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Statement of Qualifications Contract ID Number: C00093074DB96 State Project No.: 0081-154-733, P101, R201, C501, B601, B616 Federal Project No.: IM-081-2(992)

I-81 Bridge Replacement at Exit 114



Submitted to: Commonwealth of Virginia Department of Transportation (VDOT) Central Office Mail Center Loading Dock Entrance 1401 E. Broad Street Richmond, Virginia 23219 Attention: Stephen D. Kindy, P.E. (APD Division)



EXPERIENCE Transportation

Submitted by: Archer Western Construction, LLC 2 Wisconsin Circle, Suite 200, Chevy Chase, MD 20815





I-81 Bridge Replacement at Exit 114





Tran Systems

Submitted by: Archer Western Construction, LLC 2 Wisconsin Circle, Suite 200 Chevy Chase, MD 20815



September 6, 2017

Commonwealth of Virginia Department of Transportation (VDOT) Central Office Mail Center Loading Dock Entrance 1401 E. Broad Street Richmond, Virginia 23219 Attention: Stephen D. Kindy, P.E. (APD Division)

SUBJECT: Statement of Qualifications – Contract ID Number: C00093074DB96 I-81 Bridge Replacement at Exit 114 From: 0.381 Mi. South of Christiansburg SCL To: 0.510 Mi. North of Christiansburg SCL State Project No.: 0081-154-733, P101, R201, C501, B601, B616 Federal Project No.: IM-081-2(992)

Dear Mr. Kindy:

The design-build team of Archer Western Construction, LLC (AWC), and TranSystems Corporation. (TS) is pleased to submit this statement of qualifications for the I-81 Bridge Replacement at Exit 114 Project in Christiansburg.

We have assembled a highly experienced team to further enhance our overall abilities and provide the Department the most qualified team to successfully complete this challenging project. Our project team includes experts in the critical areas of this project, including developing and implementing TMPs for interstate highways, right-of-way acquisition, utility and third-party coordination, and quality assurance.

Since 2010, ENR has ranked AWC as this nation's Largest Bridge Builder, and as the 4th Largest Highway Contractor. TranSystems is nationally recognized for providing design of simple to complex major bridges, bridge structure safety inspections, evaluation, and rehabilitation. The TranSystems' Bridge Group is ranked No. 9 on ENR's 2017 List of the Top 25 Bridge firms in the United States. Together, AWC and TranSystems brings invaluable experience from projects on this country's most congested interstate highways.

3.2.1 OFFEROR'S NAME AND ADDRESS: As prime contractor and design-builder, the official representative for the I-81 Bridge Replacement at Exit 114 project will be as follows:

Offeror's Name: Archer Western Construction, LLC Address: 2 Wisconsin Circle, Suite 200, Chevy Chase, MD 20815

3.2.2 OFFEROR'S POINT OF CONTACT: Our proposed Design-Build Project Manager will serve as the Point of Contact:

Offeror's Primary Contact: David Johnson, Senior Project Manager Address: 2 Wisconsin Circle, Suite 200, Chevy Chase, MD 20815 Phone: 301-347-4680 Fax: 301-347-4681 Email: dwjohnson@walshgroup.com

3.2.3 PRINCIPAL OFFICER OF THE OFFEROR: The Principal Officer of Archer Western is as follows:

Offeror's Principal Officer: **EJ O'Neill, Vice President** *Address*: 2 Wisconsin Circle, Suite 200, Chevy Chase, MD 20815 *Phone*: 301-347-4680



- **3.2.4 STRUCTURE OF OFFEROR:** The legal structure of the team is organized such that Archer Western will be the signatory to the design-build contract with VDOT, as a limited liability company with all financial responsibility. Additionally, Archer Western will provide all performance and payment bonds for the project. TS, serving as the Lead Designer, will be a subcontractor to Archer Western. Additional subconsultant Team members that will contract to TS are shown on our organizational chart. Finally, **McDonough Bolyard Peck, Inc.**, serving as the **QAM** will be a subcontractor to AWC.
- **3.2.5** LEGAL NAMES OF LEAD CONTRACTOR AND LEAD DESIGNER: The full legal name of the Offeror is: Archer Western Construction, LLC. The full legal name of the Lead Designer is: TranSystems Corporation.
- **3.2.6** AFFILIATES & SUBSIDIARIES: A complete list of affiliates and subsidiary companies may be found in the Appendix.
- **3.2.7 DEBARMENT FORMS:** Certifications for Debarment for both Primary and Lower Tier Covered Transactions have been completed and executed for the Offeror and all subconsultants, subcontractors, and other entities identified as members of the AWC Team and may be found in the Appendix.
- **3.2.8 VDOT PREQUALIFICATION CERTIFICATE:** Archer Western's prequalification ID is A210, and our status is active. Please refer to the Appendix for supporting documentation.
- **3.2.9** LETTER OF SURETY: A surety letter from our bonding company is included in the Appendix, confirming their willingness to provide any and all bonds for this project.
- **3.2.10** SCC/DPOR INFORMATION AND EVIDENCE: The matrix in the Appendix delineates the respective state registrations and licensures of the AWC Team. The Offeror and all team members are eligible at the time of the SOQ submittal, under the law and relevant regulations, to offer and to provide any services proposed or related to the project. Respective copies of licenses may be found in the Appendix.
- **3.2.11 DISADVANTAGED BUSINESS ENTERPRISE (DBE):** AWC supports the Disadvantaged Business Enterprise (DBE) program and is committed to meeting the 8% goal for the design and construction of this project utilizing Virginia certified DBE companies.

We appreciate the opportunity to submit our qualifications for the design and construction of the *I-81 Bridge Replacement at Exit 114* project. Our team contains both the highway and bridge experience necessary to understand and mitigate the unique challenges on this project. Archer Western, TS, and our design partners create an integrated team focused on meeting your objectives for this project, to provide additional capacity, reduce congestion, improve accessibility and mobility, and improve safety through this section of I-81.

The Archer Western Team is the right team to deliver this project and we look forward to working with you on this critical project for the Christiansburg area and the Commonwealth.

Sincerely,

Archer Western Construction, LLC

Stephen P. Carter Jr

Stephen P. Carter Jr Senior Vice President



I-81 Bridge Replacement at Exit 114







Submitted by: Archer Western Construction, LLC 2 Wisconsin Circle, Suite 200 Chevy Chase, MD 20815

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3.3 Offeror's Team Structure

The Offeror, Archer Western Construction, LLC brings together industry leading design and construction firms with the resources, experience, and capabilities to manage and construct highprofile highway projects. Supporting team members, many of whom have a long history in Virginia, were carefully selected based on previous working relationships and capabilities in providing complementary services in design, quality, and right-of-way acquisition services. Structured as an integrated organization, our team supports effective communication with established internal and external relationships that will serve as the foundation for our work with VDOT. This approach will help us manage the design and construction requirements necessary to provide VDOT with a project that meets the goals of improving accessibility and mobility, and improving safety throughout this section of the I-81 corridor.

The Archer Western Team

Table 3.3.1 presents all the members of the Archer Western Team.

Archer Western Construction (AWC) is a general contracting, construction management, and design-build firm, that is a member of the Walsh Construction Group, a fourth generation, family owned business dating back 119 years. AWC has maintained its presence in Virginia since the 1980s, completing projects throughout the state. AWC traditionally self-performs demolition, wet utilities, storm drainage, concrete paving, concrete work, earthwork, foundations, bridges, and retaining walls.

TranSystems (TS) maintains a permanent staff of approximately 1,000 professionals in 43 offices nationally, placing them at No. 19 in ENR's 2017 Ranking of the Top Transportation Firms. The TranSystems' Bridge Group is uniquely qualified for this bridge replacement project, and is nationally recognized for providing design of simple to complex major bridges, bridge structure safety inspections, evaluation, and rehabilitation. The TranSystems' Bridge Group is ranked No. 9 on

Table 3.3.1 Team Members



(AWC) - Archer Western Construction

Offeror and Lead Contractor



EXPERIENCE Transportation

(TS) - TranSystems

Lead Design

ACCOMPONG ENGINEERING GROUP, LLC Engineering • Planning • Program/Project Management

(AEG) -Accompong Engineering Group (DBE) Roadway and Utilities



wheeler (Amec) - Amec Foster Wheeler

Geotechincal / Environmental



(H&B) –H&B Surveying and Mapping (SWaM) Surveying

> KDR KDR Real Estate Services

KDR Real Estate Serv

(KDR) - KDR Real Estate

Right-of-Way



(MBP) - McDonough Bolyard Peck

Quality Assurance



(SIR) - SIR

Public Information Outreach (SWaM)



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ENR's 2017 List of the Top 25 Bridge firms in the United States.

TranSystems excels in providing successful solutions to complex structural issues including multiple design stages and complex weaving patterns for traffic maintenance during construction, as well as, expert analysis to context sensitive design issues. Creating the critical links in the national highway and railway networks, TranSystems' engineers have produced award winning projects, noted for context sensitive design, environmental compatibility, and consistency with local culture and setting.

3.3.1 Identify Of and Information About The Key Personnel

AWC and TS have made the individuals in Table 3.3.2 available for the duration of the I-81 Bridge Replacement Project to fill the required Key Personnel roles. Resumes for key individuals are included in the Appendix.

3.3.2 Organizational Chart Showing the Chain of Command

Our organization chart, Figure 3.3.3 on the following page, presents a well-defined and integrated organization which identifies major functions and outlines the reporting relationships of personnel responsible for the management of design, construction, and QA/QC activities. We have organized our lower-level supervision and management team to align with our discipline based management approach. AWC is building upon our proven structure and relationships developed during the delivery of projects such as the I-395 Seminary Road Design-Build project and our design-build history to:

- Foster communication within our organization, VDOT, involved stakeholders such as the Town of Christiansburg, Montgomery County, VADEQ, local businesses, residents, and other utility owners
- Allocate resources efficiently to respond to project challenges
- Provide independence for quality, safety, and environmental personnel

Table 3.3.2

Qualification Highlights	Relevant Projects
David Johnson, Design-Build Proje	ect Manager
19 Years ExperienceDB ExperienceBridge Replacement Experience	 Bear Cut Bridge Rehabilitation, Miami, FL Alico Road Interchange, Fort Myers, FL Telegraph Road Interchange, Alexandria, VA,
Daniel Davis, PE, Design Manager	
 26 Years Experience DB Experience Bridge Replacement Experience	 I-95 Widening & Reconstruction Design-Build; Daytona Beach, FL I-64 over Rte 156 (Airport Drive) Bridge Replacements, Richmond, VA I-64/I-295 Interchange Ramps F & D, Richmond, Virginia
Kevin Kegebien, Construction Ma	nager
19 Years ExperienceDB ExperienceBridge Replacement Experience	 Harrison/Halsted Bridge Reconstruction, Chicago, IL Ohio River Bridges East End Crossing P3, Louisville, KY and IN U.S. 65/60 Interchange Ramp Replacement, Springfield, MO
Kevin Bocock, Quality Assurance	Manager
 22 Years Experience DB Experience Salem District Experience 	 Salem VDOT - Elm Avenue Design Build, Roanoke, VA Design-Build Culverts Region 1, VDOT, Staunton/Lynchburg Districts Downtown Tunnel, Midtown Tunnel, MLK Jr. Expressway, Norfolk, VA



 4



VDOT





QA Inspectors QA Testing

Quality Assurance

Manager

(MBP) - McDonough Bolyard Peck

(SIR) - SIR (SWAM)

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Functional Relationships

Our team is organized with logical reporting relationships to manage design and construction while maintaining distinct responsibilities and project controls.

Design-Build Project Manager (DBPM) – **David Johnson** reports to AWC's Project Executive, EJ O'Neill. Mr. Johnson will have primary responsibility for execution of the design, construction, project management, quality, safety, and public outreach and stakeholder communication. He is AWC's principal point of contact for VDOT. Mr. Johnson has five direct reports: Quality Assurance Manager, Design Manager, Construction Manager, Safety Manager, and Public Information Coordinator.

Quality Assurance Manager (QAM) – Kevin L. Bocock, PE, will report directly to the DBPM. Through the DBPM, the QAM organization will establish communication paths to the construction quality control and construction organization to ensure that the QAM is apprised of activities and to ensure that corrective actions and remediation are implemented as quickly as possible.

Design Manager (DM) – Daniel Davis,PE will report to the DBPM. Individual design disciplines and design subconsultants will report to Mr. Davis. The environmental team will also report to Mr. Davis during the design phase. He will ensure the overall design is in conformance with the contract documents.

Construction Manager (CM) / Design-Build Coordinator (DBC) – Kevin Kegebein Prior to construction start, during the design phase of the project, Kevin Kegebein will facilitate communication between design, construction, quality, and project management. The DBC reports to the DBPM and duties include actively participating in design Task Force Meetings, constructability reviews, and conveying field information.



Value-Added Personnel

Additionally, we commit two value-added positions that will facilitate constructability and enhance our commitment to safety of the traveling public and our construction work force, and lastly augment our public outreach approach.

Safety Manager (SM) – Jose Cortez will report to the DBPM. He is responsible for all aspects of safety during the life of the project. He will tailor AWC's corporate safety program to this project and oversee its implementation, adherence, and reporting.

Public Information Coordinator (PIC) – Michael Norvell, SIR, will report to the DBPM and will support Mr. Johnson in his responsibility to coordinate the Public outreach and Public meetings.

Effective Communication

Developing and maintaining clear and open lines of communication within the team, VDOT, and stakeholders is key to delivering a project that exceeds expectations. In addition to the reporting lines presented on our organizational chart, we will rely upon lessons learned from our most successful design-build projects. Examples that are key to the success of the Design Build process include:



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Partnering – Formal Partnering with VDOT and stakeholders is a key component on our projects. By aligning goals and establishing a framework for communications early in the project, we will be better able to respond to concerns in an atmosphere of mutual trust and work together to resolve issues before they affect the project. We have found that working in a formal partnering process resolves disputes early and mitigates risk to VDOT.

Internal Communications – Maximizing interaction between our design and construction teams will include co-location of design and construction personel. In addition, our weekly Task Force meetings serve as a forum to work through design and constructability issues in an over the shoulder setting that allows for open and honest communication allowing for goals to be met in a timely manner.

Coordination of Design and Construction – The design team organization for this project will be discipline based as presented in the organizational chart. The Task Force meetings are structured to engage engineers and construction professionals to exchange ideas, coordinate design requirements with means and methods, and develop innovative solutions to specific challenges presented throughout the design process. As the project progresses, task teams will be expanded to include participation from VDOT and other major stakeholders to the level they desire.

While coordination between VDOT and the Archer Western team is essential to the design-build process, coordination of various design disciplines is also critically important to ensure the quality and constructability of the design and life-cycle of the project.

Highway and bridge projects by nature involve many differing disciplines that must work in concert to provide a quality product. The I-81 Bridge Replacement Project involves structural, geotechnical, civil, traffic, utilities, surveys, ROW, environmental and, stormwater disciplines, as well as safety and quality issues that all must be closely coordinated in the task teams to minimize potential field issues. Archer Western has proven this approach to be successful on other design-build projects and will use the work collaboration tool on this project.

Public Outreach – David Johnson, our DBPM, with the support of Michael Norvell will be responsible for ensuring that our team interacts with stakeholders, businesses, and residents. The Team will support VDOT with all project messaging and information necessary to convey the status of the project as well as any information on upcoming events.

Separation of Quality Control and Quality Assurance

Archer Western will develop and execute the Quality Management System Plan (QMSP) in accordance with VDOT's "Minimum Requirements for QA and QC on Design-Build and PPTA Projects" (January 2012) and will include Design and Construction Quality Management (DQMP and CQMP). The QMSP will be prepared by the on-site quality management team and submitted to VDOT for review and approval. They will report directly to the QAM as presented on our organizational chart Figure 3.3-3.

Archer Western's QC Plan will detail our quality oversight including sampling, testing, inspection, document control, and communication.

The QA process will be independent of the QC process and fully staffed. QA personnel will not be assigned other duties or responsibilities. The QAM will have the authority to suspend field activities in the event QA tasks or issues are not complete or found to be non-conforming.





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Submitted by: Archer Western Construction, LLC 2 Wisconsin Circle, Suite 200 Chevy Chase, MD 20815

3.4 Experience of The Offeror's Team

Archer Western in combination with TranSystems offers significant experience and capability to deliver this critical project. We have a similar approach to business and ethics and share a corporate culture focused on safe project execution, quality, cost effectiveness, and customer satisfaction. Combined with our complimentary skill sets and experience delivering similar projects, this team embodies every capability necessary to make this project a success.

Previous DB Experience

Our team's impressive design-build successes on similar major transportation projects are described in the Work History Forms, located in the Appendix. We have extensive experience with bridges and interstate highways throughout the Mid-Atlantic and Southeast. This team's comprehensive project experience with similar design and construction challenges will allow our key staff to apply their lessons learned to the benefit of the I-81 Bridge Replacement Project. Through project design, development, and construction reflected in our Work History Forms, we have developed and fostered relationships with our entire team of design subconsultants.

Our Team Strengths

AWC and TS have developed a strong working relationship through recent projects such as the I-95 Reconstruction for FDOT, and Sunrail commuter rail system for FDOT. The Work History Forms show we have the basis to understand the risks associated with this project including: Traffic / MOT, Utilities and Geotechnical that will impact our approach to design and construction. Table 3.4.1 located on page 9 demonstrates additional Archer Western Team project experience.

We also have well established working relationships with local regulatory organizations. To enhance our team's experience we have added McDonough Bolyard Peck (MBP) as an exclusive member for this project. For the Route 220 designbuild safety improvements project along the Route 220 corridor in Botetourt County, MBP is providing responsible charge engineering (RCE) support for the Salem District Construction Division's responsibilities during the design and construction phases of this contract. During the construction phase MBP will serve in the capacity of the Owner's Representative, to include on-site inspection staff daily, responsible for Owner Independent Assurance (OIA) and Owner Verification Sampling and Testing (OVST).

Finishing Contracts On Time or Early

Members of the AWC team are proud of their track record of completing projects on time often earning early completion bonuses. In addition to all of the projects provided in the Work History Forms finishing on time, the following similar projects achieved early completion bonuses: I-95 Richmond Bridges, US 90 St. Louis Bay Bridge, and the SR105 Sisters Creek Bridge Replacement.

Minimizing Impacts to Traffic and Community

All of the Work History Forms describe projects that contained multi-phase MOT plans with approaches that minimized impacts to traffic and the community.

Effective Communication Strategies

Keeping the businesses, the surrounding community, and key stakeholders aware of upcoming construction activity that may affect them is critical to VDOT in maintaining a positive public image. Team members have implemented social media strategies on projects such as Archer Western's NC-540 Western Wake Freeway and I-77 Widening.

The AWC Team has also added Michael Norvell with SIR to assist with public information / involvement strategies.

The Southeastern Institute of Research, Inc. (SIR) was founded over 50 years ago and during the last two decades, has evolved into one of



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the nation's top transportation market research and communications consulting firms. We have conducted research studies among tens of thousands of residents, businesses, commuters, and transit riders in communities and regions across America — both large and small — including Richmond, Minneapolis, Charlotte, Columbus, Boise, northern and southeastern Virginia, and more.

SIR has recently worked public relations and communications on projects in Charlottesville, VA -Route 29 at Rio Road, and is leading the way on a support initiative for the new bus rapid transit systems, Pulse RVA, in Richmond, VA.

DBE Participation

Archer Western has a long successful history of implementing robust DBE programs focused on achieving the agency stated goals on both traditional and design-build projects. On the VDOT I-395 HOV Ramp at Seminary Road project, we exceeded the challenging 20% DBE goal and achieved 24.5% at contract completion. On every Work History Form included, we have met or exceeded the DBE Participation Goals.

Our comprehensive DBE program is implemented in two phases, the bid phase, and the award phase. During the bid phase, we have an aggressive solicitation process to ensure that every DBE firm that provides a commercially useful function (CUF) is given the opportunity to provide a quote.

During the award phase, we implement our multi-part DBE program that consists of a proactive outreach program, good faith negotiation, instructional guidance training, collaboration with stakeholders and good faith documentation.

As presented in section 3.3 Structure of the Team, the AWC Team has the participation of one DBE firm and two SWaM firms.

Similar Project Experience Project Name and Location	Team Members	Design-Build	Interstate Highway	Environmental Permitting	ROW Acquisition	Challenging Sub- Surface Environment	Public Information Program	Multi-Phase MOT	Stormwater Management	Utility Relocation/ Protection	Noise Mitigation
1-77 Widening, Columbia, SC \$88M	AWC	~	~	~	~	~	>	~	~	~	
SR 115/21st Street DB Interchange Jacksonville, FL \$30.5M	AWC	~	~	~	~	~	•	~	~	~	~
VDOT I-95 Richmond Bridges Richmond, Virginia \$51.4M	AWC		~	~	~	~	~	~	~	~	~
I-395 HOV Ramp at Seminary Rd. & NB Aux Lane Ext. Alexandria, Virginia \$57.7M	AWC	~	~	~		~	~	~	~	~	
Jones Branch Connector over I-495 - Tysons, Virginia \$39.8M	AWC		~			~		~	~	~	~
FDOT District 5 I-95 Widening & Reconstruction DB, Daytona Beach, FL \$230M	TS	~	~	~	~	~	~	~	~	~	~
Route 2 Over I-95 DB, Lexington, VA \$52.9M	TS	~	~		~	~	~	~	~	~	
I-64 over Route 156 Bridge Replacement, Richmond, VA \$28M	TS		~	~		~		~	~	~	

• A WC= Archer Western • TS = TranSystems



Table 3.4.1



I-81 Bridge Replacement at Exit 114





 Submitted by: Archer Western Construction, LLC 2 Wisconsin Circle, Suite 200 Chevy Chase, MD 20815

3.5 Project Risks

ΌΠΤ

The AWC Team has carefully considered the critical elements of work for the I-81 Bridge Replacement Project to determine the 3 most critical project risks. During our evaluation, we considered numerous risks that included public relations, stormwater management, maintenance of traffic, work zone safety, bridge construction, construction adjacent to heavy traffic volumes, utilities, geotechnical, environmental permitting, Time of Year Restrictions, right-of-way acquisition, and agency coordination. During the AWC team evaluation, we concluded that Traffic / Maintenance of Traffic, Existing Utilities, and Geotechnical are the 3 most critical risks to the success of this project. The specific issues associated with these risks are detailed below:

1) Traffic / Maintenance of Traffic

Why the risk is Critical?

I-81 is one of the most heavily traveled interstates in Virginia and carries an AADT of more than 52,000 vehicles per day, within the project limits. The interstate route functions as a critical north south artery for commuters and commerce travelling on the western side of Virginia.

While replacing the bridges on I-81 above Route 8 at Exit 114, it will be crucial that vehicular traffic be able maintain flow and speed to the maximum extent possible through our project. I-81 also has a very high tractor-trailer traffic percentage, and peak hours of operation do not necessarily correspond to peak hours as in major urban areas. This adds challenge to the determination of when planned lane closures should occur. Route 8 most likely will require intermittent detours throughout construction when required crane and other equipment placement does not allow it to remain open. While the majority of Route 8 traffic consists of local repeat users from the Town of Christiansburg/Montgomery County area, the majority of I-81 traffic consists of transient users who may require more advanced forms of freeway notification.

Impact of Risk:

The traveling public will experience the single greatest impact and be exposed to the greatest safety risk while traveling through our work site, both on I-81 and on Route 8. Their safety and well-being are paramount to all else while constructing this job. The risk is to try to balance for what and when a delay cannot be avoided, set up tasks to minimize time for the needed delay during different steps of construction, and to keep the traveling public safe during times of organized delays.

How we will Mitigate?

Many incidents occur on the Interstate due to changes in the speed limits or differences in the rate of speed between traveling vehicles. During each phase of this interstate bridge replacement project we will be able to address this concern by utilizing experienced traffic personnel along with applying lessons learned from similar projects. The Based on the conceptual bridge plans and Project Information Meeting, the Archer Western / TranSystems team envisions a Sequence of Construction and Maintenance of Traffic pattern as presented below:

During Phase 1 we will shift the I-81 a) Southbound lanes towards the exterior shoulder. A line of temporary concrete barrier wall will be placed on along the median shoulder traffic stripe. The temporary concrete barrier wall, along with the slight shift in traffic will be setup per the Virginia Work Area Protection Manual 2011 Edition, Revision 1(WAPM), the FHWA Manual on Uniform Traffic Control Devices (MUTCD) 2009 Edition, and the Virginia Supplement to the MUTCD. The slight shift in traffic alignment will allow the southbound traffic to maintain their speed through our work zone. Utilizing traffic control measures to shift traffic lanes prior to the work zone will help the flow of traffic. During this phase a portion of the new southbound bridge will be constructed. Traffic on Route 8 will be impacted due to the required placement of the construction equipment needed for the construction of the median portion of the southbound I-81 bridge. The I-81 Northbound through traffic will not be affected during this phase



of the job. The off-ramp traffic heading north on Route 8 will be impacted during this phase as will traffic coming off southbound I-81 going south on Route 8. Route 8 will need to be periodically closed and detours will need to be set up, for operations such as bridge demolition, beam erection, bridge deck concrete placement, etc.

b) During Phase 2 the complete removal and replacement of the existing I-81 Northbound Bridge will occur. In order to do this safely, a shift of the I-81 Northbound traffic onto the new median portion of the I-81 southbound Bridge will be required utilizing a temporary asphalt crossover through the median of I-81 in each direction. Southbound and Northbound traffic will be separated by temporary concrete traffic barriers. The crossover shift lengths will be designed for the minimum lengths necessary using the WAPM, MUTCD, Virginia MUTCD Supplement, and applying Common Sense Engineering principles. Also during this phase the I-81 NB Off Ramp will be rebuilt with a minimum of 1 lane of traffic being maintained along the ramp throughout its reconstruction. As with Phase 1, traffic going north on Route 8 from the ramp will be impacted, and detours will be needed while Route 8 is temporarily closed for operations such as bridge demolition, beam erection, bridge deck concrete placement, etc.

During Phase 3 I-81 Northbound traffic will c) be relocated to the new I-81 Northbound Bridge built in the previous phase. The median crossovers will be removed, and I-81 southbound traffic will be shifted onto the previously constructed median portion of the I-81 Southbound Bridge. These shifts in I-81 traffic will be designed to maintain flow and speed to the maximum extent possible. During this phase, we will remove the existing I-81 Southbound Bridge and widen the median portion of the I-81 Southbound Bridge to its final width. Traffic impacts will remain on Route 8 during this phase for operations such as bridge demolition, beam erection, bridge deck concrete placement, etc. Removing the median crossover tie-in points will require Maintenance of Traffic (MOT) for both Northbound and Southbound I-81 traffic, as will the tie in to the new Southbound I-81 Bridge partially constructed during Phase 1.

d) During Phase 4 I-81 Southbound traffic will shifted into its final alignment along the new bridge.

During the Team's review of the proposed Sequence of Construction several ideas were discussed about possible modifications which could reduce the final shifts of I-81 southbound and eliminate the need for the temporary median crossovers required in the proposed plan. These concepts will be presented to the Department through an Alternate Technical Concept (ATC) during the next phase of selection for this project.

The anticipated MOT for the project will require long term lane shifts, short term (maximum 20 minutes) partial lane closures for girder delivery along I-81, and detours along Route 8. The MOT will be a continuous challenge throughout construction to keep traffic moving smoothly with minimal delays along I-81. The need for advanced planning for the MOT on I-81 is very important for this project. Including the need for a predetermined detour in the event there is; a crash within the work zone, hazmat spill, or emergency situation related to unforeseen events.

The Archer Western/TranSystems Team understands that one of the primary goals for a successful I-81 bridge replacement project is the efficient handling of traffic through and around construction operations; while giving paramount importance to the safety of motorists, construction crew as well as Emergency Services personnel. Our team plans to prepare a comprehensive "Type C" Transportation Management Plan (TMP) and site specific Temporary Traffic Control Plan (TTCP) that is consistent with VDOT's IIM-241.7 (work-zone safety and Mobility) and TE 351 requirements.

The Archer Western/TranSystems Team is equipped with construction crews, engineers and a wide array of critical support staffing that have extensive experience in working on interstate highway projects involving bridge replacement and are ready to be actively engaged in the successful



delivery of this project. The TMP and TTC plan will be designed, implemented, and inspected by staff with VDOT certification in Work Zone Traffic Control. Our staffing is also experienced in applying the principles of the 2009 MUTCD and VDOT's 2011 Virginia Work Area Protection Manual (Revision 1).

One of our team's primary goals for this I-81 bridge replacement project is to deliver a project that minimizes impacts to roadway users and stakeholders. Through our past experiences and accomplishment with this type of interstate bridge replacement work, we believe our team is well suited to serve the department's need in delivering a successful I-81 bridge replacement project. Some of the items that pose risk to key stakeholders and the travelling public include:

- Crashes or other incidents within the construction work-zones;
- Inadequate warning and/or signage of the construction operations especially delays;
- Inadequate accommodations for emergency operation vehicles; and
- Clear communication to the traveling public.

The Archer Western/TranSystems Team is aware that communication is one of the key items in gaining the trust as well as patience of the travelling public and stake-holders. Through our Public Relations (PR) Manager, our team will ensure that road users and stakeholders are continually updated on work progress and schedule, delays with the project's vicinity, accidents, as well as lane closures. Our approach to the communications management for these types of events will involve our PR Manager ensuring that the traveling public and key stake-holders are notified, through VDOT approved procedures. They will be informed of activity/incident and be provided with anticipated schedules for the necessary construction treatments. We believe if the traveling public and stakeholders are notified of situations within the construction zones, then they can make necessary adjustments

or accommodations to suit their personal lifestyles. These notifications will be done through our proactive communications and outreach efforts in support for the Traffic Management Program. The strategies will include using Portable Changeable Message Signs (PCMS) to warn motorists of changes to the traffic patterns within the project limits. We will work through VDOT and with the Regional Traffic Operations Center (TOC) who will be able to control the PCMS boards remotely as well as to provide notifications to 511 Virginia.

Role of VDOT and other agencies:

During the development of TTC and TMP documents, we anticipate VDOT's role being associated with review and approval of plans. We anticipate working with VDOT as they access and approve our methods of switching traffic onto the temporary and permanent roadways. We also anticipate VDOT playing an active role in the public outreach processes as the TMP/MOT plans are developed and advanced into construction.

2) Existing Utilities

Why the risk is critical

Known utility relocations, if not managed early and aggressively, can cause major delays to a project. Therefore, it is imperative to obtain as much up front information on the known utilities early in the design to provide accurate information for conflict avoidance, or if the conflict can't be avoided, to design utility relocations. Potholing is an inexpensive way to the overall project cost to obtain Quality Level A subsurface utility information. Impacts to known utilities during construction causes project delays and costly service interruptions. Therefore, utility relocations prior to construction, or protection of the utilities during construction, are of great importance. Unknown utilities are cause for even greater concern. Uncovering an unknown utility can cause large delays to a project if the utility needs to be relocated for work to progress. But there is no way to foresee and mitigate for unknown utilities.



Impact of Risk:

Utility conflicts, definitely the unknown, but even the known, can cause major delays and cost impacts to a project. On this project, there is a large overhead transmission line that may need to be raised before the interstate can be raised. There are overhead power and communication lines crossing Route 8 at the NB I-81 interchange intersection, and there are overhead communication lines crossing Route 8 at the SB I-81 interchange intersection. There are three underground fiber/communication lines running under the bridges that likely are too shallow to be protected during bridge demolition and new foundation installation. There is a large overhead sign structure on Northbound I-81 that may need to be raised prior to the I-81 grade raise. And lastly, there is a water line crossing I-81 north of the bridges that requires lowering, or protection, during construction.

How we will mitigate

1) The existing overhead power line crossing I-81 will need to be surveyed to confirm clearances will be acceptable for the proposed raised grade of I-81. If not, Appalachian Power will need to raise the line. The impact to raise the line are the delays to the construction schedule due to lead time for Appalachian Power to obtain approval for the location of the new pole within VDOT rightof-way, required easements, construction permits, design, and pole installation. The current distance between existing poles is approximately 495'. The half-way point falls within the grass area between NB I-81 and the NB I-81 exit ramp behind the existing NB guardrail. The location will have to take in consideration of the proposed new guardrail location further to the east.

2) Existing overhead power and communication lines cross Route 8 at the NB Route 8 interchange intersection. These lines must be surveyed to determine the amount they need to be raised prior to construction to reduce the likelihood of being hit and interrupting service. Additionally, these lines must be clearly marked during construction and brought to the attention to the Design-Builder prior to any construction activities to insure to the greatest extent practicable that the utility service is not interrupted at any time.

3) Possible existing overhead communication lines cross Route 8 at the SB Route 8 interchange intersection. These lines must be surveyed to determine the amount they need to be raised prior to construction to prevent reduce the likelihood of being hit and interrupting service. Additionally, these lines must be clearly marked during construction and brought to the attention to the Design-Builder prior to any construction activities to insure to the greatest extent practicable that the utility service is not interrupted at any time.

4) The three underground communication lines running along Route 8 under the existing bridges will need to be located via potholing to determine if protection is possible with shielding prior to any demolition of the existing guardrail, pier protection barrier, and the bridge substructure. Two lines are on the south side of Route 8, and one line is on the north side of Route 8. The lines are not within the travel lanes, therefore line evaluations need to be made by potholing to determine if the depths allow room for protection during construction, or if the lines have to be relocated deeper and still be protected. These communication lines serve the town of Christiansburg, so it is imperative that no service interruptions are caused during construction.

5) There is an existing overhead truss sign structure on NB I-81 approaching the bridge. Design profiles show the interstate to be raised at this location. The structure will need to be surveyed to assure vertical clearance remains adequate, assuming it is adequate now. If additional height is needed, AWC will design and implement this prior to Phase 3 of our project. The impact to the project schedule is needing to install the new higher truss to raise the signs at beginning of project, causing delays to the construction schedule for truss fabrication and installation.



6) On the north end of the project, an existing waterline owned by Christiansburg, crosses the interstate. Our project team is knowledgeable that lack of preparation for these types of risks can cause serious impacts to the project schedule and overall budget. This waterline crossing must be investigated for size, material, and age to see if it can handle the additional loading created during construction. Also, SB I-81 is being proposed to be lowered at the water line crossing site. Additionally, I-81 is being widened in both NB and SB directions at this waterline crossing location. These potential impacts to the waterline brings up two issues. The water line may rise up in the areas proposed to be widened, so it may be too shallow to place the new shoulders over it. Also, the existing guardrail must be relocated that crosses this water line on east side of NB I-81 and both sides of SB I-81. The line's exact locations must be shown when driving the new guardrail posts to avoid service interruption.

VDOT's Role:

Provide any as-built survey data on the existing overhead power and communication lines which crosses above I-81 and Route 8 and the existing overhead sign structure on NB I-81 south of the bridge. We would like for VDOT to play an active role for utility coordination or relocation meetings required for this project. We also would like for VDOT to provide any historical construction asbuilts for the immediate area (Route 8 and I-81) that may show historical utilities information as well as check their available records and provide previous service interruption data during construction and maintenance at the interchange.

3) Geotechnical

Why the risk is critical

The projects geology is varied and creates multiple potential issues. These issues range from unsuitable soils to Karst conditions. All of these potential issues can contribute to pavement and structure failure creating safety issues for the traveling public. Karst formations are typical along the I-81 corridor and in Montgomery County, Virginia. As recently as 2004, a sinkhole formed along I-81 just north of Exit 118C.

Karst bedrock is a soluble type of bedrock, and because of this, the bedrock usually weathers deeply, producing a thick soil composed of cherty clay and silt overlying an irregular bedrock surface. The residual soils developed over the bedrock contain many of the weaknesses of the parent bedrock (such as fractures and bedding planes) as well as desiccation cracks. Consequently, these weaknesses may act as conduits for the downward migration of surface water.

It is not unusual to find voids created by bedrock solution, both within the bedrock system and at the soil/bedrock interface. Moreover, the internal erosion of the soil and continuing surface water infiltration and solution of the bedrock by ground water causes these voids to enlarge with time. Eventually, the erosion progresses upward to the point that the soil will no longer arch and support itself; and there is a ground collapse. Sinkholes are quite common in areas of Southwest Virginia underlain by soluble bedrock and, therefore, all areas underlain by soluble bedrock have the potential for sinkhole development.

Impact of Risk:

Unexpected and underground rock formations are a leading cause in construction delays and understanding the makeup in our project location will be crucial to success. Formation of sinkholes over time will lead to increased maintenance costs and create large safety concerns to the traveling public.

It has been our experience that those areas underlain by soluble bedrock in which the topsoil and an interval of residual soil have been removed are more susceptible to the downward migration of water and, therefore, such areas have a higher potential for sinkhole development, whether the water originates from rainfall, underground utility lines, or ground water.

The construction of bridges and roadways within areas underlain by soluble bedrock involves the inherent risk that a sinkhole may develop beneath



or adjacent to such a structure with the potential for structural damage. Such construction can increase or decrease the development of sinkholes, depending upon several factors.

The portions of the site that will be excavated to attain the desired grades will have a higher risk of sinkhole development than the areas to be filled, because of the exposure of the numerous relic fractures in the soil to rainfall and runoff. On the other hand, those portions of the site that have a modest amount of fill will have a decreased risk of sinkhole development caused by rainfall or runoff because the placement of a cohesive soil fill over these areas effectively caps the area with a relatively impervious "blanket" of remolded soil.

How we will mitigate

1) Although it is our opinion that the risk of ground subsidence associated with sinkhole formation cannot be eliminated, we have found that several measures are useful in the design and site development to reduce this potential risk. These measures include the following:

a. The scarification and recompaction of the upper nine inches of soil exposed in cut sections, thereby creating a blanket of less permeable material

b. The use of paved ditches or geomembranelined ditches, particularly in cut areas, to collect and transport surface water.

c. Maintaining site drainage during construction to avoid ponding of water and to promote the rapid removal of surface waters.

d. Further, it is important that excavated areas, as well as the rest of the construction site be maintained in a well-drained condition. Temporary and final grades should positively route waters from the site.

2) The I-81 Southbound Roadway will be founded on newly placed fill. AWC will conduct onsite testing to determine if existing soils are suitable for structural backfill. The Geotechnical memo provided with the RFQ indicates the high probability of onsite clays which are unsuitable for structural backfill. In this case, AWC will import structural fill for the new roadway sections.

3) The I-81 Bridges will need all new foundations. The foundations will likely be H-Piling or Caissons, as discussed in the Geotechnical Memo. However, AWC will research the surrounding bridges (Exit 118, 109 and 105 bridges) for the best foundation design in this geographical area.

4) In piling or caisson locations, geotechnical borings will be completed in order to determine if an area of concern exists prior to installing the foundation (or prior to design if accessible). Any areas of concern will be discussed between VDOT and AWC, and the best possible solution for all parties will be implemented.

5) Certain grading or drainage measures may be included in the project design to minimize the potential for future sinkhole development. These include minimizing surface water infiltration, avoiding open graded stone, unlined or unpaved swales, or storm water devices near structures.

VDOT's Role:

Provide historical data for local geology, and foundation installation of bridges at Exit 105, 109, 114 and 118. Include the occurrence of any sinkholes or other construction issues in this project vicinity. Share best practices of Karst Mitigation in VDOT along the I-81 corridor.





I-81 Bridge Replacement at Exit 114







Submitted by: Archer Western Construction, LLC 2 Wisconsin Circle, Suite 200 Chevy Chase, MD 20815



I-81 Bridge Replacement at Exit 114







Submitted by: Archer Western Construction, LLC 2 Wisconsin Circle, Suite 200 Chevy Chase, MD 20815

ATTACHMENT 3.1.2 Project: 0081-154-733

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

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

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15- page limit?	SOQ Page Reference
Statement of Qualifications Checklist and Contents	Attachment 3.1.2	Section 3.1.2	no	Appendix
Acknowledgement of RFQ, Revision and/or Addenda	Attachment 2.10 (Form C-78-RFQ)	Section 2.10	no	Appendix
Letter of Submittal (on Offeror's letterhead)				1-2
Authorized Representative's signature	NA	Section 3.2.1	yes	2
Offeror's point of contact information	NA	Section 3.2.2	yes	1
Principal officer information	NA	Section 3.2.3	yes	1
Offeror's Corporate Structure	NA	Section 3.2.4	yes	2
Identity of Lead Contractor and Lead Designer	NA	Section 3.2.5	yes	2
Affiliated/subsidiary companies	Attachment 3.2.6	Section 3.2.6	no	Appendix
Debarment forms	Attachment 3.2.7(a) Attachment 3.2.7(b)	Section 3.2.7	no	Appendix
Offeror's VDOT prequalification evidence	NA	Section 3.2.8	no	Appendix
Evidence of obtaining bonding	NA	Section 3.2.9	no	Appendix

ATTACHMENT 3.1.2

Project: 0081-154-733

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15- page limit?	SOQ Page Reference
SCC and DPOR registration documentation (Appendix)	Attachment 3.2.10	Section 3.2.10	no	Appendix
Full size copies of SCC Registration	NA	Section 3.2.10.1	no	Appendix
Full size copies of DPOR Registration (Offices)	NA	Section 3.2.10.2	no	Appendix
Full size copies of DPOR Registration (Key Personnel)	NA	Section 3.2.10.3	no	Appendix
Full size copies of DPOR Registration (Non- APELSCIDLA)	NA	Section 3.2.10.4	no	Appendix
DBE statement within Letter of Submittal confirming Offeror is committed to achieving the required DBE goal	NA	Section 3.2.11	yes	2
Offeror's Team Structure				3-7
Identity of and qualifications of Key Personnel	NA	Section 3.3.1	yes	4
Key Personnel Resume – DB Project Manager	Attachment 3.3.1	Section 3.3.1.1	no	Appendix
Key Personnel Resume – Quality Assurance Manager	Attachment 3.3.1	Section 3.3.1.2	no	Appendix
Key Personnel Resume – Design Manager	Attachment 3.3.1	Section 3.3.1.3	no	Appendix
Key Personnel Resume – Construction Manager	Attachment 3.3.1	Section 3.3.1.4	no	Appendix
Organizational chart	NA	Section 3.3.2	yes	5
Organizational chart narrative	NA	Section 3.3.2	yes	4,6

ATTACHMENT 3.1.2

Project: 0081-154-733

STATEMENT OF QUALIFICATIONS CHECKLIST AND CONTENTS

Statement of Qualifications Component	Form (if any)	RFQ Cross reference	Included within 15- page limit?	SOQ Page Reference
Experience of Offeror's Team				8,9
Lead Contractor Work History Form	Attachment 3.4.1(a)	Section 3.4	no	Appendix
Lead Designer Work History Form	Attachment 3.4.1(b)	Section 3.4	no	Appendix
Project Risk				
Identify and discuss three critical risks for the Project	NA	Section 3.5.1	yes	10-15



I-81 Bridge Replacement at Exit 114







Submitted by: Archer Western Construction, LLC 2 Wisconsin Circle, Suite 200 Chevy Chase, MD 20815

Form C-78-RFQ

ATTACHMENT 2.10

COMMONWEALTH OF VIRGINIA DEPARTMENT OF TRANSPORTATION

RFQ NO. C00093074DB96

PROJECT NO.: 0081-154-733, P101, R201, C501, B601, B616

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 o	f RFQ – July 12, 2017 (Date)	
	2. Cover letter o	f <u>RFQ Addendum No. 1 –</u> (Date)	August 23, 2017
	3. Cover letter o	f(Date)	
S	p C C	JRE O	August 23, 2017 DATE
Stepl	hen P. Carter, Jr		Senior Vice President
	PRINTED	NAME	TITLE



I-81 Bridge Replacement at Exit 114





Tran Systems

Submitted by: Archer Western Construction, LLC 2 Wisconsin Circle, Suite 200 Chevy Chase, MD 20815

ATTACHMENT 3.2.6

State Project No. 0081-154-733

Affiliated and Subsidiary Companies of the Offeror

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

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

Relationship with Offeror (Affiliate or Subsidiary)	Full Legal Name	Address
Affiliate	Archer Western Contractors, LLC	2410 Paces Ferry Rd SE, Suite 600, Atlanta, GA 30339
Affiliate	Walsh Construction Company, LLC	929 West Adams Street, Chicago, IL 60607
Affiliate	Walsh Construction Company II, LLC	929 West Adams Street, Chicago, IL 60607
Affiliate	Walsh Construction Company of Canada	800 Bay Street, Suite 401, Toronto, ON M5S3A9





I-81 Bridge Replacement at Exit 114







Submitted by: Archer Western Construction, LLC 2 Wisconsin Circle, Suite 200 Chevy Chase, MD 20815

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

Project No.: 0081-154-733

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.

Stephen P. Carter Jr gnature

September 1, 2017 Date Senior Vice President Title

Archer Western Construction, LLC Name of Firm

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

Project No.: 0081-154-733

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

August 25, 2017 Date

Vice President Title

TranSystems Corporation Name of Firm

CERTIFICATION REGARDING DEBARMENT LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-154-733

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.

Where the prospective lower tier participant is unable to certify to any of the statements in this 2) 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.

7/28/17 Pusident

Signature

Engineering Goovp LLC

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

Project No.: 0081-154-733

.

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.

J.M. Ale Signature		BRANCH MANAGER
AMEC FOSTER	WHEELER ENVIRON	MEUT & INFRASTRUCTURE, INC

CERTIFICATION REGARDING DEBARMENT LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-154-733

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.

August 2, 2017 Vice President Date Title Signature

H&B Surveying and Mapping, LLC Name of Firm

CERTIFICATION REGARDING DEBARMENT LOWER TIER COVERED TRANSACTIONS

Project No.: 0081-154-733

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

Where the prospective lower tier participant is unable to certify to any of the statements in this 2) 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.

Date

8/4/17 PRESIDENT Title

Signature

KOR REAL ESTATE SERVICES

Name of Firm
ATTACHMENT 3.2.7(b)

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

Project No.: 0081-154-733

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

August 21, 2017Vice President/Regional OperationsManagerDateTitle

MBP Name of Firm

ATTACHMENT 3.2.7(b)

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

Project Nos.: 0007-029-942 and 0007-029-225

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

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

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

<u>August 25, 2017</u> Date Signature

<u>Principal, Transportation Services</u> Title

Southeastern Institute of Research, Inc. (SIR) Name of Firm



I-81 Bridge Replacement at Exit 114







Submitted by: Archer Western Construction, LLC 2 Wisconsin Circle, Suite 200 Chevy Chase, MD 20815

; ; ; ; ; ; ; ; ; ; ; ; ; ;	GRADING; MAJOR STRUCTURES; PORTLAND CEMENT CONCRETE PAVING; MINOP Issue Date: January 31, 2017 This Rating and Classific: Suzanne FR Lucas, State Prequalification Officer It is not permissible to alter this document, use after posted expiration date, or use by persons or firms other the
ent of Transportation, n assigned to your firm: tion(s):	In accordance with the Regulations of the Virginia Departm your firm is hereby notified that the following Rating has been PREQUALIFIED Your firm specializes in the noted Classificat
ION, LLC	ARCHER WESTERN CONSTRUCT
ATION	CERTIFICATE OF QUALIFIC
Virginia Department of Transportation	COMMONWEALTH OF VIRGINIA



I-81 Bridge Replacement at Exit 114







Submitted by: Archer Western Construction, LLC 2 Wisconsin Circle, Suite 200 Chevy Chase, MD 20815



Travelers Bond 215 Shuman Blvd., Naperville, IL 60563 Telephone: (630) 961-7052 Fax: (630) 961-7020

July 31, 2017

RE: I-81 Bridge Replacement at Exit 114 From: 0.381 Mi. South of Christiansburg SCL To: 0.510 Mi. North of Christiansburg SCL State Project No.: 0081-154-733, P101, R201, C501, B601, B616 Federal Project No.: IM-081-2(992) Contract ID Number: C00093074DB96

To Whom It May Concern:

We have been advised that Archer Western Construction, LLC is submitting a Statement of Qualifications for the above mentioned project. Travelers Casualty and Surety Company of America is pleased to recommend Archer Western Construction, LLC as a professional, well-financed construction company.

Travelers Casualty and Surety Company of America is currently providing **Archer Western Construction**, **LLC** with bonding support of \$400 million dollars on single contracts and \$8 billion dollars for an aggregate work program. Thus, **Archer Western Construction**, **LLC** is capable of obtaining 100% Performance Bond and 100% Labor and Materials Payment Bond in the amount of the anticipated cost of construction of approximately \$21,000,000, and said bonds will cover the project and any warranty periods as provided for in the contract documents on behalf of **Archer Western Construction**, **LLC**, in the event that they be the successful bidder and enter into a contract for this project. All issuance of bonds is subject to the review and approval of all contract terms, conditions and bond forms.

Travelers Casualty and Surety Company of America is authorized to transact business in all fifty (50) states with a Treasury Listing of \$208,819,000 and is rated A++ XV by A.M. Best Company.

Should you have any questions, or need additional information, please feel free to contact me.

Yours truly, Travelers Casualty and Surety Company of America

atricia Collins, Attorney-in-Fact





In Witness Whereof, I hereunto set my hand and official seal. My Commission expires the 30th day of June, 2021.



farie C. Tetreault, Notary Public

58440-5-16 Printed in U.S.A.

WARNING: THIS POWER OF ATTORNEY IS INVALID WITHOUT THE RED BORDER

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, Kevin E. Hughes, the undersigned, Assistant Secretary, of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 31 day of July, 2017.

Mar E. Huge

Kevin E. Hughes, Assistant Secretary













To verify the authenticity of this Power of Attorney, call 1-800-421-3880 or contact us at www.travelersbond.com. Please refer to the Attorney-In-Fact number, the above-named individuals and the details of the bond to which the power is attached.



I-81 Bridge Replacement at Exit 114





 Submitted by: Archer Western Construction, LLC 2 Wisconsin Circle, Suite 200 Chevy Chase, MD 20815

ATTACHMENT 3.2.10

State Project No. 0081-154-733

SCC and DPOR Information

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

SCC & DPOR INFORMATION FOR BUSINESSES (RFQ Sections 3.2.10.1 and 3.2.10.2)							
	SCC I	nformation (3.2.10	0.1)		DPOR Info	ormation (3.2.10.2)	-
Business Name	SCC Number	SCC Type of Corporation	SCC Status	DPOR Registered Address	DPOR Registration Type	DPOR Registration Number	DPOR Expiration Date
Archer Western Construction, LLC	T0437006	Foreign Limited Liability Company	Active	929 W. Adams St. Chicago, IL 60607	Class A Contractor	2705141795	7/31/2019
McDonough Bolyard Peck, Inc.	03518008	Corporation	Active	711D Fifth St NE, Roanoke, VA 24016	ENG	0411000605	2/28/2018
TranSystems Corporation	F1150400	Foreign	Active	6800 Paragon Place, Suite 640, Richmond, VA 23230	ENG	0411000801	2/28/2018
TranSystems Corporation	F1150400	Foreign	Active	101 N. Main St., Ste. 1506, Greenville, SC	ENG	0411000649	2/28/2018
TranSystems Corporation	F1150400	Foreign	Active	2400 Pershing Road, Ste 400, Kansas City, MO 64108	ENG	0411000831	2/28/2018
Accompong Engineering Group, LLC	S2835215	Limited Liability Company	Active	9510 Iron Bridge Rd Suite 200, Chesterfield, VA 23832	ENG	0407005442	12/31/2017
Amec Foster Wheeler Environment & Infrastructure, Inc.	F1441981	Foreign	Active	1070 W. Main Street, Sute 5, Abingdon, VA 24210	ENG	0411000912	2/28/2018
H&B Surveying & Mapping LLC	S2905604	Limited Liability Company	Active	2105 Electric Rd SW Ste 103, Roanoke, VA 24018	LS	0411001268	2/28/2018
H&B Surveying & Mapping LLC	S2905604	Limited Liability Company	Active	612 Hull St, Suite 101B, Richmond, VA 23224	LS	0407005432	12/31/2017
KDR Real Estate Services, Inc.	05712104	Corporation	Active	2500 Grenoble Rd, Richmond, VA 23294	RE	0226007129	12/31/2018
Southeastern Institute of Research, Inc. (SIR)	01242411	Corporation	Active	N/A	N/A	N/A	N/A

ATTACHMENT 3.2.10

State Project No. 0081-154-733

SCC and DPOR Information

DPOR INFORMATION FOR INDIVIDUALS (RFQ Sections 3.2.10.3 and 3.2.10.4)						
Business Name	Individual's Name	Office Location Where Professional Services will be Provided (City/State)	Individual's DPOR Address	DPOR Type	DPOR Registration Number	DPOR Expiration Date
McDonough Bolyard Peck, Inc.	Kevin Lee Bocock	Roanoke, VA	1727 Millwood Dr, Salem, VA 24153	Professional Engineer	0402035156	1/31/2019
TranSystems Corporation	Daniel Glenn Davis	Richmond, VA	PO Box 70065, Richmond, VA 23255	Professional Engineer	0402032685	12/31/2018
KDR Real Estate Services, Inc.	Allen G Dorin Jr	Richmond, VA	2500 Grenoble Road, Richmond, VA 23294	Certified Real Estate Appraiser	4001000562	11/30/2017



I-81 Bridge Replacement at Exit 114





Tran Systems

Submitted by: Archer Western Construction, LLC 2 Wisconsin Circle, Suite 200 Chevy Chase, MD 20815



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	CT CORPORATION SYSTEM				
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	GLEN ALLEN VA 23060				
	HENRICO COUNTY 143				
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	CHESTERFIELD VA 23832		
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DPOR License Lookup License Number 0411000649

License Details

Name	TRANSYSTEMS CORPORATION
License Number	0411000649
License Description	Business Entity Branch Office Registration
Rank	Business Entity Branch Office
Address	101 N. MAIN ST. STE. 1506, GREENVILLE, SC
	29601
Initial Certification Date	2009-08-28
Expiration Date	2018-02-28

Related Licenses ¹

License	License Holder	License Type	Relation	License
Number	Name		Type	Expiry
0402019134	STRUB, PETER MICHAEL	Professional Engineer License	Engineering	2018-12-31

Showing 1 to 1 of 1 entries

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(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (05/2015)







(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)



I-81 Bridge Replacement at Exit 114







Submitted by: Archer Western Construction, LLC 2 Wisconsin Circle, Suite 200 Chevy Chase, MD 20815

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

a. Name & Title: David Johnson, Senior Project Manager

b. Project Assignment: Design-Build Project Manager

c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time) : Archer Western Construction, LLC (Full Time)

d. Employment History: With this Firm <u>1</u> Year. With Other Firms <u>18</u> Years

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

Archer Western Construction, LLC, 2017-Present, Senior Project Manager: Mr. Johnson is responsible for the coordination and management of; Subcontractor solicitation, negotiation, award and contract administration; cost control for self-performed work and subcontractors; coordination of MEP/FP design and submittal; design and maintenance of primavera CPM schedule; material/equipment procurements; monthly job status summaries; estimating; chairing weekly progress and coordination meetings; training staff; and execution of monthly pay applications.

Kiewit Infrastructure South Co. & Kiewit Power Constructors Co, 2002-2017, Project Sponsor: As a Project Sponsor (Senior Project Manager) Mr. Johnson was completely responsible for a project from estimate to close out. Including subcontractor solicitation, negotiation, award and contract administration; cost control for self-performed work; coordination of all designs and submittals; creating and progressing the CPM schedule; material/equipment procurements; monthly job status summaries; estimating; chairing weekly progress and coordination meetings; training staff; and execution of monthly pay applications.

e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Virginia Tech – Blacksburg, VA / Bachelor of Science / 2002 / Civil and Environmental Engineering

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

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

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

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

1. Bear Cut Bridge Rehabilitation, Miami, FL, Design Build Project Manager, 2013-2014, Kiewit Infrastructure South Co.

Specific Responsibilities:

- Coordinating with multiple permitting agencies (USACE, USCG, EPA, FL DEP, Miami-Dade, etc)
- Design management, submittals, and approvals
- CPM scheduling and updating
- Cost control for all operations
- Personnel management and training

This fast-track, \$33 million design-build project involves removing, rehabilitating and replacing sections of the Bear Cut and West bridges on Rickenbacker Causeway in Miami. The scope also involves widening Bear Cut Bridge to provide dedicated paths for pedestrians and bicyclists on each side, as well as roadway and drainage improvements, signing and pavement markings, lighting, utility services and the installation of a 16" water main pipeline. The new superstructures at both bridges involve pre-cast/pre-stressed concrete. The bridge was located over the pristine (EPA Protected) Biscayne Bay and required intensive permitting and environmental restrictions.

2. Alico Road Interchange, Fort Myers, FL, *Project Manager*, 2007-2008, *Kiewit Infrastructure South Co.* Specific Responsibilities:

- CPM scheduling and updating
- Cost control for all operations
- Personnel management and training
- Chairing weekly and monthly client meetings
- Contract administration of main and subcontracts

This project consisted of an interchange reconfiguration with the replacement of two bridges on I-75 including construction of new on/off ramps. Major items of work consisted of 6,900 lf of 24-in to 36-in water main, 350,000 cy of excavation, 42,000 tons of asphalt, 5,100 cy of structural concrete, 14,800 lf of drainage, 12,000 lf of 24" pre-stressed piling, and 6,200 lf of pre-stressed girders.

3. **Telegraph Road Interchange, Alexandria, VA,** *Contract Administrator (Assistant Project Manager), 2008-2009, CK Constructors (a Corman Construction / Kiewit Infrastructure South Co. Joint Venture)* Specific Responsibilities:

• CPM scheduling and updating

- Certor scheduling and updating
 Cost control for all operations
- Personnel management and training
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- Chairing weekly and monthly client meetingsContract administration of main and subcontracts

Project consisted of the construction of 11 bridges (3 structural steel, 8 AASHTO), 2 box culverts, new ramp alignments, roadway drainage system, multiple utility relocations (gas, water, sewer), and support of excavation installation. Project was located at the I-495 / Telegraph Road Interchange. Responsibilities included estimating/pricing contract changes with the Owner (VDOT), creation of the project P3 Schedule, monthly project schedule updates and time impact analyses, and working with Engineer of Record on constructability reviews for contract plan changes.

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

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

Backriver 2 Expansion Project, Senior Project Manager, February 2017 – February 2018
ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

a. Name & Title: Kevin L. Bocock, PE, CCM, Design-Build Quality Assurance Manager (QAM)

b. Project Assignment: Quality Assurance Manager (QAM)

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

d. Employment History: With this Firm 21 Years With Other Firms 1 Years

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

MBP, 1996 – Present, Vice President/Regional Operations Manager: Mr. Bocock is a Regional Operations Manager for MBP and leads their VDOT CEI services team in Virginia. In addition to providing leadership and management oversight within the Virginia Region, he handles a significant project workload for clients including serving in a CIC role for the Bristol District Wide contract (a part-time role) and performing engineering and training tasks for VDOT on various contracts on an as-needed, part-time basis. Examples include CPM scheduling, disputes resolution, and special tasks such as the work that he performed assisting VDOT in developing the requirements for QA and QC on design build contracts. He is active with VTCA and currently serves on the Engineering Consultant Leadership Committee of that organization. He recently completed a task serving as the QAM on the successful Elm Avenue Design Build bridge project in Roanoke and is ideally suited and available to perform the same role on the Exit 114 project.

- Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: MBA, Masters of Business Administration, Radford University, 2001 BS, Civil Engineering, Virginia Polytechnic Institute and State University, 1996
- f. Active Registration: Year First Registered/ Discipline/VA Registration #: January 18, 2001/ Professional Engineer (PE) Civil, Virginia/ 0402-035156 August 1, 2003/ Professional Engineer (PE) Civil, North Carolina/ 029064 June 11, 2010/ Certified Construction Manager (CCM)/ 1904
- g. Document the extent and depth of your experience and qualifications relevant to the Project.
 - 1. Note your role, responsibility, and specific job duties for each project, not those of the firm.
 - 2. Note whether experience is with current firm or with other firm.
 - 3. Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.

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

Salem VDOT - Elm Avenue Design Build, Roanoke, VA (current firm), 10/22/2012 – 5/5/2016: As Quality Assurance Manager (QAM), was responsible for developing a QA/QC Plan in accordance with VDOT's requirements and for performing QA services such as field inspection, materials testing, and project documentation. He supervised a team of QA inspectors as well as subconsultant materials testing lab and technicians. Additional tasks included oversight and monitoring of the contractor's QC program for compliance with the QA/QC Plan and review and approval of monthly payment applications. The design-build project was administered by VDOT and included the demolition and reconstruction of one bridge over I-581 and one bridge over Norfolk Southern Railroad at the busiest interchange in downtown Roanoke, Virginia. Also in the scope of the project was reconstruction and widening of the interchange ramps including grading, drainage, paving, associated utility relocations, and signalization of an intersection. Project also included:

- Bridge construction and reconstruction
- Extensive MOT
- Roadway expansion along busy urban corridor
- Grade separated interchange

- Stormwater management
- Bridge foundations in Karst geology
- Environmental compliance
- Phased bridge construction
- Demolition in sensitive environments
- Piling foundations
- Drilled shaft foundations

The total construction value was \$20.4 million.

Design-Build Culverts Region 1, Virginia Department of Transportation, Staunton/Lynchburg Districts (current firm), 6/12/2009 – 5/5/2016: As Quality Assurance Manager (QAM) for design-build project involving construction and rehabilitation of three concrete box culverts and four metal pipe linings, including serving as acting Responsible Charge Engineer (RCE). Responsible for creation and implementation of quality assurance plan, quality control plan, and monitoring project for conformance with VDOT's requirements for design-build contracts, and road and bridge specifications and standards, as well as for conformance with individual contract documents. The project involved multiple culvert rehabilitation projects in VDOT's Staunton and Lynchburg Districts. Staunton District included one cast-in-place box culvert and two pre-cast box culvert installations. Lynchburg District included four culvert rehabilitations involving steel liners which were used with existing culverts and grouted into place. The total construction value was \$2 million.

Downtown Tunnel, Midtown Tunnel, Martin Luther King Jr. Expressway, Norfolk/Portsmouth, VA (current firm), 6/28/2014 – 12/31/2015: As Independent Assurance and Verification (IA/IV) Manager, responsible for implementation and oversight of the contract's IV program. This project consisted of a new two-lane, immersed tube tunnel under the Elizabeth River parallel to the existing Midtown Tunnel, maintenance and safety improvements to the existing Midtown Tunnel, minor modifications to the interchange at Brambleton Avenue/Hampton Boulevard in Norfolk, maintenance and safety improvements to the existing Downtown Tunnel, and extending the MLK from London Boulevard to Interstate 264 with an interchange at High Street. This design-build, public-private partnership project included the requirement for the concessionaire to design, build, maintain, and operate the facilities for 58 years. The total construction value was \$1.6 billion.

* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.
h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. N/A

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

a. Name & Title:

Daniel (Danny) G. Davis, PE – Vice President / Senior Project Manager

b. Project Assignment: Design Manager

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

TranSystems Corporation (Full Time)

d. Employment History: With this Firm <u>6.50</u> Years With Other Firms <u>26.50</u> Years

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

TranSystems (December 2010 – present): Regional Manager – Bridge Design; Responsibilities include serving as project manager for major bridge projects, technical direction of bridge projects, and managing the bridge staff for the Southeast Region.

Halcrow (June 2008 – October 2010): Director, Bridge Sector – Bridge Design; Responsibilities include serving as project manager for major bridge projects, technical direction of bridge projects, and managing the bridge staff for the North American Region.

AECOM (December 1996 – June 2008): Regional Manager, Structures – Bridge Design; Responsibilities include serving as project manager for major bridge projects, technical direction of bridge projects, and managing the bridge staff for the Southeast Region.

e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Auburn University, Auburn, AL – Bachelor of Civil Engineering, 1990, Structures Auburn University, Auburn, AL – Masters of Science, 1995, Structural Engineering

f. Active Registration: Year First Registered/ Discipline/VA Registration #: Professional Engineer: Florida/#0051342/1997, Virginia/#032685, Louisiana/#33462, West Virginia/#18486, North Carolina/#037121, South Carolina/#29265, Alabama/#32163, NCEES – National/#15809

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

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

{See next page for projects}

I-95 Widening & Reconstruction Design-Build; Daytona Beach, Florida; Engineer-of-Record (2014-2015) {current firm}

TranSystems was selected as part of the Florida DOT design-build team with **Archer Western** as the lead contractor to provide final design engineering services for this complex project, which includes widening I-95 from four to six lanes; complete reconstruction of the I-4/I-95 interchange; reconstruction of the US 92 interchange, and improvements to I-4 (SR 400), US 92, Bellevue Road, and Tomoka Farms Road. As a lead design consultant, TranSystems provided roadway design for the segment of the project north of SR 44 to SR 421 (including the SR 421 interchange). The overall project consists of 18 new bridges, 5 of which were designed by TranSystems. Mr.

Davis was responsible for the technical lead of two bridges and served as the Engineer-of-Record.

I-64 over Rte 156 (Airport Drive) Bridge Replacements, Richmond, Virginia; Design Project Manager (2014present) {current firm}

The Virginia DOT project requires the design of the two interstate replacement bridges with a total construction cost estimated at \$28 million. This section of I-64 serves as Richmond's main route to the Hampton Roads area and the Richmond International Airport, with an ADT of 45,000. During the construction of the new bridges, two travel lanes will be maintained at all times.

The current four span bridges will be replaced with two span bridges utilizing Accelerated Bridge Techniques. The project will utilize PBUs

(Precast Beam Units) for the superstructure reducing construction time and MOT (Maintenance of Traffic) requirements. The sequence of construction provides a series of traffic shifts that minimizes the MOT setups. The two span bridge layout will also allow an efficient beam section required to increase the minimum vertical clearance over Rte. 156 from 14'-6" to 16'-6".

As the Design Project Manager, Mr. Davis is responsible for managing and coordinating the bridge, roadway, drainage, TMP (MOT/SOC), TCD, and geotechnical services. In this role he is responsible for the development and delivery of the final contract plans scheduled for October 2017.

I-64/I-295 Interchange Ramps F & D, Richmond, Virginia; Design Project Manager (2002-2008) {previous firm}

The Virginia DOT project required the design of the two curved flyover steel plate girder bridges with a total construction cost estimated at \$14 million. Ramp F is a 538m curved flyover ramp consisting of three continuous unit spans. The span lengths vary from 35 to 59m. Ramp D is a 240m curved flyover ramp consisting of two continuous unit spans. The span lengths vary from 39 to 54m. Mr. Davis was responsible for the development and delivery of the final contract bridge plans. He also served as the Principal Bridge Engineer responsible for the conceptual and final design of the curved steel plate girders and substructure elements; including the steel integral straddle bents, concrete hammerhead piers, abutments and footings.

* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.
h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment. N/A







ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.

- a. Name & Title: Kevin Kegebein, Project Manager II
- b. Project Assignment: Construction Manager

c. Name of all Firms with which you are employed at the time of submitting SOQ. In addition, please denote the type of employment (Full time/Part Time) : Archer Western Construction, LLC (Full Time)

d. Employment History: With this Firm <u>11.5</u> Years With Other Firms <u>7</u> Years

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

Walsh Construction Company (Archer Western Affiliate), 2006-2017, Project Manager: As a Project Manager, Mr. Kegebein is responsible for project administration, including project start-up, staffing, and contract negotiation with subcontractors and suppliers. He oversees maintenance of quality control systems, schedule requirements, construction of the project, cost accountability, and the establishment of management systems. It is my duty to ensure close coordination among all project team members, ensuring owners a successful project delivery.

Volk, Inc, 2004-2006, Draftsmen/Project Coordinator: Mr. Kegebein prepared Wall Sections, Details, and Floor Plans for Design Submittals. Field Work Consisted of Field Measuring and Leveling Circuits, Onsite Supervision, Scheduling.

Fence Masters, Inc, 2003-2004, Fence Detailing: Kevin detailed on AutoCAD numerous amounts of fence gates, fence sections, and latches. He also worked with different types of fence systems from ornamental to PVC. McCarthy Erectors/Randall Light SPO, 2000-2003, Steel Detailing: Mr. Kegebein began studying the process of steel detailing with the use of AutoCAD. He detailed out many small jobs including Jewel and Dominick Stores.

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

Purdue University, West Lafayette, Indiana / Bachelor of Science / 2004 / Construction Management

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

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

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

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

- 1. Harrison/Halsted Bridge Reconstruction, Chicago, IL, Project Manager, 2014-2016, Walsh Construction Company (Archer Western Affiliate)
 - Specific Responsibilities:
 - Project Manager/Oversee engineering and field supervisors
 - Daily onsite field coordination with labor force/subcontractors
 - Management of Cost Report/Revenue Summary/Profit and Loss Statements
 - Material buyout/procurement
 - Owners Meetings/Schedule Updates

As part of the overall Jane Byrne Interchange project, this project included the reconstruction of Harrison Bridge over SB 90/94, Halsted Bridge over 290/CTA, and Retaining Wall 13 at SW Abutment of Harrison Bridge. The reconstruction of intersection at Halsted & Harrison and widening of Ramp ES. Also included is the erection of a canopy spanning the center of Halsted Bridge and integrated with the entrance to the UIC/Halsted Blue Line CTA Station.

- Ohio River Bridges East End Crossing P3, Louisville, KY and IN, Project Manager, 2012-2014, Walsh Construction Company (Archer Western Affiliate) Specific Responsibilities:
 - Roadway Project Manager/Design Coordinator
 - Review design package prior to submission to KYTC.
 - Weekly design meetings with Engineers and KYTC
 - Project Manager/Oversee engineering and field supervisors
 - Daily onsite field coordination with labor force/subcontractors
 - Management of Cost Report/Revenue Summary/Profit and Loss Statements
 - Material buyout/procurement
 - Owners Meetings/Schedule Updates

This Design, Build, Finance, Operate, and Maintain project is the extension of I-265 from Utica, IN to I-71 in Prospect, KY. The project includes construction of a new cable stay bridge over the Ohio River and 600 meter twin bore tunnel under the Drumanard Estate in Kentucky, two major steel bridges in Kentucky, and other roadwork.

3. U.S. 65/60 Interchange Ramp Replacement, Springfield, Missouri, Project Manager, 2009-2012, Walsh

Construction Company (Archer Western Affiliate)

Specific Responsibilities:

- Project Manager/Oversee engineering and field supervisors
- Daily onsite field coordination with labor force/subcontractors
- Management of Cost Report/Revenue Summary/Profit and Loss Statements
- Material buyout/procurement
- Owners Meetings/Schedule Updates

The complex, \$57 million-plus project includes replacing two cloverleaf loop ramps with directional "flyover" ramps. Bridges will be built on US 60 over the railroad tracks just west of US 65. This project also consists of building four bridges over BNSF railroad tracks (two bridges as part of "flyover" ramps and two bridges carrying U.S. 60 traffic), replacing the northbound U.S. 65 bridge over U.S. 60 and rebuilding southbound U.S. 60 bridge over U.S. 60, and replacing westbound U.S. 60 bridge over Lake Springfield and widening eastbound U.S. 60 bridge over Lake Springfield.

* On-call contracts with multiple task orders (on multiple projects) may not be listed as a single project.
h. For Key Personnel required to be on-site full-time for the duration of construction, provide a current list of assignments, role, and the anticipated duration of each assignment.

Common Wealth Ave: 18 day shutdown: Overseeing field operations, until next assignment.



Statement of Qualifications Contract ID Number: C00093074DB96 State Project No.: 0081-154-733, P101, R201, C501, B601, B616 Federal Project No.: IM-081-2(992)

I-81 Bridge Replacement at Exit 114





 Submitted by: Archer Western Construction, LLC 2 Wisconsin Circle, Suite 200 Chevy Chase, MD 20815

In association with: TranSystems

ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime design	c. Contact information of the Client or	d. Contract	e. Contract	f. Contract Value (in thousands)		g. Dollar Value of Work
	consulting firm responsible for the	Owner and their Project Manager who	Completion	Completion	Original Contract	Final or Estimated	Performed by the Firm identified
	overall project design.	can verify Firm's responsibilities.	Date	Date (Actual	Value	Contract Value	as the Lead Contractor for this
			(Original)	or Estimated)			procurement.(in thousands)
SR 115/21st Street Design- Build Interchange Jacksonville, FL	GAI Consultants	Name of Client/ Owner: FDOT Phone: 904-360-5563 Project Manager: Jessica Trippett Phone: 904-360-5563	11/2013	11/2013	\$30,532	\$30,532	\$21,122
Design-Build		Email: jessica.tippett@dot.state.fl.us					

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly. The Work History Form shall include only one singular project. Projects with multiple phases, segments, elements, and/or contracts shall not be considered a single project. If a project listed includes multiple phases, segments, elements, and/or contracts the SOQ may be rendered non-responsive. In any case, only the first phase, segment, element, and/or contract listed will be evaluated.

Archer Western was the design-builder and prime contractor for this four-lane urban connector in Jacksonville, Florida.

This design-build widening and realignment project consists of the design, permitting, and widening and realignment of SR 115, along with a new connection to 21st Street and interchange improvements at Phoenix Avenue. The project consists of an asphalt-paved, four-lane, median divided facility. The project also includes the creation of a new signalized interchange at Phoenix Avenue and a connection to 21st Street (Talleyrand Avenue). Earthwork includes unsuitable excavation, pond excavation, and embankment. The project also includes the demolition and reconstruction of bridges at multiple locations.

Relevance to I-81 Bridge Replacement Project:

- Design-build delivery method utilized
- Phased construction with stringent maintenance-of-traffic (MOT) criteria
- Required coordination of schedule and work hours with multiple stakeholders
- Construction of multiple stormwater management facilities
- Demolition and bridge reconstruction
- Significant utility coordination
- DBE Performance: Goal 8.18% / Actual 15.12%

Similar Scope Elements

- Public involvement/relations
- Interstate design and construction
- Stormwater management
- Multi-phase MOT
- Significant utility relocations,
- Similar construction techniques (concrete girder bridges, concrete pavement, asphalt pavement)
- Multiple stakeholders
- Urban project with high traffic volumes





ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime design	c. Contact information of the Client or	d. Contract	e. Contract	f. Contract Value (in thousands)		g. Dollar Value of Work
	consulting firm responsible for the	Owner and their Project Manager who	Completion	Completion	Original Contract	Final or Estimated	Performed by the Firm identified
	overall project design.	can verify Firm's responsibilities.	Date	Date (Actual	Value	Contract Value	as the Lead Contractor for this
			(Original)	or Estimated)			procurement.(in thousands)
VDOT I-95 Richmond Bridges Richmond, Virginia	AECOM (Formerly URS Corporation)	Name of Client/ Owner: VDOT Phone: 804-674-2452 Project Manager: Scott Fisher Phone:804-674-2452 Email: scott.fisher@VDOT.Virginia.gov	10/2014	10/2014	\$67,958	\$73,537	\$51,476

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly. The Work History Form shall include only one singular project. Projects with multiple phases, segments, elements, and/or contracts shall not be considered a single project. If a project listed includes multiple phases, segments, elements, and/or contracts the SOQ may be rendered non-responsive. In any case, only the first phase, segment, element, and/or contract listed will be evaluated.

Archer Western was the prime contractor for the VDOT I-95 Richmond Bridges replacement project.

This project consists of the rehabilitation of 20 interstate bridges on I-95 in Richmond, Virginia, including 2 miles of shoulder widening and the extension of acceleration lanes. Bridge work is primarily superstructure work that includes nightly bridge deck/beam removal and immediate replacement with precast composite deck sections. Substructure work is focused on the rehabilitation of existing substructure elements, although it includes the construction of new substructure and retaining walls, as required for the widening of four bridges. Maintenance-of traffic (MOT) requirements are extensive, because I-95/I-64 in Richmond must be reduced to one lane in each direction for approximately 200 nights of superstructure replacement in a two-year period, with corresponding lane closures or traffic detours on underlying City of Richmond streets. The project also includes an extensive construction engineering effort for superstructure shop drawings, temporary falsework, pier reconstruction, superstructure demolition/ erection plans, and three approved VECPs.

Relevance to I-81 Bridge Replacement Project:

- Design-build delivery method utilized
- Phased construction with stringent maintenance-of-traffic (MOT) criteria
- Construction of multiple stormwater management facilities
- Demolition and bridge reconstruction
- Significant utility coordination
- DBE Performance: Goal 5% / Actual 8.9%
- Public Information Outreach Program

Similar Scope Elements:

- Public involvement/relations
- Interstate design and construction
- Stormwater management
- Multi-phase MOT
- Significant utility relocations,
- Similar construction techniques (concrete girder bridges, concrete pavement, asphalt pavement)
- Multiple stakeholders



ATTACHMENT 3.4.1(a)

LEAD CONTRACTOR - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime	c. Contact information of the Client or	d. Contract	e. Contract	f. Contract Value (in thousands)		g. Dollar Value of Work
	design consulting firm	Owner and their Project Manager who can	Completion	Completion	Original Contract	Final or Estimated	Performed by the Firm identified
	responsible for the overall	verify Firm's responsibilities.	Date	Date (Actual	Value	Contract Value	as the Lead Contractor for this
	project design.		(Original)	or Estimated)			procurement.(in thousands)
I-395 HOV Ramp at Seminary		Name of Client/ Owner: VDOT					
Rd. & NB Aux Lane Ext.		Phone: 703-2591940					
Alexandria, Virginia	Parsons	Project Manager: Arif Rahman, PE	12/2015	5/2016	\$55,448	\$70,250	\$57,755
		Phone: 703-2591940					
Design-Build		Email: MD.rahman@VDOT.virginia.gov					

h. Narrative describing the Work Performed by the Firm identified as the Lead Contractor for this procurement. If the Offeror chooses to submit work completed by an affiliated or subsidiary company of the Lead Contractor, identify the full legal name of the affiliate or subsidiary and the role they will have on this Project, so the relevancy of that work can be considered accordingly. The Work History Form shall include only one singular project. Projects with multiple phases, segments, elements, and/or contracts shall not be considered a single project. If a project listed includes multiple phases, segments, elements, and/or contracts, the SOQ may be rendered non-responsive. In any case, only the first phase, segment, element, and/or contract listed will be evaluated.

Archer Western was the design-builder and prime contractor for the VDOT I-395 HOV Ramp at Seminary Road and NB Auxiliary Lane Extension.

This design-build project includes constructing a new I-395 HOV Ramp to the existing Seminary Road Bridge, replacing the superstructure of the Seminary Road Bridge, constructing a new pedestrian bridge, widening and rehabilitating the Sanger Ave Bridge, widening the I-395 Northbound General Purpose Lanes, widening the Seminary Road off-ramp, and widening the Duke St on-ramp. In addition to the pedestrian bridge, major features of work include new steel beams and deck for the Seminary Road Bridge, new Bulb-T beam and deck for the HOV Ramp, four sound walls, MSE wall, concrete piles, micropiles, and asphalt paving.

Relevance to I-81 Bridge Replacement Project:

- Design-build delivery method utilized
- Phased construction with stringent maintenance-of-traffic (MOT) criteria
- Construction of multiple stormwater management facilities
- Demolition and bridge reconstruction
- Significant utility coordination
- DBE Performance: Goal 20% / Actual 24.5%
- Public Information Outreach Program

Similar Scope Elements

- Multi-phase MOT
- Public involvement/relations
- Interstate design and construction
- Stormwater management
- Multiple stakeholders
- Significant utility relocations
- Extensive coordination with Environmental permitting agencies
- ROW Acquisition Services performed
- Similar construction techniques (concrete girder bridges, concrete pavement, asphalt pavement)
- Work in and around environmentally sensitive areas





ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/ general	c. Contact information of the Client and	d. Construction	e. Construction	f. Contract Value (in thousands)		g. Design Fee for the Work
	contractor responsible for overall	their Project Manager who can verify	Contract Start	Contract	Construction	Construction	Performed by the Firm identified
	construction of the project.	Firm's responsibilities.	Date	Completion	Contract Value	Contract Value	as the Lead Designer for this
				Date (Actual	(Original)	(Actual or	procurement.(in thousands)
				or Estimated)		Estimated)	
Name: FDOT District 5 I-95 Widening & Reconstruction Design/Build	Name: Archer Western	Name of Client: Florida DOT Project Manager: Bradley Bauknecht Phone: (386) 740-3519 Email: Bradley.Bauknecht@dot.state.fl.us	09/2014	09/2017	\$205,000	\$230,000	\$3,175
Location:							
Daytona Beach, FL							

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant. The Work History Form shall include only one singular project. Projects with multiple phases, segments, elements, and/or contracts shall not be considered a single project. If a project listed includes multiple phases, segments, elements, and/or contracts, the SOQ may be rendered non-responsive. In any case, only the first phase, segment, element, and/or contract listed will be evaluated.

TranSystems was selected as part of a design/build team to provide final design engineering services for this complex project, which includes widening I-95 from four to six lanes; complete reconstruction of the I-4/I-95 interchange; reconstruction of the US 92 interchange, and improvements to I-4 (SR 400), US 92, Bellevue Road, and Tomoka Farms Road. As a lead design consultant, TranSystems provided roadway design for the segment of the project north of SR 44 to SR 421 (including the SR 421 interchange). The overall project consists of 18 new bridges, and TranSystems was responsible for designing five new structures, including three single span, one two-span and one three-span.

- The three-span bridge at the I-4/I-95 interchange used straight concrete girders on a curved alignment with a super elevated deck.
- The two-span bridge at Bellevue Road over I-95 had a very tight design/construction schedule and was designed in just 4 months.
- One of the single span bridges, I-95 over SR 421, was designed with 84-inch Florida I-Beams, utilizing 10,000 psi concrete, providing 192 feet span lengths.
- For the multi span bridges, column aesthetics were provided (rustication and reveals)
- All structures utilize prestressed concrete girders

TranSystems' offices included Orlando, FL, Richmond, VA, Jacksonville, FL, and Greenville, SC.



ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/ general	c. Contact information of the Client and	d. Construction	e. Construction	f. Contract Value (in thousands)		g. Design Fee for the Work
	contractor responsible for overall	their Project Manager who can verify	Contract Start	Contract	Construction	Construction	Performed by the Firm identified
	construction of the project.	Firm's responsibilities.	Date	Completion	Contract Value	Contract Value	as the Lead Designer for this
				Date (Actual	(Original)	(Actual or	procurement.(in thousands)
				or Estimated)		Estimated)	
Name: Route 2 Over I-95 Design Build Location: Lexington, MA	Name: SPS New England, Inc.	Name of Client: Mass DOT Project Manager: Murthy Kolla Phone: (857) 368-6100 Email: nmurthykolla@state.ma.us	12/2013	Project is substantially complete; 100% complete 10/2017	\$51,080	\$52,937	\$3,645

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant. The Work History Form shall include only one singular project. Projects with multiple phases, segments, elements, and/or contracts shall not be considered a single project. If a project listed includes multiple phases, segments, elements, and/or contracts, the SOQ may be rendered non-responsive. In any case, only the first phase, segment, element, and/or contract listed will be evaluated.

TranSystems was the lead design firm for the design-build replacement of the twin bridges carrying MA Route 2 over I-95. This project also included performing Interstate Maintenance along 2 miles of I-95, and revising the ramp geometry as required for the full cloverleaf interchange at this location.

Route 2 is one of the main alternatives to the Massachusetts Turnpike for east-west travel and carries approximately 67,000 vehicles per day. This portion of I-95 serves as Boston's main circumferential highway, with an ADT of 172,000. The bridges, built in 1960, were structurally deficient and functionally obsolete, and the vertical clearance for I-95 under the bridges was below current guidelines. The project replaced the existing substandard bridges with new multi-girder structures to meet current seismic criteria, improve safety, protect the environment and reduce annual maintenance costs.

ABC techniques were used to minimize disruption and reduce construction duration. They included the first-time use in Massachusetts of precast, modular concrete abutments, which replaced the drilled shaft deep foundation system which was proposed in the design-build preliminary design documents. These modular concrete abutments founded on spread footings, eliminate a total of 40 four-foot diameter drilled shafts (20 at each abutment) averaging nearly 40 feet in length.

This interchange is one of the busiest in Massachusetts, and traffic maintenance throughout construction was a key aspect of the project. To minimize traffic impacts, the construction phasing involved constructing the new Route 2 westbound bridge in the Route 2 median between the existing bridges. Upon completion, this bridge temporarily carried Route 2 eastbound traffic, while the existing Route 2 eastbound bridge was demolished and the new Route 2 eastbound bridge built in the same footprint.

The Interstate Maintenance work consisted of resurfacing, drainage improvements, median reconstruction, shoulder widening, and traffic safety improvements along a 2 mile segment of I-95, which provides 4-lanes in each direction. Additionally, the project abuts the Hobbs Brook Reservoir, the public water supply for the City of Cambridge, MA. Protecting this reservoir from impacts during construction was a vital component of the work.

TranSystems' offices included Boston, MA.



ATTACHMENT 3.4.1(b)

LEAD DESIGNER - WORK HISTORY FORM

(LIMIT 1 PAGE PER PROJECT)

a. Project Name & Location	b. Name of the prime/ general	c. Contact information of the Client and	d. Construction	e. Construction	f. Contract Value (in thousands)		g. Design Fee for the Work
	contractor responsible for overall	their Project Manager who can verify	Contract Start	Contract	Construction	Construction	Performed by the Firm identified
	construction of the project.	Firm's responsibilities.	Date	Completion	Contract Value	Contract Value	as the Lead Designer for this
				Date (Actual	(Original)	(Actual or	procurement.(in thousands)
				or Estimated)		Estimated)	
Name:	Name:	Name of Client:					
I-64 over Route 156 Bridge		Virginia DOT					
Replacement	To be determined	Project Manager: Tony Haverly, PE	Bid date 3/2018		\$28,000	Est. \$28,000	\$3,426
Location:		Phone: (804) 524-2356	Did date 3/2018				
Richmond, VA		Email:					
		Anthony.Haverly@VDOT.Virginia.gov					

h. Narrative describing the Work Performed by the Firm identified as the Lead Designer for this procurement. Include the office location(s) where the design work was performed and whether the firm was the prime designer or a subconsultant. The Work History Form shall include only one singular project. Projects with multiple phases, segments, elements, and/or contracts shall not be considered a single project. If a project listed includes multiple phases, segments, elements, and/or contracts shall not be evaluated.

TranSystems Corporation was selected by VDOT to provide professional services as the lead designer for Replacement of Bridges on EBL and WBL I-64 over Route 156 (Airport Drive). The bridges have a current ADT of 45,000 vehicles per day. TranSystems performed the conceptual bridge engineering services as part of developing the Alternatives Analysis & Recommendations report. A major goal of the bridge engineering effort is to evaluate feasible alternatives for the span arrangements and typical sections and evaluate feasible accelerated bridge construction techniques. TranSystems investigated two (2) alternatives with the goal of developing an alternative, independent of material type, with emphasis placed on accelerated bridge construction techniques. The other alternative developed was based on traditional construction methods. A major design parameter involved raising the minimum vertical clearance from 14'-5" to 16'-6".

TranSystems performed the preliminary bridge design as part of the scoping stage of the contract. An additional goal of the bridge engineering effort was to further develop the recommended alternative. TranSystems developed the selected alternative to a 30% design level considering the use of steel and concrete for the material type, as feasible. The end product of this phase was the delivery of a Stage I Bridge Report and PFI Plans.

TranSystems is currently performing final design services. The selected alternate will use accelerated bridge construction for he superstructure utilizing Precast Beam Units (PBUs). The selected alternate will reduce the construction schedule substantially, thus reducing the impacts to the traveling public.

The project involves the development of final plans including bridge, roadway, drainage, TMP (MOT/SOC), TCD, and geotechnical services.

TranSystems' offices includes Richmond, VA, Greenville, SC, and Boston, MA

