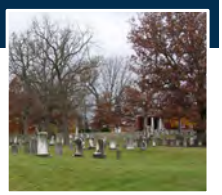
Copy 1 of 10 Copies

Statement of Qualifications for

I-64 Exit 91 Interchange Improvements Design-Build



State Project No.:
0064-007-111, P101,
R-201, C-501, B-627

Federal Project No.: NH-064-2(152)

Contract ID Number: C00075877DB47

January 6, 2012

Prepared for VDOT Virginia Department of Transportation

Prepared by CH2MHILL

LEFT TURN
YIELD
ON GREEN
GOOSE CREEK
SPEED
LIMIT
35

EAST
64

CH2M HILL
8720 Stony Point Parkway
Suite 110
Richmond, VA 23235
TEL 804.320.3848
FAX 804.594.2612

January 6, 2012

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

Subject: Statement of Qualifications, I-64 Exit 91 Interchange Improvements Design-Build; State Project No.: 0064-007-111, P101, R-201, C-501, B-627; Federal Project No.: NH-064-2(152); Contract ID Number: C00075877DB47

Dear Mr. Daoulas:

The I-64 Exit 91 Interchange Improvements Design-Build project is critical to improve capacity, safety, and access management at the I-64 Exit 91 Interchange; to reduce queuing on the ramps; and to improve access to and from the Augusta Health campus, while achieving effective and safe maintenance of traffic (MOT). Using design-build delivery creates significant opportunities to compress the schedule and provide the best value to VDOT for a safe and durable facility that can be built within budget and completed on or ahead of schedule.

CH2M HILL understands VDOT's standards and criteria as a result of our work on the I-81 Corridor Safety and Operational Improvements design-build, VA Route 288 design-build, and Northern Virginia MegaProjects program. This experience enables us to understand your goals and the challenges of this project such as maintaining access to all businesses in the project limits during construction. We offer an integrated design-build approach, in which contractor and designer are within a single company as CH2M HILL employees, thereby ensuring that both design and construction have equal ownership, input, and stake in the project success. This model of equal partnership between the builder and designer eliminates many communication and decision seams that may arise from two independent companies working together - a contractor with the designer as a subconsultant. Our proven organization—with clear reporting and functional relationships—is a lower cost structure that eliminates markups while promoting communication among the design-build team, VDOT, and stakeholders. Through our model, we maximize project success with innovation, efficiency, and collaboration to find value, shorten schedules, and avoid claims and disputes in an environment of stakeholder problem solving.

This Statement of Qualifications (SOQ) complies with the Request for Qualifications requirements and demonstrates our design-build experience on similar, urban interstate interchange projects involving roadway realignment, bridge replacement, right-of-way acquisition, utilities relocation, critical schedules, and MOT and access issues. We will demonstrate that our methods, capacity, and key personnel position CH2M HILL as your best qualified team for this project.

3.2.1 Offeror's Point of Contact

Steve Tyler is CH2M HILL's local point of contact for the SOQ and all project-related inquiries. He can be reached at CH2M HILL Constructors, Inc., 15010 Conference Center Dr., Suite 200,

Chantilly, VA 20151, Telephone: 703-376-5214; Fax: 703-376-5010; Cell: 804-400-7210 or via e-mail at steven.tyler@ch2m.com.

3.2.2 Principal Officer of the Legal Entity

Vice President David F. Bird, Jr. (CH2M HILL Constructors, Inc., 9189 S. Jamaica St., Englewood, CO 80112-5946, Phone: 720-286-2648, Fax: 720-286-9221, Cell: 720-883-4316, e-mail: david.bird@ch2m.com) is CH2M HILL's official representative authorized to negotiate and sign a design-build contract with VDOT for the project.

3.2.3 Corporate Structure

CH2M HILL Constructors, Inc., a wholly owned subsidiary of CH2M HILL Companies, Ltd. and a Delaware corporation, is the legal entity that will contract with VDOT to complete the I-64 Exit 91 Interchange Improvements Design-Build project and holds financial responsibility to deliver the project. Englewood, Colorado-based CH2M HILL Companies, Ltd. is comprised of multiple business groups that provide full service planning, engineering, design, and construction services. It is a 100 percent employee-owned company with gross revenues of $6.6 billion in 2010. The firm's bonding capacity currently exceeds $1.5 billion. There are no limitations on liability that will affect the firm's ability to complete the project when contracted.

3.2.4 Affiliated/Subsidiary Companies

CH2M HILL Companies, Ltd., an Oregon corporation, address at 9191 South Jamaica Street, Englewood, CO 80112, U.S.A., Federal Tax Identification Number 93-0549963, is an employee-owned company, and no individual shareholder directly owns more than 1% of the outstanding shares of the company.

CH2M HILL, Inc., a Florida corporation, address at 9191 South Jamaica Street, Englewood, CO 80112, U.S.A., Federal Tax Identification Number 59-0918189, is a wholly-owned and controlled subsidiary of CH2M HILL Companies, Ltd.

CH2M HILL Constructors, Inc., a corporation organized and existing under the laws of the State of Delaware, address at 9189 South Jamaica Street, Englewood, CO 80112, U.S.A, is a wholly-owned and controlled subsidiary of CH2M HILL Companies, Ltd.

3.2.5 Certification Regarding Debarment Forms

We have included in Appendix C an executed Certification Regarding Debarment Form Primary Covered Transactions for CH2M HILL Companies, Ltd. and all affiliated/subsidiary companies, as the Offeror, and Certification Regarding Debarment Form Lower Tier Covered Transactions for Volkert, Inc., our independent Quality Assurance Management subconsultant.

3.2.6 Offeror's Pre-qualification Evidence

Appendix D of this Statement of Qualifications contains CH2M HILL Constructors, Inc.'s Contractor Pre-qualification Certificate.

3.2.7 Bonding Capability

A letter from CH2M HILL's surety attesting to our ability to obtain project bonds appears on pages 3 and 4 of this Statement of Qualifications.

3.2.8 Professional Services Registration Documentation

We provide the following registration information for team member firms and personnel, as required. Full-size copies of this registration documentation are provided in Appendix E.

AON

Aon Risk Services

January 6th, 2012

Mr. John Daoulas, P.E.
Alternate Project Delivery Office
Virginia Department of Transportation
1221 East Broad Street
Main Building, 4th Floor
Richmond, VA 23219

RE: CH2M Hill Constructors, Inc.
I-64 Exit 91 Interchange Improvements
RFQ # C00075877DB47

Dear Mr. Daoulas:

We are pleased to recommend CH2M Hill Constructors, Inc. (CCI) for the above captioned project. CCI is a highly valued client of the below named surety. CCI enjoys a reputation for excellence and the commitment to deliver a product precisely within contract terms. The firm is financially sound and technically qualified to complete the work it undertakes.

As surety for CCI, Zurich American Insurance Company (ZAC) has an A.M. Best Financial Strength Rating of A+ (Excellent) and Financial Size Category XV ($2 billion or more). CCI is capable of obtaining 100% Performance Bond and 100% Labor and Materials Payment Bond in the amount of the anticipated cost of construction, and said bonds will cover the Project and any warranty periods on behalf of the contractor, in the event that such firm be the successful bidder and enter into a contract for this project.

This letter is to advise you that CCI is capable of obtaining the customary Bid, Performance and Payment bonds, which will cover the project and any warranty periods, based on the current estimated contract value of $37,000,000 referenced in Section 2.1 of the Request for Qualifications.

This letter should not be construed as an agreement to provide surety credit for any particular project, but is offered as an indication of our experience and confidence in this firm. The decision to provide bonding is subject to review of the final contract terms and conditions, acceptable bond forms, confirmation of adequate financing, as well as other underwriting conditions that may exist at the time such bonds are requested.

This letter does not constitute an assumption of liability. Any request for bonds in this case and in other cases is a matter solely between CCI and its surety, and they assume no liability to you or any third party if for any reason they do not execute said bonds.

Please consider this letter as a recommendation of this highly regarded client. In the event you have any questions or need additional information, please feel free to contact me at (720) 286-2655.

Sincerely,

Zurich American Insurance Company

Ryan Biegen, Attorney-in-Fact

Aon Risk Insurance Services West, Inc.
4100 East Mississippi Avenue, Suite 1500, Denver, CO 80246 • tel: 303-758-7688 • fax: 303-758-9458

ZURICH AMERICAN INSURANCE COMPANY

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that the ZURICH AMERICAN INSURANCE COMPANY, a corporation created by and existing under the laws of the State of New York does hereby nominate, constitute and appoint **Leon F. HILL, Jennifer L. SPERLAK, Scott RONS and Ryan BIEGEN, all of Denver, Colorado,** EACH its true and lawful Attorneys-In-Fact with power and authority hereby conferred to sign, seal, and execute in its behalf, during the period beginning with the date of issuance of this power, **any and all bonds and undertakings, recognizances or other written obligations in the nature thereof**, and to bind ZURICH AMERICAN INSURANCE COMPANY thereby, and all of the acts of said Attorney[s]-in-Fact pursuant to these presents are hereby ratified and confirmed . This Power of Attorney is made and executed pursuant to and by the authority of the following By-Law duly adopted by the Board of Directors of the Company which By-Law has not been amended or rescinded.

Article VI, Section 5. "...The President or a Vice President in a written instrument attested by a Secretary or an Assistant Secretary may appoint any person Attorney-In-Fact with authority to execute surety bonds on behalf of the Company and other formal underwriting contracts in reference thereto and reinsurance agreements relating to individual polices and bonds of all kinds and attach the corporate seal. Any such officers may revoke the powers granted to any Attorney-In-Fact."

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 ZURICH AMERICAN INSURANCE COMPANY by unanimous consent in lieu of a special meeting dated December 15, 1998

" RESOLVED, that the signature of the President or a Vice President and the attesting signature of a Secretary or an Assistant Secretary and the seal of the Company may be affixed by facsimile on any Power of Attorney pursuant to Article VI, Section 5 of the By-Laws, and the signature of a Secretary or an Assistant Secretary and the seal of the Company may be affixed by facsimile to any certificate of any such power. Any such power or any certificate thereof with such facsimile signature and seal shall be valid and binding on the Company. Furthermore, such power so executed, sealed and certified by certificate so executed and sealed shall, with respect to any bond or undertaking to which it is attached, shall continue to be valid and binding on the Company."

IN WITNESS WHEREOF, the ZURICH AMERICAN INSURANCE COMPANY has caused these presents to be executed in its name and on its behalf and its Corporate Seal to be hereunto affixed and attested by its officers thereunto duly authorized, this **16th day of September, A.D. 2008**. This power of attorney revokes that issued on behalf of Leon F. HILL, Jennifer L. SPERLAK, Kimberly D. GORDON, Scott C. RONS, dated February 18, 2008.

ZURICH AMERICAN INSURANCE COMPANY INCORPORATED 1998

ZURICH AMERICAN INSURANCE COMPANY

By:

STATE OF MARYLAND }
CITY OF BALTIMORE } ss:

Gregory E. Murray *Secretary* *Frank E. Martin Jr.* *Vice President*

On the 16th day of September, A.D. 2008, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, came the above named Vice President and Secretary of ZURICH AMERICAN INSURANCE COMPANY, to me personally known to be the individuals and officers described in and who executed the preceding instrument and they each acknowledged the execution of the same and being by me duly sworn, they severally and each for himself deposed and said that they respectively hold the offices in said Corporation as indicated, that the Seal affixed to the preceding instrument is the Corporate Seal of said Corporation, and that the said Corporate Seal, and their respective signature as such officers, were duly affixed and subscribed to the said instrument pursuant to all due corporate authorization.

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

NOTARY PUBLIC

Notary Public *My Commission Expires: July 8, 2011*

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

CERTIFICATE

I, the undersigned, a Secretary of the ZURICH AMERICAN INSURANCE COMPANY, do hereby certify that the foregoing Power of Attorney is still in full force and effect, and further certify that Article VI, Section 5 of the By-Laws of the Company and the Resolution of the Board of Directors set forth in said Power of Attorney are still in force.

IN TESTIMONY WHEREOF I have hereto subscribed my name and affixed the seal of said Company

the 6th day of JANUARY, 2012

Eric D. Barnes *Secretary*

ZURICH AMERICAN INSURANCE COMPANY INCORPORATED 1998

3.2.8.1 Virginia State Corporation Commission Registration

CH2M HILL Constructors, Inc. No.: F1162322 Type: Foreign Corporation Status: Active	**CH2M HILL, Inc.** No.: F0227217 Type: Foreign Corporation Status: Active	**Volkert, Inc.** No.: F1366592 Type: Foreign Corporation Status: Active

3.2.8.2 Department of Professional and Occupational Registration (DPOR) Registration for Offices

CH2M HILL Constructors, Inc., 9191 S. Jamaica St. Englewood, CO 80112, Type: Class A Contractors License – Classification BLD H/H, No. 2705-060064A, Exp.: 5/31/2013
CH2M HILL, Inc., 8720 Stony Point Pkwy Suite 110, Richmond, VA 23235, Type: Engineering, No.: 0411000603, Exp.: 2/29/2012
CH2M HILL, Inc., 15010 Conference Center Dr Ste 200, Chantilly, VA 20151, Type: Engineering, No.: 0411000555, Exp: 2/29/2012
Volkert, Inc., 5400 Shawnee Road Suite 301, Alexandria, VA 22312, Type: Engineering, No.: 0407002610, Exp.: 12/31/2011

3.2.8.3 DPOR Licensing for Key Personnel & Project Work Office

Design Manager Stephanie Hart, 8720 Stony Point Pkwy Suite 110, Richmond, VA 23235, Professional Engineer, No.: 0402029309, Exp.: 7/31/2013
Lead Structural Engineer Ray Cox, 8720 Stony Point Pkwy Suite 110, Richmond, VA 23235, Professional Engineer, No.: 0402046751, Exp.: 08/31/2013
QA Manager Bob McDowall, 1111 East Main Street, Richmond, VA 23219, Professional Engineer, No.: 0402018236, Exp.: 10/31/2012

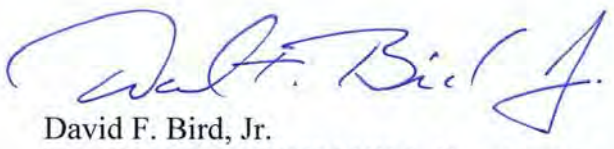
3.2.9 DBE Statement

CH2M HILL commits to achieving a 12 percent DBE participation goal for the design and construction of the I-64 Exit 91 Interchange Improvements Design-Build project. When shortlisted, we will identify high-performing DBE consultants and contractors who have a successful work history with CH2M HILL and are interested in bidding on project task elements.

CH2M HILL is committed to working with VDOT, the Federal Highway Administration, and all stakeholders to make the I-64 Exit 91 Interchange Improvements Design-Build project a success.

Sincerely,

CH2M HILL Constructors, Inc



David F. Bird, Jr.
Vice President, CH2M HILL Constructors, Inc.

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3.3 Offeror's Team Structure

CH2M HILL has matched the experience and capabilities of our key personnel to manage high-profile urban, interstate highway interchange projects with the key issues of roadway realignment, bridge replacement, right-of-way acquisition, utility relocation, maintenance of traffic, and access, while minimizing local inconvenience, and maintaining federal compliance. Our capable staff—all of whom are experienced on relevant design-build projects of similar complexity and stakeholder outreach requirements—will lead and support design, construction, quality, and public information for the project. Our qualified team includes staff with detailed knowledge and experience on VDOT criteria and specifications. Our proven organization, with clear reporting and functional relationships, has a lower cost structure that eliminates markups while promoting communication among the team, VDOT, and stakeholders.

3.3.1 Key Personnel

Our key personnel form the core of the I-64 Exit 91 Interchange Improvements design-build project team. As illustrated in Exhibit 3.3.1, each of these staff has delivered highly successful projects with the same types of challenges faced by this project. From that experience, they will bring the same skills to the interchange improvements project.

Design-Build Project Manager, Kory Voldman. Kory leads our team and serves as the primary point of interface among VDOT, stakeholders, and regulatory agencies. He draws upon his 15 years of design-build and construction experience in highway and bridge industry to collaborate with these groups to ensure that their views are addressed and that the project is delivered on time and within budget.

Kory has managed complex projects with attention to quality, cost management, and stakeholder input. As project manager on an $80 million I-405 Stage 2 Design-Build project for WSDOT in Renton, Washington, Kory provided liaison between design and construction, overseeing staff, and also cost control and issue resolution. Kory was integral in developing a construction plan that minimized traffic shifts. Throughout the project, he worked with diverse stakeholders, including multiple government, civic, business, and citizen groups, to create a lane-closure schedule meeting their needs.

EXHIBIT 3.3.1
The CH2M HILL team's key personnel have successfully delivered projects with similar scope and challenges as the I-64 Exit 91 Interchange Improvements Design-Build project.

Key Personnel Member	Assignment	Degree	Registration	Years Experience/Years with Firm	Experience in Key Scope Areas: Interstate Highway with Interchange	Urban Environment	MOT/Access Management/Schedule	Roadway Realignment	Bridge Replacement	Utilities Relocation	Right-of-Way
Kory Voldman	Design-Build Project Manager	B.S.	-	15/5	✓	✓	✓	✓	✓	✓	✓
Steve Bebee	Construction Manager	-	-	35/1	✓	✓	✓	✓	✓	✓	✓
Stephanie Hart	Design Manager	B.S.	P.E.	24/9	✓	✓	✓	✓	✓	✓	✓
Bill McDowall	Quality Assurance Manager	B.S.	P.E.	30/9	✓	✓	✓	✓	✓	✓	✓
Raymond Cox	Lead Structural Engineer	B.S.	P.E.	30/12	✓	✓	✓	✓	✓	✓	✓
Karl Kratzer	Environmental Compliance Manager	B.S.	-	27/1	✓	✓	✓	✓	✓	✓	✓

Quality Assurance Manager, Bill McDowall, P.E. Bill brings 30 years of diversified experience performing QA management services on numerous highway and VDOT bridge projects. He will be VDOT's eyes and ears and protect VDOT's interests over the course of the project. Bill will be supported by QA inspectors with significant VDOT inspection experience, for roadways and structures, who will apply discipline- and VDOT-specific knowledge of design and construction specifications that are relevant to the project.

Bill is currently the quality assurance manager on the VDOT Route 221 Realignment Project in Roanoke County, VA. He plans upcoming work activities, with the construction manager and the inspection staff and assists in identifying potential quality issues early in the scheduling process. Bill's approach to quality management includes working closely with the client to adjust quality as necessary and to constantly develop new techniques to better serve the client. During the Route 221 project, Bill met several times with VDOT's project manager to evaluate satisfaction with inspector performance and to discuss quality improvement processes.

Design Manager Stephanie Hart, P.E. Stephanie has 24 years of experience in successfully delivering design services for roadway and interchange projects, including for interstate highway design-build projects for VDOT. As design manager, she is adept at managing a multidisciplinary team of project engineers, routinely oversees design QA/QC, and provides coordination with construction teams during the design and construction phases of design-build projects. Stephanie has a thorough understanding of the interdisciplinary coordination needed to produce constructible plans that meet VDOT requirements. That knowledge will hasten the approval process to keep design and construction on schedule.

Stephanie was design manager on the Sudley Manor Drive/Linton Hall Road design-build projects for Prince William County (and accepted by VDOT), which included design and construction of 3.5 miles of 4-lane divided roadway, 3 signalized intersections, and bridge design in an urban environment. She managed the preparation of the Maintenance of Traffic Plan and also the preparation and implementation of the design QA/QC. As roadway design manager on the I-81 Corridor Safety and Operational Improvements design-build project, which involves construction of a truck climbing lane over a 5-mile segment, she manages design and services during construction of necessary drainage improvements, replacement of three bridges, improvement of shoulders, upgrading guardrails, retaining walls, and widening and improvements at connections to bridges.

Construction Manager, Steve Bebee. Steve has over 35 years of experience in construction management, specializing in design-build bridge demolition and new bridge construction, as well as pile driving, concrete, paving, scheduling, cost, and subconsultant coordination. As general superintendent for the I-15 Design-Build Interstate Improvement Project for NDOT in Las Vegas, Steve was responsible for supervising the production of prestressed girder bridges, box culverts, and retaining walls. Steve supervised a large and diverse work crew, guiding them during the difficult task of constructing bridges and interchanges in a heavily congested urban environment.

Lead Structural Engineer, Ray Cox, P.E. Ray has 30 years of experience in project management and design of structural and civil projects consisting of bridges, retaining walls, box culverts, and other transportation related structures as well as roadway projects. He was lead structures and bridge engineer on the VDOT MegaProjects program for the past 3 years, including the $1.9 billion I-495 HOT Lanes PPTA project with 58 bridges and miles of retaining and sound walls over a 14-mile segment of the Capital Beltway.

Ray has extensive experience coordinating design-build structures for VDOT. On the MegaProjects program, Ray was integral in coordinating and reviewing various design packages to ensure that they complied with VDOT standards and were cost-effective. Ray has also managed right-of-way, public relations, and environmental impacts for VDOT, demonstrating his ability to manage complex projects in urban environments.

Environmental Compliance Manager, Karl Kratzer. Karl brings 27 years of experience as a senior environmental compliance manager. He is an expert in permit acquisitions, NEPA, and environmental studies. As environmental compliance manager on numerous major infrastructure projects in Virginia, Karl managed all environmental permits and stormwater management compliance during the construction.

3.3.2 Resume Forms

Appendix F includes resumes (Attachment No. 3.3.1) for our proposed team. Each member brings strong experience in similar assignments to their proposed role.

3.3.3 Organization Chart

Our project team operates in an integrated design-build approach, in which contractor and designer function in a single company as CH2M HILL employees, thereby ensuring that both design and construction have equal ownership, input, and stake in the project success. Equal partnership between builder and designer eliminates communication and decision seams that may arise from two independent companies with their different cultures, priorities, and business interests.

From the very beginning and throughout the life of the project, our designers and builders will work side by side to provide the best value to VDOT in delivering a project that is technically compliant. Through our model, we maximize project success with innovation, efficiency, and collaboration to shorten schedules, avoid claims and disputes, and increase value in an environment of stakeholder problem solving.

The organization chart (Exhibit 3.3.2) shows the chain-of-command for managing, designing, and constructing the project. The proposed organization gives VDOT a single point of contact and responsibility for all design- and construction-related issues in Kory Voldman, our project manager.

3.3.3.1 Functional Team Relationships

The reporting relationships in the organization are clearly defined and straightforward. The design, construction, and QA managers all report directly to the project manager. They collectively form the project management team. The health and safety officer, environmental compliance manager, and manager of right-of-way acquisition services also report directly to the project manager.

We provide a project sponsor at the company executive level to serve as a liaison to VDOT to ensure that our local project team is performing to expectations. Other reporting relationships are segregated along the same discipline-specific boundaries. Each discipline manager leads and oversees the work within his or her respective group: design, construction, health and safety, environmental, and QA/QC.

3.3.3.2 Project Management

Kory Voldman leads the team with total responsibility for all aspects of the project, including design, construction, and quality assurance. As primary point of interface with VDOT, stakeholders, and regulatory agencies, Kory draws upon 15 years of construction experience in the highway and bridge industry to collaborate with these groups to ensure that their views are addressed and that the project is delivered on time and within budget. The project controls staff assists him in contract management to monitor cost, schedule, and resource allocation on the project.

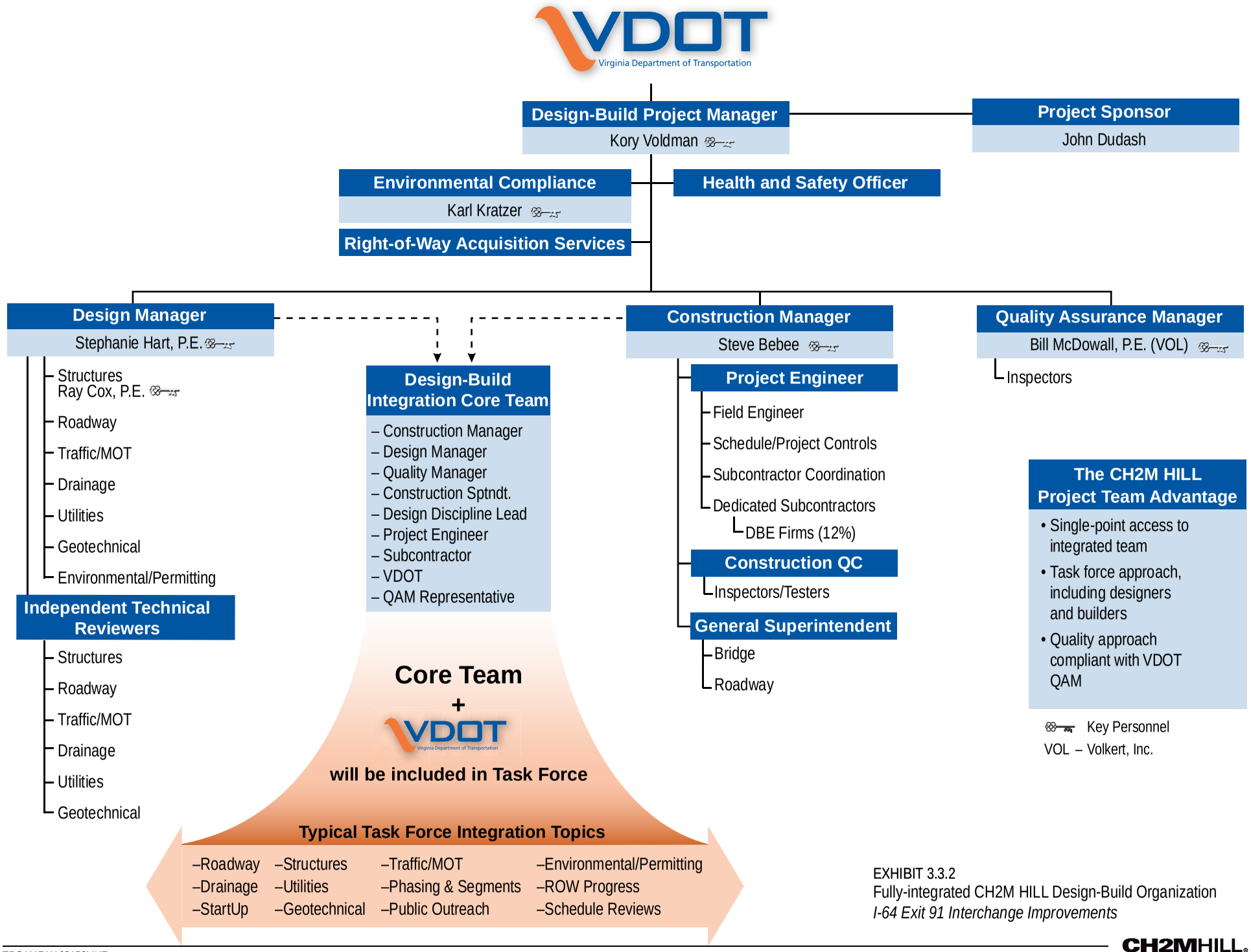

EXHIBIT 3.3.2
Fully-integrated CH2M HILL Design-Build Organization
I-64 Exit 91 Interchange Improvements

3.3.3.3 Design

Design manager Stephanie Hart, P.E., reporting to the project manager, will lead the design effort to deliver a technically compliant project design within VDOT's design QC program and to ensure that constructibility reviews are conducted directly with construction manager Steve Bebee and design-build project manager Kory Voldman. Stephanie directs and manages design elements, ensuring that design disciplines and construction forces collaborate openly and that the quest for best value project design begins at the onset of the project. Other critical integration, communication, and interdisciplinary coordination occurs at the task force level for roadway, structures and new bridge, drainage, hydraulics, utilities, and geotechnical considerations. All task leads manage discipline-specific design elements while continuously coordinating with VDOT, the construction team, and each other.

Stephanie also develops and oversees the design QA/QC program for all project design disciplines. Key staff members in the design QC function are the independent technical reviewers, who perform a continuous independent check of the design as it progresses. She will also provide design services support during construction, including shop drawing review and plan updates necessary to address changed field conditions.

3.3.3.4 Construction

Construction manager, Steve Bebee reports to the design-build project manager, Kory Voldman, and collaborates directly with the design manager, Stephanie Hart, to ensure that all construction activities proceed on schedule and conform to the project plans, specifications, and environmental requirements. Steve engages in the design process at an early stage as construction/ scope manager, providing constructability reviews and comments to optimize design and construction efficiencies. He formulates a construction staging plan and involve field superintendents early in work activity planning to apply knowledge gained from supervising day-to-day field activities.

When construction begins, Steve manages and coordinates day-to-day work activities performed by subcontractors and craft laborers. He will be onsite full time and communicate directly with the CH2M HILL design manager to resolve construction/design issues that may arise from changes in conditions. He oversees and monitors each phase of the project to ensure that critical path schedules are met, the project is constructed as designed, and quality is built in at every step.

Steve manages all QC construction activities to ensure that materials and workmanship meet VDOT's quality standards. Our construction quality team works closely with the independent QAM to ensure that quality is built into the project.

3.3.3.5 QA Management

Quality assurance manager Bill McDowall, P.E., of Volkert, Inc., will apply 30 years of diversified experience performing QA management services on numerous highway and VDOT bridge projects. Bill is supported by QA inspectors with significant VDOT inspection experience, for roadways and structures, who apply discipline- and VDOT-specific knowledge of design and construction specifications that are relevant to the project. Working as a team, independent of construction operations, these professionals actively monitor construction QC and engage in QA inspections, testing, and perform audits, and review materials testing reports to ensure that the project meets VDOT specifications.

3.3.3.6 Design-Build Core Integration Team

Our Core Integration Team is the heart of our integrated design-build approach, which

facilitates seamless project delivery through free and continuous flow of information between in-house design and construction team members. We will establish a team that identifies task forces staffed with in-house design and construction specialists to focus on critical project elements and issues and to make prompt decisions on critical path elements as the project moves through design into construction. These task forces will address startup, utilities, geotechnical, structures, roadway, MOT, drainage, and environmental compliance. They will include VDOT personnel as needed.

3.3.3.7 Design and Construction Team Coordination

CH2M HILL's integrated design-build delivery model encourages the participation of all project team members during all phases of the project, including design staff who remain actively engaged during the construction phase. They will perform services during construction in their respective disciplines. In addition to our lead engineers, we will draw upon our significant resource pool to cost-effectively place engineering staff in the field with our constructors during critical phases of work. This will facilitate routine collaboration to review and clarify requests for information and design changes, and the swift resolution of critical technical issues when they arise.

During construction our designer-builders will accomplish the following:

- Provide clarifications and addendums supporting subcontractor bidding.
- Prepare and maintain a complete list of required submittals.
- Check, approve, stamp, sign, and date each submittal consistent with the field-maintained submittal register before submittal to VDOT.
- Review and approve deviations from documents "approved for construction" by maintaining our configuration management on the design.
- Review and approve recommended field changes.
- Respond to requests for information.
- Review and approve shop drawings and specifications.
- Prepare record drawings and as-built documentation.
- Identify and provide immediate technical response to changed conditions or other significant design issues.

Our practice of involving designers during construction facilitates our project team's ability to efficiently resolve or clarify issues and design details. This ensures that VDOT compliant designs are constructed.

CH2M HILL ensures involvement of construction expertise from both subcontractors and craft laborers early in the design process. Our construction personnel will perform constructability reviews and provide input regarding the local market for suppliers and labor forces. That input will enable designers not to specify unique materials or details that are costly to construct or unavailable in the market place. It will allow designers to understand means and methods which will result in a VDOT-compliant design. Early involvement by our construction staff and subcontractors will allow early identification of long lead items and staging of labor and equipment to optimize the schedule so that it maybe be completed on time. This process allows for early mitigation in high risk areas because of the collaborative nature of problem-solving among designers, builders, and VDOT.

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3.4 Experience of Offeror's Team

The entire I-64 Exit 91 Interchange Improvements Design-Build project team, key staff, and subconsultants were selected for their experience on similar projects and history of successful delivery. VDOT benefits from this team of professionals who understand VDOT's procedures and preferences and how to collaborate within CH2M HILL's integrated design-build delivery model.

CH2M HILL is able to minimize project risks and maximize project benefits to VDOT on the I-64 Exit 91 Interchange Improvements design-build project by:

- Applying the lessons learned and the efficiencies gained on our recent and current VDOT assignments
- Implementing our fully integrated design-build approach, with CH2M HILL as both prime contractor and designer of record

Our recent and current design-build interchange projects include the I-10 Americas Interchange, I-15 North Corridor, and the I-25 COSMIX project. Exhibit 3.4.1 lists recently completed transportation design-build assignments. CH2M HILL also is conducting more than 70 design-build projects around the world. Our vast experience will enable us to maximize the benefit of VDOT involvement to resolve project issues while minimizing actual involvement. CH2M HILL's design-build delivery model gives VDOT the benefit of a truly integrated team, as opposed to merely a design-build Offeror made up of separate entities. Having all resources in-house ensures that both designers and constructors focus on the success of each project, and less on protecting the interest of separate firms when difficulties arise. **With our in-house, fully integrated team, we are able to conduct projects with continuous and informal interaction among our design and construction staff.** This results in early identification and elimination of constructibility issues, accurate scheduling and pricing, and swift clarification of technical issues once construction has started.

3.4.1 Lead Contractor and Lead Designer Work History

As a unique provider of design-build services, CH2M HILL serves as both lead contractor and lead designer. Relevant work experience in each of these roles is provided on Attachment 3.4.1(a), Lead Contractor Work History, and Attachment 3.4.1(b), Lead Designer Work History, both found in Appendix G.

EXHIBIT 3.4.1
The CH2M HILL team's in-house, integrated design-build model resulted in the delivery of approximately $2 billion worth of similar relevant transportation design-build projects over the past 10 years.

Project	Similarity in Key Project Areas						
	Interstate Highway with Interchange	Urban Environment	MOT/Access Management/Schedule	Roadway Realignment	Bridge Replacement	Utilities Relocation	Right-of-Way
I-10 Americas Interchange, TX	✓	✓	✓	✓	✓	✓	✓
I-15 North Corridor, NV	✓	✓	✓	✓	✓	✓	✓
Sudley Manor Drive/Linton Hall Road, VA		✓	✓	✓	✓	✓	✓
I-81 Corridor Improvements, VA	✓		✓	✓	✓	✓	✓
Virginia Route 288 Design-Build, Richmond, VA	✓		✓	✓	✓	✓	✓
Golden Ears Bridge, BC	✓	✓	✓	✓	✓	✓	✓
I-5 Everett HOV Lane, WA	✓	✓	✓	✓	✓	✓	✓
I-405 Renton Stage 2 Design-Build, WA	✓	✓	✓	✓	✓	✓	
I-25 COSMIX, CO	✓	✓	✓	✓	✓	✓	✓
I-5 (Clark's Branch to Tunnel Mill), OR	✓		✓	✓	✓	✓	✓
I-5 (Sutherlin to Roseburg), OR	✓		✓	✓	✓	✓	✓

I64DB_104

LEFT TURN
YIELD
ON GREEN
GOOSE CREEK
SPEED
LIMIT
35

EAST
64

3.5 Project Risk

CH2M HILL has reviewed information pertaining to the I-64 Exit 91 Interchange Improvements project. Drawing upon our extensive experience on similar design-build projects and the individual experiences of our project team members, we have identified key risk factors with mitigation strategies for each.

The purpose of the project is to improve capacity, safety, and access management at the I-64 Exit 91 Interchange; to reduce queuing on the ramps; and to improve and reduce delays for access to and from the Augusta Health campus, which experiences nearly 60,000 emergency room visits annually. As Augusta County's number one priority interstate project, it will significantly improve economic benefits to the community and the local businesses. For the project to be successful, it must be completed on or ahead of the required schedule and constructed within VDOT's funding limit, while managing and mitigating critical risks. These three critical factors are identified by CH2M HILL as posing the most risk.

Risk Factor 1: Access Management and Maintenance of Traffic during Construction

What is the risk factor?

Four key elements drive access management and maintenance of traffic during construction of this project:

- Traffic along the I-64 corridor
- Access to and from the Augusta Health campus for emergency medical service vehicles, Augusta Health campus staff, and the general population
- Daily travel of 11 school buses that use Route 285 as a school bus route
- Access to local commercial businesses, Augusta Expoland, and three nearby churches, including the Tinkling Spring Presbyterian Church along Route 285

Why it is critical for the success of the project, and what potential impact does it present to the project?

The I-64 corridor is a major commercial throughway, linking the I-81 corridor to the Virginia Tidewater Area. A large amount of truck traffic—11 percent of the ADT—uses the I-64 corridor to deliver goods to and from the Charlottesville area, the greater Richmond area, and the Tidewater area. During the summer, travel along the I-64 corridor increases because of tourists travelling to and from the Virginia Beach area.

The I-64 corridor in Augusta County also is heavily travelled by commuters going to and from Fishersville, Charlottesville, the Augusta Health campus, and Augusta Expoland. Any shutdown or major delay of traffic along I-64 will have a negative economic impact on the region.

The Augusta Health campus on Route 636 is less than 1 mile north of the I-64/Route 285 interchange. The campus is the location of the regional hospital for the Shenandoah Valley. Many emergency providers, patients, staff, and visitors use the I-64 corridor to gain access to it. Therefore, it is vital to maintain access from I-64, along Route 285, and along Route 636 leading to the campus for emergency medical service, campus staff, and the general population needing medical services. Shutdown of I-64, Route 285, Route 636, or the intersection of Route 285 and Route 636 during construction could be life-threatening.

The Augusta County Public Schools are served by 11 school buses that use Route 285 every school day. Significant traffic delays caused by construction on Route 285 will adversely affect class schedules of all grades.

Three nearby churches provide regular weekly community services, including weekend worship services, daycare/preschool facilities, and Weight Watchers meetings. Augusta Expoland is less than 1 mile from the I-64/Route 285 interchange. Numerous commercial businesses line Route 285 within the project limits. Significant disruption of access to those facilities will adversely affect the population using Route 285 as the primary road to gain access to the facilities and adversely affect economic development.

What strategies will CH2M HILL implement to mitigate all potential negative impacts to the project?

Project manager Kory Voldman will be the single point of contact for businesses and facilities in the project limits to maintain open lines of communication and to facilitate public outreach. He will conduct meetings with VDOT, Augusta County, the City of Fishersville, Augusta Health, Augusta Expoland, and the businesses within the project limits. The meetings will be held to discuss major events planned by stakeholders that may affect traffic during construction, and to review traffic access control plans and construction plans and schedules. Measures needed to address emergencies will be discussed at the meetings.

Kory will develop a construction sequence that minimizes impact to traffic during events at the Augusta Expoland. He also will develop a maintenance of traffic plan to accommodate school bus traffic and a dedicated wider lane for truck traffic. School bus schedules and pickup/dropoff locations that may be affected by construction will be discussed at the meetings. The meetings will be used to communicate upcoming lane restrictions and traffic shifts that may affect local businesses, emergency personnel, and school bus traffic during construction. Kory will notify affected businesses immediately and be available 24/7 for emergency contact.

CH2M HILL will provide updates to a project Web site to inform the travelling public of construction progress and to inform the public of any scheduled traffic shifts or potential delays during construction. CH2M HILL will also inform VDOT of potential traffic delays, so that the Virginia 511 system can be updated to apprise the public of traffic conditions during construction.

To mitigate disruption of traffic on Route 285, construction will be done in two phases (see Exhibit 3.5.1). The first phase will include most of the new construction for the widening of Route 285 and a significant part of the new bridge (four new lanes) along the north side of Route 285. Traffic will remain on the Route 285 roadway. When phase one is completed, traffic will be rerouted to the newly constructed section for phase two, which will include reconditioning the Route 285 roadbed and constructing a raised median to complete the project.

Reconstructing the intersection of Routes 285 and 636 will be phased so that the intersection will be accessible to emergency vehicles at all times. To minimize delays on Route 285, construction materials will be delivered during off-peak travel hours, and construction vehicles will not be permitted on the roadway during AM and PM peak travel times.

Access to businesses along the Route 285 corridor will be maintained at all times during construction. Temporary traffic barriers will be installed so that ingress and egress are maintained to all businesses and to

EXHIBIT 3.5.1
Construction Phasing

ensure that adequate sight lines are achieved for vehicles exiting the businesses. Access may consist of temporary gravel entrances.

The I-64 corridor will remain open to traffic for the duration of construction. The new bridge components over I-64 will be installed using rolling roadway closures during night-time hours. Closures will be lifted immediately if emergency medical service vehicles need access to the interchange.

The entrance and exit ramps to I-64 will remain open to traffic for the duration of construction. Where full pavement demolition and reconstruction are required to correct superelevation on the ramps, full depth shoulders and temporary pavement will be constructed. Traffic will be maintained on the shoulder while the ramp pavement is reconstructed. This sequencing of construction will ensure that ramps remain open to traffic throughout construction.

What is the role for VDOT or other agencies in interfacing with CH2M HILL to help address the risk?

We will partner with VDOT and provide the VDOT Public Affairs Officer with lastest information on the project to communicate to stakeholders in the region that I-64 and Route 285 will remain open during construction with minimum traffic delays. CH2M HILL will request that VDOT be an active participant in reviewing proposed agendas and presentations planned for publicly attended meetings to ensure that the project team (CH2M HILL and VDOT) is putting forward a unified and coherent message to the public. CH2M HILL will

request that VDOT have representatives attend the public meetings, as part of the project team and also giving VDOT the opportunity to answer questions best answered by VDOT.

CH2M HILL will ask the Staunton District Public Affairs representative to communicate planned traffic impacts to local media for inclusion in news reports to get the message out to the public in a VDOT desired format. CH2M HILL will request the Traffic Operations Center to use permanent message boards as a supplemental messaging tool to CH2M HILL's portable message boards, to alert the traveling public to shoulder closures, lane closures, ramp closures, alternate routes, and other messages that may be applicable.

Proof of Performance

CH2M HILL has successfully addressed and mitigated this project risk factor on many recent design-build projects, including the I-405 Renton Stage 2 Design-Build project under "Experience of Offeror's Team" in Section 3.4 which was managed by Kory Voldman. He successfully addressed and mitigated risk for access management and maintenance of traffic involving interstate access ramp improvements at two interchanges and a complete bridge replacement over the interstate in an urban environment while minimizing impacts to traffic during local events. Mainline traffic transitions were limited to two for the duration of the project.

Risk Factor 2: Third-Party Approvals

What is the risk factor?

This critical risk factor concerns potential adverse effects to the project schedule that might result from relocation of utility services within project limits and review of project components by outside third parties. Affected utility services may include electrical, telephone, natural gas, fiber-optic communications, water, and sewer. We also see potential third-party participation for review and approval for the acquisition of the permit for wetland impacts by USACE, VMRC, and VDEQ, and land disturbance and erosion and sediment control plan approval and compliance from VDCR as critical. Additional third party approvals will be required for right of way acquisitions.

Why it is critical for the success of the project and what potential impact does it present to the project?

It will be important to prepare proper submittal packages for third party review as early as possible to avoid delays that might affect the project schedule. It also will be important to identify utilities within the project limits to initiate early coordination activities to avoid delays. Although the impacts on wetlands will be small, the ability to provide timely and adequate compensation for the wetland impacts is key to moving the project forward.

What strategies will CH2M HILL implement to mitigate all potential negative impacts to the project?

CH2M HILL uses a project task force approach to reduce or eliminate negative risks. CH2M HILL will perform a thorough investigation to identify above ground and buried utilities within the project limits. This will be completed as an early task to avoid unanticipated conflicts and to initiate the relocation process. Pertinent stakeholders such as the utility owners are invited to participate in a project review meeting held specifically to assure that services are not interrupted and that relocation options and issues such as ease of maintenance are explored and agreed to

with each of the utility owners. CH2M HILL personnel participating in the task force meetings will include representatives from the design and construction, including right-of-way specialists if necessary, to ensure that the location and sequence of relocation is accommodated in the construction scheduling.

CH2M HILL will take care to avoid wells or septic drain fields if possible. We will provide an expert for oversight of utility relocations who understands each utility provider's particular concerns and has a thorough understanding of the relocation requirements in the Right-of-Way and Utilities Manual and also federal and local requirements.

We will develop a small task force to review the cumulative impacts of both roadway widening and utility relocation and discern the total amount and type of wetland impacts. We will conduct an early investigation of the work needed on the box culvert under Route 285 to verify or update the wetland impact numbers reported in the current NEPA document. It is expected that purchase of mitigation credits from a wetland mitigation bank will be required to obtain the 404 permit. These issues will be cleared with the USACE during a pre-permit submittal meeting. Representation at this meeting will include the environmental compliance officer as well as the drainage design engineer and construction manager to address questions about avoidance and minimization from the jurisdictional agency representative.

Communications and approval from the Virginia DCR will be addressed as a small task force. Assuring erosion and sediment control (E&S) compliance before and during construction will include early review packages and invitations to walk the site before and during construction at appropriate intervals. A proactive task force approach to jurisdictional agency compliance provides assurances to both regulators and VDOT that environmental commitments are a priority and avoids surprises and potential project delays.

The concept design provided in the request for qualifications indicates that the potential need to acquire right-of-way is minimal. If right-of-way must be acquired, we will identify potential right-of-way takes early in the design effort, then investigate innovative design considerations to minimize takes. We will maintain open communication with property owners through community meetings and one-on-one meetings to keep them informed of potential impacts.

What is the role for VDOT or other agencies in interfacing with CH2M HILL to help address the risk?

Although it is CH2M HILL's responsibility to acquire and maintain permits, the project remains a visible roadway construction project and VDOT representatives will want to be appraised of all facets of the project, including environmental compliance. To that end, CH2M HILL's environmental compliance officer will coordinate regularly with the Staunton District engineering and environmental staff to share permit information, compliance with the environmental document and E&S reviews, comments and communications with the DRC representative. Regarding environmental compliance, VDOT's role is limited to sharing new information or agency edicts that may, in turn, affect project schedules or approaches to construction, such that appropriate changes can be implemented and allow work to continue.

VDOT can provide budget cost estimates for right-of-way acquisitions. If necessary, VDOT can help to facilitate any condemnation.

Proof of Performance

CH2M HILL has successfully addressed and mitigated this project risk factor on many recent design-build projects, including the Sudley Manor Drive and Linton Hall Road design-build effort in Prince William County. The project included design, environmental permitting, utility coordination, and right-of-way acquisition and relocations. We are also performing the utility relocations necessary to construct the I-81 project in Montgomery County.

Risk Factor 3: Unknown Existing Conditions

What is the risk factor?

This critical risk factor concerns unknown conditions, such as subsurface soil conditions, the presence of potential karst conditions, and the condition and location of underground utilities.

Why it is critical for the success of the project and what potential impact does it present to the project?

Knowing and understanding the subsurface conditions in the work area is critical for the design of foundations. The presence of karst conditions in the work area will require mitigation strategies early in the design to protect groundwater.

What strategies will CH2M HILL implement to mitigate all potential negative impacts to the project?

We will implement an early and extensive geotechnical investigation to determine subsurface conditions, including the presence of karst conditions, through the use of ground penetrating radar. The findings of the investigation will be considered in our design, including strategies to mitigate karst conditions. We will have geotechnical engineering involvement throughout construction to coordinate with the environmental compliance field staff and to determine if measures to identify and protect groundwater within karst conditions are needed during construction.

What is the role for VDOT or other agencies in interfacing with CH2M HILL to help address the risk?

VDOT's historical knowledge, access to as-built drawings, maintenance reports, and work force members with local knowledge allows for timely consideration and review of design concepts to avoid potential delays or conflicts during the project. VDOT can provide technical information and histories that may be available on the previous construction of the Exit 91 Interchange, including geotechnical information.

Proof of Performance

CH2M HILL has successfully addressed and mitigated this project risk factor on many recent design-build projects, including the SR288 project in Richmond. CH2M HILL implemented an early geotechnical investigation along with surveys to identify conditions of bridge connections that were being widened.

Appendices

Appendix A
Form C-78-RFQ

ATTACHMENT 2.10

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION

RFQ NO. **C00075877DB47**

PROJECT NO.: **0064-007-111, P101, R-201, C-501, B-627**

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 11/03/2011
   (Date)
2. Cover letter of Questions & Answers 12/16/2011
   (Date)
3. Cover letter of _____
   (Date)

_____ 12/29/2011
DATE

Appendix B
SOQ Checklist

ATTACHMENT 3.1.2

0064-007-111, P101, R201, C501, B627

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

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

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 20-page limit?	SOQ Page Reference
Statement of Qualifications Checklist and Contents	Attachment 3.1.2	Section 3.1.2	no	Appendix B
Acknowledgement of RFQ, Revision and/or Addenda	Attachment 2.10 (Form C-78-RFQ)	Section 2.10	no	Appendix A
Letter of Submittal (on Offeror's letterhead)				
Offeror's point of contact information	NA	Section 3.2.1	yes	1
Authorized Representative's signature	NA	Section 3.2.1	yes	5
Principal officer information	NA	Section 3.2.2	yes	2
Offeror's Corporate Structure	NA	Section 3.2.3	yes	2
Affiliated/subsidiary companies	NA	Section 3.2.4	yes	2
Debarment forms	Attachment 3.2.5(a) Attachment 3.2.5(b)	Section 3.2.5	no	Appendix C
Offeror's VDOT prequalification evidence	NA	Section 3.2.6	no	Appendix D
Evidence of obtaining bonding	NA	Section 3.2.7	yes	3–4
Professional Services Evidence				
Full size copies of SCC and DPOR registration documentation (appendix)	NA	Section 3.2.8	no	Appendix E
SCC Registration	NA	Section 3.2.8.1	yes	Appendix E
DPOR Registration (Offices)	NA	Section 3.2.8.2	yes	Appendix E
DPOR Registration (Key Personnel)	NA	Section 3.2.8.3	yes	Appendix E

ATTACHMENT 3.1.2

0064-007-111, P101, R201, C501, B627

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 20-page limit?	SOQ Page Reference
DPOR Registration (Non-APELSCIDLA)	NA	Section 3.2.8.4	yes	Appendix E
DBE statement within Letter of Submittal confirming Offeror is committed to achieving the required DBE goal	NA	Section 3.2.9	yes	5
Offeror's Team Structure				
Identity of and qualifications of Key Personnel	NA	Section 3.3.1	yes	6
Key Personnel Resume – DB Project Manager	Attachment 3.3.1	Section 3.3.1.1	no	Appendix F
Key Personnel Resume – Quality Assurance Manager	Attachment 3.3.1	Section 3.3.1.2	no	Appendix F
Key Personnel Resume – Design Manager	Attachment 3.3.1	Section 3.3.1.3	no	Appendix F
Key Personnel Resume – Construction Manager	Attachment 3.3.1	Section 3.3.1.4	no	Appendix F
Key Personnel Resume – Lead Structural Engineer	Attachment 3.3.1	Section 3.3.1.5	no	Appendix F
Key Personnel Resume – Environmental Manager	Attachment 3.3.1	Section 3.3.1.6	no	Appendix F
Organizational chart	NA	Section 3.3.2	yes	9
Organizational chart narrative	NA	Section 3.3.2	yes	8
Experience of Offeror's Team				
Lead Contractor Work History Form	Attachment 3.4.1(a)	Section 3.4	no	Appendix G
Lead Designer Work History Form	Attachment 3.4.1(b)	Section 3.4	no	Appendix G
Project Risk				
Identify and discuss three critical risks for the Project	NA	Section 3.5.1	yes	14

Appendix C

Certification Regarding Debarment

ATTACHMENT NO. 3.2.5(a)

CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS

Project No.: 0064-007-111, P101, R-201, C-501, B-627

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

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

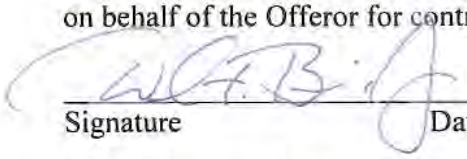
b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under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

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

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

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

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



6 Jan 2012 — Vice President

Signature — Date — Title

CH2M HILL Companies, Ltd.

Name of Firm

ATTACHMENT NO. 3.2.5(a)

CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS

Project No.: 0064-007-111, P101, R-201, C-501, B-627

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

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

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

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

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

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

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

	6 Jan 2012	Vice President
Signature	Date	Title

CH2M HILL, Inc.

Name of Firm

ATTACHMENT NO. 3.2.5(a)

CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS

Project No.: 0064-007-111, P101, R-201, C-501, B-627

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

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

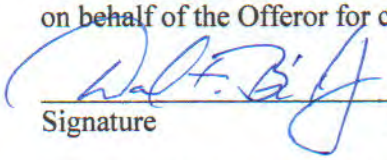
b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under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

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

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

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

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



6 Jan 2012 — Vice President

Signature — Date — Title

CH2M HILL Constructors, Inc

Name of Firm

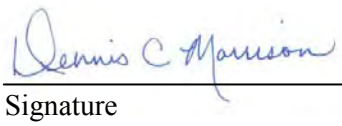
ATTACHMENT 3.2.5(b)
CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project: 0064-007-111, P101, R-201, C-501, B-627

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

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

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



Signature	December 6, 2011 Date	Senior Vice President Title

Volkert, Inc.
Name of Firm

LEFT TURN
YIELD
ON GREEN
GOOSE CREEK
SPEED
LIMIT
35

EAST
64

C317
CH2M HILL CONSTRUCTORS, INC.
EMPLOYER ID: 84-1230545
PREQ. EXP : 03/31/2012

--PREQ ADDRESS ----------
9191 SOUTH JAMAICA STREET
ENGLEWOOD, CO 80112-0000
PHONE : 303-771-0900
FAX : 720-286-2554

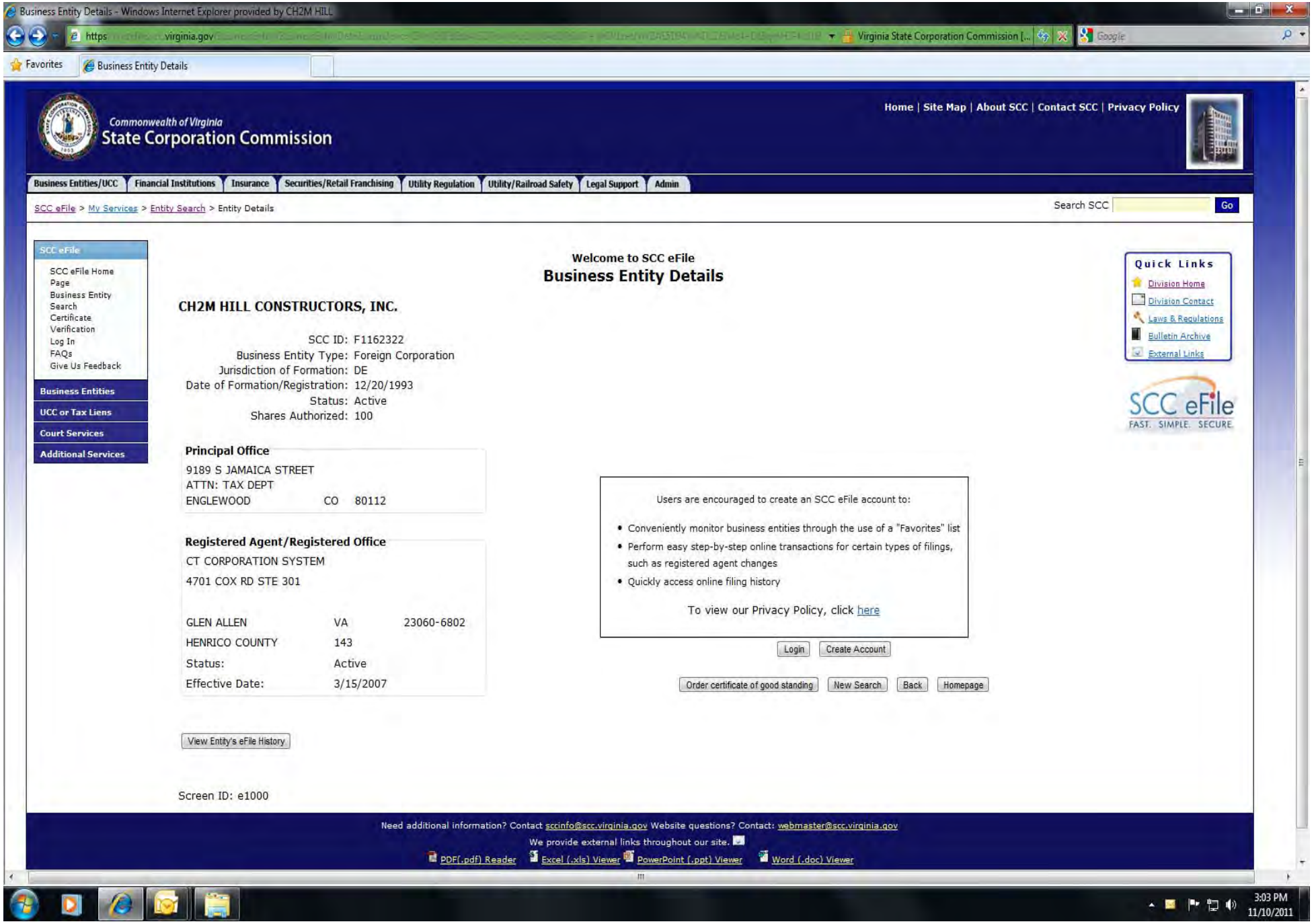
-- WORK CLASSES ----------
002 - GRADING
003 - MAJOR STRUCTURES
007 - MINOR STRUCTURES
045 - UNDERGROUND UTILITIES

BUSINESS CONTACT: STIERITZ, BRIAN CHRISTOPHER
EMAIL: BSTIERIT@CH2M.COM

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

DBE TYPE : N/A
DBE CONTACT: N/A
DBE/WBE EXP: N/A

Appendix E
SCC and DPOR Registration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Virginia State Corporation Commission [...
Google
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Business Entity Details
Commonwealth of Virginia
State Corporation Commission
Home | Site Map | About SCC | Contact SCC | Privacy Policy
Business Entities/UCC
Financial Institutions
Insurance
Securities/Retail Franchising
Utility Regulation
Utility/Railroad Safety
Legal Support
Admin
SCC eFile > My Services > Entity Search > Entity Details
Search SCC
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CH2M HILL CONSTRUCTORS, INC.
SCC ID: F1162322
Business Entity Type: Foreign Corporation
Jurisdiction of Formation: DE
Date of Formation/Registration: 12/20/1993
Status: Active
Shares Authorized: 100
Principal Office
9189 S JAMAICA STREET
ATTN: TAX DEPT
ENGLEWOOD CO 80112
Registered Agent/Registered Office
CT CORPORATION SYSTEM
4701 COX RD STE 301
GLEN ALLEN VA 23060-6802
HENRICO COUNTY 143
Status: Active
Effective Date: 3/15/2007
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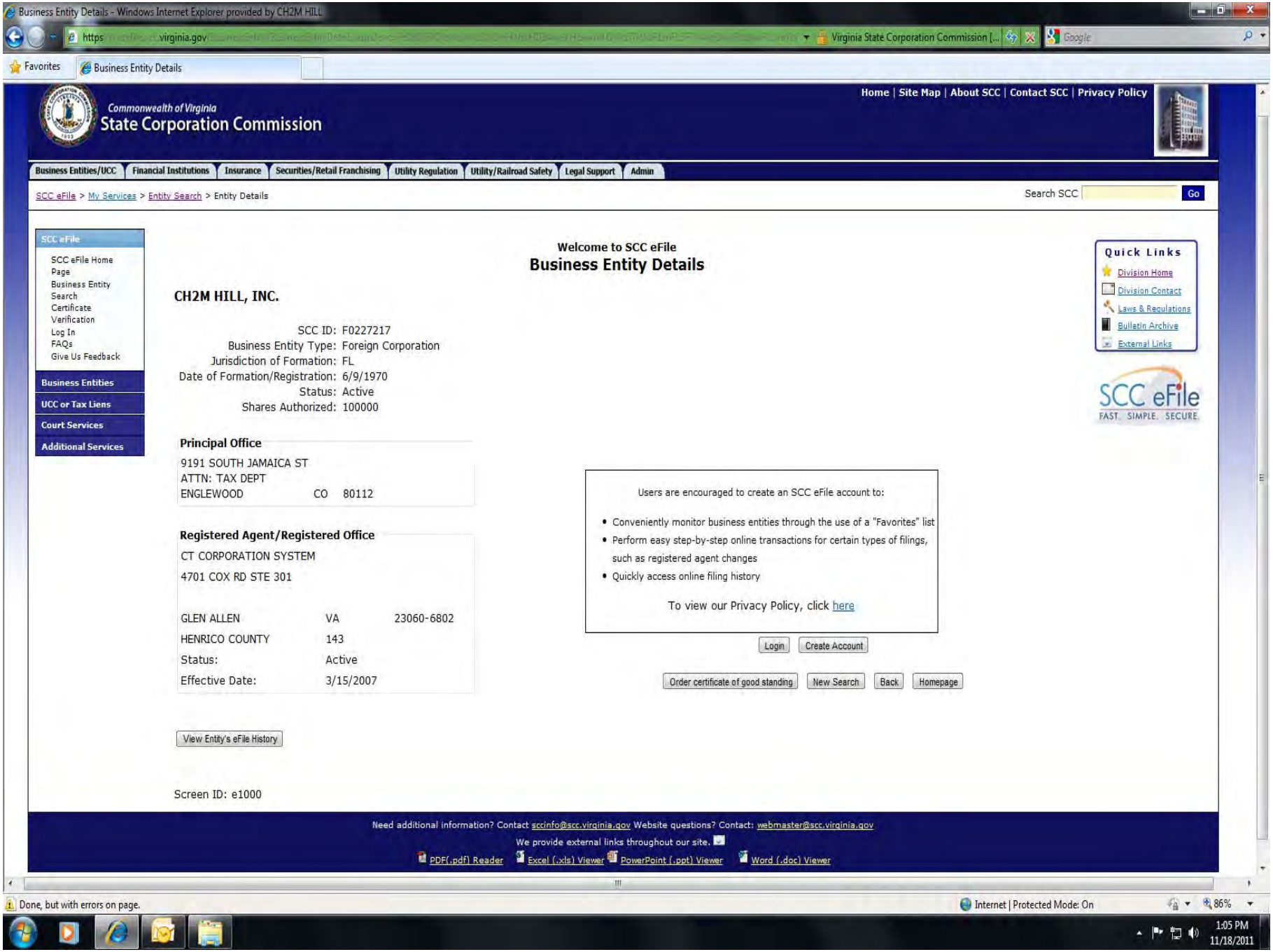
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Business Entity Details
CH2M HILL, INC.
SCC ID: F0227217
Business Entity Type: Foreign Corporation
Jurisdiction of Formation: FL
Date of Formation/Registration: 6/9/1970
Status: Active
Shares Authorized: 100000
Principal Office
9191 SOUTH JAMAICA ST
ATTN: TAX DEPT
ENGLEWOOD CO 80112
Registered Agent/Registered Office
CT CORPORATION SYSTEM
4701 COX RD STE 301
GLEN ALLEN VA 23060-6802
HENRICO COUNTY 143
Status: Active
Effective Date: 3/15/2007
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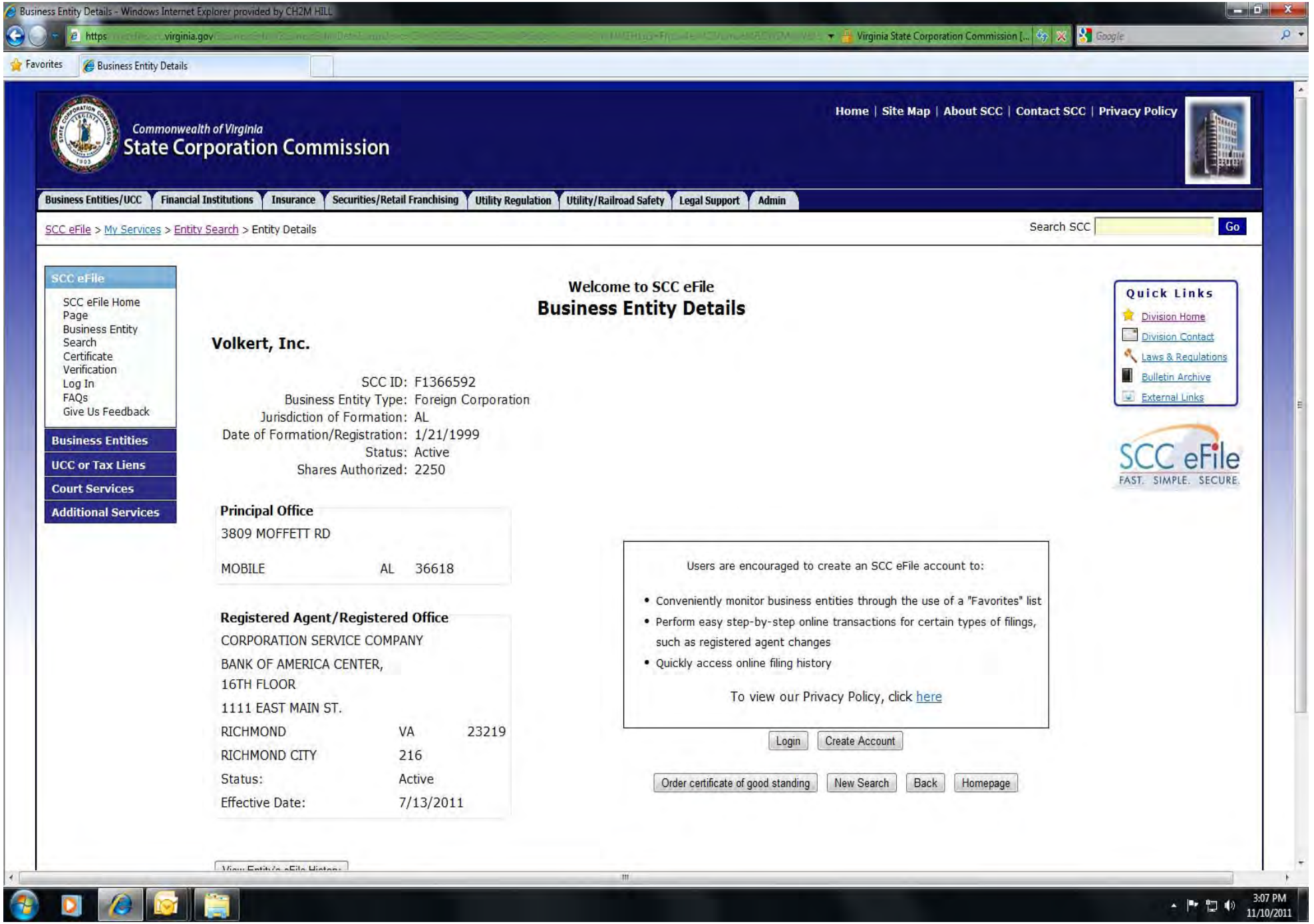
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Volkert, Inc.
SCC ID: F1366592
Business Entity Type: Foreign Corporation
Jurisdiction of Formation: AL
Date of Formation/Registration: 1/21/1999
Status: Active
Shares Authorized: 2250
Principal Office
3809 MOFFETT RD
MOBILE AL 36618
Registered Agent/Registered Office
CORPORATION SERVICE COMPANY
BANK OF AMERICA CENTER,
16TH FLOOR
1111 EAST MAIN ST.
RICHMOND VA 23219
RICHMOND CITY 216
Status: Active
Effective Date: 7/13/2011
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DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
05-31-2013

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

NUMBER
2705 060064A

BOARD FOR CONTRACTORS
CLASS A CONTRACTORS LICENSE

CH2M HILL CONSTRUCTORS INC
CH2M HILL CONSTRUCTORS INC
9191 S JAMAICA STREET ATTN CATHY POWE

ENGLEWOOD CO 80112

CLASSIFICATIONS BLD H/H

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Gordon N. Dixon, Director

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

(POCKET CARD)

COMMONWEALTH OF VIRGINIA

BOARD FOR CONTRACTORS - CLASS A CONTRACTOR LICENSE - CLASSIFICATIONS: BLD H/H

NUMBER: 2705 060064A EXPIRES: 05-31-2013
CH2M HILL CONSTRUCTORS INC
CH2M HILL CONSTRUCTORS INC
9191 S JAMAICA STREET ATTN CATHY POWE

ENGLEWOOD CO 80112

(FOLD)

(DETACH HERE)

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
9960 Mayland Dr., Suite 400, Richmond, VA 23233

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DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
02-29-2012

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

NUMBER
0411000603

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

PROFESSIONS: ENG

CH2M HILL, INC
8720 STONY POINT PKWY STE 110
RICHMOND, VA 23235

Jay W. DeBoer, Director

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BOARD FOR APELSCIDLA
BUSINESS ENTITY BRANCH OFFICE REGISTRATION
NUMBER: 0411000603 EXPIRES: 02-29-2012
PROFESSIONS: ENG
CH2M HILL, INC
8720 STONY POINT PKWY STE 110
RICHMOND, VA 23235

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EXPIRES ON
02-29-2012

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

NUMBER
0411000555

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

PROFESSIONS: ENG

CH2M HILL INC
15010 CONFERENCE CENTER DR
STE 200
CHANTILLY, VA 20151

Jay W. DeBoer, Director

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

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
12-31-2011

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

NUMBER
0407002610

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

PROFESSIONS: ENG

VOLKERT INC
5400 SHAWNEE RD
STE 301
ALEXANDRIA, VA 22312-2300

Jay W. DeBoer Director

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BOARD FOR APELSCIDLA
BUSINESS ENTITY REGISTRATION
NUMBER: 0407002610 EXPIRES: 12-31-2011
PROFESSIONS: ENG
VOLKERT INC
5400 SHAWNEE RD
STE 301
ALEXANDRIA, VA 22312-2300

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COMMONWEALTH OF VIRGINIA

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

NUMBER
0402029309

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

STEPHANIE DAWN HART
3225 LUDGATE RD
CHESTER, VA 23831

Gordon N. Dixon, Director

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

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
COMMONWEALTH OF VIRGINIA

EXPIRES ON
08-31-2013

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

NUMBER
0402046751

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

RAYMOND L COX
6977 GRIZZLY CT
MANASSAS, VA 20111

Gordon N. Dixon, Director

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BOARD FOR APELSCIDLA
PROFESSIONAL ENGINEER LICENSE
NUMBER: 0402046751 EXPIRES: 08-31-2013

RAYMOND L COX
6977 GRIZZLY CT
MANASSAS, VA 20111

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10-31-2012

9960 Mayland Dr., Suite 400, Richmond, VA 23233
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NUMBER

0402018236

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

WILLIAM DOUGLAS MCDOWALL II
2701 FRANKIE LN
HOPEWELL, VA 23860-7777

Gordon N. Dixon, Director

Appendix F
Key Personnel

ATTACHMENT 4.3.1.6

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

a. Name & Title:
Kory Voldman, Design-Build Project Manager

b. Project Assignment:
Design-Build Project Manager

c. Name of Firm with which you are now associated:
CH2M HILL

d. Years Experience: With this Firm 5 Years With Other Firms 9 Years

Please list chronologically your employment history, position and general experience or fields of practice for the last 15 years:

2006 – Present: CH2M HILL

2002–2006: Barnard Construction Company, Inc. Sr. Project Engineer, Tampa Bay Regional Reservoir, Tampa, FL, Florida Power and Light Cooling Pond Slip Lining Project, Indiantown, FL, EAA Reservoir Test Cell Project, South Bay, FL, Fern Ridge Dam Repair, Eugene, OR, C-44 Reservoir/STA Test Cell Project, Indiantown, FL

2000–2002: Danis Environmental Industries, Project Engineer, Ina Road Waste Water Treatment Plant Expansion, Tucson, AZ

1997–2000: Baugh Construction Oregon – Project Engineer, Portland International Airport Terminal Expansion Program Phase I, Portland, OR

e. Education: Degree(s)/Year/Specialization:
B.S., 1997, Construction Management

f. Active Registration: Year First Registered/ Discipline/VA Registration #:
N/A

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

1. ***Note your specific responsibilities and authorities for each assignment, 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.***

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

Experience with CH2M HILL

Project Manager, I-405 Stage 2 Widening and SR 515 Interchange Design-Build Project, WSDOT, Renton, WA, 2008–2010. Managed field engineering staff, serving as liaison between design and construction during project design phase through SDC, and conducting design constructibility reviews. Coordinated all RFIs and shop drawings, including constructibility reviews, coordinating with reviewers, distributing and resolving comments, reviewing and approving subcontractor pay estimates, developing and managing the cost-loaded P6 contract schedule, developing monthly invoices and cost forecasts, and overseeing issue resolution. Worked closely with an Environmental Compliance Manager to insure proper installation of BMPs and by conducting environmental inspections. Mr. Voldman also oversaw maintenance of traffic for I-405, the busiest roadway in the state of Washington and a complex urban environment. Assisted in the development of the construction plan to minimize traffic shift below the contract requirements to minimize ghost striping on the project. This project is part of the I-405 Corridor Program, which will provide congestion relief and improve safety along the corridor by increasing roadway capacity, enhancing mobility, and improving traffic operation and public safety. The work included interstate interchange modifications in the form of half diamond interchanges and modified on and off ramps, bridge demolitions and new bridge construction, and multiple utility relocations, including the WSDOT Fiber backbone, electrical power, cables, phone lines, sanitary and storm sewers, and portions of water mains.

Minimizing disruption to the traveling public and quality assurance were major client goals and accomplished by reducing lane closures. The original RFP required freeway closures on I-405 to demolish an existing structure, Mr. Voldman and the project team worked with WSDOT to combine closures, resulting in a shorter time to remove the bridge and allowing additional work without requiring more closures. Mr. Voldman worked with consultants to review plans and construction schemes. Attended weekly quality meetings with client, stakeholders, QA staff, and construction staff and followed strict internal and consultant review process for quality control. This project had a large public relations component, and Mr. Voldman worked closely with a task force which included WSDOT, the City of Renton, traffic control subconsultants, WA State Patrol, and Renton PD to develop the schedule for the full closure of I-405. During and after the closure, Kory talked to news media and met with local citizens throughout the project to address concerns. All budgets were met and construction is 10 months ahead of schedule.

Project Engineer, I-15 North Las Vegas Design-Build Project, Nevada Department of Transportation (NDOT), Las Vegas, NV, 2008. Mr. Voldman was responsible for change order and issues management, budget review, and quantity take-off for forecasting. The design-build project widened a 5.5-mile section of I-15 from the Spaghetti Bowl north to Craig Road and marks the first DB project in NDOT history. The project widens I-15 from six lanes to ten lanes from the Spaghetti Bowl to Lake Mead Boulevard, expands I-15 from four and five lanes to eight lanes from Lake Mead Boulevard to Craig Road, reconfigures the Lake Mead Boulevard interchange, and builds auxiliary lanes between interchanges to facilitate merging. The project also adds Intelligent Transportation System improvements such as dynamic message signs, ramp metering, and closed-circuit television cameras.

Project Engineer, I-5 Clarks Branch to Tunnel Mill Race Design-Build Project, Oregon Department of Transportation (ODOT), Southern Oregon, 2006–2008. Mr. Voldman supported a diverse and dynamic team of construction, design, environmental, quality, and safety professionals on this $39-million project consisting of 10 replacement bridges and repair of two others including replacement of the 600-foot-long I-5 bridge over the Coast Fork of Willamette River. Mr. Voldman was also responsible for maintenance of traffic during the project. Construction was performed at nine work sites in two sections along 70 miles of I-5. Midway through the project, ODOT requested a 10 percent scope expansion that included an additional bridge.

Project Engineer, I-5 Sutherlin to Roseburg Design-Build Project, ODOT, Southern Oregon, 2006–2008. In his role as a Project Engineer, Mr. Voldman was responsible for engineering aspects of project delivery and project closeout for this $48 million design-build project along an 11-mile stretch of I-5 between Sutherlin and Roseburg. Varied project scope involved eight bridge replacements, two bridge repairs, extensive mainline paving replacement, interstate maintenance, and interchange upgrades. Successfully delivered nearly $8 million in additional scope at request of ODOT. Project involved more than 200,000 man-hours worked without a lost-time accident.

ATTACHMENT 4.3.1.6

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

a. Name & Title:
Bill McDowall, Quality Assurance Manager

b. Project Assignment:
Quality Assurance Manager

c. Name of Firm with which you are now associated:
Volkert & Associates, Inc., Alexandria, VA

d. **Years experience:** With this Firm 9 Years With Other Firms 21 Years

Please list chronologically your employment history, position and general experience or fields of practice for the last 15 years:
2001–Present: Volkert, Inc., Assistant vice president. Manages construction engineering staff, contract management, quality control, and field inspection/review.

1991–2001: VDOT, Assistant State Construction Engineer. Construction program oversight in three Districts.

e. Education: Degree(s)/Year/Specialization:
B.S., 1980, Civil Engineering/Construction Management

f. Active Registration: Year First Registered/ Discipline/VA Registration #:
1988, Professional Engineer, #018236

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

1. ***Note your specific responsibilities and authorities for each assignment, 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.***

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

Experience with Volkert & Associates, Inc.

Quality Assurance Manager, Route 221 Realignment, VDOT, Roanoke County, VA, 2010–Ongoing. QA/QC for the realignment a 0.75-mile segment of Route 221. This ARRA-funded $20-million construction project involved roadway realignment and widening from 2 to 4 lanes, 3 new bridges, a new culvert, intersection improvements, a new drainage system and 2 SWM ponds. Observed the inspectors' work and checked project documentation for completeness and accuracy and to verify proper organization and maintenance. Reviewed testing reports for completeness and accuracy. Reviewed the blasting and surplus removal plans to confirm the judicious use of explosives, proper blasting techniques, and safety. Evaluated and reviewed construction schedules for completeness and conducted time impact analysis. Planned upcoming work activities with the construction manager and inspection staff. Assisted with the identification of potential issues and careful planning for avoiding / mitigating them. Met with the VDOT project manager to evaluate satisfaction with inspector performance and to discuss quality improvement processes. The existing 2-lane road is a major commuter route with an average daily traffic volume of 14,000 and runs through rocky hills as high as 190 feet. Extensive blasting next to the roadway was required for the excavation 373,858 CY of earth material with 60% rock. It included clays, silts, and rock of numerous types of geological formations ranging from the very hard charokite to the soft sandstone. Challenges included blasting operations that were appropriate for the various types of rocks and geological conditions, prevention of slope failure, safety of motorists and construction workers, avoiding environmental impacts, and finding a disposal site that complied with local ordinanaces and VDOT and the USACE requirements.

Quality Assurance Manager, I-66 Pavement Rehabilitation Design-Build Project, VDOT, Fairfax County, VA, 2011–Ongoing. Managed quality assurance for the design and construction of a $38-million design-build project involving full-depth patching of concrete pavement and asphalt overly of a 6.5-mile segment of I-66. Project included roadway improvements, drainage and utility upgrades, a transportation management plan, ITS and lighting improvements, and public outreach. Involved with preparation and implementation of QA/QC plan and monitored compliance throughout design and construction. Developed, monitored, and updated CPM construction schedule. Conducted a constructability review during each of the 4 stages of design. A key challenge was coordination of concurrent design and construction through the development of an effective but complex sequencing plan and complex transportation management plan to maintain high volumes of traffic on I-66. Managed QA inspection and materials testing of concrete, asphalt, and soil including preparation of the QA testing plan, review and approval of the QC testing plan, supervision of QA testing technicians, review of testing results, preparation of deficiency and nonconformance reports, and confirmation of accurate maintenance of testing documentation including the materials notebook, etc. Led preparatory and intermediate inspection meetings and prepared construction inspection checklists. Coordinated with VDOT's Independent Assurance and Independent Verfication Inspectors. Worked with the contractor and QC team to anticipate and resolve field issues before schedule and budget was affected and to resolve nonconforming materials and

construction work in the most efficient and cost-effective manner. Reviewed and approved non-conformance recovery plans, monitored corrective actions and retests, and worked with contractor on plan to make sure the problem did not reoccur. Prepared monthly summary reports. The project is currently 20% ahead of schedule.

Quality Assurance Manager, Route 11/460 Widening, VDOT, Roanoke County, VA, 2010–Ongoing. Conducts quality assurance review during construction of this $22-million construction project, which includes widening of a 2.1-mile section of 3-lane road to 4 lanes, including a 44-foot long bridge over Little Bear Rock Branch on drilled shafts, a triple-box culvert, a double-box culvert, a raised median, center and right-turn lanes at intersections and crossovers, and an extensive storm drainage system with stormwater management ponds and large jack and bore segments under the Norfolk Southern Railroad tracks into the Roanoke River. The project included blasting and associated safety measures for 25,000CY of grading. Observes the inspectors' work and checks project documentation and testing reports for completeness, accuracy, and proper organization. Discusses upcoming work activities with inspection staff to verify proper equipment on hand and understanding of testing frequency. Meets with VDOT and contractor representatives to discuss and evaluate construction issues and advise on potential cost effective solutions to potential and existing issues. Evaluates and reviews construction schedules for completeness and conducts time impact analysis, NOI analyses, schedule reviews, and engineering support to address construction issues.

Quality Assurance Manager, Replacement of Route 29 over the Tye River Design-Build Project, VDOT, Amherst County/Nelson County Line, VA, 2010–2011. Oversight of quality assurance services during the design and construction of a new, 0.4-mile, 2-lane, pre-stressed concrete girder bridge to replace a structurally deficient steel-girder bridge on the northbound lanes of Route 29 and to raise the roadway profile to match the profile of the southbound bridge. The $6.7 million project also includes the reconstruction of roadway approaches. Reviewed the QA/QC plan, monitors schedule and budget, conducts quality checks of documents, provides technical guidance, evaluates performance of inspectors, and prepares invoices.

Quality Assurance Manager, Route 60 over Route 288 Design-Build Project, VDOT, Chesterfield County, VA, 2007–2008. Managed quality assurance to verify that construction of this bridge widening (from 3 to 4 lanes with a full shoulder) project complied with contract documents. The new bridge included a reinforced concrete deck, steel plate girders, elastomeric bearings, piers, end bents, MSE walls and seismic design and included the 1,500 to 2,000 feet of roadway approaches. The project included grading for the roadway approaches. Prepared QA and test plans with testing types and frequencies. Managed inspection and testing personnel and conducted preparatory, intermediate, and completion inspection meetings. Oversight of materials testing including density, moisture, slump, and air content of concrete, compressive strength test on concrete, and used one-point proctors on soils. Addressed non-conformance issues regarding concrete quality and failed subgrades, monitored corrective actions, and maintained a non-conformance log. Monitored schedule, budget, and compliance with work zone safety, environmental, and EEO/DBE regulations. Oversight of document control procedures and quality including the materials notebook, reviewed daily work reports, and submitted materials test reports, non-conformance reports, and progress reports to VDOT. Conducted punch list inspection at the close of the project. Conducted constructability reviews during design.

ATTACHMENT 4.3.1.6

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

a. Name & Title:
Stephanie Hart, Design Manager

b. Project Assignment:
Design Manager

c. Name of Firm with which you are now associated:
CH2M HILL, Richmond, VA

d. Years Experience: With this Firm 9 Years With Other Firms 15 Years

Please list chronologically your employment history, position and general experience or fields of practice for the last 15 years:

2001–Present: CH2M HILL, Project Engineer. Lead design manager on three Virginia design-build projects. Manages multidiscipline design teams and subconsultants, while providing oversight of designs on roadway widening, new roadway, and intersection improvements for both urban and rural locations. Experienced in design quality assurance and quality control, roadway horizontal and vertical design geometrics, plan detailing and preparation, cross sections, traffic control design, constructibility reviews, right-of-way design, utility coordination, signal plan preparation, signing and pavement marking plan development, quantity take-offs, specifications, and special provision preparation for a variety of roadway and bridge improvement projects.

1994–2001: L Robert Kimball and Associates, Project Manager. Responsible for managing performance of all design tasks on assigned transportation projects. Duties included supervision of project teams, coordination of roadway and bridge design efforts, and client, agency, and utility coordination. Performed various engineering design tasks for highway construction projects. Major design responsibilities included horizontal and vertical roadway geometry, maintenance of traffic and constructibility reviews, public involvement, right-of-way coordination, utility coordination, design quality assurance and quality control, quantity calculations, and cost estimates.

e. Education: Degree(s)/Year/Specialization:
B.S., 1986, Mechanical Engineering Technology

f. Active Registration: Year First Registered/ Discipline/VA Registration #:
1997, Professional Engineer, 0402029309

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

1. ***Note your specific responsibilities and authorities for each assignment, 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.***

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

Experience with CH2M HILL

Roadway Design Manager, I-81 Corridor Safety and Operational Improvements Design-Build Project, VDOT, Montgomery County, VA, 2011–Ongoing. The project involved design and construction of a truck climbing lane over a 5-mile segment. Managing the design and construction of necessary drainage improvements, replacement of three bridges, improvement of existing shoulders, upgrading guardrails, retaining walls, and widening and improvements at bridge connections. Leading the road design efforts along with coordinating all disciplines to turn in a complete plan set on an accelerated schedule. Developed design approaches to the bridges, which were modified to eliminate any curvature or super elevation transition on the bridges. This improved safety, eliminated the need for deck drains on the bridge and improved the durability of and maintenance requirements for the bridge. Integral abutments were utilized to eliminate joints on the bridge in order to further reduce VDOT's maintenance requirements. The design of the I-81 crossing over Den Hill Road and the NSRR were also completed far ahead of the typical schedule. Because of Ms. Hart's knowledge of the railroad, AREMA and NSRR requirements, and close coordination with NSRR, approval of designs was obtained in half the usual time, allowing construction to begin in spring rather than fall, thus taking advantage of the summer construction season.

Design Manager and Deputy Project Manager, Sudley Manor Drive/Linton Hall Road PPTA Design-Build, VDOT, Manassas, VA, 2004–2009. The project included the design and construction of 3.5 miles of a four-lane divided roadway, three signalized intersections, and a bridge. Design phase duties included management of signal design, bridge design, traffic engineering, geotechnical work, and conformance of contract documents. Managed Maintenance of Traffic Plan preparation and approval with VDOT to ensure the highest level of safety. Managed signing and pavement marking plan preparation and approval. Conducted weekly team meetings and participated in design optimization reviews and constructability reviews. Managed design quality assurance and quality control. Responded to requests for information from the construction staff and resolved final VDOT comments which consisted

of guardrail placement modifications and a design exception for a fire station median opening. Assumed responsibilities of design manager within a year of project startup. A scope increase called for widening area connection from the initial design to accommodate a future development. She managed this change to reduce future reconstruction costs and avoid negative public input. Responsible for working directly with VDOT project manager to obtain design acceptance. Stephanie led coordination for road design, drainage design, signal design, MOT, signing and stripping, right-of-way, utility relocations, structural design, constructability reviews, geotechnical, and environmental. Conducted weekly design meetings to ensure coordination of all disciplines. Reviewed plans and designs to ensure accuracy and completeness of information. Coordinated with a future VDOT project installing a sound barrier along portions of the north side of the road and with developers along the corridor. Design approval process required coordination with VDOT to prove that the project footprint remained unchanged as presented in environmental documentation. VDOT granted a conditional construction permit to allow work to proceed on schedule before 100 percent design plan approval. During design, clear zone issues arose. Roadway sections were adjusted for safety and design waivers were granted after showing that plans maintained motorist safety. Improvements to the original MOT Plan were finalized under a tight deadline that improved project safety. By working closely with the construction team, high-priority right-of-way was determined to obtain timely rights of entry to be issued and keep to the aggressive project schedule. Participated in weekly meetings with construction staff and client and responsible for responding to requests for information from the construction staff.

Design Manager, Traffic Safety Improvements, DDOT, Washington, DC Eastern Federal Lands, 2003–2005. Design manager for multiple-intersection roadway rehabilitation project with complex traffic management elements and scope that included repaving, new curbs, and relocation of drainage facilities. Redesigned eight high-crash locations within the District of Columbia. Led design of safety improvements, including restriping of lanes and crosswalks, construction of new curb ramps, relocation of traffic signals, extensive MOT in urban setting, and resigning. Enlisted senior reviewers to quality check the plans. Responsible for multiple plan submittals and final plans, specifications, and estimates. Organized a constructability review prior to submitting the final plans. Prepared special contract requirements, engineer's estimate, and quantity computations.

Design Manager, Virginia Route 288 PPTA Design-Build, VDOT, VA, 2001–2004. Responsible for design-build integration during construction for 17 miles of interstate highway and eight interchanges, including:

- **288/Powhite Parkway (Rte 76) –** existing interchange, new bridge to accommodate additional lanes of 288 over 6-lane roadway (Rte 76)
- **288/Lucks Lane** – existing interchange, widened bridge over 288, ramp work
- **288/Woolridge Road –** new interchange Woolridge four-lane roadway over 288
- **288/Huguenot Trail (Rte 711) -** new diamond interchange Rte 711 four-lane roadway over 288
- **288/Patterson Avenue (Rte 6)** – new full cloverleaf interchange 288 over six-lane road (Rte 6)
- **288/West Creek Parkway** – new interchange West Creek Parkway four-lane roadway over 288
- **288/Ridgefield Parkway** – new interchange Ridgefield Parkway six-lane roadway over 288
- **288/Broad Street (Rte 250)** – new diamond interchange 288 over Rte 250
- **288/I-64** – new interchange with I-64

Managed the preparation of signing, pavement marking, and delineator plans for the Chesterfield and Powhatan portions of the project. Also worked with the contractor to improve the engineering design and achieve construction cost savings. Led design-build integration during critical construction phase. Construction managers relied on the immediate response to required design changes to meet schedule requirements and improve quality.

Experience Prior to CH2M HILL

Project Manager, Route 260 – 58/258 Connector in Isle of Wight County, VDOT, VA, 1999–2001. Project manager responsible for preliminary and final design of new two-lane roadway on four-lane right-of-way. Required close coordination with VDOT staff to incorporate VDOT-supplied bridge design, traffic data, and geotechnical information. Critical issues included minimizing wetland impacts, limiting purchase of additional right-of-way, and drainage design. Used IGrds and MicroStation for design and plan preparation. A project website was developed to make current drawings and other pertinent information accessible to VDOT personnel. Reviewed plans and designs to ensure accuracy and completeness of information.

ATTACHMENT 4.3.1.6

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

a. Name & Title:

Steve Bebee, Construction Manager

b. Project Assignment:

Construction Manager

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

CH2M HILL

d. Years Experience: With this Firm <1 Years With Other Firms 35 Years

Please list chronologically your employment history, position and general experience or fields of practice for the last 15 years:

2011–Present: CH2M HILL, Englewood, CO. General Structure Superintendent, supervising production of bridges.

2009–2010: Austin Bridge and Road: Dallas, TX. General Structure Superintendent, ADOT Project, supervising production of bridges, as well as superintendents, general-foreman, foreman, engineers, and craftsmen.

2008–2009: CH2M HILL, Englewood, CO. General Structure Superintendent, NDOT Interstate 15 Project, supervising construction of per-stretched girder bridges, box culverts, and retaining walls.

2005–2008: Granite Construction, Watsonville, CA. Carpenter Foreman, bridges, houses built and set transition forms in the powerhouse.

e. Education: Degree(s)/Year/Specialization:

High School Graduate

f. Active Registration: Year First Registered/ Discipline/VA Registration #:

N/A

Mr. Bebee will acquire his Virginia Department of Conservation and Recreation ("DCR") Responsible Land Disturber (RLD) Certification and VDOT Erosion and Sediment Control Contractor Certification (ESCCC) prior to the commencement of construction.

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

1. ***Note your specific responsibilities and authorities for each assignment, 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.***

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

Experience with CH2M HILL

General Structure Superintendent, I-15, NDOT, Las Vegas, NV, 2008–2009. The NDOT I-15 project was a design-build effort which included bridge demolition and new bridge construction. CH2M HILL was the managing partner for this design-build project, which improved a heavily congested portion of I-15. This project was the first transportation design-build project led by NDOT. In collaboration with NDOT, CH2M HILL developed and implemented successful design and construction approaches for worker safety, motorist safety, quality, schedule, financing, and public satisfaction. The project scope included design and construction of several new freeway ramps; the addition of through and auxiliary lanes over the 9-km project length; soundwalls; retaining walls; project-wide paving; drainage system improvements; and the complete reconstruction of the Lake Mead Boulevard Interchange, all while working within a complex urban area. New freeway lighting, intelligent transportation systems, ramp metering and signals were also provided. CH2M HILL's roadway and traffic operations specialists optimized the entire corridor with minor adjustments to centerlines and profiles to minimize constructed quantities.CH2M HILL designed 13 structures—including eight new bridges, three bridge replacements and two bridge widening—in only 8 months to meet the aggressive project schedule. CH2M HILL developed an innovative design which enabled three mainline bridges to be replaced instead of only widening as initially planned. Mr. Bebee was responsible for supervising the production of per-stretched girder bridges, box culverts, and retaining walls. Throughout the life of the project, Mr. Bebee also managed pile driving, concrete structures, scheduling, cost, ordering all materials, and coordinating all subconsultants.

Experience Prior to CH2M HILL

Construction Manager, SR-22 Design Build Project, Cal Tan, Orange, CA, 2005–2008. Mr. Bebee had 4 superintendents, 14 foreman, and about 350 craftsmen under his supervision. The project included some demolition and new bridge construction for 32 bridges of various designs. This project also entailed strategic widening of bridges and roadways in an urban environment. Mr. Bebee was responsible for pile driving, all concrete structures, scheduling, cost, ordering all materials, and coordinating all subconsultants for the projects.

Construction Manager, Railroad Over-Crossing for the Monterey Highway on Bailey Avenue, City of San Jose,

San Jose, CA, 2004–2005. The Bailey Over Crossing project included a pre-stretched girder bridge over a railroad crossing and a box girder bridge highway with a drop bent cap and double layer of wooden false work. During his role as Construction Manager, Mr. Bebee oversaw a large crew, managed pile driving and concrete structures, and was responsible for the ordering of materials and cost control. The project included right of way acquisitions along the course of the new bridge, which Mr. Bebee managed by reviewing design documents and reaching out to stakeholders.

Construction Manager, Skaggs Bridge on Highway 145, Cal Tran, Madera, CA, 2003–2004. Over the course of 2 years, Mr. Bebee was the Construction Manager for the construction of the Skaggs Bridge, a bridge with a 720-foot span over the San Joaquin River on Highway 145. The project made use of pipe and wooden false work and four coffer dams. The original bridge was demolished, with the new structure being built it its place. The construction of the new bridges presented a serious challenge, as part of the false work was erected from the river bed.

Construction Manager, Pascadero Bridge, Cal Tran, Pascadero, CA, 1989–1991. The Pascadero Bridge presented a challenge, in that it was to be built over an ocean inlet. As the Construction Manager, Mr. Bebee supervised a large and diverse crew during the design and construction of the bridge. The bridge, which was approximately 700 feet in length, included 400 yards of concrete and two coffer dams. The original bridge was demolished and the new structure was built in its place.

ATTACHMENT 4.3.1.6

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

a. Name & Title:
Raymond Cox, Lead Structural Engineer

b. Project Assignment:
Lead Structural Engineer

c. Name of Firm with which you are now associated:
CH2M HILL, Alexandria, VA

d. Years Experience: With this Firm 12 Years With Other Firms 19 Years

Please list chronologically your employment history, position and general experience or fields of practice for the last 15 years:

1998–Present: CH2M HILL, Lead Structural Engineer.
1996–1998: Consultant. Sole proprietor consulting engineer offering bridge design services in the San Francisco Bay area.

e. Education: Degree(s)/Year/Specialization:

M.E., 1980, Structural Engineering
B.S., 1979, Civil Engineering

f. Active Registration: Year First Registered/ Discipline/VA Registration #:
2009, Professional Engineer, 46751

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

1. ***Note your specific responsibilities and authorities for each assignment, 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.***

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

Experience with CH2M HILL

Lead Structures and Bridge Engineer, Virginia MegaProjects, General Engineering Contract, Northern Virginia, Virginia Department of Transportation, 2008–Ongoing. The Virginia MegaProjects consists of a number of large-scale transportation improvement projects designed to ease congestion about the urban Northern Virginia Area around Washington D.C., totaling over $7 billion. Some of the projects are Design-Build, some Design-Bid-Build, and others are Public Private Partnerships. The GEC, acting in conjunction with and on behalf of the Department, coordinated and reviewed the various design packages for compliance with Concessionaire agreement, Department standards and specifications, and solid engineering. During construction, Mr. Cox performed a similar function regarding field and design changes, shop drawings, and quality audits. His responsibilities on the project included the Engineering Manager and Structures and Bridge Lead for the $1.9 billion I-495 HOT Lanes PPTA project, with its 58 bridges and miles of retaining and sound walls over a 14-mile length of the Capital Beltway. This included coordination and review of the various design packages for compliance with the Concessionaire agreement, VDOT standards, and solid engineering. The project includes demolition of over 40 bridges to allow for the widening interstate and the interchange reconfigurations. Coordinating with maintenance of traffic was critical to the construction sequence. Mr. Cox also served as the Lead Structure and Bridge Manager for the overall Program; and as Structures and Bridge Lead for the Dulles MetroRail Extension. His responsibilities included providing information to Public Relations, Right-of-Way needs, and environmental impact and mitigation.

Structural/Bridge Engineer Lead, Anacostia Waterfront Initiative, District of Columbia Department of Transportation, 2011–Ongoing. CH2M HILL is the program manager for this comprehensive plan to restore the Anacostia Waterfront through a number of infrastructure and cultural improvements. As part of the Program Assessment team, Mr. Cox helped assess the status of the structures and bridge aspects of the program, reviewed lessons learned, and provided recommendations. Also, he provided structural engineering support to the construction management team for the Anacostia Riverwalk Trail (East and West) structures and other projects within the program.

Structures and Bridge Technical Resource, I-95 Corridor Program Management, Pennsylvania Department of Transportation, 2011–Ongoing. Mr. Cox provided quality assurance and technical leadership to this ongoing program to rehabilitate the I-95 corridor from state line to state line. He included the development of project review checklists and procedures, both for internal and external designs, as well as scopes of work for various projects on the program. Projects are expected to include Interstate to Interstate Interchange reconfigurations, local street interchanges, widening, bridge replacements and rehabilitations, retaining and sound walls, and significant MOT phases. Mr. Cox innovated project delivery options and high performance, low maintenance materials are being evaluated for inclusion in the Program.

Project Manager and Lead Structural Engineer, Flushing Channel Bridge, Riviera Dunes Resort, City of Palmetto, FL, 2001. Project included the design and construction oversight of a new bridge as part of this exclusive

Manatee River waterfront resort development. The Riviera Dunes development project involved the converting of an abandoned dolomite mine into a marina basin with surrounding residential and commercial lots. In order to provide adequate water circulation and quality for the marina basin, two channels were dredged between the basin and the Manatee River. To access the 50 lots on the barrier island, an access bridge was required. A single-span, two-lane structure founded on a cantilever seat abutment was determined to be the most economical for the site. The superior load carrying capacity of the soils allowed the use of spread footings in lieu of piles. To prevent undermining of the foundation due to severe storms, the footing was placed below the anticipated scour depth and as an added precaution, rubble riprap was placed along the channel toe. The bridge is designed to withstand the impact of a drifting, 100-ton yacht under storm tide/flow conditions.

Lead Structural Engineer, San Francisco-Oakland Bay Bridge Seismic Safety Project, Oakland, CA, 1997. Project Engineer for the quantity take-off of six alternative designs for the skyway portion of this $1.6 billion bridge replacement project. As part of the type selection analysis to replace the eastern portion of this landmark bridge, numerous alternatives were evaluated for the approach skyway portion of the bridge. Alternatives included segmental concrete and steel superstructures on a variety of foundation types and configurations.

ATTACHMENT 4.3.1.6

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

a. Name & Title:
Karl Kratzer, Environmental Compliance Manager

b. Project Assignment:
Environmental Compliance Manager

c. Name of Firm with which you are now associated:
CH2M HILL

d. **Years experience:** With this Firm 1 Years With Other Firms 26 Years

Please list chronologically your employment history, position and general experience or fields of practice for the last 15 years:

2011–present: CH2M HILL, Senior NEPA (National Environmental Policy Act) Planner

2005–2011: Whitman Requardt & Associates, Project Manager for environmental studies and permit acquisitions

1988–2005: H. W. Lochner, Inc. Started out as document writer and field biologist, promoted to environmental task leader, promoted to environmental documents project manager and finally to office manager

e. Education: Degree(s)/Year/Specialization:
B.S., 1985, Biology

f. Active Registration: Year First Registered/ Discipline/VA Registration #:
N/A

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

1. ***Note your specific responsibilities and authorities for each assignment, 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.***

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

Experience with CH2M HILL

Environmental Compliance Manager, St. Elizabeths Hospital East Campus Transportation Network Environmental Assessment, DDOT, April 2011–Ongoing. Coordinating development of the draft environmental assessment and supporting studies for a new transportation network on the St. Elizabeths Hospital East Campus, a national historic landmark. The transportation network is being developed simultaneously as the campus and its historic buildings are evaluated for adaptive reuse. Project challenges include ensuring compliance with applicable parts of the National Environmental Policy Act and the Advisory Council on Historic Preservation and the economic realities and development opportunities within the project site. Role during Phase II will be to design the recommended improvements and to ensure that the design complies with the commitments stated in the environmental document.

Environmental Compliance Manager, I-81Truck Climbing Lanes, VDOT, April 2011–Ongoing. Assisting project design staff with individual permit requirements and DCR stormwater management compliance during construction. The project is a design-build delivery for a new truck climbing lane on I-81 in southwest Virginia.

Experience Prior to CH2M HILL

Project Manager, Southeastern Parkway and Greenbelt, Chesapeake and Virginia Beach, VA, 2003–2005. A contentious and controversial project with a rich 20-year history, the Southeastern Parkway and Greenbelt is proposed to be a 20-mile multi-lane toll facility on new alignment located in the Tidewater region of Virginia. Served as project manager and led the efforts to complete the draft environmental impact statement and supporting technical studies for the project. Challenges of the project are the magnitude of impacts and the respective mitigation requirements. Additional challenges are the project's proximity to Oceana Naval Air Station and Fentress Navel Auxiliary Landing Field, their respective accident potential zones, and minimizing relocations in this highly urbanized area.

Kiln Creek Interceptor Force Main, Hampton Road Sanitation District, York County/City of Poquoson, VA, 2009–2011. Permit writer and environmental compliance coordinator for 35,000 feet of new interceptor force main in the rapidly developing areas of York County. Great care was taken to ensure excavation did drain wetlands areas and create impacts beyond those accounted for in the Corps of Engineers permit.

Environmental Compliance Coordinator, North Fork Rivanna RiverPump Station and Transmission Line, Albemarle County Service Authority, VA, 2009–2011. Permit and environmental compliance coordinator for the pump station replacement and 10,000 feet of new sewer line along US 29, including a crossing of the North Fork Rivanna River. Project required mussel surveys for federally listed species and VSMP permits in addition to the Corps' permits.

Appendix G
Work History

ATTACHMENT 4.3.1.5(a)
LEAD CONTRACTOR - WORK HISTORY FORM
(LIMIT 1 PAGE PER PROJECT)

Work by Lead Contractor - three (3) projects which best illustrates current qualifications relevant to this Project.							
a. Project Name & Location	**b. Narrative describing nature of Firm's Responsibilities; Identify the Lead Designer.**	**c. Client/Owner/Project Manager who can verify Firm's responsibilities. Include address and current phone number.**	**d. Contract Completion Date (Original)**	**e. Contract Completion Date (Actual or Estimated)**	**f. Estimated Value (in Thousands)**		
					Original Contract Value	**Final or Estimated Contract Value**	**Dollar Value of Work for Which Firm Was/Is Responsible**
(1) Sudley Manor Drive and Linton Hall Road Design-Build, Prince William County, VA	**Lead Designer:** CH2M HILL **PROJECT ACHIEVEMENTS:** All phases completed ahead of schedule. ● Design and construction of four-lane divided roadway in an urban environment with a new bridge over a creek, and intersection improvements. CH2M HILL was the prime contractor and lead designer responsible for delivering this project to Prince William County (PWC) and final acceptance by VDOT into the state highway system. Our scope of work entailed all facets of a design-build contract including all design, structural, bridge construction, roadway construction, utility relocation, environmental permitting and mitigation, signal installation, drainage installation, surveying, construction management, quality assurance, quality control, subcontract administration, right-of-way acquisition, and project management. CH2M HILL designed and constructed improvements valued at $72 million to Sudley Manor Drive and Linton Hall Road, two primary arterials located in one of the fastest growing areas of the county. As PWC's first design-build project involving a public-private partnership, these roadway improvements enhance regional mobility and safety and support continued economic development in the area. **Maintenance of Traffic:** The Sudley Manor Drive project crossed several existing roadways that required new turn lanes, median work, mill and overlay and one road that required 500 feet of reconstruction due to a grade change. The 10,000 vehicles per day on Wellington Road and the 25,000 vehicles per day on Prince William Parkway presented challenges for building the required improvements. Portable message signs, adequate lane widths, proper traffic control devices and temporary pavement were used to keep the traveling public safe and aware of the changing traffic patterns. A temporary detour was used to close Bethlehem Road so it could be reconstructed. Linton Hall Road also carried more than over 10,000 vehicles per day and had numerous residential areas along the corridor. The traffic control measures used along the Sudley Manor Drive connections were also used along Linton Hall Road. We also used a temporary concrete barrier along the Linton Hall Road project **Public Relations:** The public wanted both projects from the onset, voting on a bond referendum to pay for it. With little to no opposition, we focused on informing the public of project elements and addressing right-of-way concerns. CH2M HILL supported the PWC community and provided graphics and handouts at public meetings. We met with residents individually and at homeowner association meetings to review project details, solicit feedback about new concerns, and review potential sound wall locations. We worked with property owners to analyze roadway impacts, negotiate for land dedication, and replace trees. We made efforts to ensure adequate entrances and other access management concerns for properties during construction. **Environmental Compliance:** Based on a preliminary field survey, the most significant environmental impacts caused by the proposed project were impacts to wetlands and sensitive waterways. The project required general water protection permits. Wetland surveys were conducted to delineate and survey wetlands in support of permitting activities. The culvert entrance minimized channel damage and allowed for easier fish passage. CH2M HILL coordinated with regulatory agencies about beaver dams in the project area to open stream blockages. This significantly reduced the limits of water resource impact areas allowing the project to qualify to use streamlined permitting processes. We developed a unique armoring system for the bridge abutments of the Linton Hall Road Bridge over the tributary of Broad Run, which included a design to launch the armor protection into the stream during a large storm event; allow placement of the protection with significantly reduced encroachment into the stream; and reduce encroachment and mitigation requirements to allow the permitting to stay within the requirements for streamlined processing. **Bridges:** A new 82-foot bridge with MSE wall abutments was built over the NSRR and provided sufficient horizontal clearance to add another track in the future. The work was performed adjacent to the NSRR with up to 12 trains passing through the construction area daily. The MSE walls, which were constructed near environmental permitted areas, were flagged and monitored daily to ensure permit compliance. A sanitary sewer was relocated from within the proposed roadway footprint. **Utility Relocation:** CH2M HILL managed extensive utility relocations (high-pressure gas, major overhead power, water, sewer, and fiber optics) for both projects. Relocations were accomplished while dovetailing activities into the construction schedule in a phased approach to accelerate the overall project delivery. **Right-of-Way Acquisition:** CH2M HILL worked directly with VDOT to identify land acquisition needs for limited access right-of-way. This enabled expedited approvals that, on later projects with VDOT, resulted in a 60 percent right-of-way acquisition time savings.	Tom Blaser, Director of Transportation Prince William County 1 County Complex Court Prince William County, VA 22192 703-792-6824	2009	2009	TOTAL: $30,000 PRIMARY ACTIVITIES: Design, Construction, Roadway Realignment, Bridge Replacement, Utilities Relocation, QA/QC, Right-of-Way, Maintenance of Traffic, Environmental	TOTAL: $72,000 (client added amendment) PRIMARY ACTIVITIES: Design, Construction, Roadway Realignment, Bridge Replacement, Utilities Relocation, QA/QC, Right-of-Way, Maintenance of Traffic, Environmental	TOTAL: $72,000 PRIMARY ACTIVITIES: Design, Construction, Roadway Realignment, Bridge Replacement, Utilities Relocation, QA/QC, Right-of-Way, Maintenance of Traffic, Environmental

ATTACHMENT 4.3.1.5(a)
LEAD CONTRACTOR - WORK HISTORY FORM
(LIMIT 1 PAGE PER PROJECT)

Work by Lead Contractor - three (3) projects which best illustrates current qualifications relevant to this Project.							
a. Project Name & Location	**b. Narrative describing nature of Firm's Responsibilities; Identify the Lead Designer.**	**c. Client/Owner/Project Manager who can verify Firm's responsibilities. Include address and current phone number.**	**d. Contract Completion Date (Original)**	**e. Contract Completion Date (Actual or Estimated)**	**f. Estimated Value (in Thousands)**		
					Original Contract Value	**Final or Estimated Contract Value**	**Dollar Value of Work for Which Firm Was/Is Responsible**
(2) I-81 Design-Build Corridor Safety and Operational Improvements, Salem, VA	**Lead Designer:** CH2M HILL **PROJECT ACHIEVEMENTS:** Significant construction cost reductions achieved through the use of innovative retaining walls to reduce bridge span lengths. ● Parallel design efforts reduced the design schedule by 50 percent. ● Led an aggressive 8-month design schedule and gained approval to begin construction on time and under budget. CH2M HILL's integrated design-build team is leading the design and construction of a 5-mile truck climbing lane in the southbound direction of I-81, including transitions, tapers, and drainage improvements; replacement of 3 bridges; shoulder improvements; upgrading all guardrails; retaining walls; and widening and improvements at bridge connections. The scope of work includes design; environmental permitting; right-of-way acquisition; roadway; bridges; signage, and QA/QC. The design concepts accommodate future expansion, including a widened bridge deck and full depth shoulders to accommodate a future travel lane, and a longer bridge to accommodate additional railroad tracks under I-81 at the bridge over Norfolk Southern Railway. Overpass bridge spans were reduced utilizing retaining walls thus reducing future maintenance costs. The project is under construction. **Maintenance of Traffic:** The primary goal is to maintain capacity and normal traffic speed on I-81 throughout construction. To meet this goal, we are separating the work area from the existing travel lanes, maintaining full width lanes, proper buffer zones between travel lanes and barriers, extending the lengths of emergency pull-offs, proper messaging, and providing assistance to motorists when needed. During peak hours, 2 southbound lanes are kept open, focusing on maintaining safety for commuters and area residents. The high amount of blasting and rock-moving requires some daytime closures, such as rolling closures conducted with special attention to safety of motorists. During higher traffic periods, we partnered with VDOT to add a detour plan as a traffic management option. During bridge construction, we maintained east/west connectivity, both over and under I-81 for bridge replacements, and have also maintained access to private drives during construction. **Public Relations:** CH2M HILL's public relations focused on providing a supportive public with information and updates about the project. This included informing people and organizations of the major project elements, working with emergency service providers and highway users to understand and address potential traffic impacts from the construction, and addressing any specific right-of-way concerns. The effort included five significant tasks during the design phase of the project that transitioned into two continuing tasks during the construction phase. The first task was to prepare an incident response plan for accidents, construction traffic delays, and other site incidents that might require detours or road closures. CH2M HILL created a decision logic tree and detailed response plan that was prepared in close coordination with VDOT Traffic Operations Centerl staff, Montgomery County and the City of Christiansburg emergency personnel, and local EMS providers and local schools. In close coordination with the VDOT Salem District Public Affairs office, CH2M HILL developed a standard format weekly traffic impact update notice that was incorporated into the VDOT 511 system each week. **Environmental Compliance:** We led the environmental documentation and permitting. The project had complex geotechnical issues and the environmental permitting needed to account for waste and borrow areas during construction. We led an aggressive 8-month design schedule and gained approval to begin construction on time. CH2M HILL obtained approvals and gained necessary environmental permits to begin initial construction activities 3 months after NTP and full construction activities 7 months after NTP, including mitigation credits. **Bridges:** CH2M HILL performed the preliminary and final design for the bridges, including two road crossings over I-81. Both bridges used designs with identical details, and the substructures and superstructures were designed in parallel; reducing the design schedule by 50 percent. The approaches to the bridges were modified to eliminate curvature or superelevation transition to improve safety, reduce right-of-way impacts, eliminate deck drains, and improve the durability of the bridge. Integral abutments were used to eliminate bridge joints and reduce VDOT's maintenance requirements, and overall span lengths were shortened through the use of retaining walls. We worked closely with the NSRR on design submittal reviews and received approvals ahead of schedule. **Utility Relocation:** CH2M HILL worked closely with utility owners to overcome challenges and make changes to the preferred alignment, ultimately achieving utility relocations 90 days ahead of schedule. The team coordinated and discussed conflicts and relocations with the Transmission and Distribution offices of Appalachian Power Company, a division of American Electric Power, Verizon Virginia, Inc., Spectra Energy, Comcast Cable, NTELOS, Montgomery County Public Service Authority, and the Town of Christiansburg Utilities and Public Works. **Right-of-Way Acquisition:** CH2M HILL and our sub-consultant coordinated directly with adjacent property owners to obtain rights-of-entry during the right-of-way acquisition process which allowed for construction to begin soon after offers were presented to owners. The Senior Project staff members meet with property owners regularly to address any concerns and answer any questions the property owners may have.	Robert Phlegar, P.E. Program Manager Virginia Department of Transportation 731 Harrison Avenue, Salem, VA 24153 540-378-5083	2013	2013	TOTAL: $75,370 PRIMARY ACTIVITIES: Design, Construction, Roadway Realignment, Bridge Replacement, Utilities Relocation, QA/QC, Right-of-Way, Maintenance of Traffic, Environmental	TOTAL: $75,370 PRIMARY ACTIVITIES: Design, Construction, Roadway Realignment, Bridge Replacement, Utilities Relocation, QA/QC, Right-of-Way, Maintenance of Traffic, Environmental	TOTAL: $75,370 PRIMARY ACTIVITIES: Design, Construction, Roadway Realignment, Bridge Replacement, Utilities Relocation, QA/QC, Right-of-Way, Maintenance of Traffic, Environmental

ATTACHMENT 4.3.1.5(a)
LEAD CONTRACTOR - WORK HISTORY FORM
(LIMIT 1 PAGE PER PROJECT)

Work by Lead Contractor - three (3) projects which best illustrates current qualifications relevant to this Project.

a. Project Name & Location	b. Narrative describing nature of Firm's Responsibilities; Identify the Lead Designer.	c. Client/Owner/Project Manager who can verify Firm's responsibilities. Include address and current phone number.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Estimated Value (in Thousands)		
					Original Contract Value	Final or Estimated Contract Value	Dollar Value of Work for Which Firm Was/Is Responsible
(3) I-405 Renton Stage 2 Design-Build, King County, WA	**Lead Designer:** CH2M HILL **PROJECT ACHIEVEMENTS:** Design innovations saved 30 percent of the initial baseline quantities, with no decrease in operational benefits. ● Delivered 9 months ahead of schedule. ● Won 2010 Gold MarCom Award, Association of Marketing and Communication Professionals; 2010 Local Outstanding Civil Engineering Achievement Award, Seattle Chapter of American Society for Civil Engineers; WSDOT Environmental Performance Incentive Award; 2011 AGC Environmental Excellence in Constructoin Management Award. CH2M HILL provided design and construction services to WSDOT through a joint venture for a 2-mile section of I-405, including access ramp improvements (adding one auxiliary lane in each direction between SR 167 and SR 169); construction of a new half diamond interchange at Talbot Road; and replacement of the Benson Road Bridge over I-405. The project is in the urban environment at the south end of the Renton Curves on I-405; the busiest section of interstate in the NW. CH2M HILL improved access ramps to the I-405 interchanges at SR 167 and SR 169, which in turn improved access to downtown Renton, relieved traffic demand on the I-405 interchanges at SR 167 and SR 169, improved safety, increased capacity, and reduced congestion. The Renton Stage 2 project was developed in accordance with the urban design criteria established for the I-405 Corridor. This includes aesthetic geometric criteria for size and scale; patterns on all retaining walls, bridge elements, and railings; and a specified pallet of landscape materials. This is the first major project in the corridor designed with the distinctive horizontal tops and vertical steps on all retaining and noise walls. American Disability Act criteria were employed where excessive grades on sidewalks were a challenge. **Maintenance of Traffic:** MOT was a major commitment on the project. The CH2M HILL team limited transitions of mainline traffic transitions, two for the entire project duration. Other than night-time lane closures, work was sequenced for the entire length of the corridor with each stage. The hazards of frequent changes and ghost striping on the finished PCC surface were significantly reduced. Through careful coordination with WSDOT and the City, we widened a major north-south surface street through downtown Renton and installed 2 new signalized intersections for the interchange. In addition, we realigned a half mile section of Benson Road right in front of City Hall, while maintaining traffic throughout construction. We minimized traffic disruptions by limiting lane closures to off-peak hours. **Public Relations:** CH2M HILL worked within a legacy of ill feelings towards WSDOT dating back more than 20 years. After uncovering the depth of emotion, the team developed an outreach plan for each neighborhood and various levels of contacts within city government. Public involvement was planned in conjunction with WSDOT and City of Renton staff to include all affected communities. Team members attended community picnics, public meetings, and sidewalk neighborhood meetings to explain the project improvements and its effects during construction. Weekly updates to noise and traffic impacts were communicated through door-to-door flyers and newsletters, and posted on the WSDOT Web site. Major events, such as girder erection with rolling slowdowns and demolition of structures, were accomplished through major communication campaigns organized through WSDOT. **Environmental Compliance:** Regulatory permits were followed for in-stream work around Thunder Hills Creek, the City of Renton Aquifer Protection Zone, noise variances, and work adjacent to wetlands. Our team secured wetlands with high-visibility fencing and installed TESC measures as hold points before entering any work area. In-stream work was sequenced to occur within in-water work windows, and reports were issued when work was completed. All ground penetrations within the aquifer zone were lined with impermeable liners. A noise hotline and multiple mitigation measures were provided to address community concerns. **Bridges:** Unique structures on the project included (1) Benson Road Bridge Replacement—The 520-foot bridge features a 3-span, spliced, post-tensioned precast girder bridge using the first application of WF100PTG girders in the state, with a maximum span length of 207 feet; and (2) Southbound Off-Ramp Bridge—The two-span prestressed girder bridge was designed using WF58G girders for a curved alignment and included design of an integral straddle bent at the interior pier. The bridges feature aesthetic treatments in accordance with I-405 corridor urban design guidelines. Both were designed to current WSDOT displacement-based seismic design criteria on a 4-month fast-track schedule. The project includes stream habitat restoration and design and construction of 12 retaining walls of various types, including structural earth, soil nail, gravity block, and concrete cantilever. **Utility Relocation:** Several utilities relocations were required. The underground utility concerns were critical to the success of the project, and required a very detailed coordination. Our team completed advanced stakeout of potholing, surveyed locations of underground utility markings and post-potholing markers, and compiled results from field efforts. CH2M HILL also developed a unique 3-D Utility Database that has been successfully incorporated across all design disciplines.	Lisa Hodgson, WSDOT Project Engineer 600 108th Avenue NE, Suite 405 Bellevue, WA 98004 425-496-2038	March 2011	June 2010	TOTAL: $83,000 PRIMARY ACTIVITIES: Design, Construction, Roadway Realignment, Bridge Replacement, Utilities Relocation, QA/QC, Maintenance of Traffic, Environmental	TOTAL: $83,000 PRIMARY ACTIVITIES: Design, Construction, Roadway Realignment, Bridge Replacement, Utilities Relocation, QA/QC, Maintenance of Traffic, Environmental	TOTAL: $83,000 PRIMARY ACTIVITIES: Design, Construction, Roadway Realignment, Bridge Replacement, Utilities Relocation, QA/QC, Maintenance of Traffic, Environmental

ATTACHMENT 4.3.1.5(b)
LEAD DESIGNER - WORK HISTORY FORM
(LIMIT 1 PAGE PER PROJECT)

Work by Lead Designer - three (3) projects which best illustrates current qualifications relevant to this Project.							
a. Project Name & Location	**b. Narrative describing nature of Firm's Responsibilities; Identify the Lead Contractor.**	**c. Client/Owner/Project Manager who can verify Firm's responsibilities. Include address and current phone number.**	**d. Contract Completion Date (Original)**	**e. Contract Completion Date (Actual or Estimated)**	**f. Estimated Value (in Thousands)**		
					Original Contract Value	**Final or Estimated Contract Value**	**Dollar Value of Work for Which Firm Was/Is Responsible**
(1) Sudley Manor Drive and Linton Hall Road Design-Build, Prince William County, VA	**Lead Contractor:** CH2M HILL **PROJECT ACHIEVEMENTS:** All phases completed ahead of schedule. ● Design and construction of four-lane divided roadway in an urban environment with a new bridge over a creek, and intersection improvements. CH2M HILL was the prime contractor and lead designer responsible for delivering this project to Prince William County (PWC) and final acceptance by VDOT into the state highway system. Our scope of work entailed all facets of a design-build contract including all design, structural, bridge construction, roadway construction, utility relocation, environmental permitting and mitigation, signal installation, drainage installation, surveying, construction management, quality assurance, quality control, subcontract administration, right-of-way acquisition, and project management. CH2M HILL designed and constructed improvements valued at $72 million to Sudley Manor Drive and Linton Hall Road, two primary arterials located in one of the fastest growing areas of the county. As PWC's first design-build project involving a public-private partnership, these roadway improvements enhance regional mobility and safety and support continued economic development in the area. **Maintenance of Traffic:** The Sudley Manor Drive project crossed several existing roadways that required new turn lanes, median work, mill and overlay and one road that required 500 feet of reconstruction due to a grade change. The 10,000 vehicles per day on Wellington Road and the 25,000 vehicles per day on Prince William Parkway presented challenges for building the required improvements. Portable message signs, adequate lane widths, proper traffic control devices and temporary pavement were used to keep the traveling public safe and aware of the changing traffic patterns. A temporary detour was used to close Bethlehem Road so it could be reconstructed. Linton Hall Road also carried more than over 10,000 vehicles per day and had numerous residential areas along the corridor. The traffic control measures used along the Sudley Manor Drive connections were also used along Linton Hall Road. We also used a temporary concrete barrier along the Linton Hall Road project **Public Relations:** The public wanted both projects from the onset, voting on a bond referendum to pay for it. With little to no opposition, we focused on informing the public of project elements and addressing right-of-way concerns. CH2M HILL supported the PWC community and provided graphics and handouts at public meetings. We met with residents individually and at homeowner association meetings to review project details, solicit feedback about new concerns, and review potential sound wall locations. We worked with property owners to analyze roadway impacts, negotiate for land dedication, and replace trees. We made efforts to ensure adequate entrances and other access management concerns for properties during construction. **Environmental Compliance:** Based on a preliminary field survey, the most significant environmental impacts caused by the proposed project were impacts to wetlands and sensitive waterways. The project required general water protection permits. Wetland surveys were conducted to delineate and survey wetlands in support of permitting activities. The culvert entrance minimized channel damage and allowed for easier fish passage. CH2M HILL coordinated with regulatory agencies about beaver dams in the project area to open stream blockages. This significantly reduced the limits of water resource impact areas allowing the project to qualify to use streamlined permitting processes. We developed a unique armoring system for the bridge abutments of the Linton Hall Road Bridge over the tributary of Broad Run, which included a design to launch the armor protection into the stream during a large storm event; allow placement of the protection with significantly reduced encroachment into the stream; and reduce encroachment and mitigation requirements to allow the permitting to stay within the requirements for streamlined processing. **Bridges:** A new 82-foot bridge with MSE wall abutments was built over the NSRR and provided sufficient horizontal clearance to add another track in the future. The work was performed adjacent to the NSRR with up to 12 trains passing through the construction area daily. The MSE walls, which were constructed near environmental permitted areas, were flagged and monitored daily to ensure permit compliance. A sanitary sewer was relocated from within the proposed roadway footprint. **Utility Relocation:** CH2M HILL managed extensive utility relocations (high-pressure gas, major overhead power, water, sewer, and fiber optics) for both projects. Relocations were accomplished while dovetailing activities into the construction schedule in a phased approach to accelerate the overall project delivery. **Right-of-Way Acquisition:** CH2M HILL worked directly with VDOT to identify land acquisition needs for limited access right-of-way. This enabled expedited approvals that, on later projects with VDOT, resulted in a 60 percent right-of-way acquisition time savings.	Tom Blaser, Director of Transportation Prince William County 1 County Complex Court Prince William County, VA 22192 703-792-6824	2009	2009	$30,000 PRIMARY ACTIVITIES: Design, Construction, Roadway Realignment, Bridge Replacement, Utilities Relocation, QA/QC, Right-of-Way, Maintenance of Traffic, Environmental	$72,000 (The client added a $42 million amendment) PRIMARY ACTIVITIES: Design, Construction, Roadway Realignment, Bridge Replacement, Utilities Relocation, QA/QC, Right-of-Way, Maintenance of Traffic, Environmental	$72,000 PRIMARY ACTIVITIES: Design, Construction, Roadway Realignment, Bridge Replacement, Utilities Relocation, QA/QC, Right-of-Way, Maintenance of Traffic, Environmental

ATTACHMENT 4.3.1.5(b)
LEAD DESIGNER - WORK HISTORY FORM
(LIMIT 1 PAGE PER PROJECT)

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(2) I-81 Design-Build Corridor Safety and Operational Improvements, Salem, VA	**Lead Contractor:** CH2M HILL **PROJECT ACHIEVEMENTS:** Significant construction cost reductions achieved through the use of innovative retaining walls to reduce bridge span lengths. ● Parallel design efforts reduced the design schedule by 50 percent. ● Led an aggressive 8-month design schedule and gained approval to begin construction on time and under budget. CH2M HILL's integrated design-build team is leading the design and construction of a 5-mile truck climbing lane in the southbound direction of I-81, including transitions, tapers, and drainage improvements; replacement of 3 bridges; shoulder improvements; upgrading all guardrails; retaining walls; and widening and improvements at bridge connections. The scope of work includes design; environmental permitting; right-of-way acquisition; roadway; bridges; signage, and QA/QC. The design concepts accommodate future expansion, including a widened bridge deck and full depth shoulders to accommodate a future travel lane, and a longer bridge to accommodate additional railroad tracks under I-81 at the bridge over Norfolk Southern Railway. Overpass bridge spans were reduced utilizing retaining walls thus reducing future maintenance costs. The project is under construction. **Maintenance of Traffic:** The primary goal is to maintain capacity and normal traffic speed on I-81 throughout construction. To meet this goal, we are separating the work area from the existing travel lanes, maintaining full width lanes, proper buffer zones between travel lanes and barriers, extending the lengths of emergency pull-offs, proper messaging, and providing assistance to motorists when needed. During peak hours, two southbound lanes are kept open, focusing on maintaining safety for commuters and area residents. The high amount of blasting and rock-moving requires some daytime closures, such as rolling closures conducted with special attention to safety of motorists. During higher traffic periods, we partnered with VDOT to add a detour plan as a traffic management option. During bridge construction, we maintained east/west connectivity, both over and under I-81 for bridge replacements, and have also maintained access to private drives during construction. **Public Relations:** CH2M HILL's public relations focused on providing a supportive public with information and updates about the project. This included informing people and organizations of the major project elements, working with emergency service providers and highway users to understand and address potential traffic impacts from the construction, and addressing any specific right-of-way concerns. The effort included five significant tasks during the design phase of the project that transitioned into two continuing tasks during the construction phase. The first task was to prepare an incident response plan for accidents, construction traffic delays, and other site incidents that might require detours or road closures. CH2M HILL created a decision logic tree and detailed response plan that was prepared in close coordination with VDOT Traffic Operations Center staff, Montgomery County and the City of Christiansburg emergency personnel, and local EMS providers and local schools. In close coordination with the VDOT Salem District Public Affairs office, CH2M HILL developed a standard format weekly traffic impact update notice that was incorporated into the VDOT 511 system each week. **Environmental Compliance:** We led the environmental documentation and permitting. The project had complex geotechnical issues and the environmental permitting needed to account for waste and borrow areas during construction. We led an aggressive 8-month design schedule and gained approval to begin construction on time. CH2M HILL obtained approvals and gained necessary environmental permits to begin initial construction activities 3 months after NTP and full construction activities 7 months after NTP, including mitigation credits. **Bridges:** CH2M HILL performed the preliminary and final design for the bridges, including two road crossings over I-81. Both bridges used designs with identical details, and the substructures and superstructures were designed in parallel; reducing the design schedule by 50 percent. The approaches to the bridges were modified to eliminate curvature or super elevation transition to improve safety, reduce right-of-way impacts, eliminate deck drains, and improve the durability of the bridge. Integral abutments were used to eliminate bridge joints and reduce VDOT's maintenance requirements, and overall span lengths were shortened through the use of retaining walls. We worked closely with the NSRR on design submittal reviews and received approvals ahead of schedule. **Utility Relocation:** CH2M HILL worked closely with utility owners to overcome challenges and make changes to the preferred alignment, ultimately achieving utility relocations 90 days ahead of schedule. The team coordinated and discussed conflicts and relocations with the Transmission and Distribution offices of Appalachian Power Company, a division of American Electric Power, Verizon Virginia, Inc., Spectra Energy, Comcast Cable, NTELOS, Montgomery County Public Service Authority, and the Town of Christiansburg Utilities and Public Works. **Right-of-Way Acquisition:** CH2M HILL and our sub-consultant coordinated directly with adjacent property owners to obtain rights-of-entry during the right-of-way acquisition process which allowed for construction to begin soon after offers were presented to owners. The Senior Project staff members meet with property owners regularly to address any concerns and answer any questions the property owners may have.	Robert Phlegar, P.E. Program Manager Virginia Department of Transportation 731 Harrison Avenue, Salem, VA 24153 540-378-5083	2013	2013	TOTAL: $75,370 PRIMARY ACTIVITIES: Design, Construction, Roadway Realignment, Bridge Replacement, Utilities Relocation, QA/QC, Right-of-Way, Maintenance of Traffic, Environmental	TOTAL: $75,370 PRIMARY ACTIVITIES: Design, Construction, Roadway Realignment, Bridge Replacement, Utilities Relocation, QA/QC, Right-of-Way, Maintenance of Traffic, Environmental	TOTAL: $75,370 PRIMARY ACTIVITIES: Design, Construction, Roadway Realignment, Bridge Replacement, Utilities Relocation, QA/QC, Right-of-Way, Maintenance of Traffic, Environmental

ATTACHMENT 4.3.1.5(b)
LEAD DESIGNER - WORK HISTORY FORM
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(3) Virginia Route 288 Design-Build, Richmond, VA	**Lead Contractor:** CH2M HILL **PROJECT ACHIEVEMENTS:** Innovative approach saved more than $47 million and the project was completed 3 years sooner than with conventional delivery. ●Worked closely with VDOT and successfully obtained initial permissions only 3 months after the start of the project for construction for a new alignment segment that needed to be open to traffic 8 months after notice to proceed or VDOT would face a developer claim. ● Instituted over 25 major value engineering revisions to optimize designs with the contractor, resulting in $5 million in cost savings. ● Produced more than 2,100 roadway work package sheets and over 1,500 bridge work package sheets and get them approved for construction in phases on a 300-day schedule. CH2M HILL provided design, construction, and quality management services for 10.5 miles of new four-lane freeway and the expansion of 7 miles of 2-lane highway from the Route 76 in Chesterfield County to Interstate 64 in Goochland County. The scope of work included 6 new interchanges, 23 new bridges, and modifying 2 interchanges. The project required significant coordination with the contractor on fast-track schedules for delivery of plans in order to meet construction schedules and to protect VDOT from developer claims. We managed design staff in 7 of our offices and those of 6 major subconsultants. **Maintenance of Traffic:** Our team developed an innovative traffic detour and shift plans that allowed closing of I-64 for bridge construction. The accurate traffic volume forecasts led to minimal traffic delays and resulted in positive news coverage during construction. VDOT used these successful techniques on other interchange projects in the Richmond District. **Public Relations:** A comprehensive Public Information Plan informed stakeholders and affected businesses and residents of scheduled work, road closures, and detours. We worked closely with residents and businesses to minimize impacts and to resolve their issues. **Environmental Compliance:** The project involved considerable environmental compliance, including the environmentally sensitive James River Bridge crossing. In-stream work included six 8-foot-diameter drilled shaft foundations. Restrictions were placed on in-stream work for fish spawning cycles. A camera was placed on the bank of the river to continuously monitor river conditions for potential contamination from construction activities. The data were transmitted directly to the Virginia Department of Environmental Conservation Web site. No spills or contaminants were released to the river during construction. VDOT performed the EIS, EA, and archeological studies. We successfully avoided two archeological sites. **Bridges:** The scope of work included modifying 2 interchanges, and designing and constructing 6 interchanges and 23 bridges. Our team designed bridges that ranged from the 3,500-foot twin bridges across the James River to the 250-foot bridges across local tributaries. We designed 4 other multi-span bridges, both concrete and steel, ranging from 65 to 250 feet. Bridge types consisted of prestressed concrete girder and steel plate I-girder bridges, including three new horizontally curved flyover structures for the VA 288/I-64 interchange at the project's northern terminus. Aesthetic treatments were built into the design using Illinois Rail, MSE abutment walls, and other improvements to the appearance. For the project, CH2M HILL designed the highest MSE abutment wall constructed in the country. The wall is 85 feet tall and provided a cost savings by eliminating one pier and shortening the spans across I-64. **Utility Relocation:** CH2M HILL coordinated with county water and sewer companies to install large diameter sleeves for future mains to cross Route 288. We provided design for electrical utilities, signs, signals, and associated equipment throughout the corridor, including coordination of power drop locations. We coordinated with Dominion Virginia Power, Verizon, and Comcast to provide conduits for future use on new bridges. We also provided utility relocation coordination and design in the West Park development area, where we removed and reset all lighting, including redesign of the conduit and irrigation systems and relocation of communication and power on West Creek Parkway, Broad Branch Drive, and Tuckahoe Creek Parkway. **Right-of-Way Acquisition:** CH2M HILL facilitated negotiations with such major commercial property owners as Capital One, Carmax, and West Creek development to negotiate exchanges of right-of-way for engineering and construction services. We coordinated with the developer's engineers to determine utility access and prior rights for utility easements. VDOT had obtained the preponderance of right-of-way for the project before construction began, thus enabling a smooth construction process. CH2M HILL coordinated with property owners to meet VDOT commitments during construction and to apprise them of activities that could affect their properties. Right-of-way challenges included negotiations with property owners who had not finished their plans for development before project began, and thus had to negotiate right-of-way during construction. Resolving these issues with proactive, innovative techniques avoided delays.	Malcolm Kerley, P.E. Virginia Department of Transportation 1401 East Broad Street Richmond, VA 23219 804-786-2801	November 2003	November 2004 (hurricane-related weather delay)	TOTAL: $236,000 PRIMARY ACTIVITIES: Design, Construction, Roadway Realignment, Bridge Replacement, Utilities Relocation, QA/QC, Right-of-Way, Maintenance of Traffic, Environmental	TOTAL: $236,000 PRIMARY ACTIVITIES: Design, Construction, Roadway Realignment, Bridge Replacement, Utilities Relocation, QA/QC, Right-of-Way, Maintenance of Traffic, Environmental	TOTAL: $236,000 PRIMARY ACTIVITIES: Design, Construction, Roadway Realignment, Bridge Replacement, Utilities Relocation, QA/QC, Right-of-Way, Maintenance of Traffic, Environmental