th>
<th>ADDRESS</th>
<th>PHONE NUMBER</th>
<th>FAX NUMBER</th>
<th>EMAIL ADDRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthony Bednarik, DBIA</td>
<td>3290 N. Susquehanna Trail York, PA 17406-9754</td>
<td>717-764-8521 x201</td>
<td>717-767-5457</td>
<td><a href="mailto:awbednarik@wagman.com">awbednarik@wagman.com</a></td>
</tr>
</tbody>
</table>

3.2.3 PRINCIPAL OFFICER INFORMATION | Serving as the Prime Contractor for this project, Wagman’s principal officer’s information is as follows:

<table>
<thead>
<tr>
<th>NAME &amp; TITLE</th>
<th>ADDRESS</th>
<th>PHONE NUMBER</th>
<th>FAX NUMBER</th>
<th>EMAIL ADDRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>David Lyle</td>
<td>5911 Nena Grove Lane Chester, VA 23831-3715</td>
<td>804-778-4444</td>
<td>804-778-4929</td>
<td><a href="mailto:dwlyle@wagman.com">dwlyle@wagman.com</a></td>
</tr>
</tbody>
</table>
3.2.4 OFFEROR'S CORPORATE STRUCTURE | Wagman is an active, registered Corporation in the Commonwealth of Virginia and will take financial responsibility for this project. A single 100% performance bond and a single 100% payment bond will be provided for the total contract value and time period.

3.2.5 IDENTITY OF LEAD CONTRACTOR | G.A. & F.C. Wagman Inc. will serve as the prime/general contractor. We will be the sole legal entity who will execute the Contract with VDOT and will be responsible for overall construction of the project.

3.2.5 IDENTITY OF LEAD DESIGNER | KCI Technologies, Inc. will serve as the prime design consulting firm responsible for the overall design of this project. They will provide design project management, surveying, structure and bridge design, roadway design support, utility coordination, project inspection, and project performance quality control monitoring.

3.2.6 AFFILIATED/SUBSIDIARY COMPANIES | Wagman has two affiliate companies; the full legal name and address of each can be found in Appendix 3.2.6.

3.2.7 DEBARMENT | Each of our team members certify that neither their firm nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency, as reflected by each firm’s signed Certification Regarding Debarment Form, located in Appendix 3.2.7.

3.2.8 VDOT PREQUALIFICATION | Wagman is active, in good standing, and prequalified to bid on this project as outlined in VDOT’s Rules Governing Prequalification Privileges. Our prequalification number is W002. Evidence indicating Wagman is currently prequalified is located in Appendix 3.2.8.

3.2.9 BONDING CAPACITY | With over $500 million in bonding capacity, Wagman is capable of obtaining a performance and payment bond based on the current estimated contract value referenced in RFQ Section 2.1, which bonds will cover the project and any warranty periods as detailed in the attached Letter of Surety, found in Appendix 3.2.9.

3.2.10 SCC AND DPOR REGISTRATION | All firms on our team comply with the law with regard to their respective organizational structure, any required registration with governmental agencies and/or entities, and any required governmental licensure, whether business, commercial, individual, or professional in nature. All team members are eligible at the time of this SOQ submittal, under the law and relevant regulations, to offer and to provide any services proposed or related to the project. All firms satisfy all commercial and professional registration requirements, including those requirements of the Virginia State Corporation Commission (SCC) and the Virginia Department of Professional and Occupational Regulations (DPOR). Full size copies of all SCC registrations and DPOR licenses, or evidence indicating the same, are included in Appendix 3.2.10. Additionally, a table of this information is provided on Attachment 3.2.10, included in the same tab.

3.2.11 DBE STATEMENT | Wagman supports the Disadvantaged Business Enterprise program and is committed to achieving or exceeding the 2% DBE goal for the entire value of the contract.

We look forward to working with and serving VDOT on this project. We greatly appreciate this opportunity and your strong consideration during the evaluation and selection process. If you have any questions in your review, please contact me at (804) 778-4444.

Respectfully,

G.A. & F.C. WAGMAN, INC.

David Lyle
Vice President & Division Manager
3.3 Offeror's Team Structure
3.3 OFFEROR’S TEAM STRUCTURE

**Wagman – Offeror, Legal Entity, Prime/General Contractor:** Since 1902, Wagman is a heavy civil contractor specializing in transportation infrastructure and has grown to become a nationally recognized leader within the industry. We are an experienced design-build contractor and have partnered to complete over $1 billion of highways and bridges in the Mid-Atlantic region during the last 20 years. We will be responsible for overall project management and will self-perform the majority of construction as the general contractor. With innovative engineering experience and a large fleet of heavy equipment, we are well-positioned to manage this project and can ensure a successful end result. Our local resources and knowledge of the area, combined with decades of experience working with owners, contractors and designers allows us to be a valuable resource and provide competitive advantages as a team member. David Lyle, vice-chair and long-standing member of VTCA’s bridge sub-committee, will assist during design and construction as a value-added position.

**KCI – Lead Designer, Project Management, Roadway Design Support, Structure and Bridge Design, Surveying, Utilities, Quality Control Inspection:** KCI is an employee-owned, full service engineering firm employing 1,000 people operating in 26 offices including Richmond, VA. KCI was established in 1955 and has consistently been placed among ENR’s top 100 engineering firms in the country. KCI has excelled in providing management and design services for fast track, design-build projects. This experience includes 35 major transportation design-build projects, either completed or currently under construction for VDOT, NCDOT, SCDOT, MoDOT, MDOT and ODOT. KCI’s design-build experience includes VDOT projects (Rte. 288 PPTA and Region II Bridge Replacement Program) and interstate facilities such as the $142M, I-520 Palmetto Parkway consisting of 12.5 miles of interstate design, 15 bridges and major interchanges at I-20 and US 25 in Aiken County, SC. KCI’s value engineering and innovative designs have saved our DOT clients $18 million in the last 16 years. KCI also specializes in construction engineering and has a client list of over 50 highway/heavy contractors throughout the Southeast, which provides KCI’s staff a competitive edge for constructability and efficient designs.

**McCormick Taylor, Inc. – Roadway Design, Hydraulics, Traffic Control Devices, Transportation Management Plans, Environmental, Permitting, Public Involvement/Relations:** Since 1946, McCormick Taylor has been providing environmental, engineering, planning and communications services to transportation clients throughout the Mid-Atlantic region. With over 400 people in 13 offices, their staff’s diverse strengths are in multi-modal transportation and transit planning and environmental analysis, public involvement and communications, traffic studies, highway, rail and bridge design, and construction inspection. The firm’s long list of successful accomplishments includes a wide range of high visibility, ground-breaking, and award winning transportation planning, communications services and context sensitive design projects. The firm recently completed the VDOT I-64 Richmond to Hampton Roads EIS giving them project specific knowledge for this design-build project area. They have three Virginia offices located in Richmond, Staunton and Bristol.

**Volkert, Inc. – Quality Assurance:** In business since 1926, Volkert, Inc. is a multidisciplinary transportation engineering and construction management firm. Volkert provides construction management and inspection from 24 offices in 11 states and the District of Columbia. Engineering News-Record ranks Volkert #118 among the top 500 design firms. In Roads and Bridges Magazine’s “Go-To” list of 2012, Volkert is ranked #18 and #19 among the top 25 highway and bridge firms that departments of transportation prefer to work with on the job.
site. Volkert has provided quality control (QC); and quality assurance (QA) services for design-build projects (including 100% federally funded projects) ranging in size up to $465 million.

**Schnabel Engineering Consultants, Inc. – QA Testing:** Schnabel specializes in geotechnical and geosstructural engineering, dam and tunnel engineering, environmental services, and sustainable design. Schnabel maintains in-house soil, materials, and asphalt laboratories that are accredited by AASHTO Materials Reference Laboratory and the US Army Corps of Engineers in their Newport News, Richmond, and Blacksburg offices. Schnabel has been a subconsultant on multiple design-build and public-private partnership support term contracts.

**ECS Mid-Atlantic, LLC (ECS) – Geotechnical Engineering, Quality Control Testing:** ECS is an industry leader in geotechnical, construction materials, environmental, and facilities engineering. They have 14 operational centers spread throughout the Mid-Atlantic region and a professional support staff of more than 500 employees, including registered Professional Engineers and Geologists, Environmental Scientists, certified field support staff, and AASHTO accredited laboratories.

**McCarthy Improvement Company – Concrete Paving:** McCarthy Improvement is an award-winning concrete paving subcontractor that is exclusive to our team.

**Stantec Consulting Services (SCS) – Right-of-Way Acquisition:** SCS will be providing right-of-way acquisition services and is a VDOT prequalified right-of-way contracting consultant since 1999.

**Dominion Realty Advisors, Inc. (DRS) – Fee Appraiser:** DRS is a VDOT prequalified Fee Appraiser firm.

**Appraisal Review Specialists, LLC (ARS) – Appraisal Review:** ARS will be providing appraisal reviews and is a VDOT prequalified Review Appraisal firm.

### 3.3.1 IDENTITY AND QUALIFICATIONS OF KEY PERSONNEL

Our management team includes seven Key Personnel positions; each of these individuals have been selected due to their extensive experience and expertise in each of their respective areas of design, construction and administration of similar projects. The chart below introduces our Key Personnel; resumes are included in Appendix 3.3.1.

<table>
<thead>
<tr>
<th>TITLE</th>
<th>NAME</th>
<th>FIRM</th>
<th>Years Exp.</th>
<th>DB Exp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design-Build Project Manager (DBPM)</td>
<td>Anthony Bednarik, DBIA</td>
<td>Wagman</td>
<td>27</td>
<td>√</td>
</tr>
<tr>
<td>Quality Assurance Manager (QAM)</td>
<td>Julie Hartman, PE</td>
<td>Volkert</td>
<td>17</td>
<td>√</td>
</tr>
<tr>
<td>Design Manager (DM)</td>
<td>Stephen Drumm, PE</td>
<td>KCI</td>
<td>36</td>
<td>√</td>
</tr>
<tr>
<td>Construction Manager (CM)</td>
<td>David Passmore</td>
<td>Wagman</td>
<td>20</td>
<td>√</td>
</tr>
<tr>
<td>Lead Structural Engineer</td>
<td>Eric Burgess, PE</td>
<td>KCI</td>
<td>14</td>
<td>√</td>
</tr>
<tr>
<td>Lead Roadway Engineer</td>
<td>Rick DeLong, PE</td>
<td>McCormick Taylor</td>
<td>20</td>
<td>√</td>
</tr>
<tr>
<td>Public Relations Manager</td>
<td>Patsy Napier</td>
<td>McCormick Taylor</td>
<td>46</td>
<td>√</td>
</tr>
</tbody>
</table>

### 3.3.2 ORGANIZATIONAL CHART/NARRATIVE

Our team is illustrated on the organization chart on page 5. We have established specific responsibilities for each key staff member of our organizational structure to ensure effective project management. The personnel presented are committed to the successful delivery of this project. Our team understands that no primary team member, including subcontractors and subconsultants, will be changed without VDOT approval. Our organizational chart shows the “chain of command” and reporting relationships of all team members. The solid lines represent reporting relationships in managing, designing, and constructing the project. The dashed lines represent the coordination and communication that will take place between the disciplines. Also shown below is the separation between QA and QC inspection and field/laboratory testing in accordance with the *Minimum Requirements for Quality Assurance and Quality Control on Design Build and P3 Projects, January 2012*. 
Third Party Stakeholders

City of Newport News
Hampton Roads TPO
Dept. of Defense
VA Dept. of Emergency Mgmt
VA Dept. of Tourism
Regulatory Agencies
Educational Facilities
Lakeside Church of God
Full Gospel First Church of VA

Newport News Water Works
Newport News Park
Noise-Sensitive
Neighborhoods (The Forest, Hanover Heights, Turnberry)
Emergency Responders
CSX
Port of Virginia

Lead Structural Engineer
Eric Burgess, PE (KCI)

Lead Roadway Engineer
Rick DeLong, PE (MT)

Survey
Rob Baumgartner, RLS (KCI)

Utilities
Scott Riddle (KCI)

Hydraulics
Brad Stimpson, PE (MT)

Geotechnical
J. Randy Wirt, PE (ECS)

Survey
Rob Baumgartner, RLS (KCI)

Utilities
Scott Riddle (KCI)

Railroad Coordination
Jim Fitz Morris, PE (KCI)

ITS
Aaron Hottenstein, PE (KCI)

Noise Walls
Josh Wilson (MT)

Design QA/QC
Jeremy Betz, PE (KCI)

Traffic Engineering
Andrew Parker, PE, PTOE (MT)

Environmental
Rich Butala (MT)

Landscaping
Allysha Lorber, RLA, AICP (MT)

Right-of-Way Acquisition
Tim Copeland (SCS)

Fee Appraiser
David Richards, MAI (DRA)

Independent Appraisal Review
Scott Barber (ARS)

Design Manager
Stephen Drumm, PE (KCI)

Construction Manager
David Passmore (WM)

Safety Manager
Wayne Johnson (WM)

Quality Assurance Manager
Julie Hartman, PE (VK)

Quality Assurance Inspector
Tommy Moore (VK)

Quality Assurance Testing
Schnabel

Quality Control Manager
Dow Lassiter, PE (KCI)

Quality Control Inspectors
KCI

Quality Control Testing Lab
ECS

Organizational Chart Key

WM – G.A. & F.C. WAGMAN, INC.
KCI – KCI TECHNOLOGIES, INC.
MT – MCCORMICK TAYLOR, INC.
VK – VOKERT, INC.
ECS – ECS MID-ATLANTIC, LLC
SCS – STANTEC CONSULTING SERVICES
DRA – DOMINION REALTY ADVISORS, INC.
ARS – APPRAISAL REVIEW SPECIALISTS, LLC

DENOTES KEY PERSONNEL
DENOTES COORDINATION/COMMUNICATION
Design-Build Project Manager (DBPM) – Anthony Bednarik, DBIA (Wagman) | Mr. Bednarik will be the primary point of contact for this project. He has full authority of all aspects of our team’s responsibilities. The Design Manager (DM), Construction Manager (CM), Quality Assurance Manager (QAM), Public Relations Manager, and Safety Manager will all report directly to Mr. Bednarik. He will proactively identify and mitigate project risks and will maintain the project schedule to ensure timely completion of design and construction. He has more than 27 years of experience, including 20 years of project management experience in the construction industry. He is a DBIA certified professional with over 15 years of design-build experience and has served as DBPM on multiple projects.

Quality Assurance Manager (QAM) – Julie Hartman, PE (Volkert) | Ms. Hartman will report to our DBPM, with independent oversight by VDOT. She will be located on the project site full-time for the duration of the construction operations. She will remain independent from the construction QC team to oversee QA matters, including QA testing. She will be responsible for the QA inspection and testing of all materials used and work performed on the project, to include monitoring of Wagman’s QC program. She will ensure that all work and materials, testing, and sampling are performed in conformance with the contract requirements, and the “approved for construction” plans and specifications. Ms. Hartman is a registered, licensed, Professional Engineer in the Commonwealth of Virginia. She has 17 years of combined experience in highway construction engineering, and QA for VDOT projects. She knows VDOT and FHWA construction requirements and methods as outlined in VDOT’s Design-Build Manual and Minimum Requirements for Quality Assurance and Quality Control on Design Build and Public-Private Transportation Act Projects. Her experience includes the development of QA/QC plans; supervision of QA inspectors and testing technicians; identifying and resolving non-compliance issues; and coordination with contractors and VDOT, FHWA, and local agency officials.

Design Manager (DM) – Stephen Drumm, PE (KCI) | Mr. Drumm will report to the DBPM and coordinate with both the DBPM and CM to develop a cost effective, efficient, and constructible design. He will manage the design team and will be responsible for coordinating the individual design disciplines and ensuring the overall project design is in conformance with the Contract Documents. He will coordinate with the CM during construction to confirm field conditions meet design assumptions and reevaluate these assumptions if necessary. He will also be responsible for establishing and overseeing a QA/QC program for all pertinent disciplines involved in the design of the project, including review of design, working plans, shop drawings, specifications, and constructability for the project. Mr. Drumm is a registered, licensed, Professional Engineer in the Commonwealth of Virginia. He has 36 years of experience in all aspects of highway design including recent design-build projects as Project Manager for MD 355 and MD 124 projects and lead Highway Engineer for the Intercounty Connector (ICC), Contract B. Prior to joining KCI, Mr. Drumm served as Chief of Highway Design for the Maryland State Highway Administration (SHA), where he supervised a staff of 150 engineers.

Construction Manager (CM) – David Passmore (Wagman) | Mr. Passmore reports directly to the DBPM and will communicate with the DM during both design and construction phases to ensure construction is consistent with the project design. He will oversee the entire construction team, including the Bridge Superintendent and Roadway Superintendent, who will oversee construction crews in the field. He will also manage all construction QC activities to ensure the materials used and work performed meet contract requirements and the “approved for construction” plans and specifications. Mr. Passmore will be located on the project site for the duration of construction operations. He currently holds a VDOT Erosion and Sediment Control Contractor Certification (ESCCC) and will obtain a Virginia Department of Conservation and Recreation (DCR) Responsible Land Disturber (RLD) Certification prior to the start of construction. Mr. Passmore brings 20 years of construction experience to the Project.
**Lead Structural Engineer – Eric Burgess, PE (KCI)** | Mr. Burgess will be responsible for structural design of the bridges, retaining walls and other structures and will report directly to the DM. He will lead an experienced team of structural engineers and technicians for the design and plan preparation of all structures. He will review designs and verify and modify designs, if necessary, based on field conditions and construction activities related to dismantling and removing portions of existing structures, widening existing structures, installing foundation structures, handling and erecting bridge girders, and making superstructure and substructure repairs. Mr. Burgess is a registered, licensed, Professional Engineer in the Commonwealth of Virginia. Mr. Burgess provides VDOT with over 14 years of design-build and highway bridge and structure design knowledge and experience. He has been involved with over 50 DOT bridge replacement projects for multiple DOTs, including VDOT.

**Lead Roadway Engineer – Rick DeLong, PE (McCormick Taylor)** | Mr. DeLong will also report to the DM and will be responsible for roadway, drainage, and TMP design. He will be available to review designs and to verify and modify designs, if necessary, based on field conditions and construction activities. Mr. DeLong is a registered, licensed, Professional Engineer in the Commonwealth of Virginia. He has over 20 years of experience in the design and management of multi-disciplinary teams, and has managed projects from the planning and feasibility stages through final design. Mr. DeLong has extensive experience managing similar VDOT projects involving complex designs. He oversaw the engineering and traffic analysis on the VDOT I-64 Richmond to Hampton Roads EIS project. In addition, he conducted design studies and analysis of Segment I in preparation for the design-build project.

**Public Relations Manager – Patsy Napier (McCormick Taylor)** | Ms. Napier will report directly to the DBPM and will coordinate with all third party stakeholders. She will be responsible for developing a public relations plan in accordance with the RFP Technical Requirements and managing all external project communication with project stakeholders, the media, and the general public during the design and construction of the project. Ms. Napier has over 46 years experience, including 36 years of preliminary engineering and public involvement experience with VDOT having been Program Manager for VDOT’s Location and Design Division’s Public Involvement Section and Special Studies Section. She provided guidance to assure compliance with both state and federal regulations related to public participation activities, managed the update of the Public Participation Manual and the presentation of this material, and monitored Title VI requirements to ensure compliance in all Public Hearing actions. Ms. Napier has led McCormick Taylor’s public outreach efforts for the VDOT I-64 Richmond to Hampton Roads EIS, I-81 Tier 1 Corridor Study, VDOT Route 29 Corridor Plan, and VDOT Reconstruction of I-95 & Route 630 Interchange.
3.4 EXPERIENCE OF OFFEROR'S TEAM
3.4 EXPERIENCE OF OFFEROR’S TEAM

We have assembled a team with extensive experience working together; our team has been involved in numerous VDOT, PPTA, and design-build projects and has a proven track record of providing successful projects completed on schedule and within budget.


KCI and Wagman, with their acquisition of DW Lyle, also have a 20-year history of working together in Virginia including the Route 288 PPTA project in Richmond. Wagman and KCI key staff have a close working relationship dating back to the early 1990s and will work closely together in the management and oversight of this contract.

KCI and McCormick Taylor have a long and successful history working together on all types of transportation projects throughout the Mid-Atlantic region. Our staff is very familiar with each other through our work on projects such as: the Route 23 EIS, SR 0068 Improvements, Route 228 Criders Corners East, the East Brady Bridge Replacement, and the Western Inner Loop project, along with a number of Transportation On-Call Contracts for Design and also for Environmental Monitoring where Wagman was the bid-build contractor.

Wagman has extensive design-build experience in the Mid-Atlantic region. In Pennsylvania, Wagman has been working on design-build projects (alternate bridge design and construction) for over 40 years. In Maryland, we were fortunate to work on two of the largest design-build projects (Contract A & B of the ICC) in MD. In Virginia, our DW Lyle division worked on the orginal 895 PPTA in Richmond, Route 288 PPTA, Route 60 over Route 288, Route 895 Connector, I-495 Hot Lanes, and is working on Route 61 in Narrows, VA.

KCI has provided design services on more than 35 design-build contracts across the United States, including the VDOT Route 288/I-64 Interchange PPTA in Richmond, Virginia and the recent VDOT Region 2 Multiple Bridge Rehabilitation Project in the Salem and Lynchburg Districts. KCI’s projects have been recognized with awards from ACEC, ASCE, MDOT, and several regional professional organizations.

McCormick Taylor’s recent design-build involvement has been with the I-95 HOT Lanes, Route 460 Corridor, ICC, and CSX Cherry Hill Third Track projects. On the ICC project, their work included the development of the EIS and permitting for the entire corridor, and later included serving as the Independent Environmental Monitor and assisted MSHA with the oversight of the construction and environmental compliance.

Volkert’s Mid-Atlantic office in Alexandria, Virginia has provided QA services for seven design-build/PPTA projects in Virginia ranging in size from $3.5 million to more than $207 million. Their similar project experience includes: Middle Ground Boulevard in Newport News, Replacement of Route 61 over the New River Design-Build Project in Narrows, and I-66 Rehabilitation in Fairfax.

ECS is currently serving as a prime consultant to VDOT Materials Division for the On-Call Limited Geotechnical Engineering Services Term Contract for Northern Region and the Eastern Region, which covers diverse geologic physiographic provinces including the Coastal Plain region. The majority of project assignments has been related to highway and bridge engineering in both soil and rock terrains. In addition, ECS has successfully completed over 100 task order assignments under the VDOT Statewide On-Call Geotechnical Services contract and is serving as geotechnical engineer of record (GER) on two current design-build projects along the I-64 corridor.

For additional information on our team’s experience, Work History Forms for both Wagman and KCI have been provided in Appendix 3.4.1. These projects demonstrate our team’s relevant experience on projects with similar scope and complexity.
3.5 PROJECT RISKS

Successfully mitigating risk is essential to minimizing project costs and maintaining the project schedule. Our risk mitigation strategies are based on personal and organizational experience working with key project stakeholders and managing complex design-build projects. Our team has evaluated the Interstate 64 Capacity Improvements – Segment I project in detail to identify the potential risk factors encountered on a design-build project of this nature.

3.5.1 CRITICAL RISKS

As referenced in the RFQ Section 3.5 “Project Risks,” our team has identified three major areas of risk that we consider to be critical to the project’s success:

- Risk No. 1 – Existing Geotechnical Conditions
- Risk No. 2 – Environmental Compliance
- Risk No. 3 – Maintenance of Traffic

The three critical risk factors are described in greater detail below with proposed solutions and mitigation strategies.

Risk No. 1 – Existing Geotechnical Conditions

Our team is comprised of geotechnical professionals with many years of experience in designing and constructing VDOT projects within the unique geologic setting of this project.

Risk Identification: The approximately 5.5-mile long project site is located in the Atlantic Coastal Plain Physiographic Province of Virginia. Specifically, the roadway alignment passes through the Windsor Formation of Williamsburg, Virginia. This formation primarily includes alluvial and terrace deposits consisting of pebble to boulder sands overlain by fine to coarse sand interbedded with peat and clayey silt rich in organics. Based on review of the Geotechnical Data Report dated October 23, 2013, the near surface soils (below topsoil layer) are generally anticipated to include existing Fill (typically CL and SC) ranging in thickness from 0 (no fill) to about 12.5 feet and transitioning to the alluvial and terrace deposit soils (SM, SC, and CL) to depths of about 50 feet. The near surface alluvial and terrace deposit soils may contain significantly thick deposits of soft, compressible highly plastic soils (CH, MH, and OH).

Why this Risk is Critical: The unknowns of subsurface conditions places financial and schedule risk on the project. The risk and mitigation strategy for each risk is sub-divided into three groups:

a) Potentially Unsuitable Soils: Based on the geographic location of the project alignment and the boring logs from the GDR, the subgrade soils could be unsuitable for roadway embankment and pavement subgrades. Subgrade soils classifying as highly-plastic clays and silts (CH and MH) and soils with natural moisture contents well in excess of optimum moisture contents are unsuitable and must be modified in place or removed entirely. These soils pose a risk to the project due to the additional time required to delineate the extent of these soils and the time required to modify or remove and replace these soils with suitable fill.

Mitigation Strategy: To mitigate the potential for unsuitable soils to negatively affect the project schedule, the our team will focus early phase geotechnical explorations around low-lying areas and the portion of the alignment that crosses the Lee Hall Reservoir at Newport News Park. The early phase exploration will also focus on laboratory tests of the samples to include natural moisture contents, gradation, Atterberg Limits (VTM-7), Standard Proctor (VTM-1) and California Bearing Ratio (VTM-8) tests. The results of these tests will help delineate the lateral extent and depth of unsuitable soils to allow for proactive measures to be taken in early earthwork construction phases.

b) Settlement of Embankment Fill: New embankment fills will be constructed within the existing median for structure approaches at Industrial Park Drive and CSX Railroad, Stony Run (box culvert), Fort Eustis
Blvd., and the Lee Hall Reservoir. In addition, substantial fills (>5 feet) will be required at various locations to accommodate the new lanes and shoulder construction. Soft soil layers exist, therefore, fill induced settlement must be evaluated by our team prior to construction. Fill induced settlement could lead to post-construction settlement of new pavements, affecting the levelness and “rideability” of the new lanes and approaches. Settlement monitoring of the deeper fill areas could impact the project schedule if not accounted for early-on in the construction process.  

**Mitigation Strategy:** To help mitigate and plan for this risk, in-situ testing consisting of Cone Penetrometer Testing (CPT), including pore pressure dissipation testing, Dilatometer Testing (DMT), and/or Pressure Meter Testing (PMT) can be performed at deep fill (>5 feet) locations to complement traditional Standard Penetration Testing (SPT) and laboratory consolidation testing. The test results will be used to determine settlement rates, magnitudes and provide anticipated settlement monitoring durations for inclusion in the project schedule, similar to work performed by Wagman on the I-95/I-495/MD 210 Interchange Reconstruction project. Our team has considerable project experience in the vicinity of the project with settlement data from similar approach embankments on soft alluvial soils.

c) **Bridge Foundations:** The foundation design of the Lee Hall Reservoir bridge widening will be dependent on soil types and relative densities/consistencies as well as the scour analysis. The borings presented in the Geotechnical Data Report (GDR) show very soft/loose to soft/loose soil profiles to the termination depth of each of the bridge borings. Our team will focus early phase explorations on the borings for the bridge structure with emphasis on material classification, including grain size analyses, Atterberg Limits testing, and laboratory strength testing. Scour potential of the near surface soils will be a significant design consideration for bridge foundations that are placed near water. Scour can affect the long-term stability of foundations and must be evaluated during the design phase.  

**Mitigation Strategy:** Deep foundation systems developing most of their capacity from skin friction (such as large displacement piles, drilled shafts, or augered piles) will be considered in lieu of non-displacement deep foundation systems such as H-piles. Deeper borings can be drilled at the bridge locations to evaluate the depth and consistency of deeper soil strata that can also contribute to increased skin friction and end bearing capacity. Careful consideration of geotechnical investigation field and laboratory testing will be followed. In-situ testing (CPTu, DMT, and PMT) of the on-site soils can be used to complement traditional SPT soil test borings. Additional SPT or bulk soil samples will also be collected and a gradation analysis including hydrometer testing will be performed in order to provide adequate gradation information for scour analysis. The results of the scour analysis will be incorporated into the design of the bridge foundations and/or substructure. Wagman’s in-house geotechnical engineers will assist the design team with constructability reviews.

**Role of VDOT and other Agencies:** VDOT and other agencies will be responsible for timely reviews, comment, and approval of geotechnical analysis, design, and recommendations.

**Risk No. 2 – Environmental Compliance**

The following highlights several primary environmental compliance risks to be considered for the I-64 project. Team member McCormick Taylor completed the EIS for the I-64 project; therefore, has intrinsic knowledge on project-specific environmental constraints and challenges and has already initiated coordination with many of the regulatory agencies and other stakeholders concerned with environmental compliance.

a) **Natural Resources:** There are a number of natural resources located within the project corridor. The team will provide the environmental reviews and obtain approvals/clearances for federal, state and local permits, as needed using our established working relationships with the federal, state and local agency representatives.

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**ENVIRONMENTAL**

Wagman designed and constructed underground stormwater management facilities, such as sand filters, bio-filter trenches and precast structures to reduce thermal impact to the adjacent streams.

On the ICC, Wagman worked with the environmental team to map all resources and relocate if possible. We relocated hundreds of turtles and “electro-shocked” fish to relocate prior to permanent impact.
**Impact of Risk on Project:** While the EIS prepared a preliminary review of the wetlands and streams in the corridor, a delineation of Waters of the US and jurisdictional determination from the USACE has not been completed. This work would be initiated immediately upon NTP. Upon confirmation of the Waters of the US, a Joint Permit Application (JPA) would be completed and submitted to the appropriate agencies. It is anticipated that the permits for this project may include a CWA Section 404 permit from the USACE, a VWP Permit from the VDEQ, and a Subaqueous Bottomlands Permit from the VMRC. As part of this permitting process, the Coastal Zone Management Area Program checklist would also be completed. In addition, permits from the County Tidal Wetlands Board may be required for impacts to tidal waters, if confirmed by the USACE. Compensatory mitigation will be required as a permit condition for stream and wetland impacts that cannot be avoided through design measures. Based on the recent federal mitigation rule, preference for compensatory mitigation is as follows: purchase of mitigation “credits” from an approved bank in the approved service area; payment into an approved in-lieu fee fund; and on-site and off-site restoration. We will evaluate the necessary mitigation for this project in coordination with the locality and agencies to determine the appropriate approach.

The presence of any threatened or endangered (T&E) species in the vicinity of the corridor requires close coordination with the agencies. As part of the permitting process, the team will work closely with the regulatory agencies, including those listed in the table to the right, to determine the requirements for all species and measures to avoid potential impacts. Due to the presence of federal and state listed T&E species and/or habitat documented within the vicinity of the project area, habitat assessment and species survey and construction time-of-year restrictions may be required. A review of the EIS, as well as the current agencies databases, identified the following T&E species within a two-mile radius of the project corridor: Mabee’s Salamander, Bald Eagle, Canebrake Rattlesnake, Peregrine Falcon, and Atlantic Sturgeon (listed since the EIS). There are currently no Bald Eagle nests or Peregrine Falcon occurrences identified within 600 feet of the corridor; therefore, this species is not anticipated to be of concern for this project. The Atlantic Sturgeon would require coordination to limit potential impacts for any in-stream work.

As noted in the EIS, an area of “medium” potential Small Whorled Pogonia habitat was identified within the southwest cloverleaf of Exit 250 (Fort Eustis). An official habit survey conducted by a certified specialist will likely be required for this species. The survey must be completed between May 25-July 15 and submitted to the agencies for their review and recommendations.

The Northern Long-Eared Bat is under consideration as an endangered species and if added to the endangered species list, we will be required to identify a suitable habitat, limit tree removal, and document avoidance and minimization.

The project will cross the Lee Hall Reservoir, which is also surrounded by the Newport News Park, a Section 4(f) property. The Newport News Waterworks requested that the widening take place in the median and asked for close coordination through the design and construction process to minimize sedimentation. The USACE also expressed interest in continued coordination in this area.

**Mitigation Strategy:** Team members have been involved in numerous environmentally sensitive projects throughout the mid-Atlantic. Using past experience, the team has developed the following proven and successful mitigation strategies:

1. Develop an environmental task force that will review all design and construction submittals for compliance. Team member successfully implemented a program similar to this on the ICC. Members of the environmental task force will attend other design task force groups to maintain compliance.
2. Upon NTP, the corridor will be surveyed, as required, to identify environmental resources. We will then utilize our design and construction experience to avoid or minimize impacts. We reduced impacts on the ICC over 20% from the estimated impacts in the EIS.
3. During construction, we will conduct a daily inspection of all environmental protective devices such as exclusion fence or E&S controls.
4. Agency coordination would be initiated upon NTP to obtain the permits and clearances to comply with the
5. The team will immediately initiate coordination with the Newport News Waterworks and USACE to address the design and construction of the project in the vicinity of the Lee Hall Reservoir. The design will focus on avoiding any impacts to park property.

**VDOT or Other Agency Efforts in Mitigation:** We will provide all information pertaining to the natural resources and environmental impacts and mitigation strategies for the project and a list of environmental commitments made to the community, environmental agencies and any other third party stakeholder. We will request input, review and comment on our environmental plan, design submissions and construction plans.

b) **Cultural Resources:** One of the most challenging components of the environmental compliance process is gaining clearance for issues related to cultural resources and satisfying Section 106 of the National Historic Preservation Act. We are very familiar with all aspects of the commitments made as a result of the Section 106 process.

**Impact of Risk on Project:** The programmatic agreement (PA) for cultural resources provides a blueprint for the Section 106 process. One of the main stipulations of this document is the provision for the archaeological survey of all areas of ground disturbance which are associated with the project. During the EIS, an area within the current project boundary was deemed “high probability” for archaeological resources and was subjected to Phase I archaeological identification survey. As a result of these studies, no new archaeological sites were recorded.

The project area is currently being archaeologically surveyed by VDOT’s on-call cultural resource consultant, and its findings are not known to the team. It will be important to determine as early as possible the extent of these survey efforts and the status of VDOT and VDHR’s review. In addition to ground disturbances for the proposed travel lanes and adjacent shoulders, other areas such as storage yards, access roads, or SWM facilities are considered as part of the project and may require additional survey efforts.

**Mitigation Strategy:** Using lessons learned from the EIS and previous project experience, the team has developed the following strategy for navigating the cultural resource issues connected with this project:
1. Upon NTP, cultural resource specialists for the team will initiate contact with appropriate VDOT staff in order to determine the extent of the on-going cultural resource studies and the status of Section 106 coordination;
2. Cultural resource specialists for the team will review all design and construction plans to insure compliance with existing the PA, as well as to determine if all areas of proposed ground disturbance have been appropriately surveyed for cultural resources;
3. If significant cultural resources are identified within the project area, the team will use its previous experience to work with project designers and other interested parties in order to avoid or minimize adverse impacts.

**VDOT or Other Agency Efforts in Mitigation:** VDOT, in consultation with VDHR, will determine the effect this project will have on cultural resources and have the ability to review and comment on our plan to address cultural resources. Cultural resource specialists on the team possess the necessary background and experience to ensure this process is conducted as expeditiously as possible in order to avoid project delays.

c) **Noise Analysis:** A Final Design Noise Analysis (FDNA) and VDOT concurrence of any warranted, feasible and reasonable noise abatement will be required prior to construction. McCormick Taylor completed the preliminary noise analysis during the EIS and will revise that analysis with the team’s final proposed roadway design. The noise abatement identified in the FDNA will require input and approval from the benefited owners and residents, in the form of certified letters, requesting votes in favor or against the noise abatement, or barriers. Of the votes tallied, 50% or more must be in favor of the barrier in order for it to be considered further, and subsequently constructed by the team. Identifying this risk early, creates the opportunity to reduce project costs while minimizing impacts to the local residents.

**Impact of Risk on Project:** On a typical design-bid-build project, cost estimates for the construction of noise
barriers are made based on the FDNA and square footage of the final, approved barriers. The risk to a design-build team lies in the uncertainty of the final noise barrier locations and dimensions. McCormick Taylor’s familiarity with the project in the preliminary phase provides a complete understanding of these risks and the associated cost effective solutions and mitigation options that can be implemented.

**Mitigation Strategy:** Using past design-build experience, our team have developed the following proven and successful mitigation strategies to reduce costs and still allow for effective noise abatement on design-build projects. These savings can be shown in the upfront cost proposal and bid prepared by our team, which in turn can save VDOT money on the overall project.

1. Having prepared the preliminary noise analysis, we can identify the locations of final noise barriers with certainty to accurately estimate cost. Due to familiarity with the project, more effort can be focused on designing streamlined mitigation alternatives in an effort to reduce cost and impacts to the adjacent stakeholders. Unless significant design elements change, the need of additional noise abatement would be minimal risk to the team.

2. Based on McCormick Taylor’s experience completing FDNA and noise abatement commitments on the I-95 HOT Lanes project, risk is associated with the interpretive height of the proposed abatement. In most cases, lengths of barriers are relatively firm, however, significant cost savings can occur if barrier height is reduced without compromising acoustics. Our ability to integrate lateral shifts of proposed abatement and to situate the barrier to reduce height has significant potential to yield less barrier surface area.

3. Based on McCormick Taylor’s experience completing FDNA and noise abatement commitments on the Route 460 Improvements Project, risk is also possible when necessary design changes require additional noise abatement not identified in the EIS. Two areas were identified in this analysis that were not mentioned in the preliminary report. McCormick Taylor engineers and noise staff worked together to design effective and approved mitigation options utilizing waste fill material and much shorter noise barriers mounted on top of earthen berms. This cut the barrier surface area by nearly 70% and yielded significant cost savings to the project in addition excess excavation could be discarded.

**VDOT or Other Agencies Efforts in Mitigation:** VDOT will review the barrier voting results in the FDNA and will issue a concurrence letter. This documentation is the last step necessary, prior to physical construction of the abatement. McCormick Taylor staff has the necessary experience to facilitate this process in a concise manner. VDOT will advise of other appropriate agencies that may require some coordination.

d) **Stormwater Management:** Stormwater quality and quantity compliance is an important part of this project, in particular as a result of the changing agency oversight and procedures. The project must address VDOT and DEQ’s SWM design and regulatory permitting requirements, including VDOT’s SWM Program and the Chesapeake Bay TMDL Program. The VDOT SWM program areas include E&S Control, Post Construction SWM, VSMP Construction Permit and the MS4 Permit. Based on our understanding of the new regulatory processes and procedures in these areas, meeting their requirements will present risks to the project.

**Impact of Risk on Project:** Preliminary plans prepared for the project show a reduced highway median width, new pavement widening along the median and areas identified for SWM facilities located outside of the roadway shoulders. The project area has shallow groundwater depths and includes two water crossings (the Newport News Reservoir and Stony Run) that may affect location of the BMPs, which are FEMA regulated floodways and have delineated 100-year floodplains. VDOT’s policy is to not locate SWM facilities within a 100-year floodplain and therefore BMPs locations must be scrutinized to ensure they are located in the appropriate areas. There is also the possibility that Nutrient Credit banks in the area may not have available credits to meet the project needs.

In addition, the new DEQ SWM program will now require analysis and treatment of stormwater for the entire corridor, rather than just the additional lanes, which increases the potential size and quantities of SWM facilities. Each of the BMPs must be constructed within the NEPA approved and permitted corridor and therefore it is critical to understand the need for SWM along the corridor to ensure there is ample space within the ROW and project area for design and construction. As an example, a cultural resource may be present at a
proposed SWM facility, causing a desirable location to be precluded, and therefore other options might need to be investigated.

**Mitigation Strategy:** Our team will design the SWM conveyance systems and necessary SWM BMPs to fit within the existing ROW and environmental constraints, and will explore application of other BMPs where necessary, such as possibly utilizing the center median strip rather than the outside portion of the corridor. We will investigate utilizing bio-swales or sand filters to limit the footprint of stormwater BMP’s. In addition, our team will coordinate with watershed nutrient banks in order to reserve the necessary credits, at the best cost, that may need to be purchased for this project. All submissions will be reviewed by team members that understand the regulations to ensure compliance. This review process will minimize impacts to the schedule and cost. Our team will establish project specific training, so that all personnel working on the project understand the regulations and have the knowledge to keep the project in compliance.

**VDOT or Other Agency Efforts in Mitigation:** Our team will request input, review and comment from VDOT and VDEQ as needed to ensure our environmental plan, design submissions and construction plans meet the appropriate standards. Mitigation strategies will be supported by VDOT Administration’s policy guidance, submission of the plan set and VSMP Construction Permit to DEQ and training. VDOT’s support for addressing the new VSMP Construction Permit requirements beginning July 1, 2014, whether applying for the new permit or reapplying from coverage under the current permit will be essential to addressing the risk associated with meeting permit requirements.

**Risk No. 3 – Maintenance of Traffic**

Maintaining safe and efficient operation of traffic during construction is of utmost importance on any project. This is especially true on interstate facilities in congested areas such as this segment of I-64. According to the VDOT Traffic Engineering Division Annual Average Daily Traffic Volume Estimates of 2012, an estimated 94,000-116,000 commuters traveled the project corridor on a daily basis. This is especially noticeable at the “bottle neck” just West of Bland Blvd. on I-64 Westbound. As daily commuters of this area can attest, the queue can become quite long and tedious. This results in frustrated driving through the project corridor westbound, which results in more accidents and more “rubber necking.” With new construction and perception of slower travel this frustration will most likely increase.

**Impact of Risk on Project:** Interstate 64 is a heavily travelled and important interstate in the region. Maintaining traffic to allow the volume of commuters, tourists, truck traffic and emergency responders through the project corridor safely and fluidly is a risk to the schedule, project cost and public perception. Allowing safe and unhindered access to the work zones, enable the design-builder to maintain schedule and progress the work efficiently. Designers and contractors collaborating to create a well-executed TMP, will ensure the team avoids major delays along the project work areas such as the Fort Eustis Blvd. interchange.

**Mitigation Strategy:** As outlined in the RFQ, the proposed scope of improvements will be to add a 12’ through lane and 12’ inside shoulder in both the eastbound and westbound directions. This proposed widening is to occur in the median, including the bridge widenings. Impacts to the interchanges are to be avoided. Limiting these improvements to the median area reduces complexity of the project but creates greater challenges for the maintenance of traffic.

Determining the appropriate traffic control, public communication and transportation operation strategies to be employed on this project will be one of the first activities during the design process and will be monitored and adjusted as necessary during construction. We will use lessons learned from past experience. Our team members have been involved in similar interstate widening projects and have developed successful mitigation strategies:

1. Following NTP, our team will initiate contact with the appropriate VDOT staff to conduct an Initial Scoping Meeting to present and discuss our traffic control, public communication and transportation operation strategies for the project.
2. A detailed Traffic Control Plan, Public Communications Plan, and Transportation Operations Plan will be prepared in accordance with VDOT’s IIM-LD-241.5 for Type C project and will be submitted to VDOT for review at the appropriate phases of the project development process.

3. Work zone impacts along this section of the I-64 corridor will need to be thoroughly considered to produce and implement an effective TMP for the project. The detailed traffic impact assessment will need to be prepared giving careful consideration to existing traffic patterns and crash data within the project area so as to provide contingency plans that address any incident that would occur within the work zone or the queue that could impact traffic flow. Identifying affected local and regional stakeholders, major traffic generators and emergency service providers will also be key to developing operational strategies such as emergency detour routes and incident management plans to manage the work zone impacts to traffic. Careful consideration will be given to locating “fender bender” turn outs, emergency turnouts and possibly even a managed coordination of multiple tow truck “on call” companies. Frequent public outreach and media attention is a way to ease the commuter frustration.

4. Because of the width of the existing facility and the reduced pavement section of the outside shoulder, it is anticipated that at least a portion, if not all of the existing outside shoulder will have to be reconstructed to be able to shift over and support traffic while the construction in the median is being performed. Particular care will be given to how this shift will be accommodated as we approach the interchange at Rte 105 (Fort Eustis Blvd.) so that tie-ins to the acceleration & deceleration lanes and ramps can be made with minimal outside impacts. The existing bridges at this interchange include a 12’ auxiliary weave lane between the loop ramps which will still be maintained by providing a reduced 6’ outside shoulder. Ensuring safe and efficient traffic operations at this interchange will of utmost importance to this project.

5. Careful attention will be given to the bridge widenings. In particular, the bridges at I-64 over Industrial Park Dr. and CSX will be analyzed to ensure we are providing sufficient access to construct the piers and abutments and widening of the bridge deck while minimizing temporary impacts and maintaining traffic on both Industrial Park Dr. and CSX. Our team will ensure that the appropriate coordination with VDOT and CSX will occur during the TMP/MOT/SOC plan development and as well as when any changes in the construction sequencing happen.

6. As with most widening projects, especially in this region, maintaining temporary drainage during construction will be a challenge. With the majority of the widening occurring in the median, including a combination of graded ditch sections and bifurcated median barriers, ensuring that the appropriate temporary drainage structures are installed to avoid any ponding issues will be critical.

7. Our team will ensure safety by providing minimum lane, shoulder and clear zone widths at all times. Where minimum lateral offsets cannot be met, appropriate barrier protection will be provided. Our team will ensure adequate sight lines are being maintained at all times when positioning barriers and other traffic control devices.

**VDOT or Other Agency Efforts in Mitigation:** We will provide all information pertaining to the TMP/MOT/SOC Plans to VDOT. Our team will request a timely review, comment, and approval on our submittals.
ATTACHMENT 3.1.2

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

<table>
<thead>
<tr>
<th>Statement of Qualifications Component</th>
<th>Form (if any)</th>
<th>RFQ Cross reference</th>
<th>Included within 15-page limit?</th>
<th>SOQ Page Reference</th>
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## ATTACHMENT 3.1.2

**Project: 0064-965-264**  
**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

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| DBE statement within Letter of Submittal confirming Offeror is committed to achieving the required DBE goal | NA | Section 3.2.11 | yes | 2 |

**Offeror's Team Structure**

| Identity of and qualifications of Key Personnel | NA | Section 3.3.1 | yes | 4-7 |
| Key Personnel Resume – DB Project Manager | Attachment 3.3.1 | Section 3.3.1.1 | no | Appendix 3.3.1 |
| Key Personnel Resume – Quality Assurance Manager | Attachment 3.3.1 | Section 3.3.1.2 | no | Appendix 3.3.1 |
| Key Personnel Resume – Design Manager | Attachment 3.3.1 | Section 3.3.1.3 | no | Appendix 3.3.1 |
| Key Personnel Resume – Construction Manager | Attachment 3.3.1 | Section 3.3.1.4 | no | Appendix 3.3.1 |
| Key Personnel Resume – Lead Structural Engineer | Attachment 3.3.1 | Section 3.3.1.5 | no | Appendix 3.3.1 |
| Key Personnel Resume – Lead Roadway Engineer | Attachment 3.3.1 | Section 3.3.1.6 | no | Appendix 3.3.1 |
## ATTACHMENT 3.1.2

### Project: 0064-965-264

**STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS**

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ATTACHMENT 2.10
Form C-78-RFQ
ATTACHMENT 2.10

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

RFQ NO. C00104905DB75
PROJECT NO.: 0064-965-264

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 03/14/2014
   (Date)

2. Cover letter of RFQ Addendum No. 1 03/28/2014
   (Date)

3. Cover letter of
   (Date)

[Signature]
April 14, 2014

David W. Lyle
Vice President, Division Manager

[Printed Name]
[Title]
ATTACHMENT 3.2.6

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

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

<table>
<thead>
<tr>
<th>Relationship with Offeror (Affiliate or Subsidiary)</th>
<th>Full Legal Name</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affiliate</td>
<td>Wagman Companies, Inc.</td>
<td>3290 North Susquehanna Trail, York, PA 17406</td>
</tr>
<tr>
<td>Affiliate</td>
<td>Wagman Construction, Inc.</td>
<td>231 North George Street, York, PA 17401</td>
</tr>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>
ATTACHMENT 3.2.7
Debarment Forms
ATTACHMENT NO. 3.2.7(a)

CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS

Project No.: 0064-965-264

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

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

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

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

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

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

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

Signatures
Date
Title

Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-965-264

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

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

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

Signature: ______________________ Date: 4/15/2014
Title: Vice President

KCI Technologies, Inc.
Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-965-264

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

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

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

[Signature] March 27, 2014 [Date] [President] [Title]

McCormick Taylor, Inc.
Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-965-264

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

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

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

[Signature] April 8, 2014 [Senior Vice President]
[Date] [Title]

Volkert, Inc.
Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-965-264

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

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

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

[Signature]
April 10, 2014

Senior Vice President

[Title]

Schnabel Engineering Consultants, Inc.

Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-965-264

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

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

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

_____________________________ __________________
Signature Date                       Title

J. Randy Witt  April 11, 2014  Vice President

ECS Mid-Atlantic, LLC

Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-965-264

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

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

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

SignatureDATE

President

Title

McCarthy Improvement Company

Name of Firm
CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-965-264

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

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

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

Signature: ___________________________ Date: 4/14/2014

Title: Senior Associate

Stantec Consulting Services, Inc.

Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-965-264

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

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

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

______________________________  __________________________
Signature                       Date                       Title

Dominion Realty Advisors, Inc.
Name of Firm
ATTACHMENT NO. 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-965-264

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

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

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

[Signature] 4/15/2014 [Managing Partner]  [Date] [Title]

Appraisal Review Specialists, LLC

Name of Firm
APPENDIX 3.2.8
Offeror’s VDOT Prequalification Certificate
W002
G. A. & F. C. WAGMAN, INC.
FREQ. EXP : 10/31/2014

---FREQ ADDRESS ------------ W002
3290 NORTH SUSQUEHANNA TRAIL
YORK, PA 17406-9754
PHONE : 717-764-8521
FAX : 717-764-2799

WORK CLASSES (LISTED BUT NOT LIMITED TO):
003 - MAJOR STRUCTURES
007 - MINOR STRUCTURES
011 - CLEARING AND GRUBBING
080 - DEMOLITION OF STRUCTURES
101 - EXCAVATING

BUSINESS CONTACT: BECKER, TODD EUGENE
EMAIL: INFO@WAGMAN.COM

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

DBE TYPE : N/A
DBE CONTACT: N/A
APPENDIX 3.2.9
Letter of Surety
Virginia Department of Transportation  
VDOT Central Office  
1221 East Broad Street  
Richmond, VA 23219  

Re: Surety Letter  
Request for Prequalification  
Federal Project No: NHS-064-3  
Contract ID Number: C00104905DB75  
Newport News, Virginia  
A Design-Build Project

To Whom It May Concern:

As surety for G.A. & F.C. Wagman, Inc., Continental Casualty Company with an A.M. Best Financial strength rating of "A" and financial size category of XV, is capable of obtaining a 100% Performance Bond and a 100% Labor and Materials Payment Bond in the amount of the anticipated cost of construction ($120,000,000.00) 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 enters into a contract for this project.

Signed, sealed and dated this 9th Day of April, 2014

Very truly yours,  
Continental Casualty Company

By: [Signature]  
Eugene M. Fritz  
Attorney-in-Fact
POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That Continental Casualty Company, an Illinois insurance company, National Fire Insurance Company of Hartford, an Illinois insurance company, and American Casualty Company of Reading, Pennsylvania, a Pennsylvania insurance company (herein called "the CNA Companies"), are duly organized and existing insurance companies having their principal offices in the City of Chicago, and State of Illinois, and that they do by virtue of the signatures and seals herein affixed thereby make, constitute and appoint

Eugene M Fritz, Kathy R Reisinger, Donald R Wert, Patricia C Robinson, Deborah L Cottom, James R Gould, Joseph G Buyakowski, Alson O Wolcott, Jr, Individually

of Mechanicsburg, PA, their true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on their behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind them thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of their insurance companies and all the acts of said Attorney, pursuant to the authority hereby given is hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law and Resolutions, printed on the reverse hereof, duly adopted, as indicated, by the Boards of Directors of the insurance companies.

In Witness Whereof, the CNA Companies have caused these presents to be signed by their Vice President and their corporate seals to be hereto affixed on this 15th day of August, 2013.

Continental Casualty Company
National Fire Insurance Company of Hartford
American Casualty Company of Reading, Pennsylvania

Paul T. Bruflat
Vice President

State of South Dakota, County of Minnehaha, ss:

On this 15th day of August, 2013, before me personally came Paul T. Bruflat to me known, who, being by me duly sworn, did deposes and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of Continental Casualty Company, an Illinois insurance company, National Fire Insurance Company of Hartford, an Illinois insurance company, and American Casualty Company of Reading, Pennsylvania, a Pennsylvania insurance company described in and which executed the above instrument; that he knows the seals of said insurance companies, that the seals affixed to the said instrument are such corporate seals; that they were so affixed pursuant to authority given by the Boards of Directors of said insurance companies and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance companies.

J. Mohr
Notary Public

My Commission Expires June 23, 2015

CERTIFICATE

I, D. Bult, Assistant Secretary of Continental Casualty Company, an Illinois insurance company, National Fire Insurance Company of Hartford, an Illinois insurance company, and American Casualty Company of Reading, Pennsylvania, a Pennsylvania insurance company do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolution of the Board of Directors of the insurance companies printed on the reverse hereof is still in force. In testimony whereof I have heretofore subscribed my name and affixed the seal of the said insurance companies this 10th day of April 2014.

D. Bult
Assistant Secretary

Form F6853-4/2012
Authorizing By-Laws and Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF CONTINENTAL CASUALTY COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company at a meeting held on May 15, 1995:

"RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective."

This Power of Attorney is signed by Paul T. Bruffat, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of Continental Casualty Company.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012:

"Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the "Authorized Officers") to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, "Electronic Signatures"); Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company."

ADOPTED BY THE BOARD OF DIRECTORS OF NATIONAL FIRE INSURANCE COMPANY OF HARTFORD:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company by unanimous written consent dated May 16, 1995:

"RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective."

This Power of Attorney is signed by Paul T. Bruffat, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of National Fire Insurance Company of Hartford.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012:

"Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the "Authorized Officers") to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, "Electronic Signatures"); Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company."

ADOPTED BY THE BOARD OF DIRECTORS OF AMERICAN CASUALTY COMPANY OF READING, PENNSYLVANIA:

This Power of Attorney is made and executed pursuant to and by authority of the following resolution duly adopted by the Board of Directors of the Company by unanimous written consent dated May 10, 1995:

"RESOLVED: That any Senior or Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided in writing by the Senior or Group Vice President to the Secretary of the Company prior to such execution becoming effective."

This Power of Attorney is signed by Paul T. Bruffat, Vice President, who has been authorized pursuant to the above resolution to execute power of attorneys on behalf of American Casualty Company of Reading, Pennsylvania.

This Power of Attorney is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of the Company by unanimous written consent dated the 25th day of April, 2012:

"Whereas, the bylaws of the Company or specific resolution of the Board of Directors has authorized various officers (the "Authorized Officers") to execute various policies, bonds, undertakings and other obligatory instruments of like nature; and

Whereas, from time to time, the signature of the Authorized Officers, in addition to being provided in original, hard copy format, may be provided via facsimile or otherwise in an electronic format (collectively, "Electronic Signatures"); Now therefore be it resolved: that the Electronic Signature of any Authorized Officer shall be valid and binding on the Company."
ATTACHMENT 3.2.10

SCC and DPOR Information Tables
## ATTACHMENT 3.2.10

**State Project No. 0064-965-264**

**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.

<table>
<thead>
<tr>
<th>Business Name</th>
<th>SCC Number</th>
<th>SCC Type of Corporation</th>
<th>SCC Status</th>
<th>DPOR Registered Address</th>
<th>DPOR Registration Type</th>
<th>DPOR Registration Number</th>
<th>DPOR Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>G.A. &amp; F.C. Wagman, Inc.</td>
<td>F019898-8</td>
<td>Foreign Stock Corporation</td>
<td>Active, In Good Standing</td>
<td>3290 North Susquehanna Trail York, PA 17406</td>
<td>Contractor Class A</td>
<td>2701015887</td>
<td>01-31-2015</td>
</tr>
<tr>
<td>KCI Technologies</td>
<td>F059869-0</td>
<td>Foreign Stock Corporation</td>
<td>Active, In Good Standing</td>
<td>936 Ridgebrook Road Sparks, MD 21152</td>
<td>ENG</td>
<td>0407003113</td>
<td>12-31-2015</td>
</tr>
<tr>
<td>KCI Technologies</td>
<td>F059869-0</td>
<td>Foreign Stock Corporation</td>
<td>Active, In Good Standing</td>
<td>6802 Paragon Place, Suite 410 Richmond, VA 23230</td>
<td>ENG</td>
<td>0411000938</td>
<td>02-29-2016</td>
</tr>
<tr>
<td>KCI Technologies</td>
<td>F059869-0</td>
<td>Foreign Stock Corporation</td>
<td>Active, In Good Standing</td>
<td>3014 Southcross Blvd, Rock Hill, SC 29730</td>
<td>ENG</td>
<td>0411000956</td>
<td>02-29-2016</td>
</tr>
<tr>
<td>McCormick Taylor, Inc.</td>
<td>F129691</td>
<td>Corporation</td>
<td>Active, In Good Standing</td>
<td>4951 Lake Brook Drive, Suite 275 Glen Allen, VA 23060</td>
<td>ENG</td>
<td>0407004111</td>
<td>12-31-2015</td>
</tr>
<tr>
<td>McCormick Taylor, Inc.</td>
<td>F129691</td>
<td>Corporation</td>
<td>Active, In Good Standing</td>
<td>113 Mill Place Parkway, Suite 103 Verona, VA 24482</td>
<td>ENG</td>
<td>0411000771</td>
<td>02-29-2016</td>
</tr>
<tr>
<td>McCormick Taylor, Inc.</td>
<td>F129691</td>
<td>Corporation</td>
<td>Active, In Good Standing</td>
<td>2426 Lee Highway, Suite 208 Bristol, VA 24202</td>
<td>ENG</td>
<td>0411001043</td>
<td>02-29-2016</td>
</tr>
<tr>
<td>McCormick Taylor, Inc.</td>
<td>F129691</td>
<td>Corporation</td>
<td>Active, In Good Standing</td>
<td>509 S. Exeter St, 4th Floor Baltimore, MD 21202</td>
<td>ENG, LA</td>
<td>0411000726</td>
<td>02-29-2016</td>
</tr>
<tr>
<td>Volkert, Inc.</td>
<td>F136659-2</td>
<td>Foreign Corporation</td>
<td>Active, In Good Standing</td>
<td>1214 Progressive Drive, Suite 102 Chesapeake, VA 23310</td>
<td>ENG</td>
<td>0411000940</td>
<td>02-29-2016</td>
</tr>
<tr>
<td>Company Name</td>
<td>Tax ID</td>
<td>Company Type</td>
<td>Status</td>
<td>Address Details</td>
<td>Certificate Type</td>
<td>Certification No.</td>
<td>Date Valid</td>
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<tr>
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<tr>
<td>Schnabel Engineering Consultants, Inc.</td>
<td>07126741</td>
<td>Corporation</td>
<td>Active, In Good Standing</td>
<td>300 Ed Wright Lane, Suite 1, Newport News, VA 23606</td>
<td>ENG</td>
<td>0411000699</td>
<td>02-29-2016</td>
</tr>
<tr>
<td>Schnabel Engineering Consultants, Inc.</td>
<td>07126741</td>
<td>Corporation</td>
<td>Active, In Good Standing</td>
<td>1 West Cary Street, Richmond, VA 23220</td>
<td>ENG</td>
<td>0411000322</td>
<td>02-29-2016</td>
</tr>
<tr>
<td>ECS Mid-Atlantic, LLC</td>
<td>S-120821-6</td>
<td>S Corporation</td>
<td>Active, In Good Standing</td>
<td>108 Ingram Road, Ste 1, Williamsburg, VA 23188</td>
<td>ENG</td>
<td>0411000382</td>
<td>02-29-2016</td>
</tr>
<tr>
<td>ECS Mid-Atlantic, LLC</td>
<td>S-120821-6</td>
<td>S Corporation</td>
<td>Active, In Good Standing</td>
<td>2700 International Pkwy, Ste 100, Virginia Beach, VA 23452</td>
<td>ENG</td>
<td>0411000385</td>
<td>02-29-2016</td>
</tr>
<tr>
<td>McCarthy Improvement Company</td>
<td>F1387572</td>
<td>Foreign Corporation</td>
<td>Active, In Good Standing</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Stantec Consulting Services</td>
<td>F149319</td>
<td>Stock</td>
<td>Active, In Good Standing</td>
<td>10800 Midlothian Turnpike, Suite 310, Richmond, VA 23235</td>
<td>Real Estate Appraiser Business</td>
<td>4008001770</td>
<td>03-31-2015</td>
</tr>
<tr>
<td>Dominion Realty Advisors</td>
<td>0444843-7</td>
<td>S Stock</td>
<td>Active, In Good Standing</td>
<td>5360 Robin Hood Road, Suite 101, Norfolk, Virginia 23513</td>
<td>Real Estate Appraiser Business</td>
<td>4008000405</td>
<td>11-30-2015</td>
</tr>
<tr>
<td>Appraisal Review Specialists, LLC</td>
<td>T049068-2</td>
<td>LCC</td>
<td>Active, In Good Standing</td>
<td>3058 Mount Vernon Rd., Suite 12, Hurricane, WV 25523</td>
<td>Real Estate Appraiser Business</td>
<td>4008001735</td>
<td>04-30-2014</td>
</tr>
<tr>
<td>Business Name</td>
<td>Individual’s Name</td>
<td>Office Location Where Professional Services will be Provided (City/State)</td>
<td>Individual’s DPOR Address</td>
<td>DPOR Type</td>
<td>DPOR Registration Number</td>
<td>DPOR Expiration Date</td>
<td></td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>KCI Technologies, Inc.</td>
<td>Stephen Drumm</td>
<td>Sparks, MD</td>
<td>18450 Pretty Boy Dam Road Parkton, MD 21120</td>
<td>Professional Engineer</td>
<td>0402044936</td>
<td>06-30-2014</td>
<td></td>
</tr>
<tr>
<td>McCormick Taylor, Inc.</td>
<td>Rick DeLong</td>
<td>Glen Allen, VA</td>
<td>4951 Lake Brook Drive, Suite 275 Glen Allen, VA 23060</td>
<td>Professional Engineer</td>
<td>0402031642</td>
<td>10-31-2014</td>
<td></td>
</tr>
<tr>
<td>Stantec Consulting Services</td>
<td>Joseph Copeland</td>
<td>Suffolk, VA</td>
<td>204 March Drive, Suite 12 Suffolk, VA 23434</td>
<td>Real Estate Appraiser</td>
<td>4001013213</td>
<td>12-31-2015</td>
<td></td>
</tr>
<tr>
<td>Appraisal Review Specialists, LLC</td>
<td>Rayman Scott Barber</td>
<td>Hurricane, WV</td>
<td>058 Mount Vernon Rd. Suite 12 Hurricane, WV 25523</td>
<td>Real Estate Appraiser</td>
<td>4001012258</td>
<td>03-31-2015</td>
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</tbody>
</table>
APPENDIX 3.2.10
SCC and DPOR registrations/licenses
Commonwealth of Virginia

State Corporation Commission

CERTIFICATE OF GOOD STANDING

I Certify the Following from the Records of the Commission:

That G. A. & F. C. WAGMAN, INC., a corporation incorporated under the law of Pennsylvania, is authorized to transact business in the Commonwealth of Virginia;

That it obtained a certificate of authority to transact business in Virginia from the Commission on September 20, 1967; and

That the corporation is in good standing in the Commonwealth of Virginia as of the date set forth below.

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
June 17, 2013

Joel H. Peck
Clerk of the Commission
I certify the following from the records of the Commission:

KCI Technologies, Inc., a corporation existing under the laws of Delaware, holds a certificate of authority to transact business in Virginia, and is in good standing.

The certificate was issued on December 19, 1988.

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
March 19, 2010

Joel H. Peck, Clerk of the Commission
Commonwealth of Virginia

State Corporation Commission

I Certify the Following from the Records of the Commission:

The foregoing is a true copy of the certificate of authority to transact business in Virginia issued for McCormick, Taylor & Associates, Inc., a PENNSYLVANIA corporation.

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
October 11, 2001

Joel H. Peck, Clerk of the Commission
CERTIFICATE OF GOOD STANDING

I Certify the Following from the Records of the Commission:

That Volkert, Inc., a corporation incorporated under the law of Alabama, is authorized to transact business in the Commonwealth of Virginia;

That it obtained a certificate of authority to transact business in Virginia from the Commission on January 21, 1999; and

That the corporation is in good standing in the Commonwealth of Virginia as of the date set forth below.

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
November 15, 2013

Joel H. Peck, Clerk of the Commission
Commonwealth of Virginia

State Corporation Commission

I Certify the Following from the Records of the Commission:

Schnabel Engineering Consultants, Inc. is a corporation existing under and by virtue of the laws of Virginia, and is in good standing.

The date of incorporation is August 12, 2009.

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
November 17, 2009

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

Richmond, April 16, 2004

This is to certify that the certificate of organization of

Engineering Consulting Services - Mid-Atlantic, LLC

was this day issued and admitted to record in this office and that the said limited liability company is authorized to transact its business subject to all Virginia laws applicable to the company and its business. Effective date: April 16, 2004

State Corporation Commission
Attest:

Clerk of the Commission
 McCarthy Improvement Company

General

SCC ID: F1387572
Entity Type: Foreign Corporation
Jurisdiction of Formation: IA
Date of Formation/Registration: 7/23/1999
Status: Active
Shares Authorized: 40000424

Principal Office

5401 Victoria Ave
Davenport, IA 52807

Registered Agent/Registered Office

CORPORATION SERVICE COMPANY
Bank of America Center, 16th Floor
1111 East Main Street
Richmond VA 23219
Richmond City 216
Status: Active
Effective Date: 4/29/2011

Screen ID: e1000

Need additional information? Contact sccefie@scc.virginia.gov. Website questions? Contact: webmaster@scc.virginia.gov

We provide external links throughout our site. 

https://sccefie.scc.virginia.gov/Business/F1387572

4/15/2014
Commonwealth of Virginia

State Corporation Commission

I Certify the Following from the Records of the Commission:

The foregoing is a true copy of an application for an amended certificate of authority to transact business in Virginia filed in this office by Stantec Consulting Services Inc.

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
April 19, 2005

Joel H. Peck, Clerk of the Commission
**CORPORATE DATA INQUIRY**

- **CORP ID:** 0444843 - 7
- **STATUS:** 00 ACTIVE
- **STATUS DATE:** 03/13/12
- **CORP NAME:** DOMINION REALTY ADVISORS, INC.

**DATE OF CERTIFICATE:** 04/06/1995  
**PERIOD OF DURATION:**  
**INDUSTRY CODE:** 00  
**STATE OF INCORPORATION:** VA VIRGINIA  
**STOCK INDICATOR:** S STOCK  
**MERGER IND:**  
**CONVERSION/DOMESTICATION IND:**  
**GOOD STANDING IND:** Y  
**MONITOR INDICATOR:**  
**CHARTER FEE:** 50.00  
**MON NO:**  
**MON STATUS:** MONITOR DTE:  
**R/A NAME:** WILLIAM C COWARDIN JR  
**STREET:** 696 J CLYDE MORRIS BLVD

**CITY:** NEWPORT NEWS  
**STATE:** VA  
**ZIP:** 23601  
**R/A STATUS:** 4 ATTORNEY  
**EFFECTIVE DATE:** 10/30/07  
**LOC:** 211  
**ACCEPTED AR#: 214 05 7077**  
**DATE:** 03/25/14  
**NEWPORT NEWS CI**  
**CURRENT AR#: 214 05 7077**  
**DATE:** 03/25/14  
**STATUS:** A  
**ASSESSMENT INDICATOR:** 0

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</table>

(Screen Id:/Corp_Data_Inquiry)
Commonwealth of Virginia
State Corporation Commission

CERTIFICATE OF FACT

I Certify the Following from the Records of the Commission:

That Appraisal Review Specialists, LLC, a limited liability company organized under the law of West Virginia, obtained a certificate of registration to transact business in Virginia from the Commission on February 3, 2012; and

That it is registered to transact business in the Commonwealth of Virginia as of the date set forth below.

Nothing more is hereby certified.

Signed and Sealed at Richmond on this Date:
June 24, 2013

Joel H. Peck, Clerk of the Commission
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA
9960 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-8500

EXPIRES ON
12-31-2015

NUMBER
0407003113

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

PROFESSIONS: ENG

KCI TECHNOLOGIES INC
936 RIDGEBROOK ROAD
SPARKS, MD 21152

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

(POCKET CARD)
COMMONWEALTH OF VIRGINIA
BOARD FOR APHELSCIDLA
BUSINESS ENTITY REGISTRATION
NUMBER: 0407003113 EXPIRES: 12-31-2015
PROFESSIONS: ENG
KCI TECHNOLOGIES INC
936 RIDGEBROOK ROAD
SPARKS, MD 21152

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Gordon N. Dixon, Director

DETACH HERE
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

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

PROFESSIONS: ENG

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

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

PROFESSIONS: ENG

KCI TECHNOLOGIES INC
3014 SOUTHCROSS BLVD
ROCK HILL, SC 29730
BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS
BUSINESS ENTITY BRANCH OFFICE REGISTRATION

PROFESSIONS: ENG

MCCORMICK TAYLOR INC
113 MILL PLACE PARKWAY
UNIT 103
VERONA, VA 24482

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AND LANDSCAPE ARCHITECTS
BUSINESS ENTITY BRANCH OFFICE REGISTRATION

PROFESSIONS: ENG

MCCORMICK TAYLOR INC
2426 LEE HIGHWAY
SUITE 208
BRISTOL, VA 24202
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
12-31-2015

NUMBER
0407002610

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

PROFESSIONS: ENG, LA

VOLKERT INC
5400 SHAWNEE RD
STE 301
ALEXANDRIA, VA 22312

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Gordon N. Dixon, Director
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
02-29-2016

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

NUMBER
0411000940

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

PROFESSIONS: ENG

VOLKERT INC
1214 PROGRESSIVE DR STE 102
CHESAPEAKE, VA 23320

Nick A. Christner, Interim Director
BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS
BUSINESS ENTITY BRANCH OFFICE REGISTRATION

PROFESSIONS: ENG

SCHNABEL ENGINEERING CONSULTANTS, INC
300 ED WRIGHT LANE
SUITE 1
NEWPORT NEWS, VA 23606

Nick A. Christopherson, Interim Director

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(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA
9950 Mayland Dr., Suite 400, Richmond, VA 23233
Telephone: (804) 367-6500

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

PROFESSIONS: ENG

ECS-MID- ATLANTIC LLC
108 INGRAM RD STE 1
WILLIAMSBURG, VA 23188

Nick A. Christner
Interim Director

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

COMMONWEALTH OF VIRGINIA
BOARD FOR APELSCIDLA
BUSINESS ENTITY BRANCH OFFICE REGISTRATION
NUMBER: 0411000382 EXPIRES: 02-29-2016
PROFESSIONS: ENG
ECS-MID- ATLANTIC LLC
108 INGRAM RD STE 1
WILLIAMSBURG, VA 23188

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

PROFESSIONS: ENG

ECS-MID-ATLANTIC LLC
2700 INTERNATIONAL PKWY
SUITE 100
VIRGINIA BEACH, VA 23452-7855

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Nick A. Christner, Interim Director
REAL ESTATE APPRAISER BOARD
BUSINESS REGISTRATION

STANTEC CONSULTING SERVICES INC
10800 MIDLOTHIAN TURNPIKE SUITE 310
NORTH CHESTERFIELD VA 23235

Gordon N. Dixon, Director
REAL ESTATE APPRAISER BOARD
APPRaisal BUSINESS REGISTRATION

DOMINION REALTY ADVISORS INC
5360 ROBIN HOOD RD SUITE 101
NORFOLK, VA 23513
DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPRES ON
04-30-2014

NUMBER
4008 001735

REAL ESTATE APPRAISER BOARD
BUSINESS REGISTRATION

APPRAISAL REVIEW SPECIALISTS LLC
3058 MOUNT VERNON ROAD SUITE 12
HURRICANE WV 25523

Gordon N. Dixon, Director

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

COMMONWEALTH OF VIRGINIA

REAL ESTATE APPRAISER BOARD
BUSINESS REGISTRATION
NUMBER: 4008 001735 EXPIRES: 04-30-2014
APPRAISAL REVIEW SPECIALISTS LLC
3058 MOUNT VERNON ROAD SUITE 12
HURRICANE WV 25523

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

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

JULIE WOOD HARTMAN
1703 HOLLY AVE
GROTTOES, VA 24441

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

EXPIRES ON
06-30-2014

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

NUMBER
0402044936

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

STEPHEN FRANCIS DRUMM
18450 PRETTY BOY DAM ROAD
PARKTON, MD 21120

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than those named may result in criminal prosecution under the code of Virginia.

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

EXPIRES ON
10-31-2014

NUMBER
0402031642

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

RICK JAMES DELONG
MCCORMICK TAYLOR INC
4951 LAKE BROOK DRIVE
SUITE 275
GLEN ALLEN, VA 23060

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Gordon N. Dixon, Director

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

EXPIRES ON
03-31-2015

NUMBER
4001 012258

REAL ESTATE APPRAISER BOARD
CERTIFIED GENERAL REAL ESTATE APPRAISER

RAYMAN SCOTT BARBER
3058 MOUNT VERNON RD
HURRICANE WV 25526

Gordon N. Dixon, Director

(SEE REVERSE SIDE FOR NAME AND/OR ADDRESS CHANGE)
ATTACHMENT 3.3.1

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

#### a. Name & Title:

**Anthony W. Bednarik, Vice President of Estimating and Design-Build**

#### b. Project Assignment:

**Design-Build Project Manager**

#### c. Name of Firm with which you are now associated:

**G.A. & F.C. Wagman, Inc.**

#### d. Years experience:

- **With this Firm:** 15 Years
- **With Other Firms:** 12 Years

Please list chronologically (most recent experience 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 experience, please list the experience for those years you have worked. Project specific experience shall be included in Section (g) below):

<table>
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<th>Name of Firm</th>
<th>Start Date</th>
<th>End Date</th>
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<td>G.A. &amp; F.C. Wagman, Inc.</td>
<td>1999</td>
<td>Present</td>
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<tr>
<td><strong>Current Position:</strong> Vice President of Estimating and Design-Build</td>
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Mr. Bednarik is responsible for the estimating staff and, more importantly, is involved in design-build projects for Wagman from pursuit to final completion. He is assigned to major design-build projects, such as the I-64 Capacity Improvement. Over the past 15 years, Mr. Bednarik has worked as a Design-Build Project Manager, Design-Build Coordinator, Project Manager and estimator. Over the past 11 months, he has worked with the new D.W. Lyle division, integrating estimating and engineering staff and coordinating design-build pursuits.

2011-2014 VP Design-Build multiple design-build projects: (Route 1 @ Ft Belvoir), (I-78 in Lenhartsville PA) (Delaware Water Gap – Raymondskill Bridge) Coordinated design-build effort and ROW acquisition, then assisted the Construction Manager during construction.

2008-2011 Assistant DBPM Intercounty Connector Contract B (See Below)
2006-2008 Assistant DBPM Intercounty Connector Contract A (See Below)
2003-2006 DBPM Youghiogheny Reservoir Bridge and Route 40 Widening (See Below)
2001-2003 Project Manager 4 projects – (Salisbury Bypass Contract A), Salisbury Bypass Contract B), (Route 115 Widening, Berlin MD), (Route 54 Evacuation Route Upgrade, new structure and road widening Fenwick Island DE). As Project Manager responsible for budget, schedule, field resources, safety and overall coordination.

1999-2001 DBPM Route 15 (See Below), Project Manager Danville Cut and Cover Tunnel

#### e. Education:

<table>
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<th>Name of Institution(s)/Degree(s)/Year/Specialization:</th>
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<td>Bucknell University/B.S./1987/Civil Engineering</td>
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#### f. Active Registration:

DBIA Certified Professional, ARTBA Project Management Academy, ASCE

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

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

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

**Intercounty Connector, Contract B, Design-Build, Montgomery County, MD**

**Owner** – Maryland Department of Transportation, State Highway Administration for Maryland Transportation Authority

**Firm** – G.A. & F.C. Wagman, Inc.

**Dates** – 2009-2011

**Role and Description** – Anthony served as Wagman’s senior representative this $560 million project and was assigned to the project as an assistant DBPM. Using lessons learned on the ICC Contract A, Anthony was instrumental in the successful prosecution of Contract B. As assistant DBPM, he was responsible for design coordination from environmental to roadway and structures. He worked with designers and field personnel to assure that the design met all environmental commitments, design requirements, and constructability constraints.
Anthony worked with the design team and field personnel for initial survey and geotechnical investigation through submission of design packages for construction. Any design modifications initiated from the field would be facilitated by Anthony to minimize schedule impacts. Anthony assisted with the initial project schedule. He was involved in organizing the project management team, bringing people together from three different companies to create an integrated organization. Other duties included interaction with public outreach, to inform people of the latest designs and any impacts to the local communities. As a team member with local experience, Anthony assisted the management team coordinate the partnering process for the project.

**Intercounty Connector, Contract A, Design-Build, Montgomery County, MD**

**Owner** – Maryland Department of Transportation, State Highway Administration for Maryland Transportation Authority  
**Firm** – G.A. & F.C. Wagman, Inc.  
**Dates** – 2007-2010  
**Role and Description** – Anthony was part of the Contract A joint venture team from preliminary design and proposal preparation thru construction to final completion. As Wagman’s senior representative on the $478 million project, Anthony served as assistant Design-Build Project Manager during project start-up and was responsible for design coordination, utility relocation, project mobilization, and early data gathering such as survey and geotechnical borings. He assisted disciplines with technical expertise, and constructability including acquisition of MDE permits, acquisition of ROW, earthmoving, utilities, and structures. He coordinated with the third party QC firm and the environmental compliance firm for the project. As part of the project senior management, Public outreach and partnering plans were developed to inform third party stakeholders and resolve issues. Prior to his new assignment on ICC B, Anthony established the process to coordinate the ITS, ETC and electrical components of the project. As Wagman’s executive, Anthony continued to attend joint venture meetings, project progress meetings and partnering discussions until project completion.

**Youghiogheny Reservoir Bridge Replacement and Route 40 Widening**

**Owner** – Pennsylvania Department of Transportation, District 12-0  
**Firm** – G.A. & F.C. Wagman, Inc.  
**Dates** – 2003-2006  
**Role and Description** – Anthony was the Project Manager for this $27 million project in western Pennsylvania. He was responsible for schedule, budget coordination of field personnel and subcontractors. As permitted by PennDOT procurement, Wagman prepared a successful alternate bridge design for this 1500 ft. long bridge across Youghiogheny Reservoir. Through design and construction innovation, the alternate bridge design eliminated two piers in the 80 ft. deep lake, resulting in significant time and cost savings to the Owner, as well as minimizing environmental and recreational impact on the lake. During the redesign of the structure, Anthony served as the DBPM and he was responsible for all design coordination and field activities, including interaction with the Owner and permitting agencies such as the U.S. Army Corps of Engineers. The project also included reconstruction and widening of existing Route 40 for 3 miles. As Project Manager Anthony was responsible for all roadway construction activities self-performed or subcontracted.

**Mill Creek Bridge Replacement and Route 15 Widening**

**Owner** – Pennsylvania Department of Transportation, District 3-0  
**Firm** – G.A. & F.C. Wagman, Inc.  
**Dates** – 1999-2001  
**Role and Description** – This $10 million project, one of the first design-build bridge projects awarded in Pennsylvania, required construction of 1510 ft. long bridge structure to widen the existing high-level bridge across Tioga Lake to four lanes. As Design-Build Project Manager for Wagman, Anthony was responsible for supervision of all construction activities and design coordination during design activities, which were carried on simultaneously in order to meet an aggressive schedule in an area with a limited construction season. Other aspects of this project included approach highway design and construction, a Contractor designed traffic maintenance scheme, and coordination with the Army Corps of Engineers lake management operations. He created a modified QC Plan for construction activities and coordinated QC testing. The project was part of the overall Route 15 widening project that created additional lanes to an existing roadway.

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

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

N/A
**Brief Resume of Key Personnel anticipated for the Project.**

a. **Name & Title:**

   Julie Hartman, Regional Manager, Construction Engineering Inspection Services

b. **Project Assignment:**

   Quality Assurance Manager

c. **Name of Firm with which you are now associated:**

   Volkert, Inc.

d. **Years experience: With this Firm 2 Years With Other Firms 15 Years**

   Please list chronologically (most recent experience 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 experience, please list the experience for those years you have worked. Project specific experience shall be included in Section (g) below):

   **Name of Firm:** Volkert, Inc.  
   **Position:** Construction Manager  
   Ms. Hartman is responsible for management of construction inspection projects including the supervision of inspection personnel, QA activities including preparatory inspection meetings and resolution of nonconformance issues to assure compliance with VDOT standards and client satisfaction. She works collaboratively with VDOT, engineers, and contractors to resolve design, construction, and quality issues.

   **Name of Firm:** City of Harrisonburg, Virginia, DPW  
   **Position:** Public Works Engineer  
   Managed design and construction of VDOT-funded, locally administered projects; supervised inspectors; led project meetings; resolved project issues; coordinated with VDOT and FHWA officials; met with property owners; and monitored schedules and budgets.

   **Name of Firm:** West Virginia Dept. of Highways  
   **Position:** Project Manager / Highway Engineer  
   Construction management of bridge (major water crossings) projects ranging in size up to $120 million including schedule, cost, document, and claims management; supervision of inspectors; resolution of complex design, construction, and nonconformance issues; FHWA and agency coordination; and meeting facilitation.

   **Name of Firm:** West Virginia Dept. of Highways  
   **Position:** Engineer-in-Training Level II  
   Supervised construction inspectors, monitored schedules and budgets, resolved construction issues with designers and contractors, reviewed RFIs, reviewed project documentation for interstate bridge and widening projects.

e. **Education: Degree(s)/Year/Specialization:** B.S., 1996, Civil Engineering

f. **Active Registration:** Year First Registered/ Discipline/VA Registration #: 2001 / Professional Engineer / Virginia# 0402 018236

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

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

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

**Middle Ground Boulevard Extension Design-Build Project, Newport News, VA**

**Owner:** VDOT  
**Firm:** Volkert, Inc.

**Dates:** July 2013- Winter 2014

**Role and Description:** Quality Assurance Manager. Providing QA management, as part of the design-build team, for the construction of a $32-million, new, 4-lane roadway (1.5 miles in length) including a bridge over the CSX Railroad, a sidewalk, a shared-use path, enhanced landscaping, street lights, signal modifications, and traffic control installation. Confirms that construction, material testing, and sampling performed by the Design-Build QC inspectors are in accordance with the contract requirements, including the VDOT IPD Design-Build Manual and the approved-for-construction plans and specifications. Coordinates with testing laboratory and reviews testing results, evaluates material documentation from suppliers to confirm compliance with specifications, and verifies accurate and complete testing documentation including the materials notebook. Works with the contractor and QC team to anticipate and resolve field issues before schedule and budget is affected and to resolve nonconforming materials and construction work in the most efficient and cost-effective manner. Prepares noncompliance reports and reviews and approves nonconformance...
recovery plans, monitors corrective actions and retests, and works with contractor on plan to make sure the problem does not reoccur. Prepares monthly QA summary reports. Reviews contractor’s pay application and confirms payment of all items. Communicates and coordinates with the VDOT project manager and staff and with OIA/OVST inspectors.

**Blennerhassett Bridge / Ohio River Bridge, Parkersburg, WV**

**Owner:** West Virginia Dept. of Highways  
**Firm:** West Virginia Dept. of Highways  
**Dates:** June 2005 - June 2007  
**Role and Description:** Project Manager. Managed the $120-million construction of a new 4,008-foot-long bridge with the longest network tied-arch of its kind in the world as of 2008. Nationally and internationally recognized, the bridge was one of *Road and Bridge Magazine*’s Top Ten Bridges in 2008. Responsible for coordination and compliance with governing agencies including the USACE, US Coast Guard, ODOT, FHWA, VWDEP, WVDOH, and WV DNR. Supervised 12 inspectors. Confirmed construction, material testing, and sampling were in accordance with the contract requirements, plans and specifications. Coordinated with testing laboratory and reviewed testing results, evaluated material documentation from suppliers to confirm compliance with specifications, and verified accurate and complete testing documentation. Resolve field issues including nonconforming materials and construction work. Prepared noncompliance reports and approved nonconformance recovery plans, monitored corrective actions and retests, and worked with contractor on plan to ensure the problem does not reoccur. Reviewed and monitored the CPM schedule and monthly updates. Managed the shop drawing and submittal review process. Reviewed RFIs and coordinated responses. Reviewed and approved the contractor’s monthly payments. Analyzed and negotiated change orders.

**Replacement of I-81 Twin Bridges over Tuscarora Creek, Martinsburg, WV**

**Owner:** West Virginia Dept. of Highways  
**Firm:** West Virginia Dept. of Highways  
**Dates:** Oct. 2001-Sept. 2003  
**Role and Description:** Project Manager. Managed the $8-million, 8-lane replacement bridge consisting of a single-span structure with concrete girders and semi-integral abutments. The project also included widening of 2 miles of I-81 from 4 lanes to 6 lanes except in area where it was 8 lanes wide to accommodate ramps for Exit 13. Project also included sign structure and drainage improvements. Supervised 4 inspectors. Monitored the CPM schedule and monthly updates. Reviewed inspector daily reports and wrote correspondence and reports. Ensured E&SC inspections were performed. Reviewed RFIs and coordinated responses. Reviewed and approved the contractor’s monthly payments. Worked with designers and contractor to resolve design, construction, schedule, and budget issues. Analyzed and negotiated change orders and prices for additional work. Conducted monthly progress meetings. Reviewed payroll compliance, DBE compliance, material certifications, and QC/QA materials testing. Prepared letters to contractor as necessary. Reviewed and monitored MOT checks and compliance.

**Replacement of Exit 13 King Street Overpass Bridge over I-81, Martinsburg, WV**

**Owner:** West Virginia Dept. of Highways  
**Firm:** West Virginia Dept. of Highways  
**Dates:** 1998 – 2000  
**Role and Description:** Project Manager. Managed the $5-million construction of a bridge replacement and street improvements. The bridge replacement was a 4-lane, 2-span structure with concrete girders and semi-integral abutments. The project was funded by the WVDOH and FHWA. Supervised inspectors and reviewed inspector daily reports. Reviewed and monitored the CPM schedule and monthly updates. Ensured E&SC inspections were performed. Reviewed RFIs and coordinated their responses. Reviewed and approved the contractor’s monthly payments. Worked with designers and contractor to resolve design, construction, schedule, and budget issues. Analyzed and negotiated change orders and prices for additional work. Conducted monthly progress meetings. Reviewed payroll compliance, DBE compliance, material certifications, and QC/QA materials testing. Monitored MOT checks and compliance.

**I-81 Widening, Martinsburg, WV**

**Owner:** West Virginia Dept. of Highways  
**Firm:** West Virginia Dept. of Highways  
**Dates:** 1998 – 2000  
**Role and Description:** Project Manager. Managed the $7-million widening of a 4-mile segment of interstate from 4 to 6 lanes and sign and drainage improvements. Supervised 6 inspectors and reviewed inspector daily reports. Reviewed and monitored the CPM schedule and monthly updates. Ensured E&SC inspections were performed. Reviewed RFIs and coordinated their responses. Reviewed and approved contractor’s monthly payments. Worked with designers and contractor to resolve design, construction, schedule, and budget issues. Analyzed and negotiated change orders and prices for additional work. Conducted monthly progress meetings with contractor and inspectors by preparing agendas, documenting meetings, and distributing meeting minutes. Reviewed payroll compliance, DBE compliance, material certifications, and QC/QA materials testing. Reviewed and monitored MOT checks and compliance.

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

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.

**Middle Ground Blvd. Extension Design-Build, Quality Assurance Manager, December 2014**  
**Fredericksburg District Wide CEI Contract, Construction Inspection Coordinator, December 2014**
# ATTACHMENT 3.3.1
## KEY PERSONNEL RESUME FORM

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

<table>
<thead>
<tr>
<th>a. Name &amp; Title:</th>
<th>Stephen Drumm, PE, Vice President, Transportation Regional Practice Leader</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Project Assignment:</td>
<td>Design Manager</td>
</tr>
<tr>
<td>c. Name of Firm with which you are now associated:</td>
<td>KCI Technologies, Inc.</td>
</tr>
<tr>
<td>d. Years experience:</td>
<td>With this Firm 19 Years With Other Firms 18 Years</td>
</tr>
<tr>
<td>Please list chronologically (most recent experience 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 experience, please list the experience for those years you have worked. Project specific experience shall be included in Section (g) below):</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name of Firm:</th>
<th>KCI Technologies, Inc.</th>
<th>Start Date:</th>
<th>Dec. 1994</th>
<th>End Date:</th>
<th>Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>Position:</td>
<td>Vice President, Transportation Regional Practice Leader</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mr. Drumm has extensive experience in all aspects of highway design including design-build projects. His responsibilities include managing a design team comprised of design disciplines from KCI and various firms (including DBE) providing task assignments for the project. He manages the design through regular team meeting, coordinating with the client, and providing quality control reviews of all work. He then prepares the monthly invoice, progress reports, staff assignments, budget and schedule monitoring, and general technical oversight. Management is continued through construction, by attending partnering meeting and resolving field issues</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>e. Education:</th>
<th>Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Lowell /B.S./1978/Civil Engineering</td>
<td></td>
</tr>
<tr>
<td>f. Active Registration:</td>
<td>Year First Registered/ Discipline/VA Registration #:</td>
</tr>
<tr>
<td>2014/Professional Engineer/0402013248</td>
<td></td>
</tr>
<tr>
<td>g. Document the extent and depth of your experience and qualifications relevant to the Project.</td>
<td></td>
</tr>
<tr>
<td>1. Note your specific responsibilities and authorities for each project, not those of the firm.</td>
<td></td>
</tr>
<tr>
<td>2. Note whether experience is with current firm or with other firm.</td>
<td></td>
</tr>
<tr>
<td>3. Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</td>
<td></td>
</tr>
<tr>
<td>(List at least three (3), but no more than five (5) relevant projects** for which you have performed a similar function.)</td>
<td></td>
</tr>
</tbody>
</table>

| I – 90 EB Cleveland Innerbelt George V. Vionovich Bridge Design-Build CCG2, Cuyahoga County, OH |
| Owner: | Ohio Department of Transportation |
| Firm: | KCI Technologies, Inc. |
| Dates: | 2013-2014 |
| Role and Description: | Roadway Design Quality Manager/Engineer. As part of a $270 million design-build project, KCI is part of the Independent Quality Firm (IQF) that is contracted to the contractor, TGR to provide quality management services. Mr. Drumm is serving as the Highway Design Lead for the project reviewing the roadway maintenance of traffic, retaining walls and drainage design and utility relocation for two miles of the interstate widening and interchange reconstruction. This project is the second phase, for the east bound bridge replacement, a 3900’ structure over the Cuyahoga River. The roadway improvements include three interchanges at Fairfield, Ontario, East 9th streets, replacement of seven bridges and five retaining walls. Mr. Drumm is responsible for the management of the highway review team and coordination with the design and construction team consisting of staff from multiple firms. The IQF is responsible to review, approve and release for construction all plans prior to construction. Mr. Drumm is responsible for the design review of 27 buildable units consisting of for the full depth eastbound reconstruction of the interstate comprising of three partial interchanges, retaining walls, drainage, and stormwater management facilities, multi-phase maintenance of traffic, signing, and lighting. Project complexities include addressing multi-phased changes to City street patterns and changes to ramp access to the interstate, utility relocations, drainage and coordination with the demolition of the existing Bridge structure. Construction is scheduled to be complete in 2016. |
# ATTACHMENT 3.3.1

## KEY PERSONNEL RESUME FORM

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Owner</th>
<th>Firm</th>
<th>Dates</th>
<th>Role and Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intercounty Connector, Design-Build, Contract B, Montgomery County, MD</strong></td>
<td>Maryland State Highway Administration</td>
<td>KCI Technologies, Inc.</td>
<td>2007-2010</td>
<td><strong>Roadway Design Lead Manager/Engineer.</strong> As part of a $550 million design-build project, KCI provided roadway, traffic and drainage design for a seven-mile segment of the ICC, including interchanges at MD 182 and MD 650 for this six-lane highway on new alignment. Mr. Drumm was responsible for the management of the highway design team consisting of staff from multiple firms. The design work was performed in a project office with co-located owner and review staff. Work included design of the six-lane divided open road tolled expressway comprising two full-access interchanges, 10 bridges, retaining and noise walls, drainage, erosion and sediment control, and stormwater management facilities, including multi-phase maintenance of traffic, signing, lighting and electronic toll collection. Project complexities included design and construction plans to protect environmentally sensitive areas, multi phase buildable units starting with early, rough, and final construction phasing and utility relocations.</td>
</tr>
<tr>
<td><strong>MD 695 Widening from I-97 to MD 10 Design-Build, Baltimore, MD</strong></td>
<td>Maryland State Highway Administration</td>
<td>KCI Technologies, Inc.</td>
<td>2000-2002</td>
<td><strong>Project Manager.</strong> KCI designed the $9.4 million third lane widening, which included new overhead signing, new median lighting, patching and overlay of MD 695, extension of an acceleration lane for MD 2 NB, resurfacing of ramps, and new traffic barrier and end treatment. Mr. Drumm prepared median widening plans including highway, structural, surveys, geotechnical, drainage, stormwater management, traffic, signing, pavement marking, lighting, ITS device, and reforestation design. Key issues included reconstruction of an existing 44’ grass median into a new median barrier, shoulders, travel lanes, and HOV enforcement area. This project was completed on a fast-track schedule.</td>
</tr>
<tr>
<td><strong>MD 124 Design-Build South of Airpark Road to Rosewood Manor Lane, Gaithersburg, MD</strong></td>
<td>Maryland State Highway Administration</td>
<td>KCI Technologies, Inc.</td>
<td>2007-2010</td>
<td><strong>Principal-in-Charge.</strong> This design-build project involved the six-lane divided highway widening for 1.6 miles of MD 124. Mr. Drumm was responsible for complete oversight of roadway, traffic, drainage, stormwater management, erosion and sediment controls, permits, WSSC water lines, noise walls, landscaping, geotechnical, utility avoidance, and lighting design. He managed the team to prepare the preliminary plans for the contractor's bid and complete final design plans for review and approval by SHA. Mr. Drumm was responsible for preparation of a multi-phased maintenance of traffic plan to use during the utility and stormdrain work followed by the roadway pavement reconstruction. The project also involved a public information program during construction to notify the residents, churches, and businesses along the roadway of the work schedule and closures.</td>
</tr>
<tr>
<td><strong>I-95/I-495/MD 210 Interchange Reconstruction, Prince George's County, MD</strong></td>
<td>Maryland State Highway Administration</td>
<td>KCI Technologies, Inc.</td>
<td>1998-2012</td>
<td><strong>Project Manager.</strong> Mr. Drumm led this project, which involved preliminary and final design services for the reconstruction of the interchange as part of the Woodrow Wilson Bridge project to replace the existing six lane structure spanning the Potomac River between Maryland and Virginia. KCI and its subconsultants provided highway design for widening I-95/I-495, reconstructing the MD 210 interchange and ramps, and relocating Bald Eagle Road and Oxon Hill Roads; structural design for seven bridges, two noise walls, and 22 retaining walls; traffic design for signals, signing, pavement marking, and ITS; geotechnical design for foundations and slope stability; utility designation, test pits and relocation; and plats, surveys, landscaping, and public involvement. Mr. Drumm also oversaw surveys; preparation of ROW plats; noise walls design; environmental permits; and landscaping. Mr. Drumm managed tasks for scope and fee proposal preparation, selected subconsultants, prepared progress reports, assigned staff, and monitored budget/schedule.</td>
</tr>
</tbody>
</table>

*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**

<table>
<thead>
<tr>
<th>Brief Resume of Key Personnel anticipated for the Project.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Name &amp; Title:</td>
</tr>
<tr>
<td>David Passmore, Senior Project Manager</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>b. Project Assignment:</td>
</tr>
<tr>
<td>Construction Manager</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>c. Name of Firm with which you are now associated:</td>
</tr>
<tr>
<td>G.A. &amp; F.C. Wagman, Inc.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>d. Years experience:</td>
</tr>
<tr>
<td>With this Firm: <code>&lt;1</code> Years With Other Firms: <code>19</code> Years</td>
</tr>
<tr>
<td>Please list chronologically (most recent experience first) your employment history, position and general experience or fields of practice for the last fifteen(15) years. (NOTE: If you have less than 15 years of experience, please list the experience for those years you have worked.):</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Name of Firm: G.A. &amp; F.C. Wagman, Inc.</td>
</tr>
<tr>
<td>Start Date: March 2014</td>
</tr>
<tr>
<td>End Date: Present</td>
</tr>
<tr>
<td>Position: Senior Project Manager</td>
</tr>
<tr>
<td>Mr. Passmore is a Senior Project Manager for Wagman, Inc. a heavy civil and site contractor in the Mid-Atlantic region. His responsibilities include estimating, proposal preparation, financial, quality control and management of all aspects of construction projects. He oversees the construction activities in the field to ensure project delivery that meets or exceeds all expectations quality, timeliness and budget.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Name of Firm: American Infrastructure Inc.</td>
</tr>
<tr>
<td>Start Date: 2008</td>
</tr>
<tr>
<td>End Date: 2014</td>
</tr>
<tr>
<td>Position: Project Manager II</td>
</tr>
<tr>
<td>As a Project Manager for American Infrastructure, Mr. Passmore was a design-build Construction Manager as well as a Project Manager for VDOT projects. His responsibilities included overall construction, schedule, quality and safety on his projects. He was involved in proposal development as well as estimating. His notable accomplishments were the successful outcome of highly restricted time schedule projects. As well as transparency on projects with all stakeholders, to achieve a successful outcome for all.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Name of Firm: CD Hall Construction Inc.</td>
</tr>
<tr>
<td>Start Date: 2006</td>
</tr>
<tr>
<td>End Date: 2008</td>
</tr>
<tr>
<td>Position: Senior Project Manager</td>
</tr>
<tr>
<td>As a Project Manager for CD Hall Construction, a civil/site utility contractor in Central Virginia, Mr. Passmore was responsible for all aspects of construction projects. He main functions were quality control, the development and establishment of management systems, supervision of projects in process, specifically road construction and deep sewer projects. Mr. Passmore was the lead on projects that involved unknown utilities and complex traffic control aspects.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Name of Firm: Vrana Construction Company, Inc</td>
</tr>
<tr>
<td>Start Date: 1996</td>
</tr>
<tr>
<td>End Date: 2006</td>
</tr>
<tr>
<td>Position: Senior Project Manager</td>
</tr>
<tr>
<td>As a Senior Project Manager for Vrana Construction, a leader in heavy civil construction in the Mid-West, Mr. Passmore was responsible for numerous roadway and bridge projects. Mr. Passmore oversaw the projects as well as the project managers assigned to the projects. He had complete responsibility for the projects including, all financial aspects, quality, schedule and partnering. Numerous partnering success’s landed Mr. Passmore on the Contractor/Engineer evaluation board for the City of Omaha.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>e. Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</td>
</tr>
<tr>
<td>The Military College of South Carolina, The Citadel/B.S./1994/Civil Engineering</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>f. Active Registration: Year First Registered/ Discipline/VA Registration #:</td>
</tr>
<tr>
<td>Erosion and Sediment Control Contractor #4973C Expiration June 26, 2014</td>
</tr>
<tr>
<td>Will hold DCR Responsible Land Disturber Certification prior to commencement of construction.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>g. Document the extent and depth of your experience and qualifications relevant to the Project.</td>
</tr>
<tr>
<td>1. Note your specific responsibilities and authorities for each assignment, not those of the firm.</td>
</tr>
<tr>
<td>2. Note whether experience is with current firm or with other firm.</td>
</tr>
<tr>
<td>3. Provide beginning and end dates for each assignment; projects shall have been completed within the past fifteen (15) years.*</td>
</tr>
</tbody>
</table>
ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

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

**Middle Ground Blvd Extension**
Owner – Virginia Department of Transportation
Firm – American Infrastructure Inc.
Dates – 2013-2014

Role and Description – Construction Manager for overall Design/Build construction activities, construction quality management, and contract administration required for the completion of the $32,000,000 four lane connector with 2 span bridge. The overall scope of work is the construction of infrastructure improvements for VDOT, the City of Newport News, Hampton Roads Sanitation District and CSX Railroad. To accomplish this work, phased construction will be performed over the course of the 3 year 4 month long project, ensuring that no aspect of the existing infrastructure is compromised during its completion. This 3 mile improvement will provide 4 lanes for through traffic and a 13-foot median for left turn lanes as needed. The proposed roadway project will provide improved roadway lighting, signals, drainage, landscaping, bike lanes, curb, gutter and sidewalks. Additionally, a improved 36” forcemain will be added as an improvement to the project. This forcemain is 1.2 miles long with connections to existing main at each end. For the connecting bridge to remain 2 span required the use of one of the largest concrete web dimensions cast in Virginia.

**VDOT B26 Hampton Boulevard Grade Separation Project**
Owner – Virginia Department of Transportation
Firm – American Infrastructure Inc.
Dates – 2009-2013

Role and Description – Responsible for overall construction activities, construction quality management, and contract administration required for the completion of the $49,000,000 underpass and bridge project. The overall scope of work was the construction of infrastructure improvements for VDOT, the City of Norfolk, Norfolk Southern/Portsmouth Beltline Railroads, the Virginia Port Authority, and the Navy. To accomplish this work, phased construction was performed over the course of the project, ensuring that no aspect of the existing infrastructure is compromised during its completion. This seven-tenth of a mile improvement will provide six lanes for through traffic and a 13-foot median for left turn lanes as needed. The proposed roadway project will provide improved roadway lighting, signals, drainage, landscaping, bike lanes, curb, gutter and sidewalks. The existing at-grade conflict with the Norfolk Southern/Norfolk Portsmouth Beltline railroad will be removed. This will be accomplished by excavating the existing Hampton Boulevard 35 feet below existing grade and constructing a new 350 m long underpass retaining wall, founded upon over 1800 piles. Two new at-grade bridges will be constructed to streamline flow of rail and pedestrian traffic across Hampton Boulevard at its new elevation. A double-span steel bridge will provide a railroad crossing, while a single span concrete bridge will provide vehicle access into Norfolk International Terminal (NIT) and Naval Station Norfolk (NSN) Gate 6. To facilitate drainage within the project limits, a new Pump Station and drainage outfall will be built to transport site-runoff to the Elizabeth River.

**I-680, Maple to Fort Street/Sprague Street Bridge/108th and Maple Streets**
Owner – Nebraska Department of Transportation
Firm – Vrana Construction
Dates – 2003-2006

Role and Description – Responsible for overall construction activities, construction quality management, and contract administration required for the completion of the $22,000,000 interstate and bridge project. The project consisted of the widening of I-680 interstate, the completion of a cloverleaf interchange along with the construction of the Sprague Street bridge that was offsite but connected to the project. Construction activities included 2 bridges which were 250’ long x 138’ wide, 16,000 lf of pipe pile with 26 girders. The project consisted of 190,000 SY of doweled concrete interstate paving, 190,000 SY of stabilized fly ash subgrade, 240,000 CY of excavation, 71,500 SY of crushed concrete and 60,000 LF of concrete protection barrier. Because of the nature of the project, coordination was necessary for numerous utility contractors not under contract for Vrana Construction, but working as independents. The weekly meetings held between the utility contractors, the State, Power Company and the City of Omaha for the total relocation of high tension wire structure and many underground utilities resulted in a “non-delay” outcome. Because of this coordination Mr. Passmore led the monthly public meetings for the project as well as spoke with any news media that questioned the project. With 6 lanes of traffic a $500 per lane per minute penalty was implemented for any lane restriction still set up after a specified time limit and all traffic switches, shutdowns and lane closures were designed and implemented without a penalty.

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

Mr. Passmore is currently assigned as Project Manager for the VDOT C00094932B01 contract. He will be available full time for I-64 Capacity Improvements project.
## KEY PERSONNEL RESUME FORM

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

<table>
<thead>
<tr>
<th>a. Name &amp; Title:</th>
<th>Eric Burgess, PE, Transportation Structures Practice Leader</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Project Assignment:</td>
<td>Lead Structural Engineer</td>
</tr>
<tr>
<td>c. Name of Firm with which you are now associated:</td>
<td>KCI Technologies, Inc.</td>
</tr>
<tr>
<td>d. Years experience: With this Firm</td>
<td>14</td>
</tr>
</tbody>
</table>

Please list chronologically (most recent experience 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 experience, please list the experience for those years you have worked. Project specific experience shall be included in Section (g) below):

<table>
<thead>
<tr>
<th>Name of Firm:</th>
<th>KCI Technologies, Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Date:</td>
<td>Jan. 2000</td>
</tr>
<tr>
<td>End Date:</td>
<td>Present</td>
</tr>
<tr>
<td>Position:</td>
<td>Transportation Structures Practice Leader</td>
</tr>
<tr>
<td>Responsibilities:</td>
<td>Responsible for design and design management of highway bridge projects. Mr. Burgess has served as project engineer, project manager, vice president of design services and now, transportation structures practice leader. His duties include contract executions, business development, marketing and managing all engineers, designers and technicians within the design team. He has served as a lead engineer for fast-paced value engineering and design-build projects for bridge contractors as well as traditional design-bid projects directly for state departments of transportation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>e. Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clemson University/B.S./1997/Civil Engineering</td>
</tr>
<tr>
<td>Clemson University/M.E.1999/Civil Engineering</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>f. Active Registration: Year First Registered/ Discipline/VA Registration #:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011/Professional Engineer/0402048509</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>VDOT Route 288/I-64 Interchange Design-Build, Richmond, VA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner -</td>
<td>VDOT</td>
</tr>
<tr>
<td>Firm –</td>
<td>KCI Technologies, Inc.</td>
</tr>
<tr>
<td>Dates –</td>
<td>2001-2003</td>
</tr>
<tr>
<td>Role and Description – Lead Bridge Engineer.</td>
<td>The Route 288/I-64 Interchange was part of the $236 million design-build project funded through the Public-Private Transportation Act of 1995 (PPTA) and was completed within two years. Mr. Burgess served as the lead bridge engineer for Ramps E, G &amp; H at the interchange of Route 288 and I-64. These bridges are all multi-span, horizontally curved continuous steel plate girder structures with spans ranging from 211’ to 246’. The superstructures are supported on drilled shaft foundations and hammerhead piers. The abutments were supported by driven steel pipe pile and Ramps G &amp; H utilized a shared MSE retained wall, with heights as great as 70’. With an accelerated schedule, the ramps were designed in 10 months and constructed in 20 months.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>I-520 Palmetto Parkway Design-Build, Phase I and II, Aiken County, SC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner –</td>
<td>SCDOT</td>
</tr>
<tr>
<td>Firm –</td>
<td>KCI Technologies, Inc.</td>
</tr>
<tr>
<td>Dates –</td>
<td>2002-2009</td>
</tr>
</tbody>
</table>
Role and Description – Phase I: Lead Engineer; Phase II: Project Manager. This $192M, major design-build project consisted of connecting I-20 to I-520 Bobby Jones Expressway. This four lane divided interstate facility on new alignment is controlled access and includes 11 major interchanges, 12 miles of interstate and 21 bridges. The project also included roadway improvements to US Route 25, SC 126 (Clearwater Road), S-33 (Ascauga Lake Road) and various secondary and local roads. Mr. Burgess served as the Lead Engineer and Project Manager for this project. He managed all aspects of design and was responsible for the coordination between all of the subconsultants for geotechnical, hydrology and bridge design and with the SCDOT Project Manager for submittals and approvals. Under Mr. Burgess’s management, KCI was able to provide final design and plan details for the bridge over the Savannah River in only five months and provided responsive contractor support during construction to ensure that the project was completed ahead of schedule.

SC 150 Emergency Bridge over I-85 Design-Build, Cherokee County, SC
Owner – SCDOT
Firm – KCI Technologies, Inc.
Dates – 2011-2011
Role and Description – Lead Design Engineer. KCI served as the bridge design engineer for the emergency bridge replacement of SC 150 over I-85. The replacement was required because of bridge damage sustained by a tractor trailer collision with one of the interior bents. Mr. Burgess served as lead design engineer for this project and was responsible for managing all bridge design as well as coordination with the subconsultants, SCDOT, and suppliers in order to meet the accelerated deadlines required by the emergency replacement guidelines. The bridge design and construction plan development was on the critical path to meet the construction schedule. The project was completed 28 days ahead of the project deadline, thus further reducing the impacts to the traveling public and allowing the contractor to receive the maximum incentive bonus as stipulated by the contract.

VDOT Multiple Bridge Replacements Design-Build Project, Region II, VA
Owner – VDOT
Firm – KCI Technologies, Inc.
Dates – 2009-2012
Role and Description – Project Manager. KCI served as the lead engineering firm for VDOT’s first-ever multiple bridge rehabilitation projects. The contract included the complete replacement of the superstructures and substructure repairs and rehabilitation on 12 bridge sites. Mr. Burgess served as a project manager for this project. His duties include design coordination and oversight for the bridge design team. Mr. Burgess was actively involved in the bid process including field reconnaissance to determine the overall project approach for each site. A major portion of the project approach was the evaluation of existing substructures to determine rehabilitation and modification requirements to suit the new superstructures. KCI provided design and coordination of bridge plans on an accelerated schedule requested by the contractor. The majority of design on the 12 bridge sites was completed within three months of the contract award date. KCI also provided design alternatives that reduced the impacts of construction to the traveling public.

John N. Hardee Expressway Design-Build, Columbia, SC
Owner – SCDOT
Firm – KCI Technologies, Inc.
Dates – 2002-2003
Role and Description – Lead Bridge Engineer. KCI provided the value engineering design services to replace approximately 1,529’ of multi-span dual bridge structures with a single 190 ft. simple span structure and replace costly concrete retaining walls with decorative, soldier pile and panel walls. The long simple span bridge design required 78” deep structural steel plate girders and MSE high wall abutments to provide the necessary horizontal clearances for the underlying roadway. The MSE and extensive retaining walls were designed with multiple tiers for landscaping treatments and contain decorative palmetto tree reveals in the wall panels for added aesthetics. This value engineering option provided a functionally adequate and aesthetically pleasing structure with significantly lower maintenance costs at a construction savings of $2.8 million to the SCDOT. This project was completed within one and a half years. Mr. Burgess served as the Lead Bridge Engineer for this project.

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

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

N/A
### Brief Resume of Key Personnel anticipated for the Project.

**a. Name & Title:**

Rick DeLong, PE, Associate / Engineering Group Leader

**b. Project Assignment:**

Lead Roadway Engineer

**c. Name of Firm with which you are now associated:**

McCormick Taylor, Inc.

**d. Years experience:**

<table>
<thead>
<tr>
<th>Firm Name</th>
<th>Start Date</th>
<th>End Date</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>McCormick Taylor, Inc.</td>
<td>2004</td>
<td>Present</td>
<td>Associate / Engineering Group Leader</td>
</tr>
<tr>
<td>Johnson, Mirmiran &amp; Thompson</td>
<td>2001</td>
<td>2004</td>
<td>Chief of Highways</td>
</tr>
<tr>
<td>Gannett Fleming, Inc.</td>
<td>1993</td>
<td>2001</td>
<td>Roadway Section Manager</td>
</tr>
</tbody>
</table>

Mr. DeLong is an Associate and Engineering Group Leader responsible for all of McCormick Taylor’s Virginia Engineering Operations. Responsible for leading the design and management of numerous major roadway and traffic engineering improvement projects. Leads and supervises the development of final construction plans, specifications and bid documents. Responsible for the management & supervision of technical engineering staff in various disciplines. In addition to having interstate reconstruction experience, Mr. DeLong also has design-build experience on several VDOT interstate soundwall construction projects.

**e. Education:**

Pennsylvania State University / B.S. / 1993 / Civil Engineering

**f. Active Registration:**

1998 / Professional Engineer / Virginia #031642

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

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

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

**I-64 Environmental Impact Statement and Related Studies**

Owner – VDOT

Firm – McCormick Taylor, Inc.

Dates – 2010-2013
Role and Description – Preliminary Engineering Manager for this Environmental Impact Study (EIS) analyzing the 75-mile I-64 corridor between Richmond and Hampton, VA. Mr. DeLong is responsible for managing all roadway and traffic design activities, including the analysis of all existing geometric deficiencies and the development of numerous alternatives for 25 interchanges within the study limits. Also responsible for developing construction cost estimates. Also as a follow-up to the EIS effort, Mr. DeLong was responsible for performing additional design studies and analysis of Segment 1 in preparation for this design-build contract.

Reconstruction of I-95 & Route 630 Interchange Reconstruction, Stafford County, VA
Owner – VDOT
Firm – McCormick Taylor, Inc.
Dates – 2012-Present
Role and Description – Project Manager for the realignment and widening of Route 630 as part of interchange improvements on I-95. Project includes interchange improvements, urban arterial roadway design, and improvements to two major intersections, including the addition of turn lanes and traffic signals. Responsible for coordinating final roadway design, maintenance of traffic plans, signal design, drainage and public involvement.

North Area Roadway Widening & Interchange Improvements–South Section, Dulles, VA
Owner – Metropolitan Washington Airports Authority (MWAA)
Firm – Johnson, Mirmiran & Thompson
Dates – 2001-2004
Role and Description – Roadway Manager responsible for the widening of the Dulles Access Highway, including the addition of new collector-distributor roads, interchange and ramp modifications, as well as improvements to several internal airport roadways. Project included the design of nine new bridges. Responsible for preparing final construction plans, including coordinating the design of stormwater management facilities, storm drainage, erosion and sediment control, signing, pavement marking, and extensive maintenance of traffic and traffic signal design.

I-64 Widening and Interchange Improvements at Grove-Busch Gardens, James City County/York County, VA
Owner – VDOT
Firm – Gannett Fleming, Inc.
Dates – 1997-2000
Role and Description – Lead Roadway Manager responsible for widening and interchange improvements, including providing full directional access from I-64 to Rt.60 and the Busch Gardens Theme Park. Duties included development of final right of way and construction plans, roadway geometric design, and coordinating the development of maintenance of traffic plans, drainage design, and cost estimating.

I-81 Widening and Interchange Improvements Routes 311 & 115, Roanoke County, VA
Owner – VDOT
Firm – Gannett Fleming, Inc.
Dates – 1999-2001
Role and Description – Lead Roadway Manager responsible for the preliminary and final design for interchange improvements and widening of 2.5 & 3 mile sections of I-81 in highly congested urban environment. Projects include the addition of collector-distributor lanes, as well as three new bridges and seven bridge widenings. Responsible for roadway design activities and preparation of ROW and construction plans, including preliminary interchange alternatives, public involvement, and the coordination of hydraulic, geotechnical, landscaping, and utility design activities.

* 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

<table>
<thead>
<tr>
<th>Brief Resume of Key Personnel anticipated for the Project.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.  Name &amp; Title:</td>
</tr>
<tr>
<td>Patsy Napier,  Senior Technical Advisor</td>
</tr>
<tr>
<td>b.  Project Assignment:</td>
</tr>
<tr>
<td>Public Relations Manager</td>
</tr>
<tr>
<td>c.  Name of Firm with which you are now associated:</td>
</tr>
<tr>
<td>McCormick Taylor, Inc.</td>
</tr>
<tr>
<td>d.  Years experience:</td>
</tr>
<tr>
<td>With this Firm: 9.5  Years With Other Firms: 36  Years</td>
</tr>
<tr>
<td>Please list chronologically (most recent experience 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 experience, please list the experience for those years you have worked. Project specific experience shall be included in Section (g) below):</td>
</tr>
<tr>
<td><strong>Name of Firm:</strong> McCormick Taylor, Inc.  <strong>Start Date:</strong> 2004  <strong>End Date:</strong> Present</td>
</tr>
<tr>
<td><strong>Position:</strong> Senior Technical Advisor</td>
</tr>
<tr>
<td>Ms. Napier oversees the public outreach and public involvement activities for all projects which require coordination and acceptance by the public as well as federally funded projects which require public outreach related to the environmental documentation, location and design activities. She coordinates with localities and other state and federal agencies to ensure all guidelines for Federal, State and locally administrated projects are met. She also coordinates with state and local officials to keep everyone updated on project progress and schedules.</td>
</tr>
<tr>
<td><strong>Name of Firm:</strong> VDOT  <strong>Start Date:</strong> 1968  <strong>End Date:</strong> 2004</td>
</tr>
<tr>
<td><strong>Position:</strong> Program Manager for Location &amp; Design  Division, Public Involvement Section and Special Studies Section</td>
</tr>
<tr>
<td>As the Public Involvement Section Manager, Ms. Napier was responsible for Public Hearing activities statewide. She provided guidance to assure compliance with both state and federal regulations related to public participation activities, managed the update of the Public Participation Manual and the presentation of this material in training sessions throughout the nine District Offices, and monitored Title VI requirements to ensure compliance in all Public Hearing actions. Ms. Napier also managed the Special Studies Section where she was responsible for the development of complex new location corridor studies and feasibility studies statewide including the Public Involvement Programs for these studies.</td>
</tr>
<tr>
<td>e.  Education: Name &amp; Location of Institution(s)/Degree(s)/Year/Specialization:</td>
</tr>
<tr>
<td>N/A</td>
</tr>
<tr>
<td>f.  Active Registration: Year First Registered/ Discipline/VA Registration #:</td>
</tr>
<tr>
<td>N/A</td>
</tr>
</tbody>
</table>
| g.  Document the extent and depth of your experience and qualifications relevant to the Project.  
1.   Note your specific responsibilities and authorities for each project, not those of the firm.  
2.   Note whether experience is with current firm or with other firm.  
3.   Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.  
(List at least three (3), but no more than five (5) relevant projects* for which you have performed a similar function.) |
| **I-64 Environmental Impact Statement and Related Studies** |
| **Owner** – VDOT  **Firm** – McCormick Taylor, Inc.  **Dates** – 2010-2013 |
| **Role and Description** – As the Public Involvement Leader, Ms. Napier managed all outreach activities for this large scale 75- miles long project that included 25 interchanges. Her efforts included leading the preparation for Citizens Information Meetings and the Location Public Hearings. Ms. Napier also led the efforts in developing handouts and display boards, coordinating with VDOT Public Affairs staff, in both the Hampton Roads and Richmond Districts, and in compiling meeting summaries and all public comments. Throughout the entire project development process she provided extensive |
**ATTACHMENT 3.3.1**

**KEY PERSONNEL RESUME FORM**

<table>
<thead>
<tr>
<th>Role and Description</th>
<th>Reconstruction of I-95 &amp; Route 630 Interchange, Stafford County, VA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Owner</strong> – VDOT</td>
<td><strong>Firm</strong> – McCormick Taylor, Inc.</td>
</tr>
<tr>
<td><strong>Dates</strong> – 2012-Present</td>
<td><strong>Role and Description</strong> – Ms. Napier is currently leading the public involvement efforts for the realignment and widening of Route 630 as part of interchange improvements on I-95. Her responsibilities include the development of Communications Plan, working closely with the Fredericksburg District Public Affairs Office and coordinating with local governments and special interest groups. She also developed project web site updates and has led the development of text and graphic materials for public meetings and for the Design Public Hearing.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Role and Description</th>
<th>2035 Statewide Highway Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Owner</strong> – VDOT</td>
<td><strong>Firm</strong> – McCormick Taylor, Inc.</td>
</tr>
<tr>
<td><strong>Dates</strong> – 2010-2011</td>
<td><strong>Role and Description</strong> – Ms. Napier was the Leader for the Public Outreach efforts for this Statewide Planning effort. Her work included developing the Communications Plan, continuous coordination with VDOT staff and local governments, and preparing project web site updates. She also provided assistance and facilitation at Stakeholder Meetings and led the preparation of graphic materials for the public meetings. She also developed meeting summary reports along with weekly e-Bulletin for stakeholders, State, Local and Federal officials in order to keep everyone updated on the study. Ms. Napier also led the efforts in the preparation of the Rural Long Range Transportation Plans that were prepared for each of the 21 Planning District Commissions throughout Virginia.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Role and Description</th>
<th>Hillsdale Drive Extension, City of Charlottesville, VA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Owner</strong> – VDOT</td>
<td><strong>Firm</strong> – McCormick Taylor, Inc.</td>
</tr>
<tr>
<td><strong>Dates</strong> – 2008-Present</td>
<td><strong>Role and Description</strong> – Leader for all public involvement efforts for this final design project for an extension of a new roadway section through a fully developed commercial center in Charlottesville. Work included leading an active public participation program including a Steering Committee, Project web site and numerous special purpose meetings with area businesses and stakeholders. Her work also included the facilitation and coordination of the Design Committee. She also provided text and graphic support during the preparation of all handouts, displays, newsletters and informational products along with providing updates for the project website.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Role and Description</th>
<th>I-81 Tier 1 Environmental Impact Statement, VA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Owner</strong> – VDOT</td>
<td><strong>Firm</strong> – McCormick Taylor, Inc.</td>
</tr>
<tr>
<td><strong>Dates</strong> – 2005-2008</td>
<td><strong>Role and Description</strong> – As a subconsultant on this large scale NEPA project, Ms. Napier led McCormick Taylor’s efforts in reviewing and managing public comments, assisted in the preparation of newsletters and informational products, and provided oversight and coordination efforts for the numerous public, agency and stakeholder contacts for this 325-mile long project.</td>
</tr>
</tbody>
</table>

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

- 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

Work History Forms
**LEAD CONTRACTOR - WORK HISTORY FORM**

**LIMIT 1 PAGE PER PROJECT**

<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
<th>b. Name of the prime design consulting firm responsible for the overall project design.</th>
<th>c. Contact information of the Client or Owner and their Project Manager who can verify Firm’s responsibilities.</th>
<th>d. Contract Completion Date (Original)</th>
<th>e. Contract Completion Date (Actual or Estimated)</th>
<th>f. Contract Value (in thousands)</th>
<th>g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement (in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name:</strong> Intercounty Connector, Contract A, Design-Build</td>
<td><strong>Location:</strong> Montgomery County, MD</td>
<td><strong>Name:</strong> Lead Designer: Parsons-Jacobs JV Additional Designers: KCI Technologies</td>
<td><strong>Name of Client/Owner:</strong> Maryland Department of Transportation State Highway Administration</td>
<td><strong>Phone:</strong> 410-838-7788</td>
<td><strong>Project Manager:</strong> Melinda Peters Phone: 410-838-7788</td>
<td><strong>Email:</strong> <a href="mailto:MPeters@sha.state.md.us">MPeters@sha.state.md.us</a></td>
</tr>
</tbody>
</table>

**Risks Similar to I-64 Project**

- Existing Geotechnical Conditions
  - Completed over 1000 geotechnical borings
  - Designed drainage blanket at Route 97 interchange due to wet soil conditions
- Environmental Compliance
  - Employed environmental team that reviewed designs and construction operations
  - Employed a certified environmental reviewer to ensure packages were in compliance before we submitted to governing agency
  - Conducted field surveys to verify potential impacts and revise design to minimize impacts
  - Employed full time E&S crews to maintain compliance during construction
  - Installed redundant E&S controls in Special Protection Areas
  - Noise study and construction of noise walls
  - Maintenance of Traffic
    - Created a full Traffic Management Plan - preliminary access to construction to final design
    - Employed ATSSA certified MOT manager
    - Developed MOT plans to accommodate construction and construction access on existing I-370 to access the median

**Scope of Work Similar to I-64 Project**

- Design-Build
- Widening of Existing I-370
- Precise Survey
- Phased Structural Construction
- Geotechnical Mitigation
- Complicated Transportation Management
- Major Existing Utilities
- Abundance of Noise Walls
- Environmental Compliance
- Public Outreach

**Verifiable Evidence of Performance**

- 2012 National Designs-Build Award
- 2012 Exemplary Ecosystem Initiatives Award
- 2012 America’s Transportation Awards Top 10 Finalist
- 2012 ARTBA Globe Award for Environmental Excellence
- 2011 Northeast’s Region Best Overall Project
- 2011 President’s Award for Highways

**Team Members**

- Wagman
- KCI
- McCormick Taylor
- Schnabel

---

*For multiple phase projects, only a single phase of construction (or single contract) will be considered as a Project. If additional phases are shown under the same Work History Form, only the first phase (or contract) listed will be evaluated.*
**ATTACHMENT 3.4.1(a)**

**LEAD CONTRACTOR - WORK HISTORY FORM**

*(LIMIT 1 PAGE PER PROJECT)*

<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
<th>b. Name of the prime design consulting firm responsible for the overall project design.</th>
<th>c. Contact information of the Client or Owner and their Project Manager who can verify Firm’s responsibilities.</th>
<th>d. Contract Completion Date (Original)</th>
<th>e. Contract Completion Date (Actual or Estimated)</th>
<th>f. Contract Value (in thousands)</th>
<th>g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement (in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location: Montgomery County, MD</td>
<td>Name: Intercounty Connector, Contract B, Design-Build</td>
<td>Name: Lead Designer: Parsons Transportation Group Additional Designers: KCI Technologies</td>
<td>Name of Client / Owner: Maryland Department of Transportation State Highway Administration Phone: 410-838-7788 Project Manager: Melinda Peters Phone: 410-838-7788 Email: <a href="mailto:MPeters@sha.state.md.us">MPeters@sha.state.md.us</a></td>
<td>11/2011</td>
<td>11/2011</td>
<td>$545,092</td>
</tr>
</tbody>
</table>

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

ICC, Contract B was a $570 million highway design-build, best value project extending from MD 97 to MD 29. Wagman was an equity member of a fully integrated construction joint venture, so we were joint and severable with each partner and financially responsible for the project. Contract B involved 7.5 miles of new controlled access, six-lane, tolled roadway with two interchanges; MD 650 New Hampshire Avenue and MD 182 Layhill Road. The work included 2.5 million yards of excavation, drainage, temporary detours for cross roads, utility relocations, 13 bridges, 300,000 SF of noise walls and retaining walls. New stormwater management structures were created and we reconstructed several existing stormwater management facilities to handle the new storm-water run-off and updated regulations. The project included ITS to inform the public and open road tolling to collect tolls that included hardwired and cellular connections. The ITS and ETC system had to be part of the existing system maintained by the State. Quality control was the responsibility of the design-builder and we managed the program. The ICC project was an extremely environmentally and community sensitive project and extensive measures have been planned by the design-build team to minimize the environmental impact of this project. Contact B was the second of five contracts planned to create the I-270 corridor in Montgomery County to the I-95/US1 corridor in Prince George’s County, MD. KCI designed the roadway, structures and assisted with the environmental permitting. Anthony Bednarik was assigned to the project as an assistant DBPM, and was also Wagman’s executive. Many other Wagman personnel excelled and were placed in position of authority, such as structure Construction Manager, General Bridge Superintendent, Piling Manager, Beam Erection Manager, field engineers, carpenters, operators, laborers, E&S workers, and MOT personnel. We utilized many Alternate Technical Concepts and other innovations to reduce cost, improve schedule or improve environmental performance, such as Caucus in lieu of spread footings to minimize permanent impacts to wetlands and flood plains, underground stormwater management facilities to minimize the thermal impact to fresh water streams after a rain event. Alternate pier locations were developed to minimize impacts with wetlands, streams and underground utilities. Our survey team utilized three dimensional modeling to increase production of the bulk excavating. Working with the model and adjusting vertical alignment we were able to match existing elements and eliminate excess material to be hauled off site, thus reducing cost. ICC, Contract A and B were completely independent projects and contracts.

**Scope of Work Similar to I-64 Project**
- Design-Build
- Precise Survey
- Phased Structural Construction
- Geotechnical Mitigation
- Complicated Transportation Management
- Major Existing Utilities
- Abundance of Noise Walls
- Environmental Compliance
- Public Outreach

**Risks Similar to I-64 Project**
- Existing Geotechnical Conditions
  - Completed over 1200 geotechnical borings
  - Designed drilled shafts to handle bridge load, scour and minimize permanent environmental impacts
- Environmental Compliance
  - Employed environmental team that reviewed designs and construction operations
  - Employed a certified environmental reviewer to ensure packages were in compliance before we submitted to governing agency
  - Conducted field surveys to verify potential impacts and revise design to minimize impacts to things such as wetlands and “Champion Trees”
  - Employed full time E&S crews to maintain compliance during construction, and installed redundant E&S controls in Special Protection Areas
  - Worked through permit modification process to allow construction of large beam erection
  - Noise study and construction of noise walls
- Maintenance of Traffic
  - Created a full Traffic Management Plan - preliminary access to construction to final design
  - Constructed temporary roadways to maintain cross road traffic
  - Coordinated with Contract A & C to open the highway

**Verifiable Evidence of Performance**
- 2012 National Design-Build Award
- 2012 Exemplary Ecosystem Initiatives Award
- 2012 America’s Transportation Awards Top 10 Finalist
- 2012 Northern Virginia Transportation Alliance Award
- 2012 ARTBA Globe Award for Environmental Excellence

**Team Members**
- Wagman
- KCI
- McCormick Taylor
- Schnabel

*For multiple phase projects, only a single phase of construction (or single contract) will be considered as a Project. If additional phases are shown under the same Work History Form, only the first phase (or contract) listed will be evaluated.*
### LEAD CONTRACTOR - WORK HISTORY FORM

#### (LIMIT 1 PAGE PER PROJECT)

<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
<th>b. Name of the prime design consulting firm responsible for the overall project design.</th>
<th>c. Contact information of the Client or Owner and their Project Manager who can verify Firm’s responsibilities.</th>
<th>d. Contract Completion Date (Original)</th>
<th>e. Contract Completion Date (Actual or Estimated)</th>
<th>f. Contract Value (in thousands)</th>
<th>g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement (in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-95/I-495/MD 210 Interchange Reconstruction</td>
<td>KCI Technologies</td>
<td>Maryland Department of Transportation State Highway Administration</td>
<td>09/2008</td>
<td>01/2009</td>
<td>$59,469</td>
<td>$61,564</td>
</tr>
<tr>
<td>Location: Prince George’s County, MD</td>
<td>Name: Sherlene Cleveland</td>
<td>Phone: 410-545-8838</td>
<td>Project Manager: Sherlene Cleveland</td>
<td>Phone: 410-545-8838</td>
<td>Email: <a href="mailto:SCleveland@sha.state.md.us">SCleveland@sha.state.md.us</a></td>
<td>$46,173</td>
</tr>
</tbody>
</table>

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

As part of the overall Woodrow Wilson Bridge improvements, this contract included the reconstruction of two miles of mainline I-95/I-495. Improvements to seven ramps on the I-95/I-495/MD 210 Interchange, 360,000 SY stone base, 165,000 TN Asphalt, 310,000 CY roadway excavation, 10,300 LF storm drainage, 35,000 SF noise barrier, and 81,500 LF steel pile were driven. Six retaining walls consisting of 16,000 SF of MSE walls, 19,000 SF CIP walls and a 37,000 SF contractor-designed top down soldier pile and lagging wall with a CIP concrete face. This retaining wall was a design-build element that Wagman designed and coordinated with KCI Technologies and the Owner to obtain approval of the design and construction methods. Due to our existing relationship with KCI, this coordination and design was very successful. We built two bridge structures: one bridge was 1,160 LF that crossed I-95/I-495 and included a post-tensioned pier cap to accommodate a lengthy span; the second bridge was a 1,952 LF mainline structure that required three phases of construction to widen the new structure and roadway while maintaining traffic on the Washington Beltway (Inner and Outer Loop). The project included extensive traffic control needed to widen and reconstruct mainline I-95/I-495. The project included landscaping, context sensitive designs, signing, utility relocation coordination, lighting and ITS work. We utilized three dimensional modeling to utilize equipment controlled by GPS. Our full time survey crew was able to tie into existing facilities and coordinate with other contractors. Our Project fell within the larger Woodrow Wilson Bridge Project that required a massive coordination effort between adjacent contracts and the local stakeholders. We supported MD SHA in the public outreach effort and participated in a project wide partnering process. The project was located in the environmentally sensitive Potomac River Basin, the project required compliance with environmental agency permits and general environmental regulations. Wagman exceeded all required DBE subcontracting goals.

#### Scope of Work Similar to I-64 Project
- Highly Traveled Roadway Construction
- Precise Survey
- Phased Structural Construction
- Geotechnical Mitigation
- Complicated Transportation Management
- Extensive Utility Coordination
- Abundance of Noise Walls
- Coordinated with DOT Public Outreach
- Environmental Compliance During Construction

#### Risks Similar to I-64 Project
- Existing Geotechnical Conditions
- Drilled in permanent pile for single face retaining wall
- Designed and installed tie-backs for single face retaining wall
- Subsurface investigation to avoid and protect existing oil filled high voltage line
- Environmental Compliance
- Employed E&S construction crews to maintain compliance during construction
- Employed certified E&S workers and managers
- Worked with independent environmental monitor to ensure compliance during construction
- Maintenance of Traffic
- Employed ATSSA-certified MOT manager
- Managed major traffic switches utilizing our own forces to allow reconstruction of the Inner and Outer Loop of the Washington Beltway
- Coordinated the MOT effort with adjacent contractors to minimize public impact
- Employed an emergency action plan for any traffic incidents within the work zone

#### Verifiable Evidence of Performance
- Won the Maryland Quality Initiative (MdQI) “Award of Excellence, Major Roadway Over $10 Million”
- One of the projects that was included in Wagman receiving the “Northern Virginia Transportation Alliance Award”
- Wagman created and maintained the P6 schedule and earned all available milestones and completed the project on time, safely and within budget.
- Wagman maintained the highest E&S rating (4.0)

#### Team Members
- Wagman
- KCI
- Schnabel
- Current McCormick Taylor & ECS Design Staff

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LEAD DESIGNER - WORK HISTORY FORM

(ATTACHMENT 3.4.1(b)

(LIMIT 1 PAGE PER PROJECT)

<table>
<thead>
<tr>
<th>a. Project Name &amp; Location</th>
<th>b. Name of the prime/ general contractor responsible for overall construction of the project.</th>
<th>c. Contact information of the Client and their Project Manager who can verify Firm’s responsibilities.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercounty Connector, Contract B, Design-Build</td>
<td>Name: Kiewit/Wagman/Corman JV</td>
<td>Name of Client: Maryland State Highway Administration Phone: 301-586-9267 Project Manager: Mark Coblentz Phone: 301-586-9267 Email: <a href="mailto:mcoblentz@sha.state.md.us">mcoblentz@sha.state.md.us</a></td>
</tr>
<tr>
<td>Montgomery County, MD</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Name: Kiewit/Wagman/Corman JV
Location: Montgomery County, MD

KCI was part of the MD 200 design-build team consisting of various design and construction firms, that teamed on Section B of Intercounty Connector (ICC). This section of the ICC is 7.5 miles of a new controlled access, six-lane tolled highway with two interchanges. KCI provided the lead roadway, traffic, and drainage engineers on this environmentally sensitive project to manage the design and coordination of all design disciplines: led roadway design for 7.5 miles of a six-lane highway with two interchanges; led drainage design of storm drainage, culverts, SWM and erosion and sediment control (multi-phased construction); and led traffic design for the signals, signing and pavement marking and lighting aspects of the project. Roadway design included horizontal and vertical design of the ICC in Geopak adjusted from the RFP alignments for cost savings, widening and realignment design for the crossing roadways, and the design for a diamond interchange at MD 182 and SPU at MD 650; five detour roads, interchange ramps, and temporary interchange and signal at MD 28; and three miles of bike path and grading for noise walls and access roads to SWM and relocated utility facilities. KCI Structure design included two structures for BR-25 Longmead Crossing over the ICC and BR-28 the ICC over Northwest Branch. KCI provide the full bridge plans for the abutments, piers, sub and superstructure. KCI provided utility relocation design for Pepco and Verizon facilities including subsurface utility test pit services. KCI designed the relocation of a multi-duct Verizon telecommunications line at MD 650, overhead power pole relocation and MD 28, MD 182, and MD 650. KCI provided environmental review and agency coordination for compliance with EIS commitments and 106 clearances (also included). KCI's management team worked in the project office holding weekly discipline team meetings, attending public meetings, coordinating submission and discipline reviews and quality control, and addressing non-conformance comments. KCI coordinated with the ICC GEC by preparing design contract variance submittals, over-the-shoulder reviews, and design coordination meetings for addressing comments. This project was a separate project and contract from ICC, Contract A.

b. 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.

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<th>Risks Similar to I-64 Project</th>
<th>Verifiable Evidence of Performance</th>
<th>Team Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Design Management for Design-Build</td>
<td>✓ Existing Geotechnical Conditions</td>
<td>✓ 2012 National Design-Build Award</td>
<td>✓ Wagman</td>
</tr>
<tr>
<td>✓ Multi-Phased Construction</td>
<td>✓ Completed over 1200 geotechnical borings</td>
<td>✓ 2012 Exemplary Ecosystem Initiatives Award</td>
<td>✓ KCI</td>
</tr>
<tr>
<td>✓ Roadway Widening of Interstate Facility</td>
<td>✓ Designed drilled shafts to handle bridge load, scour and minimize permanent environmental</td>
<td>✓ 2012 America’s Transportation Awards Top 10 Finalist</td>
<td>✓ McCormick Taylor</td>
</tr>
<tr>
<td>✓ Environmentally Sensitive Project</td>
<td>✓ Environmental Compliance</td>
<td>✓ 2012 Northern Virginia Transportation Alliance Award</td>
<td>✓ Schnabel</td>
</tr>
<tr>
<td>✓ Extensive Utility Coordination &amp; Relocation</td>
<td>✓ Environmental Compliance</td>
<td>✓ 2012 ARTBA Globe Award for Environmental Excellence</td>
<td>✓</td>
</tr>
<tr>
<td>✓ Complex Phased MOT</td>
<td>✓ Employment of environmental team that reviewed designs and construction operations</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>✓ Public &amp; 3rd Party Coordination</td>
<td>✓ Maintained of Traffic</td>
<td>✓</td>
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*For multiple phase projects, only a single phase of construction (or single contract) will be considered as a Project. If additional phases are shown under the same Work History Form, only the first phase (or contract) listed will be evaluated.*
KCI provided preliminary and final design services for the reconstruction of the I-95/I-495/MD 210 interchange as part of the Woodrow Wilson Bridge project to replace the existing six lane structure spanning the Potomac River between Maryland and Virginia. KCI and its subconsultants provided: highway design for widening I-95/I-495, reconstructing the MD 210 interchange and ramps, and relocating Bald Eagle Road and Oxon Hill Roads; structural design for seven bridges, two noise walls, and 22 retaining walls; traffic design for signals, signing, pavement marking, and ITS; geotechnical design for foundations and slope stability; utility designation, test pits and relocation; and plats, surveys, landscaping, and public involvement. Specific design issues and services are listed below:

Highway Design. KCI provided final design to reconstruct the MD 210 interchange which includes widening of I-495/I-95 from six to 12 lanes, reconstruction of the MD 210 interchange and ramps for increased capacity and future managed lanes access; a grade separated interchange for MD 210 and Oxon Hill Road, a new access roadway and bridge to Oxon Hill Children Farm, a new flyover ramp to I-495, and replacement of the Livingston Road Bridge. KCI designed the roadways using Microstation and Geopak to layout and set the geometry, cross-sections, quantities and right of way. KCI prepared multiple phased construction contracts, MB 1-4, to keep the size of the contracts within local contractor’s competitive range. Existing access from Livingston Road to the Oxon Hill Children’s Farm was from Oxen Hill Road via the Bald Eagle Road Bridge. Working with the National Park Service to address both improved visitor access and their concerns with impacts to existing trees and a stream, the design team was able to develop an alignment that balanced the proposed environmental impacts with the improved access and overall safety for the visitors. KCI designed a 40 foot high retaining wall along the road to minimize impacts to the stream and trees.

Structure Design. KCI provided structural design for noise walls, numerous complex retaining walls and seven bridges to be constructed in multiple maintenance of traffic phases. The bridges include a single span 75 foot long bridge for I-495/I-95 over Livingston Road; a two span 410 foot long bridge for MD 210 over I-495/I-95; a four span 380 foot long bridge for Bald Eagle Road over 1-495/I-95; a seven span 1060 foot long curved ramp bridge over I-495/I-95 for ramp B; a two span 140 foot long bridge for MD 210 over Oxon Hill Road; and two single span bridges for Ramp F over Oxon Hill road and Ramp G. KCI also provided full geotechnical design investigations, reports and recommendations for the foundations of all structures.

Value Engineering, Construction Management, Shop Drawing Reviews. KCI has reviewed VE proposals by the contractor on the mainline retaining walls and worked with the GEC and SHA teams to prepare comments to address the proposal and continue to review the shop drawings. KCI also performed Environmental Monitoring for the Mitigation design projects.
ATTACHMENT 3.4.1(b)

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<th>d. Construction Contract Completion Date (Original)</th>
<th>e. Construction Contract Completion Date (Actual or Estimated)</th>
<th>f. Contract Value (in thousands)</th>
<th>g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement (in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name: US 50 HOV from East of US 301 to West of MD 410, Design-Build</td>
<td>Name: Concrete General, Inc.</td>
<td>Name of Client: Maryland State Highway Administration, District 3</td>
<td>Phone: (443) 572-5265 Project Manager: Duane Bernard Phone: (443) 572-5265 Email: <a href="mailto:dbernard@sha.state.md.us">dbernard@sha.state.md.us</a></td>
<td>03/2001</td>
<td>12/2002</td>
<td>$18,958</td>
</tr>
</tbody>
</table>

KCI completed design for High Occupancy Vehicle (HOV) third-lane widening of US 50 from east of US 301 to west of MD 410. This $18.7 million design-build project included grading and resurfacing 1.58 miles of US 50 from west of I-95 to west of MD 410, replacing of 5,000 LF of concrete median barrier; reconstructing Ramp H from NB I-95 to EB US 50; constructing of over 55,000 LF of a new 4” HMA median shoulder; HMA and concrete patching; HOV signing and pavement markings; extensive multi-phase MOT; overlaying and striping approx. 10,000 LF of US 50 from east of I-95 to east of Lottsford-Vista Road; median widening including grading and constructing fill shoulder; new median drainage structures throughout the closed section; and paving opened-section median to construct a closed section with approx. 7,700 LF of Concrete Median Traffic Barrier. KCI provided a full geotechnical evaluation of the median acceleration lane widening and SWM infiltration. Multi-phase erosion and sediment control plans were prepared. Aerial survey was performed to provide roadway edge elevations for the median widening. Field surveys included horizontal and vertical control, baseline stakeout and cross sections. The project earned a $175,000 incentive for providing increased water quality management capacity. An additional 3.5 acres of SWM was constructed using grass swales, check dams, and infiltration facilities for water quality treatment to meet the SWM incentive. The US 50 project required all guardrail end treatments within the project limits to be upgraded to NCHRP 350 standards. This included upgrading the guardrail’s thrie beam and rub rail attachment to the bridge parapets. Working with the KCI, the contractor developed multiple innovative solutions for attaching guardrail end treatments along US 50 where drainage and/or the existing lighting conduit handbook created a conflict which saved time and money. Coordinating the storm drainage upgrades (large pipe sizes) for the median drainage crossing US 50 to the shoulder and into new SWM facilities. Investigated options for open cut and jacking and boring of new pipes under US 50. Based upon schedule and traffic impacts the higher cost for jack and boring under the pavement saved time and was selected. Winter or cold weather work was allowed for construction of the new median drainage during the offseason. When the warm weather temperatures and conditions allowed for concrete demolition and storm drain excavation, the contractor was able to construct the storm drain system during a mild winter such that when the warmer paving temperatures arrived in the spring, significant time was saved with the drainage pipes, inlets and subgrade in place allowing the median barriers and pavement to be constructed ahead of schedule. Traffic barrier upgrades needed to be reviewed early in the bid phase and during design to fully understand the scope of work for the required upgrades and the traffic barrier retrofit along US 50 to current standards. US 50 had various shoulder and median upgrades performed over a number of years with variable bridge and guardrail systems constructed that needed to be inspected and designed for completeness with the new NCHRP 350 standards. The design team met with the guardrail subcontractor in the field to inspect each bridge attachment and guardrail run for compliance and construction issues where the standards would not apply. Construction details were developed for the concrete parapets to address lighting hand boxes that would be covered with the new thrie-beam attachments along with curb placement and design recommendations for grading, and end treatments. Low lever helicopter surveys. The median reconstruction and shoulder improvements required the design team to obtain edge of existing US 50 pavement edge elevations data. Closing the median lane for the field survey was not a cost effective option. KCI worked with our photogrammetry subcontractor and obtained low level helicopter surveys that provided the pavement and shoulder elevation data we needed for design, one tenth of a foot, without the need for lane closures or the survey crews working next to a US 50 travel lane. Photogrammetric targets were painted on the shoulder, 10 feet from the shoulder lane, allowing the crew to work quickly and safely while provide the survey necessary for this high accuracy photogrammetric mapping.

Scope of Work Similar to I-64 Project
- Design Management for Design-Build
- Multi-Phase MOT & Construction
- Median Widening of Major US Route
- SWM & Median Drainage Analysis
- Multi-Phase Erosion & Sediment Control
- Extensive Surveys for Existing Paveriment & Widening

Risks Similar to I-64 Project
- Existing Geotechnical Conditions
- Full evaluation for median widening; investigated options for jack and bore for median drainage
- Completed existing pavement studies
- Environmental Compliance
- Conducted field surveys to verify potential impacts
- Received incentives for providing increased water quality
- Studies for SWM measures utilizing grass, swales, check dams & infiltration facilities
- Maintenance of Traffic
- Extensive studies for multi-phase MOT
- Innovative surveying techniques eliminated lane closures

Verifiable Evidence of Performance
- 2003 Achievement Award by ACEC MD
- 2004 Award of Excellence in the Major Roadway Project/Maintenance of Traffic Category by the Maryland Quality Initiative

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