

I-64 Hampton Roads Express Lanes (HREL) Segment 4C
From: 0.138 miles East of LaSalle Ave
To: 0.500 miles East of Settlers Landing Road
City of Hampton, Virginia

State Project No.: 0064-114-xxx
Federal Project No.: NHPP-064-3(522)
Contract ID Number: C00117841DB111

Statement of Qualifications

June 29, 2021

ferrovial
construction

PARSONS

**2.10 Acknowledgement of RFQ, Revision and/or Addenda
Form C-78-RFQ**

ATTACHMENT 2.10**COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION**

RFQ NO. C00117841DB111
PROJECT NO.: 0064-114-xxx

ACKNOWLEDGEMENT OF RFQ, REVISION AND/OR ADDENDA

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

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

1. Cover letter of RFQ – April 30, 2021
(Date)
2. Cover letter of RFQ Addendum #1 – June 2, 2021
(Date)
3. Cover letter of RFQ Addendum #2 – June 11, 2021
(Date)

 <hr style="border: 0; border-top: 1px solid black; margin: 0;"/> SIGNATURE	<hr style="border: 0; border-top: 1px solid black; margin: 0;"/> June 28, 2021 DATE
<hr style="border: 0; border-top: 1px solid black; margin: 0;"/> Domingo Rodriguez Torregrosa PRINTED NAME	<hr style="border: 0; border-top: 1px solid black; margin: 0;"/> Managing Director East Coast US Authorized Representative TITLE

3.1.2 SOQ Checklist

ATTACHMENT 3.1.2

Project: 0064-114-xxx, Contract ID: C00117841DB111

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	N/A
Acknowledgement of RFQ, Revision and/or Addenda	Attachment 2.10 (Form C-78-RFQ)	Section 2.10	no	N/A
Letter of Submittal (on Offeror's letterhead)				
Authorized Representative's signature	NA	Section 3.2.1	yes	1
Offeror's point of contact information	NA	Section 3.2.2	yes	1
Principal officer information	NA	Section 3.2.3	yes	1
Offeror's Corporate Structure	NA	Section 3.2.4	yes	1
Identity of Lead Contractor and Lead Designer	NA	Section 3.2.5	yes	1
Affiliated/subsidiary companies	Attachment 3.2.6	Section 3.2.6	no	N/A
Debarment forms	Attachment 3.2.7(a) Attachment 3.2.7(b)	Section 3.2.7	no	N/A
Offeror's VDOT prequalification evidence	NA	Section 3.2.8	no	N/A
Evidence of obtaining bonding	NA	Section 3.2.9	no	N/A

ATTACHMENT 3.1.2

Project: 0064-114-xxx, Contract ID: C00117841DB111

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	N/A
Full size copies of SCC Registration	NA	Section 3.2.10.1	no	N/A
Full size copies of DPOR Registration (Offices)	NA	Section 3.2.10.2	no	N/A
Full size copies of DPOR Registration (Key Personnel)	NA	Section 3.2.10.3	no	N/A
Full size copies of DPOR Registration (Non-APELSCIDLA)	NA	Section 3.2.10.4	no	N/A
DBE statement within Letter of Submittal confirming Offeror is committed to achieving the required DBE goal	NA	Section 3.2.11	yes	1
Offeror's Team Structure				
Identity of and qualifications of Key Personnel	NA	Section 3.3.1	yes	2-3
Key Personnel Resume – DB Project Manager	Attachment 3.3.1	Section 3.3.1.1	no	N/A
Key Personnel Resume – Entrusted Engineer In Charge	Attachment 3.3.1	Section 3.3.1.2	no	N/A
Key Personnel Resume – Quality Assurance Manager	Attachment 3.3.1	Section 3.3.1.3	no	N/A
Key Personnel Resume – Design Manager	Attachment 3.3.1	Section 3.3.1.4	no	N/A
Key Personnel Resume – Construction Manager	Attachment 3.3.1	Section 3.3.1.5	no	N/A
Organizational chart	NA	Section 3.3.2	yes	6
Organizational chart narrative	NA	Section 3.3.2	yes	3-5

ATTACHMENT 3.1.2

Project: 0064-114-xxx, Contract ID: C00117841DB111

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				
Lead Contractor Work History Form	Attachment 3.4.1(a)	Section 3.4	no	N/A
Lead Designer Work History Form	Attachment 3.4.1(b)	Section 3.4	no	N/a
Project Risk				
Identify and discuss three critical risks for the Project	NA	Section 3.5.1	yes	7-15

3.2 Letter of Submittal

June 29, 2021

Commonwealth of Virginia
Virginia Department of Transportation
1401 East Broad Street
Richmond, VA 23219
Attention: Suril R. Shah, P.E. DBIA (APD Division)

I-64 Hampton Roads Express Lanes Segment 4C
Contract ID No.: C00117841DB111
Statement of Qualifications
3.2 Letter of Submittal

Offeror Ferrovial Construction US Corp. (FCUS) is pleased to submit our SOQ to VDOT. FCUS's experience includes some of the largest, most complex transportation projects in the US, including Transform 66 Outside the Beltway. In the last 10 years, the firm has been awarded 12 major design-build contracts worth \$13B in construction value. At \$6.6B, FCUS has one of the largest bonding capacities in the US. FCUS will be supported by dedicated subcontractor Branscome, Inc.

Parsons has led the design for over 120 design-build projects in North America totaling more than \$40B in constructed value. In the Commonwealth, Parsons has been a partner in the advancement of transportation infrastructure for more than five decades. Parsons is proposing their best roadway design team and industry-leading credentials for this opportunity, bringing local experience and knowledge of the design team from the recent I-64 Southside Widening and High Rise Bridge (HRB), Phase 1 project in Hampton Roads.

3.2.1 Offeror: Ferrovial Construction US Corp., 9600 Great Hills Trail, Suite 200E, Austin, TX 78759

3.2.2 Offeror Point of Contact: Enrique Aldecoa, Project Manager, 3877 Fairfax Ridge Rd, 3rd Floor Central Tower, Fairfax, VA 22030 | 817.510.3557 (p) | 512.637.1499 (f) | ealdecoa@ferrovial.us

3.2.3 Principal Officer of Offeror: Domingo Rodriguez Torregrosa, Managing Director East Coast US, Authorized Representative, One Securities Centre, 3490 Piedmont Road, Suite 350, Atlanta, GA 30305 | 404.434.8778 (p) | 512.637.1499 (f) | domrodri@ferrovial.com

3.2.4 Ferrovial Construction US Corp., a corporation, will assume financial responsibility for this Project and has no liability limitations. A single 100% performance bond and 100% payment bond will be provided.

3.2.5 The Lead Contractor is Ferrovial Construction US Corp. The Lead Designer is Parsons Transportation Group Inc.

3.2.6 Legal name and address of Offeror's affiliated and/or subsidiary companies is in Attachment 3.2.6.

3.2.7 Executed Attachments 3.2.7a and 3.2.7b regarding debarment are included in the Appendix.

3.2.8 FCUS's VDOT prequalification number is F1029. Our probationary status was waived by Harold Caples, PE, VCCO on 4/14/21. Evidence of prequalification and waiver are in the Appendix.

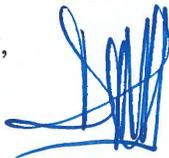
3.2.9 The Appendix contains a surety letter stating FCUS can obtain a performance and payment bond based on the contract value in Section 2.1 of the RFQ. The bonds will cover the project and warranty period.

3.2.10 SCC and DPOR registration for all business entities on the team is contained in Attachment 3.2.10. Copies of the registrations and licenses are in the Appendix.

3.2.11 FCUS is committed to achieving the 6% DBE participation goal for the entire value of the contract.

We appreciate the opportunity to submit our Statement of Qualifications.

Respectfully,



Domingo Rodriguez Torregrosa
Managing Director East Coast US, Authorized Representative

3.3 Offeror's Team Structure

3.3 OFFEROR'S TEAM STRUCTURE

The Offeror and Lead Contractor is Ferrovial Construction US Corp. (FCUS). FCUS is a leading-edge global construction firm noted for its innovation and ability to bring added value to clients. FCUS has been active in the North American transportation industry since 1999. The company's experience includes some of the largest, most complex transportation projects in the US, including the \$2.3B Transform 66 Outside the Beltway (Transform 66) project for VDOT. FCUS has completed or is in the process of completing 12 major design-build contracts in the US, totaling more than \$13B. **FCUS has a history of completing projects early:** \$2.1B I-635 LBJ Express (three months), \$1.5B North Tarrant Express (NTE) (nine months) and \$1.1B I-35W Segment 3A (two months). FCUS will be supported by dedicated subcontractor Branscome, Inc. a highly-regarded local general contractor specializing in highway paving.

With 75 years of experience having delivered 120 alternative delivery projects across North America valued at over \$40B, Lead Designer, Parsons Transportation Group Inc. (Parsons), is uniquely qualified to undertake the complex design issues related to projects in dense urban areas. Parsons brings the requisite blend of local knowledge and expertise from design experience on the I-64 Southside Widening and High Rise Bridge (HRB), Phase 1, and Military Highway CFI projects in Hampton Roads.

OFFEROR & LEAD CONTRACTOR

ferrovial
construction

LEAD DESIGNER

PARSONS

As a member of VDOT's GEC on Transform 66, Parsons has an established, collaborative working relationship with FCUS that has led to pursuing \$4B in new design-build procurements together.

FCUS and Parsons projects have received numerous awards for safety, environmental, public relations, DBE and design/construction. Project specific examples are shown on the Work History Forms.

As experts at design-build, we promote a whole-team approach to identify and manage issues and provide project guidance. We use a flexible, integrated approach that can quickly adapt to change. The FCUS-Parsons team organization is depicted on the Project Organizational Chart and described in the Organizational Narrative.

3.3.1 KEY PERSONNEL

The root of successful experience and performance lies with the people that manage projects. We have assembled an exceptional team with the necessary experience and knowledge to deliver a safe and sustainable solution of the highest quality. Our Key Personnel have worked on numerous successful design-build projects comparable to I-64 HREL Segment 4C in terms of scope, size and complexity, demonstrating their capacity to adapt to new challenges by working as a team, coordinating and collaborating since day one. Specifically, all the construction Key Personnel (DBPM, EIC and CM) have worked together in similar roles on the Transform 66 project, bringing existing collaborative relationships and experience with VDOT. These three individuals also worked together on the \$1.5B NTE Segments 1&2 in Fort Worth, Texas, which was completed nine months ahead of schedule. The remaining Key Personnel (DM and QAM) possess local expertise in the Hampton Roads District; the DM served on the I-64 HRB project and the QAM worked on the I-64 Capacity Improvements projects (Seg I and III). Their two firms have worked together on numerous projects; most recently, the Battlefield Parkway in Loudoun County.

Our Key Personnel are identified in Table 1 on the following page. Attachment 3.3.1 - Key Personnel Resumes details the experience and qualifications of our Key Personnel, demonstrating that the project and associated risks will be effectively managed through personal competence, accountability and availability.

Key Personnel experience on similar projects in the area

- **DBPM** – Transform 66
- **EEIC** – Transform 66
- **QAM** – I-64 Capacity Imp.
- **DM** – I-64 High Rise Bridge
- **CM** – Transform 66



*Recent VDOT design and construction experience:
Transform 66 (left) I-64 HRB (right)*

Table 1 - Key Personnel			
Role	Individual	Recent Relevant Project	Firm
DB Project Manager (DBPM)	Pablo Molla	Transform 66	FCUS
Entrusted Engineer-In-Charge (EIC)	Rosario Tripliana, PE	Transform 66	FCUS
Quality Assurance Manager (QAM)	Andy Kondysar, PE	I-64 Capacity Improvements	Quinn
Design Manager (DM)	Joshua Wade, PE	I-64 HRB	Parsons
Construction Manager (CM)	Ismael Javierre	Transform 66	FCUS

Value-Added Personnel

In addition to our Key Personnel, we have identified additional roles and team members critical to the success of this project. The functional relationships section details the added value of their positions and qualifications, specific to addressing the challenges of this project.

Table 2 - Valued-Added Personnel			
Role	Individual	Recent Relevant Project	
MOT Design Engineer	James Thomas, PE	I-64 HRB	
MOT Implementation Manager	Dean Conrad	Transform 285/400	
Corridor Coordination Manager	Nelson Coelho	Transform 66	
Public Information Manager	Nancy Smith	Transform 66	
Environmental Design Manager	Stuart Tyler, PE	Transform 66	
Environmental Permitting & Coordination Manager	Curtis Hickman	I-64 HRB	
Environmental Compliance Manager	Francisco Metcalf	Transform 66	
Structure & Bridge Engineer	Greg Shafer, PE	I-64 HRB	
Bridge Superintendent	Kieran McKenna	Transform 66	
Geotechnical Engineer	Jonathan Taylor, PE	I-64 HRBT	
ITS/Tolling Systems Engineer	Olu Adeyinka, PE	Transform 66	

3.3.2 ORGANIZATIONAL CHART

An organizational chart highlighting the “chain of command” of all companies, including individuals responsible for pertinent disciplines proposed on the Offeror’s team, is contained on page 6. Major responsibilities and reporting relationships in managing, designing and constructing the project are illustrated on the chart and described on the following pages.

The FCUS LBJ Express Project Management Plan is currently used by FHWA as a best practice.

Functional Relationships and Communication

Our structure facilitates stability and results in a highly-functional team able to effectively involve all stakeholders and third parties, resolve issues at the project level, and work closely with VDOT to achieve timely delivery and a high-quality product. Our management structure offers a balanced integration of design and construction that promotes safety, quality, innovation, efficiency and life-cycle benefits.

Design-Build Project Manager Pablo Molla is responsible for the overall project design and construction, including quality management and construction administration, thereby meeting the Design-Builder’s obligations under the design-build contract. He will serve as the primary point of contact with VDOT upon conditional award. Pablo is responsible for contract management as well as coordinating and integrating all design-build project disciplines. He has full authority to resolve all disputes or disagreements through

best efforts and good faith negotiations with the Department's representatives. Pablo will work alongside VDOT to coordinate with all third-party stakeholders and public outreach efforts (including meetings) and answer any project-specific inquiries.

Our collaborative approach to design and construction is led by **Rosario Tripiana, PE**, as the **Entrusted Engineer-in-Charge (EIC)**. She will report directly to the DBPM and is responsible for design and construction engineering decisions, including subcontractors and subconsultants.

Rosario will work closely with the design manager, construction manager, quality assurance manager and MOT design engineer, and MOT implementation manager to supervise all engineering tasks related to the final work. She will also ensure all engineering work is integrated and in conformance with contract documents to deliver a safe, constructable and functional product. Rosario will be assigned to the project full-time and will be actively engaged in coordinating all engineering decisions for the life of the project. She will compile the complete, aggregate collection of the final Released for Construction Plans, Specifications and other documents for the entirety of the work, and seal and sign the cover sheet. Rosario will have complete authority to accept or reject any or all construction work.

The QA team will be led by **Quality Assurance Manager (QAM) Andy Kondysar, PE**. He reports directly to the DBPM and VDOT, and will be fully independent of construction operations. Andy will be on the project site full-time for the duration of construction operations. He will be responsible for the QA inspection and testing of materials and work performed on the project. Andy will ensure all work and materials, testing and sampling are conducted in conformance with the contract requirements as well as the "approved for construction" plans and specifications. He will prepare the QA/QC plan.

Andy will be supported by a team of inspectors with a minimum of two lead QA inspectors (bridge and roadway) assigned on the project site full-time during construction operations. The inspectors will handle all field QA inspection and testing.

Design Manager (DM) Joshua Wade, PE reports directly to the DBPM. Josh is responsible for ensuring the design work is performed in accordance with current VDOT standards and specifications. He will manage design elements and be responsible for providing a quality product, meeting all design milestones, and ensuring the design QC program is

followed. He will assign resources as needed, oversee the design subconsultants, develop and implement corrective measures, following the design QC review, and confirm that complete environmental compliance measures are integrated into the design. Josh will maintain involvement during construction and to oversee plan revisions and shop drawings, and review construction activities with the construction manager, EIC and others.

Construction Manager (CM) Ismael Javierre will report directly to the DBPM and is responsible for managing the construction process. He will oversee QC activities, ensuring materials used and work performed meet contract requirements, and the "approved for construction" plans and specifications. Ismael will be on the project site for the duration of construction operations. He will manage subcontractors and FCUS self-performance crews. Ismael will supervise the MOT implementation manager, ITS/tolling systems manager, utility manager, construction coordinators, superintendents, foremen and other field staff. Ismael will obtain and hold a DEQ Responsible Land Disturber Certification and a VDOT ESCC Certification prior to the commencement of construction.

The FCUS-Parsons team brings lessons learned and best practices from recent relevant road/bridge projects; a culture of safety driven by a zero accidents goal and "safety first" attitude; clear lines of communication and embedded accountability at every level; and a comprehensive Partnering program.

Value-Added Personnel

To address the project-specific complexities and mitigate risks, we provide the Value-Added Personnel, identified in Table 2, detailed below. These individuals were chosen because of their applicable experience and expertise in delivering projects similar in scope: designing and constructing bridges/interchanges in urban corridors, coordinating with adjacent projects, developing innovative design solutions and construction techniques, and managing projects under tight schedule constraints.

MOT Design Engineer James Thomas, PE will report directly to the DM and is responsible for all MOT design elements. James provides unparalleled expertise and will monitor the Transportation Management Plan (TMP) and Temporary Traffic Control (TTC) plans throughout design and construction to ensure safe and efficient operations

are maintained. James is a certified MOT engineer and has successfully led the MOT design on several VDOT DB projects, including the I-64 HRB project. James will be essential in addressing and mitigating MOT risks, applying his 15-year experience with VDOT, best practices and lessons learned.

MOT Implementation Manager Dean Conrad will report to the CM and is responsible for implementing and overseeing the TTC plans, LCAMS coordination, and incident management. On the \$2.1B LBJ Express, Dean coordinated 10,000 lane closures and 1,000 traffic shifts. The project was completed three months early with no fines, fatalities or major injuries. Dean is well-versed in traffic control activities in dense urban areas, including major detours setups; marking and identification of construction zones and areas for striping; lane closures and installation of barrier walls; and traffic control equipment inspections. Dean is a trained Peace Officer. He will coordinate wrecker service to minimize impacts from accidents, and work closely with James (MOT DM) in monitoring and updating the TTC as conditions necessitate.

Corridor Coordination Manager Nelson Coelho will report directly to the DBPM. This position was created to liaise, coordinate and collaborate with adjacent projects (e.g. I-64 HRBT and I-64 Segment 4A/4B) and local stakeholders to minimize constraints and maximize cooperation among parties. Nelson will leverage his experience working in the Commonwealth and with stakeholders on Transform 66.

Public Information Manager Nancy Smith will report directly to the DBPM and is responsible for providing coordination with VDOT and assisting with the development of an effective, project-specific communications and outreach plan. Nancy will communicate and coordinate with VDOT, key stakeholders, businesses and the traveling public, as well as attend community and public meetings. She will serve as a liaison between VDOT and the DB team, and will gather pertinent information to ensure notifications and advisories can be shared (regarding construction operations and their potential impacts). Nancy is serving in the same role on Transform 66 where she has participated in hundreds of community meetings.

Our experienced MOT team of James (design), Dean (implementation), Nelson (corridor coordination) and Nancy (public information) will work collaboratively to address the project's primary challenges: MOT and project coordination (as described in Risk #1 and #2).

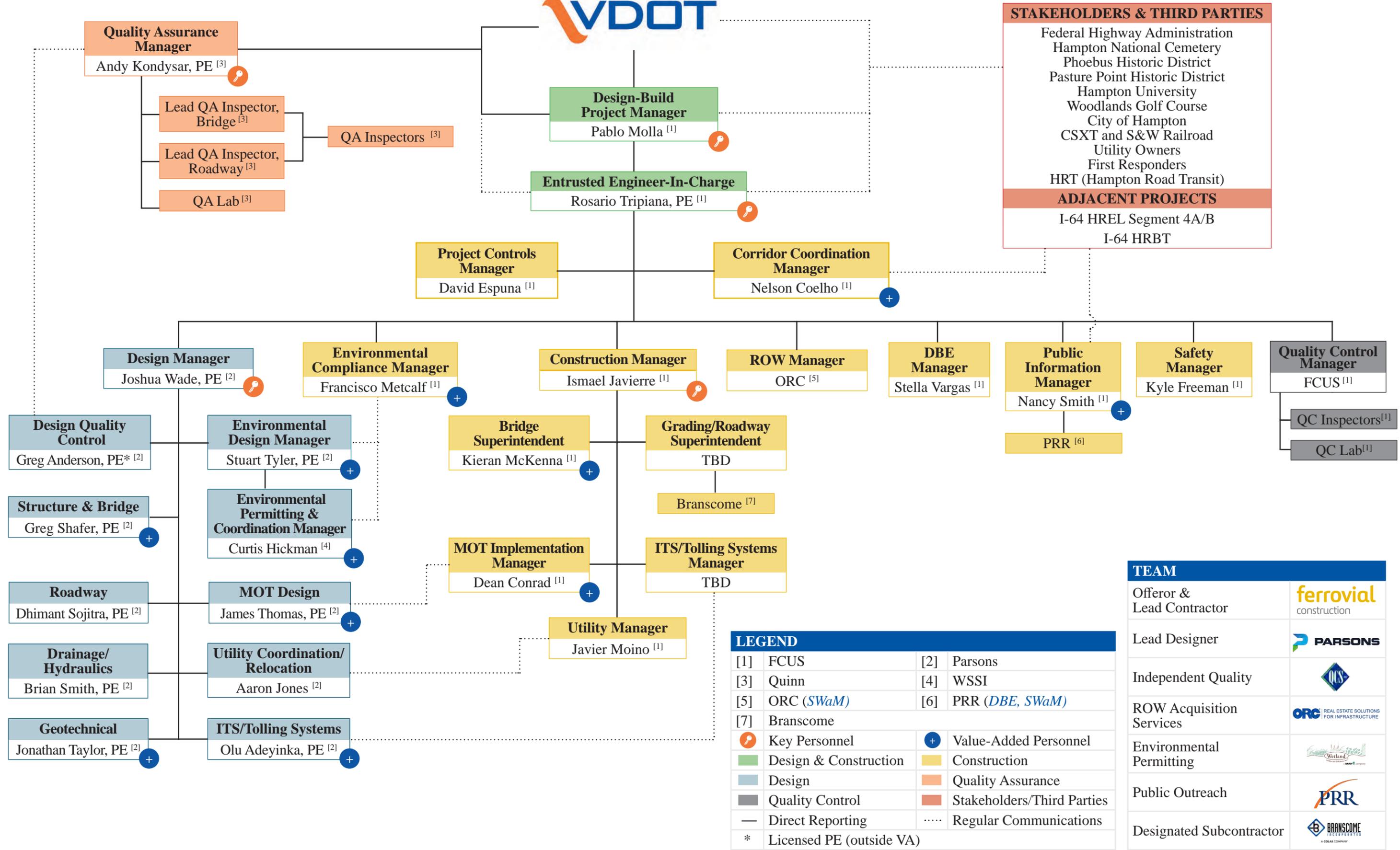
Environmental Design Manager Stuart Tyler, PE will report directly to the DM and is responsible for developing the Environmental Management Plan (EMP) and providing environmental input during the design phase. Stuart will work closely with **Environmental Permitting & Coordination Manager Curtis Hickman**, who reports to Stuart, and **Environmental Compliance Manager (ECM) Francisco Metcalf**, who reports to the DBPM.

Stuart and Curtis will collaborate and ensure designs are permissible and permit documentation accommodates all utility relocation and construction activities. Curtis held this same role on the nearby I-64 HRB project and achieved permit approvals two months ahead of an already ambitious schedule. Similarly, during construction, Francisco and Curtis will work together to ensure permit inspections are completed and documented in accordance with environmental permit requirements. Francisco provides diligent oversight and monitoring of environmental compliance during construction. In addition, Stuart and Francisco will coordinate throughout design and construction on environmental issues and work in partnership to mitigate the Erosion and Sediment Control (ESC)/Stormwater Management (SWM) risk (see Risk #3). Stuart and Francisco successfully worked together in these same roles on Transform 66, with Stuart serving as a member of the GEC team, and Francisco on the construction team.

Josh (DM) and Curtis (permitting manager) will use their experience collaborating on HRB to address the environmental challenges (Risk #3). As a result of their efforts on HRB, environmental permits were obtained two months ahead of schedule.

Structure & Bridge Engineer Greg Shafer, PE and **ITS/Tolling Systems Engineer Olu Adeyinka, PE** will report to Josh (DM) and leverage their experience working together in similar roles on the I-64 HRB project. Both HRB and Segment 4C have multi-span interstate bridges constructed over water and multiple bridge widenings adjacent to traffic. Greg will deliver structural design solutions consistent with the policy and expectations of VDOT's Structure and Bridge Division and the Hampton Roads District office. In addition to HRB, Olu was responsible for the design and coordination of tolling infrastructure and ITS on I-495 Capital Beltway, I-95 and Transform 66. He was specifically chosen to apply his extensive experience in implementing tolling systems with VDOT and coordinating with third-party vendors.

Organizational Chart



STAKEHOLDERS & THIRD PARTIES

- Federal Highway Administration
- Hampton National Cemetery
- Phoebus Historic District
- Pasture Point Historic District
- Hampton University
- Woodlands Golf Course
- City of Hampton
- CSXT and S&W Railroad
- Utility Owners
- First Responders
- HRT (Hampton Road Transit)

ADJACENT PROJECTS

- I-64 HREL Segment 4A/B
- I-64 HRBT

LEGEND

[1] FCUS	[2] Parsons
[3] Quinn	[4] WSSI
[5] ORC (SWaM)	[6] PRR (DBE, SWaM)
[7] Branscome	
🔑 Key Personnel	+ Value-Added Personnel
🟢 Design & Construction	🟡 Construction
🟠 Design	🟠 Quality Assurance
🟤 Quality Control	🔴 Stakeholders/Third Parties
— Direct Reporting	⋯ Regular Communications
* Licensed PE (outside VA)	

TEAM

Offeror & Lead Contractor	
Lead Designer	
Independent Quality	
ROW Acquisition Services	
Environmental Permitting	
Public Outreach	
Designated Subcontractor	

3.4 Experience of Offeror's Team

Per RFQ instructions, please find our Lead Contractor and Lead Designer Work History Forms in the Appendix.

3.5 Project Risks

3.5 PROJECT RISKS

RISK #1 – MAINTENANCE OF TRAFFIC (MOT)

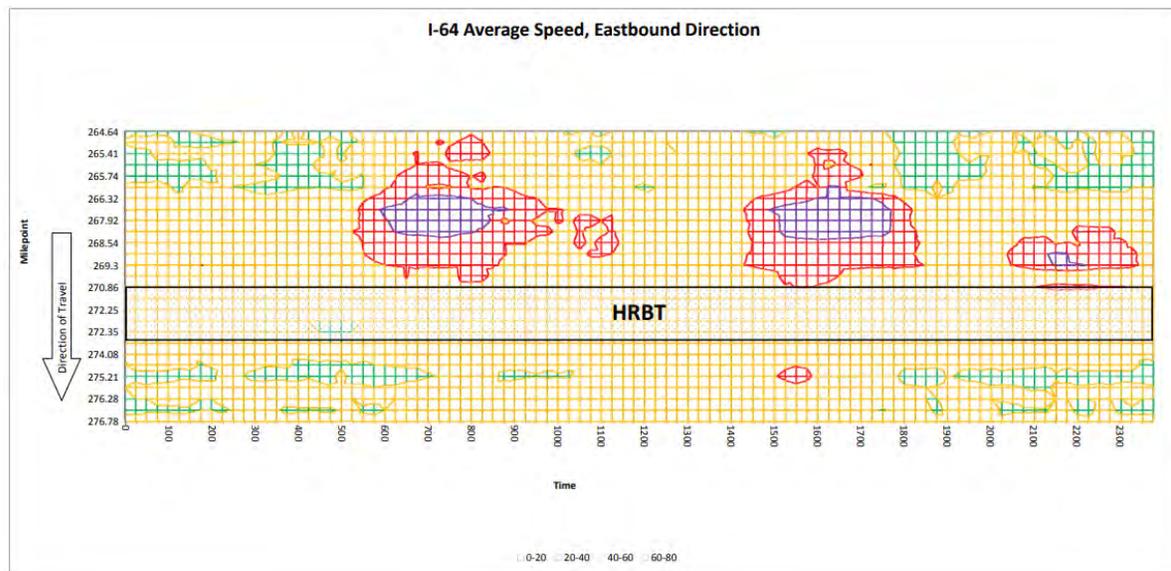
Risk Identification

Safely managing the flow of traffic in and around the work zone is a critical risk when working on an interstate with limited alternative routes that is located in a metropolitan area and adjacent to sensitive historic neighborhoods, navigable waterways and a university. For this project, this risk is magnified by the unique characteristics of this section of I-64 in Hampton, including seasonal variations in traffic and adjacent on-going construction projects on both ends.

This section of I-64 already experiences severe congestion and the challenge will be to efficiently manage vehicles through the work zone and maintain a safe and steady flow of traffic so that this existing condition is not unnecessarily magnified.

Why This Risk Is Critical

Traffic Operations in the I-64 Corridor. The I-64 corridor is critical to regional mobility, as demonstrated by the traffic congestion, low speeds and lengthy queues in both directions on a daily basis. Two of the primary causes of these chronic traffic problems are: (1) unpredictable congestion and queuing at the Hampton Roads Bridge Tunnel (HRBT) and (2) the limited number of routes from the peninsula to Norfolk, Virginia Beach and other points south. As shown in the speed contour plot below, which is based on INRIX data from 2010, slow downs occur several times of the day in the eastbound direction approaching the HRBT, spilling back into Segment 4C. These conditions have worsened over the past 10 years and are expected to deteriorate further due to construction in the corridor.



Source: I-64 HRBT EIS, Traffic and Transportation Technical Report, VDOT, October 12, 2012

This section of I-64 is a major commuter and commercial trucking route and serves close to 100,000 vehicles per day (vpd). This section of I-64 also experiences high volumes of seasonal vacation traffic, as both a route to nearby beaches and to the Outer Banks further south. There are also several military facilities in the region, including the Naval Station in Norfolk, adding considerable volume to the highway when multiple ships are docked. Seasonal/vacation and military traffic cause extreme and unpredictable congestion as well as bring drivers to the roadway network who are not familiar with roadway conditions, increasing the MOT risk.

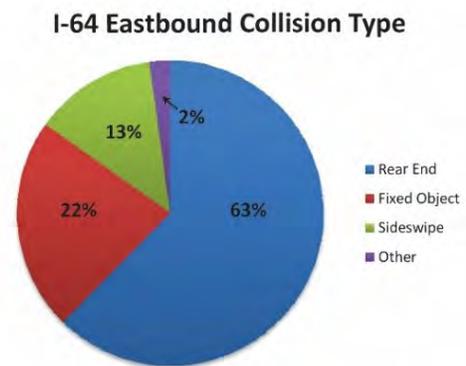
Maintaining a safe and steady traffic flow during construction is imperative for a project such as this one in a dense urban corridor. The many opportunities for failure during construction can quickly gain unwanted negative attention from the public and elected officials. Ineffective and inefficient MOT operations can lead to major issues/incidents and create a negative public perception of the project.

Adjacent Street Network and Historic Districts/Communities. There are many historic areas adjacent to the project, including historic downtown Hampton and Hampton University, and reducing spillover of vehicles onto the local streets will be critical to maintain a positive relationship with local stakeholders and the public. Inadequate detours and increased congestion on I-64 could lead to more cut-through traffic, which could increase the potential for accidents involving pedestrians and bicyclists. This potential for accidents is magnified by the fact that cut-through traffic tends to travel at higher speeds through these low-speed corridors.

Construction Access and Safety. There is limited access within the project area for deliveries of materials and equipment and limited area for construction staging outside of the roadway. Between LaSalle Avenue and Settlers Landing Road, there are no ingress or egress points to this section of I-64. As a result, any congestion and traffic delays would have a considerable impact on the ability to deliver materials and equipment in a timely manner, which would have negative impacts on the construction schedule and the ability to complete work on time. All work will take place next to an active interstate with vehicles traveling at high speeds. Safety of construction workers is also a key consideration within the work zone and in providing access to the job site.

Adjacent Projects. While there are many MOT risks related to the project itself, there are also additional and compounded MOT risks associated with the active construction projects at either end. Having projects back-to-back-to-back in a restricted section of roadway can lead to overlapping work zones and temporary traffic control devices as well as have a spillover effect should the congestion from an incident occurring in one project spread into the adjacent project limits. Low overhead clearance in the existing HRBT frequently necessitates the turn-around of over height trucks, which requires temporary road closures in both directions and results in additional delays and unpredictable travel conditions. The risk of issues occurring within the adjacent projects negatively affecting this project are extremely high and could lead to accidents in the work zone as well as major construction schedule delays.

Traveling Public Safety. The large number of rear end crashes within the I-64 corridor and on the tunnel approaches has already been identified in traffic and safety studies performed by VDOT. As shown in the pie chart below, rear end and sideswipe crashes accounted for 76% of total observed crashes during a four-year period in the 13.5-mile segment of I-64 between I-664 and I-564, within which all three projects lie. The high percentage of rear end crashes and sideswipe crashes is an indication of congestion and improper lane changes.¹ These types of crashes generally result from driver aggressiveness and inattention where motorists follow too closely, frequently accelerate and decelerate, and unsafely change lanes.² In addition, non-standard and/or non-conforming geometry, such as short weave sections³ or non-standard acceleration and deceleration lane lengths⁴, also contribute to these types of crashes.



Source: I-64 HRBT EIS, Traffic and Transportation Technical Report, VDOT, October 12, 2012

Potential Impacts

The potential impacts of the MOT risk include:

- Unacceptable worsening of traffic congestion and negative public perception of the project
- Impacts to adjacent street network and historic districts/communities
- Schedule disruption due to inefficient sequencing and access to work
- Dangerous working conditions
- Interference with and from adjacent HRBT and Segment 4A/4B
- Increased frequency and severity of traffic accidents

¹ Baldock, M. R. J., A. D. Long, V. L. Lindsay, and A. J. McLean. Rear-end Crashes. CASR Report Series–CASR 018. Adelaide, Australia: University of Adelaide. 2005.

Pant, Prahlad D. and Subarna Panta. Crash Base Rates for Freeways/Reduction Strategies for Rear End Crashes-Volume 2: Reduction Strategies for Rear End Crashes in Ohio. No. FHWA/OH-2008/14. 2009.

² Baldock, et al, 2005. See above.

³ Glad, Richard W. Weave Analysis and Performance: The Washington State Case Study. No. WA-RD 515.1. 2001.

⁴ Pant et al, 2009. See above.

Mitigation Strategy

We will mitigate MOT risks with the following strategies:

MOT and Work Zone Design

- **MOT design** will maximize the amount of work that can be completed in static, barrier-protected work zones, which provide positive protection for workers and predictability for the traveling public. They can also reduce the frequency and duration of lane closures and shifts for planned work, such as setup and removal of the work zone and paving operations. The MOT design will include provisions for access by emergency vehicles and it will be coordinated with the local first responders. Construction access points along these static work zones would be provided with acceleration and deceleration lanes located offline so that construction traffic would not impact the travel lanes. Finally, aggregate and asphalt would be delivered to the project site by our dedicated sub / team member Branscome Construction utilizing the nearby rail line, which is connected to their nearby facilities, to reduce the number of construction trucks on the interstate. Non-rail deliveries would be scheduled at off-peak hours (preferably nights) and alternative access provided where feasible.
- **Smart/Enhanced work zone systems** will be investigated for applicability and feasibility for use on this project. These include providing connected devices along the corridor to monitor traffic conditions in real-time and the ability to alter messaging on Portable Changeable Message Signs (PCMS) from a central location rather than at the device. A Queue Management System could be used to address back-of-queue safety hazards that can occur when significant backups spill out past the work zone limits. These types of systems would not only help to prevent accidents within the adjacent HRBT and Segment 4A/4B work zones that may result from incidents in this project's work zone, but they can also be used in conjunction with those projects to develop a corridor-wide temporary network to improve public safety and mobility.
- Alternative routes and detours, including I-664 and larger roadways such as Armistead Avenue, LaSalle Avenue, and Settlers Landing Road, will be identified in the project **Transportation Management Plan (TMP)** to address incidents and bypass the work zone at any point along the project limits. These routes will be activated and communicated through the emergency contract list coordinated by the **MOT Implementation Manager**. In addition, PCMSs will be used in conjunction with existing Dynamic Message Signs (DMSs) to alert motorists of significant incidents and guide them towards these alternative routes when necessary.
- In addition to efficiently moving traffic through the work zone, emphasis will also be placed on **reducing accidents and increasing safety** for motorists and workers. To address worker safety, we will develop a matrix to evaluate technologies such as sensors to alert workers of errant vehicles entering the work area, entering/exiting construction vehicle notification, backup alarms, and intelligent work zone devices. Each will be analyzed for the cost versus the safety benefits to determine the feasibility for use on the project. Incorporation of presence lighting at regular intervals along the work zone will also be considered. Typically, lights are provided in the active work zone areas only; presence lights along the full length of the work zone has been proven to create a more uniform speed through the corridor by improving work zone conspicuity.
- To mitigate the MOT risk during design, **each phase of construction will be modeled using VISSIM** to identify areas of congestion and conflict points so that these areas can be modified prior to implementation in the field. This is especially critical when identifying the required acceleration and deceleration lengths for the interstate ramps as these merge areas tend to have the largest impact on the flow of traffic through the work zone. During construction, VISSIM will be used to monitor operations and MOT efficiency. We have considerable experience revising the MOT plan in real-time conditions; our **MOT design engineer** will work closely with the **MOT implementation manager** in the field and VDOT to implement changes when necessary.

Our team is well equipped to implement these mitigation strategies for VDOT, as demonstrated on the nearby I-64 Southside Widening and HRB, Phase 1 project and Transform 66 project in Northern Virginia. We have the requisite blend of local knowledge and expertise in designing and constructing high-volume urban interstates to effectively mitigate the risk of major traffic disruptions.

Communications

- Set up and maintain a public-facing **construction hotline and outreach email address** (advertised broadly on the project website, social media and informational materials) where our team can respond directly, on behalf of the project, to public concerns and inquiries. We will work closely with VDOT to share any pressing issues or trends we see in feedback from the public. We will continue to rely on both **in-person and virtual public meetings** to keep the traveling public and nearby residents and businesses updated on project progress, upcoming construction activities, and imminent traffic pattern changes, as well as offer an opportunity for questions, comments and inquiries. These meetings have proven effective in mitigating issues at an early stage and have allowed us to build credibility and trust with the public, which supports and enhances the VDOT brand.
- Coordinate with Hampton Roads Transit (HRT) and Hampton University to provide **enhanced transit options** to move people off the interstate and onto public transportation. This can include providing more frequent service or offering free or reduced transit passes or other incentives to use public transit during peak periods for commutes to work or school to reduce automobile trips and increase transit ridership.
- Open lines of **communication with the commercial trucking industry**. Approximately one out of every four crashes in a work zone involves at least one large truck, and many of these tend to be rear end crashes. Thus, it will be imperative to alert truckers of lane configuration changes, lane closures, and overall roadways conditions during construction. Our team will investigate the use of tools such as the CB Wizard alert system, which is an unmanned CB radio transmitter designed to automatically broadcast work zone safety messages prior to motorists entering the work zone.
- **Communication with marine traffic** traveling beneath I-64 to keep the local boating community, including the Virginia Pilots Association, aware of any short-term closures, or other impacts, related to work on the I-64 bridges. Information can also be posted at local boat launches along this section of the Hampton River, such as the River Street Park Canoe and Kayak Launch, to alert marine users who are coming from out of the area of conditions beneath the bridges.
- **Utilize a broad array of technology and mediums** to keep the traveling public, neighborhoods and other key stakeholders updated on construction activities. The DB team will provide content for the VDOT controlled social media platforms and project website to keep the public informed. We will prepare traffic advisories, ramp-closure notifications, press releases, detailed detour graphics and informational materials related to long-term lane closures. We will assist VDOT in developing and maintaining a project-specific email distribution list, including media outlets, elected officials, neighborhood associations, businesses, other stakeholders and interested members of the public, to utilize in regular electronic communications (e-blasts) promoting detours, long-term closures or other construction activities. We will use navigational apps, such as WAZE, Apple Maps and Google Maps to incorporate overnight ramp closures/detours, as well as long-term traffic pattern changes. WAZE has proven to be especially responsive and appreciative of our detailed detour maps and advisories that allow the company to keep their traffic mapping updated.

Incident Management/Adjacent Projects Coordination

- A dedicated **corridor coordination manager (CCM)** will hold **weekly coordination meetings** with VDOT and the TMP coordinators of the adjacent projects to ensure that everyone has the latest information available regarding schedules and construction progress, that work zones are coordinated and adjusted as needed, and that issues are resolved in an efficient manner. The CCM will be responsible for keeping project staff updated on the progress of the adjacent projects and coordinating any changes to the MOT scheme that may be required based on information gathered from these coordination meetings.
- The MOT implementation manager will coordinate directly with the VDOT Hampton Roads Traffic Operations Center to ensure incidents are quickly identified, clearly communicated, and expeditiously cleared. An on-site, project-dedicated, wrecker service will be provided that can be swiftly deployed throughout the corridor to clear vehicles.

We will use the lessons learned and best practices gained from coordinating with the contractor on the I-35W Segment 3B adjacent to the FCUS Segment 3A project in downtown Fort Worth, Texas. Through communication and collaboration, we changed the geometry of an interchange to the benefit of both projects.

Role of VDOT & Other Agencies

From our past experience on DB projects with VDOT, we understand that VDOT will take primary responsibility for communicating a clear and consistent message to the public and key stakeholders. As described above, our team is fully committed to support this task with all needed information. Additionally, VDOT's assistance in facilitating MOT coordination with adjacent projects and OTS reviews of MOT designs will be invaluable in ensuring an efficient and safe work zone for all stakeholders.

Nancy, our **Public Information Manager**, will coordinate with other agencies and stakeholders to disseminate information and receive feedback to be used to amend or modify the MOT plan as needed.

RISK #2 – PROJECT COORDINATION

Risk Identification

VDOT's goal is to open the Hampton Roads Express Lanes (HREL) network by the last quarter of 2025. Shown in the adjacent map, I-64 HREL Segment 4A/4B, Segment 4C and the HRBT Expansion Project (Segment 3) will be under construction at the same time and will have to be actively coordinated. Any inadequacy in coordination could introduce challenges to the project disciplines discussed below and negatively impact safety, schedule, and cost.

Why This Risk Is Critical

Construction activities for Segment 4A/4B, Segment 4C, and the HRBT will be taking place concurrently. As discussed in Risk #1, it will be imperative to maintain traffic through the adjacent work zones in a safe and coordinated manner. Similarly, coordination on several other project disciplines will be required from the beginning of the Segment 4C project through design, utility relocation, construction, tolling integration, and final acceptance of the infrastructure because impacts to the individual schedules of these activities could have a trickle-down effect and result in a major impact on the final completion of all three projects. Project delays would impact tolling revenue and user confidence in the new HREL network. In addition, if the projects are not coordinated properly, there is the potential to create rework and/or result in unsafe conditions for the traveling public.

MOT coordination through VDOT with the adjacent projects, and with other agencies and stakeholders, will be critical for the successful completion of all three projects simultaneously.



Adjacent projects, laydown yard and materials plant

Potential Impacts

Potential impacts by discipline include:

Design: Potential challenges include overlapping work zones, temporary and permanent signage, ITS infrastructure and devices, and utilities. Design details will undergo changes throughout the course of these projects (e.g. during value engineering and/or during construction as a field change) and the team must ensure that the most current design/as-built information from adjacent projects is incorporated in the design for Segment 4C. Lack of coordination during design could result in interruptions during construction due to redesign and other delays, thereby impacting safety, schedule and cost.

Utility Relocation: Utility relocations must be coordinated with proper understanding of utility relocation schedules and how they tie in to construction schedules of the adjacent projects. Overlapping utility relocations must be properly planned to avoid utility disruptions and maintain schedule.

Right-of-Way (ROW) and Easement Impacts: Some of the same properties impacted by Segment 4C are also being impacted by the HRBT or Segment 4A/4B projects. Determination of potential impacts, property owner coordination, negotiations, and acquisition timing should be coordinated among the projects to avoid “gaps” or discrepancies in the ROW plans developed as part of this project. If not addressed in a timely manner, these issues could delay and/or result in unexpected costs for the project.

Construction: Construction schedules of adjacent projects must be coordinated to understand their interdependencies. Implementation of MOT design, including barrier placement, lane/shoulder closures, temporary signage and construction entrances, must be coordinated among the projects. Inadequate coordination may lead to multiple traffic shifts, conflicting signage, and the need for rework, which would result in schedule delays and additional costs. This could also result in unsafe work zones, driver confusion, traffic backups and delays, and accidents. With respect to the latter, the incident management plans must be coordinated among adjacent projects to be ready with a unified response in case of emergency.

Permitting: Permits obtained by the HRBT and Segment 4A/4B projects may impact obtaining coverage for Segment 4C and result in delays and/or additional costs.

Tolling System: Toll system infrastructure will require coordination with VDOT's third party vendor. This coordination will be required throughout each phase of the project as the Vendor will need access to install communication lines in conduits, install equipment, and then test and integrate that equipment with the tolling system.

Value-Added Personnel included to ensure that project coordination receives the utmost attention:

- Corridor Coordination Manager
- MOT Implementation Manager
- Public Information Manager
- ITS/Tolling Systems Manager
- Environmental Design and Compliance Managers

Mitigation Strategy

We will review the design and schedules of the two adjacent projects and identify specific areas of conflict. These specific areas will be tracked separately and a discipline lead will be identified to continuously track and monitor the mitigation plan for that specific area. The potential solutions will be discussed with VDOT and incorporated into the design. Specific mitigation strategies are described below.

Design Phase Coordination Meetings: These regular meetings will include all adjacent project teams and VDOT, and invitations will be issued to the environmental agencies as well as the localities and other stakeholders. Work plans, the Public Involvement/Relations Plan, TMP, safety, environmental, design, system integration, and construction elements of each project will be discussed and coordinated at these meetings.

Lack of coordination among the adjacent projects could affect construction activities and result in schedule delays, thereby impacting the overall success of the new HREL tolling network.

Coordination Meetings During Construction:

We will hold an initial partnering meeting with the Segment 4A/4B and HRBT contractors to define procedures and protocols for coordination as well as sharing files such as geometry and profiles. Weekly MOT coordination meetings during construction will occur for detailed planning of lane closures and temporary signage; implementing appropriate traffic control plans; coordinating material staging, deliveries and haul routes. These meetings will focus on ensuring consistency across projects and reducing conflicts, resulting in safer work zones. Daily lane closure schedules will be developed and coordinated through VDOT's LCAMS to avoid conflicts. Staging areas in use or planned by adjacent projects will be identified and incorporated into our planning.

Utility Relocations: As part of the early coordination with the adjacent projects, we will obtain the HRBT and Section 4A/4B planned utility relocations design and schedule and integrate them into the Segment 4C plans. As Segment 4C design progresses, the **Utility Manager** will review conflicts that arise and determine whether they can be eliminated or reduced by a design revision. Remaining conflicts would be reviewed with the utility owner and the adjacent project to develop solutions that minimize the risk of delay to either project, which could include a combined relocation, alterations to a sequence of work, or adjustments to the schedule.

ROW and Easements: The locations, limits and timing of acquisitions for the adjacent projects will be integrated into our design and schedule so that conflicts or overlaps can be identified early. Where possible, we will modify our design and/or schedule to eliminate or minimize the conflicts. Where the timing of acquisitions overlap, we will discuss with VDOT opportunities to combine acquisitions, amend offers, or expedite settlements. Regular coordination and communication between teams would ensure that any right-of-way or easement changes are identified early, allowing updates to be made without impacting the overall acquisition schedule.

Coordinated Public Relations Approach:

We propose regular meetings with the **Public Information Managers** from all adjacent projects. In addition, any public communication would be

coordinated with VDOT. Our coordination efforts would help to deliver one consistent message to the travelers in the I-64 corridor, thereby enhancing safety and driver satisfaction.

Transportation Management Plan (TMP):

Management of traffic within the work zone is a risk unto itself and is discussed in detail in Risk #1. We would develop a project-specific TMP considering the schedules and TMPs of adjacent projects.

Master Schedule: We will develop a project work plan and schedule that incorporates the schedules of the adjacent projects, including third-party availability and utility relocations.

Subcontractor and Supplier Coordination: We will actively coordinate with local subcontractors to assess the availability of material and incorporate the different subcontractor schedules into our master project schedule. The project expectation will be communicated to the subcontractors to make sure their deliverables meet quality and schedule expectations of the project. Note that aggregate and asphalt will be delivered to the project site by our dedicated sub / team member Branscome Construction utilizing the nearby rail line, which is connected to their nearby facilities, to reduce the number of deliveries and construction trucks on the interstate and within the work zones of the three projects.

Permitting: Critical to mitigating the risk of permitting conflicts will be to obtain all active permits to understand their requirements and commitments. Our **Environmental Permitting and Coordination Manager** will meet with each permitting agency to clarify permitting needs of the project, limitations of these permits, and the timing of each. A key goal of these discussions would be to resolve any conflicts that arise between permitting requirements of the multiple projects and determine a clear path forward. For example, one approach would be to transfer the HRBT project's permit to Segment 4C and continue coverage. A comprehensive permit monitoring plan would be developed to ensure proper controls are in place and maintained, overlapping or conflicting controls are avoided, and inspection and documentation of issues are properly identified and submitted to the permitting agencies.

Tolling System: We will coordinate with VDOT's tolling system integrator throughout the design, construction, and integration phase through regular coordination meetings and specific P6 schedules. Our extensive experience in implementing tolling system networks throughout the US will benefit VDOT and

travelers in the I-64 corridor as we will leverage our capabilities to successfully deliver the new HREL system to the Hampton Roads community.

Role of VDOT & Other Agencies

VDOT's role will be to continue to monitor progress of the three adjacent projects; facilitate LCAMS coordination; and work with the DB team, including the Value-Added Personnel, to ensure coordination among the various project teams, stakeholders and the public. Recognizing that adjacent project coordination is our responsibility post Award, we will lead efforts to integrate all parties, including VDOT, FHWA, local authorities and permitting agencies, into the decision-making processes.

RISK #3 – Erosion and Sediment Controls (ECS) & Stormwater Management (SWM)

Risk Identification

This project is located within the immediate proximity of sensitive environmental resources, and as such it is critical to manage the risks related to stormwater and non-functioning and/or failed stormwater Best Management Practices (BMPs).

Sensitive environmental resources:

- Hampton River
- Brights Creek
- Southwest Branch of the Back River
- River Street Park
- Hampton National Cemetery
- Hampton University
- Phoebus Historic District
- Pasture Point Historic District
- Woodland Golf Course

Why This Risk Is Critical

The project construction phase will increase the denuded surface area and in later phases increase impervious surface area. Flooding from these land cover changes could damage downstream property, and ground erosion (whether to slopes, sheet-flow areas, or stormwater channels) can cause destruction and additional sediment pollution. Also, excessive dissolved nutrients conveyed in discharged stormwater would negatively impact tidal aquatic habitats of sensitive animal and plant communities.

These stormwater-related risks require astute attention during the design, installation and maintenance of ESC and SWM BMPs. ESC. As work evolves, ECS device adjustment and

connection to permanent SWM facilities must be carefully managed and phased. These practices will mitigate water quality impacts to receiving waters and related aquatic habitat/resources, as well as other resources within or adjacent to the project corridor. Furthermore, the risks require close attention to ensure compliance with environmental laws, regulations, and the Virginia Department of Environmental Quality (DEQ) agency permit conditions. Other environmental permits that carry ESC and SWM conditions include the Clean Water Act Section 404/401 permit (with DEQ and the USACE) and the permit from the Virginia Marine Resources Commission (for the Hampton River crossing).

Potential Impacts

The potential impacts of this risk include:

- **Environmental:** Adverse impacts to the natural and the built environment, such as the receiving waters and related aquatic habitat/resources and the historic districts and recreational areas identified above.
- **Monetary:** Financial impacts involving the payment of fines due to non-compliance with permit obligations and for the repair of damage.
- **Schedule:** Delays resulting from unplanned project shutdowns until corrective measures are satisfactorily implemented and from environmental cleanups.
- **Public perception:** Public dissatisfaction and unauthorized environmental impacts resulting from stormwater-conveyed pollutant discharge and/or downstream property damage due to erosion or flooding.

Mitigation Strategy

We will mitigate this risk with the following strategies:

Site-contextual ESC and SWM Designs: The designs for ESC and SWM during construction and for permanent SWM at the end of construction would be developed in coordination with the construction team and take into account the site's unique topographical, geological, and meteorological site conditions, which are described further below.

- **Topographical:** The generally flat site topography aggravates the risk of unintended sediment-laden site ponding during construction within the project areas and along the project edges against perimeter controls, and elevates the risk of a sediment discharge into a sensitive downstream resource. Our ESC design will incorporate the necessary interim grading to ensure the project will shed water in a controlled predictable manner, towards appropriately located and sized sediment controls for proper treatment. Our design will also ensure that ESC perimeter controls can function as intended and minimize the risk of BMP failure and resulting recordable sediment discharges. Flat topography and close proximity to tidal water also necessitates good outfall design, for temporary ESC basins and permanent SWM ponds, to ensure free flow and mitigate recurring clogging, which can prevent proper BMP function and cause upstream water backup.
- **Geological:** Specific geological conditions may include erodible sand, high-turbidity clays and high groundwater. High groundwater will be addressed by dewatering through approved devices such as a frac tank. Based on review of available soil survey data, both sands and clays are possible, which require special stabilization and attention for ESC BMP maintenance. Denuded embankments have eroded during recent highway construction in the Hampton Roads District. We will address this issue by employing approved DEQ practices such as temporary berms and slope drains. Since clays and silts may produce turbid water with fine suspended particles, we will monitor discharge points during and after each rain event, in conformance to permit conditions and DEQ expectations, to prevent turbid discharge into downstream property. Lastly, given recent project precedent in the Hampton Roads District, permanent SWM basins may need clay liners if directed by geotechnical mandate.
- **Meteorological:** Rainfall totals are generally heavier in the Hampton Roads District, compared to other districts. Also, the area is prone to tropical storms and hurricanes between July and November. Especially during the summer months, large-rainfall events can place a strain on ESC BMPs and potentially cause catastrophic failure. Risk will be mitigated by monitoring weather reports and by providing proactive ESC measures such as immediate site stabilization. Sea level rise is another risk, posing a long-term impact for permanent SWM basins with a 50-year lifespan. To mitigate this, a higher tidal tailwater will be incorporated in the post-construction SWM BMP design.

Multi-phased ESC / SWM Design & ESC Redundancy: The ESC and SWM designs would include additional phasing beyond the default two-phase ESC plan development, which better reflects the construction phasing. Additional mitigation would also be provided by including ESC redundancy and/or alternate scenarios in the design, namely in areas with elevated risk of failure and/or with high-value resources. Site conditions permitting, redundant controls could include parallel silt fence installations and sediment traps in series.

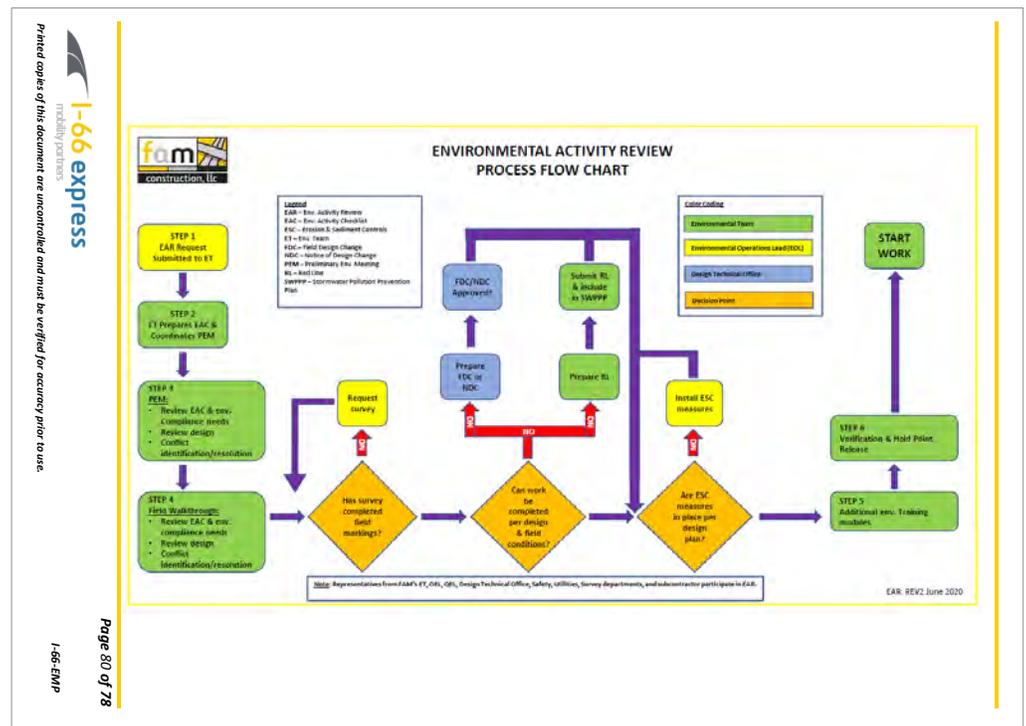
Environmental Activity Review (EAR) to Support Environmental Compliance: monitoring and maintenance best practices will be performed during construction in accordance with permit conditions and contractual requirements. As a systematic measure to mitigate the risk of non-functioning and/or failed stormwater BMPs, we will produce a comprehensive Environmental Management Plan (EMP) that defines staff responsibilities, environmental training requirements and work-flow processes, with a goal of minimizing and eliminating environmental issues and non-compliance incidents. The EAR process flow chart which will be included in the EMP (sample from Transform 66 EMP shown below), describes the preventive measures designed to minimize the risk and likelihood of a non-compliance. A “hold point release” is required prior to starting a specific feature of work.

Prior to any construction activity, our team will develop and deliver a comprehensive environmental training program that includes regular “huddles” with the construction staff and subcontractors to minimize risk of non-compliance.

Schedule Integration: Throughout the project, allowances for the time necessary to design, install and maintain all environmental mitigation features will be integrated into our overall sequence of work. As the project progresses, we will closely monitor the schedule for slippages and/or delays. If observed, all parties will review the causes and determine the appropriate action to recover. These actions may include close coordination with the agencies, adding resources, resequencing the work, or creating innovative ways to avoid impacts.

Role of VDOT & Other Agencies

The extensive stormwater permitting experience of our team, including in the Hampton Roads District, will allow VDOT to confine their duties to normal roles of review, comment and regular inspection during construction. VDOT must still carry out permitting coordination duties if mandated by certain permitting obligations. For example, VDOT will coordinate the design package approvals to obtain permit coverage under the General Virginia Pollutant Discharge Elimination System permit for discharge of stormwater from construction activities.



EAR process flow chart, excerpt from Transform 66 EMP

During construction, VDOT will be apprised of sediment control revisions based on field-conditions changes, and updates to responsible engineer staffing, to remain engaged with ESC implementation and maintenance.

Appendix

3.2.6 List of Affiliated and Subsidiary Companies

ATTACHMENT 3.2.6

State Project No. 0064-114-xxx, Contract ID C00117841DB11

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.

- | |
|---|
| <input type="checkbox"/> The Offeror does not have any affiliated or subsidiary companies. |
| <input checked="" type="checkbox"/> Affiliated and/ or subsidiary companies of the Offeror are listed below. |

Relationship with Offeror (Affiliate or Subsidiary)	Full Legal Name	Address
Affiliate	52 Block Builders, LLC	1725 Hughes Landing Boulevard Suite 1200 The Woodlands, TX 77380
Subsidiary	Alamo NEX Construction, LLC	9600 Great Hills Trail Suite 200E Austin, TX 78759
Affiliate	Amey-Webber, LLC	1725 Hughes Landing Boulevard Suite 1200 The Woodlands, TX 77380
Subsidiary	Bluebonnet Contractors, LLC	1725 Hughes Landing Boulevard Suite 1200 The Woodlands, TX 77380
Affiliate	Cadagua US, LLC	1725 Hughes Landing Boulevard Suite 1200 The Woodlands, TX 77380
Subsidiary	California Rail Builders, LLC	400 N. F Street Wasco, CA 93280
Subsidiary	Central Texas Highway Constructors, LLC	9600 Great Hills Trail Suite 200E Austin, TX 78759
Affiliate	Central Texas Mobility Constructors, LLC	1725 Hughes Landing Boulevard Suite 1200 The Woodlands, TX 77380

ATTACHMENT 3.2.6

State Project No. 0064-114-xxx, Contract ID C00117841DB11

Affiliated and Subsidiary Companies of the Offeror

Affiliate	DBW Construction, LLC	1725 Hughes Landing Boulevard Suite 1200 The Woodlands, TX 77380
Affiliate	Dowley Pepper-Lawson LLC	1725 Hughes Landing Boulevard Suite 1200 The Woodlands, TX 77380
Subsidiary	FAM Construction, LLC	3877 Fairfax Ridge Road Suite 300C Fairfax, VA 22030
Subsidiary	Ferrovia Agroman 56, LLC	9600 Great Hills Trail Suite 200E Austin, TX 78759
Subsidiary	Ferrovia Agroman Indiana, LLC	9600 Great Hills Trail Suite 200E Austin, TX 78759
Subsidiary	Ferrovia Construction East, LLC	One Securities Centre 3490 Piedmont Road Suite 350 Atlanta, GA 30305
Subsidiary	Ferrovia Construction Texas, LLC	9600 Great Hills Trail Suite 200E Austin, TX 78759
Affiliate	Ferrovia Construction US Holding Corp.	9600 Great Hills Trail Suite 200E Austin, TX 78759
Subsidiary	Ferrovia Construction West, LLC	222 N Pacific Coast Highway Suite 1925 El Segundo, CA 90245
Subsidiary	Grand Parkway Infrastructure, LLC	8811 FM 1960 Bypass Road West Suite 400 Humble, TX 77338

ATTACHMENT 3.2.6

State Project No. 0064-114-xxx, Contract ID C00117841DB11

Affiliated and Subsidiary Companies of the Offeror

Subsidiary	Great Hall Builders, LLC	222 N Pacific Coast Highway Suite 1925 El Segundo, CA 90245
Subsidiary	Indiana Toll-Roads Contractors, LLC	9600 Great Hills Trail Suite 200E Austin, TX 78759
Subsidiary	North Perimeter Contractors, LLC	270 Carpenter Drive Suite 700 Atlanta, GA 30328
Subsidiary	North Tarrant Infrastructure, LLC	13601 North Freeway, Suite 200 Fort Worth, TX 76177
Affiliate	Pepper Lawson Horizon International Group LLC	1725 Hughes Landing Boulevard Suite 1200 The Woodlands, TX 77380
Affiliate	Pepper Lawson Renda LLC	1725 Hughes Landing Boulevard Suite 1200 The Woodlands, TX 77380
Affiliate	PLW Cadagua Partners	1725 Hughes Landing Boulevard Suite 1200 The Woodlands, TX 77380
Affiliate	PLW Waterworks, LLC	1725 Hughes Landing Boulevard Suite 1200 The Woodlands, TX 77380
Affiliate	Southern Crushed Concrete, LLC	1725 Hughes Landing Boulevard Suite 1200 The Woodlands, TX 77380
Subsidiary	Sugar Creek Construction, LLC	8015 W WT Harris Blvd Charlotte, NC 28216
Subsidiary	Trinity Infrastructure, LLC	1725 Hughes Landing Boulevard Suite 1200 The Woodlands, TX 77380

ATTACHMENT 3.2.6

State Project No. 0064-114-xxx, Contract ID C00117841DB11

Affiliated and Subsidiary Companies of the Offeror

Subsidiary	US 460 Mobility Partners, LLC	One Securities Centre 3490 Piedmont Road Suite 350 Atlanta, GA 30305
Affiliate	Webber Barrier Services, LLC	1725 Hughes Landing Boulevard Suite 1200 The Woodlands, TX 77380
Affiliate	Webber-Cadagua Partners	9600 Great Hills Trail Suite 200E Austin, TX 78759
Affiliate	Webber Commercial Construction, LLC	1725 Hughes Landing Boulevard Suite 1200 The Woodlands, TX 77380
Affiliate	Webber Equipment & Materials, LLC	1725 Hughes Landing Boulevard Suite 1200 The Woodlands, TX 77380
Affiliate	Webber Holdings, LLC	1725 Hughes Landing Boulevard Suite 1200 The Woodlands, TX 77380
Affiliate	Webber Management Group, LLC	1725 Hughes Landing Boulevard Suite 1200 The Woodlands, TX 77380
Affiliate	Webber, LLC	1725 Hughes Landing Boulevard Suite 1200 The Woodlands, TX 77380
Affiliate	Webber-United, LLC	1725 Hughes Landing Boulevard Suite 1200 The Woodlands, TX 77380

3.2.7 Debarment Forms

**3.2.7 Debarment Forms
Attachment 3.2.7(a)**

ATTACHMENT 3.2.7(a)

CERTIFICATION REGARDING DEBARMENT
PRIMARY COVERED TRANSACTIONS

Project No.: 0064-114-xxx

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

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

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

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

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

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

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



Signature

June 28, 2021
Date

Managing Director East Coast US
Authorized Representative

Title

Ferrovial Construction US Corp.
Name of Firm

**3.2.7 Debarment Forms
Attachment 3.2.7(b)**

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-114-xxx

- 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

5/19/21

Date

Region Manager

Title

Bransome, Inc.

Name of Firm

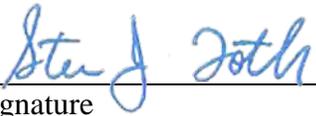
ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-114-xxx

- 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	June 17, 2021 Date	President Title
---	-----------------------	--------------------

O. R. Colan Associates, LLC
Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-114-xxx

- 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.



6/24/2021

Ronaldo (Nick) Nicholson/Vice President

Signature

Date

Title

Parsons Transportation Group Inc.

Name of Firm

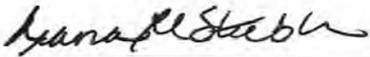
ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-114-xxx

- 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	6/22/2021 _____ Date	Diana Steeble Managing Principal _____ Title
---	----------------------------	---

PRR, Inc.

Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-114-xxx

- 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

6/29/2021
Date

President
Title

Quinn Consulting Services, Inc.

Name of Firm

ATTACHMENT 3.2.7(b)

CERTIFICATION REGARDING DEBARMENT
LOWER TIER COVERED TRANSACTIONS

Project No.: 0064-114-xxx

- 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

June 25, 2021

Date

Director - Hampton Roads

Title

Wetland Studies and Solutions, Inc.

Name of Firm

3.2.8 VDOT Prequalification Evidence



Department's List of Prequalified Vendors
Includes All Qualified Levels As Of 6/23/2021
- F -

Vendor ID: F1029
Vendor Name: FERROVIAL CONSTRUCTION US CORP.
Prequal Level: Prequalified (Probationary)
Prequal Exp: 05/31/2022

-- PREQ Address --

9600 GREAT HILL TRAIL STE. 200E
AUSTIN, TX 78759
Phone: (512)637-8588
Fax: (512)637-1499

Work Classes (Listed But Not Limited To)

003 - MAJOR STRUCTURES
004 - ASPHALT CONCRETE PAVING
032 - RAILROAD CONSTRUCTION / REPAIR
078 - TEMPORARY TRAFFIC MANAGEMENT
179 - H.C.C. PAVEMENT

Bus. Contact: PASCUAL, JAVIER
Email: JPASCUAL@FERROVIAL.US

-- DBE Information --

DBE Type: N/A
DBE Contact: N/A

Zeinner, Amy

From: Caples, Harold <harold.caples@vdot.virginia.gov>
Sent: Wednesday, April 14, 2021 12:24 PM
To: Pascual Martinez, Francisco Javier
Cc: rr VDOT-Prequalification
Subject: Re: Ferrovial Agroman US Corp, Waiver Request Letter-Hampton Roads Express Lanes (HREL) Segment 4C (Lasalle to Settlers)

CAUTION: External email. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Francisco,

I have reviewed the qualifications of Ferrovial Agroman US Corp and I find them acceptable for the purpose of bidding the referenced project . Therefore, I hereby waive the bidding restriction on your firm for this project.

This waiver is predicated on your compliance with the Rules Governing Prequalification. The rules state that you are limited to no more than three projects at any given time, each of these contracts will be limited to a maximum contract value of \$2 million not exceeding a total value of \$6 million (aggregate). This waiver allows you to bid beyond that dollar limit, but should you be successful on this project, you may be ineligible for any further VDOT work as a prime contractor until you receive a satisfactory VDOT performance evaluation.

VDOT looks forward to your submission.

Thank you,

Harold R. Caples, P.E., VCCO
Asst. State Construction Engineer
Construction Division
Virginia Department of Transportation
804-786-1630 (office)
804-840-1551 (cell)
harold.caples@vdot.virginia.gov



On Tue, Mar 23, 2021 at 10:14 AM Pascual Martinez, Francisco Javier <jpascual@ferrovial.us> wrote:

Mr. Caples,

Ferrovial Construction US Corp is interested in pursuing the Hampton Roads Express Lanes (HREL) Segment 4C (Lasalle to Settlers) Design Build Project.

In accordance of VDOT's Rules Governing Prequalification Privileges, please see attached letter requesting a waiver of the \$2,000,000 maximum contract value limitation as well as the updated Form C-42

Please, do not hesitate in contacting me if you have any question.

Sincerely,

Francisco Javier Pascual

Ferrovial Construction East, LLC

T.: 470 299 1457.

C.: 512 940 3597

jpascual@ferrovial.us

One Securities Centre

3490 Piedmont Road, Suite 350

Atlanta, GA 30305

www.ferrovial.com

ferrovial
construction

[twitter](#) - [facebook](#) - [linkedin](#) - [blog](#)

-

CONFIDENTIALITY WARNING

We hereby inform you, as addressee of this message, that Internet e-mail neither guarantees the confidentiality nor the completeness or proper receipt of the messages sent. If you do not consent to the use of Internet e-mail, please notify us immediately.

3.2.9 Surety Letter



Laura Sudduth
 Fulfillment Specialist
 Marsh USA Inc.
 2929 Allen Parkway
 Suite 2500
 Houston, TX 77019
 +1 713 276 8303
 www.marsh.com

June 29, 2021

Commonwealth of Virginia
 Department of Transportation (VDOT)
 1401 E. Broad Street
 Richmond, Virginia 23219
 Attention: Suril R. Shah, P.E. DBIA (APD Division)

Subject: Request for Qualifications for the I-64 Hampton Roads Express Lanes (HREL) Segment 4C Project

As co-sureties for Ferrovial Construction US Corp. (the "Contractor"), the undersigned surety companies (the "Co-Sureties") with A.M. Best Financial Strength Rating of A or better and Financial Size Category XV or better state the Contractor is capable of obtaining 100% Performance Bond and 100% Labor and Materials Payment Bond in the amount of the anticipated cost of construction of \$318.5 million, and said bonds will cover the Project and any warranty periods as provided for in the Contract Documents on behalf of the Contractor, in the event that such firm be the successful bidder and enter into a contract for this Project.

This support is subject to review and approval of the contract terms, conditions and bond forms and the application of such other underwriting criteria as may be pertinent at the time such bonds are requested by the Contractor. This letter does not constitute an assumption of liability, and the issuance of bonds in connection with this Project is a matter solely between the Co-Sureties and the Contractor.

Federal Insurance Company
 Berkshire Hathaway Specialty Insurance Company
 Liberty Mutual Insurance Company
 Zurich American Insurance Company
 Continental Insurance Company

By: Laura E. Sudduth
 Laura E. Sudduth, Attorney-in-fact



Power of Attorney

Federal Insurance Company | Vigilant Insurance Company | Pacific Indemnity Company
Westchester Fire Insurance Company | ACE American Insurance Company

Know All by These Presents, that FEDERAL INSURANCE COMPANY, an Indiana corporation, VIGILANT INSURANCE COMPANY, a New York corporation, PACIFIC INDEMNITY COMPANY, a Wisconsin corporation, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY corporations of the Commonwealth of Pennsylvania, do each hereby constitute and appoint Orlando Aguirre, Mario Arzamendi Sr., Mary Ann Garcia, Tannis Mattson, Barbie Norton, Sandra Parker, Laura E. Sudduth, Amanda Turman-Avina and Misty Witt of Houston, Texas

each as their true and lawful Attorney-in-Fact to execute under such designation in their names and to affix their corporate seals to and deliver for and on their behalf as surety thereon or otherwise, bonds and undertakings and other writings obligatory in the nature thereof (other than bail bonds) given or executed in the course of business, and any instruments amending or altering the same, and consents to the modification or alteration of any instrument referred to in said bonds or obligations.

In Witness Whereof, said FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY have each executed and attested these presents and affixed their corporate seals on this 27th day of April, 2020.

Dawn M. Chloros

Dawn M. Chloros, Assistant Secretary

Stephen M. Haney

Stephen M. Haney, Vice President



STATE OF NEW JERSEY
County of Hunterdon ss.

On this 27th day of April, 2020, before me, a Notary Public of New Jersey, personally came Dawn M. Chloros and Stephen M. Haney, to me known to be Assistant Secretary and Vice President, respectively, of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY, the companies which executed the foregoing Power of Attorney, and the said Dawn M. Chloros and Stephen M. Haney, being by me duly sworn, severally and each for herself and himself did depose and say that they are Assistant Secretary and Vice President, respectively, of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY and know the corporate seals thereof, that the seals affixed to the foregoing Power of Attorney are such corporate seals and were thereto affixed by authority of said Companies; and that their signatures as such officers were duly affixed and subscribed by like authority.

Notarial Seal



KATHERINE J. ADELAAR
NOTARY PUBLIC OF NEW JERSEY
No 2318685
Commission Expires July 18, 2024

Signature of Katherine J. Adelaar

Notary Public

CERTIFICATION

Resolutions adopted by the Boards of Directors of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY on August 30, 2016; WESTCHESTER FIRE INSURANCE COMPANY on December 11, 2006; and ACE AMERICAN INSURANCE COMPANY on March 20, 2009:

"RESOLVED, that the following authorizations relate to the execution, for and on behalf of the Company, of bonds, undertakings, recognizances, contracts and other written commitments of the Company entered into in the ordinary course of business (each a "Written Commitment"):

- (1) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise.
(2) Each duly appointed attorney-in-fact of the Company is hereby authorized to execute any Written Commitment for and on behalf of the Company, under the seal of the Company or otherwise, to the extent that such action is authorized by the grant of powers provided for in such person's written appointment as such attorney-in-fact.
(3) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to appoint in writing any person the attorney-in-fact of the Company with full power and authority to execute, for and on behalf of the Company, under the seal of the Company or otherwise, such Written Commitments of the Company as may be specified in such written appointment, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.
(4) Each of the Chairman, the President and the Vice Presidents of the Company is hereby authorized, for and on behalf of the Company, to delegate in writing to any other officer of the Company the authority to execute, for and on behalf of the Company, under the Company's seal or otherwise, such Written Commitments of the Company as are specified in such written delegation, which specification may be by general type or class of Written Commitments or by specification of one or more particular Written Commitments.
(5) The signature of any officer or other person executing any Written Commitment or appointment or delegation pursuant to this Resolution, and the seal of the Company, may be affixed by facsimile on such Written Commitment or written appointment or delegation.

FURTHER RESOLVED, that the foregoing Resolution shall not be deemed to be an exclusive statement of the powers and authority of officers, employees and other persons to act for and on behalf of the Company, and such Resolution shall not limit or otherwise affect the exercise of any such power or authority otherwise validly granted or vested."

I, Dawn M. Chloros, Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, PACIFIC INDEMNITY COMPANY, WESTCHESTER FIRE INSURANCE COMPANY and ACE AMERICAN INSURANCE COMPANY (the "Companies") do hereby certify that

- (i) the foregoing Resolutions adopted by the Board of Directors of the Companies are true, correct and in full force and effect,
(ii) the foregoing Power of Attorney is true, correct and in full force and effect.

Given under my hand and seals of said Companies at Whitehouse Station, NJ, this 29th of June, 2021



Dawn M. Chloros

Dawn M. Chloros, Assistant Secretary

IN THE EVENT YOU WISH TO VERIFY THE AUTHENTICITY OF THIS BOND OR NOTIFY US OF ANY OTHER MATTER, PLEASE CONTACT US AT:
Telephone (908) 903-3493 Fax (908) 903-3656 e-mail: surety@chubb.com



Power Of Attorney

BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY NATIONAL INDEMNITY COMPANY / NATIONAL LIABILITY & FIRE INSURANCE COMPANY

Know all men by these presents, that **BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY**, a corporation existing under and by virtue of the laws of the State of Nebraska and having an office at One Lincoln Street, 23rd Floor, Boston, Massachusetts 02111, **NATIONAL INDEMNITY COMPANY**, a corporation existing under and by virtue of the laws of the State of Nebraska and having an office at 3024 Harney Street, Omaha, Nebraska 68131 and **NATIONAL LIABILITY & FIRE INSURANCE COMPANY**, a corporation existing under and by virtue of the laws of the State of Connecticut and having an office at 100 First Stamford Place, Stamford, Connecticut 06902 (hereinafter collectively the "Companies"), pursuant to and by the authority granted as set forth herein, do hereby name, constitute and appoint: **Tannis Mattson, Sandra Parker, Gina A. Rodriguez, Mary Ann Garcia, Laura Sudduth, Amanda Turman-Avina, 2929 Allen Parkway, Suite 2500 of the city of Houston, State of Texas**, their true and lawful attorney(s)-in-fact to make, execute, seal, acknowledge, and deliver, for and on their behalf as surety and as their act and deed, any and all undertakings, bonds, or other such writings obligatory in the nature thereof, in pursuance of these presents, the execution of which shall be as binding upon the Companies as if it has been duly signed and executed by their regularly elected officers in their own proper persons. **This authority for the Attorney-in-Fact shall be limited to the execution of the attached bond(s) or other such writings obligatory in the nature thereof.**

In witness whereof, this Power of Attorney has been subscribed by an authorized officer of the Companies, and the corporate seals of the Companies have been affixed hereto this date of December 20, 2018. This Power of Attorney is made and executed pursuant to and by authority of the Bylaws, Resolutions of the Board of Directors, and other Authorizations of **BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY, NATIONAL INDEMNITY COMPANY and NATIONAL LIABILITY & FIRE INSURANCE COMPANY**, which are in full force and effect, each reading as appears on the back page of this Power of Attorney, respectively. The following signature by an authorized officer of the Company may be a facsimile, which shall be deemed the equivalent of and constitute the written signature of such officer of the Company for all purposes regarding this Power of Attorney, including satisfaction of any signature requirements on any and all undertakings, bonds, or other such writings obligatory in the nature thereof, to which this Power of Attorney applies.

BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY,

**NATIONAL INDEMNITY COMPANY,
NATIONAL LIABILITY & FIRE INSURANCE COMPANY,**

By: _____
David Fields, Executive Vice President

By: _____
David Fields, Vice President

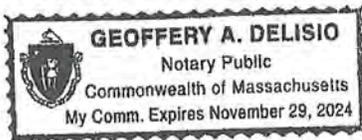


NOTARY

State of Massachusetts, County of Suffolk, ss:

On this 20th day of December, 2018, before me appeared David Fields, Executive Vice President of **BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY** and Vice President of **NATIONAL INDEMNITY COMPANY** and **NATIONAL LIABILITY & FIRE INSURANCE COMPANY**, who being duly sworn, says that his capacity is as designated above for such Companies; that he knows the corporate seals of the Companies; that the seals affixed to the foregoing instrument are such corporate seals; that they were affixed by order of the board of directors or other governing body of said Companies pursuant to its Bylaws, Resolutions and other Authorizations, and that he signed said instrument in that capacity of said Companies.

[Notary Seal]



Notary Public

I, Ralph Tortorella, the undersigned, Officer of **BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY, NATIONAL INDEMNITY COMPANY** and **NATIONAL LIABILITY & FIRE INSURANCE 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**, see hereunto affixed the seals of said Companies this June 29, 2021.



Officer

To verify the authenticity of this Power of Attorney please contact us at: BHSI Surety Department, Berkshire Hathaway Specialty Insurance Company, One Lincoln Street, 23rd Floor Boston, MA 02111 | (770) 625-2516 or by email at Jennifer.Porter@bhspecialty.com. **THIS POWER OF ATTORNEY IS VOID IF ALTERED**

To notify us of a claim please contact us on our 24-hour toll free number at (855) 453-9675, via email at claimsnotice@bhspecialty.com, via fax to (617) 507-8259, or via mail.

BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY (BYLAWS)

ARTICLE V.

CORPORATE ACTIONS

....

EXECUTION OF DOCUMENTS:

....

Section 6.(b) The President, any Vice President or the Secretary, shall have the power and authority:

- (1) To appoint Attorneys-in-fact, and to authorize them to execute on behalf of the Company bonds and other undertakings, and
- (2) To remove at any time any such Attorney-in-fact and revoke the authority given him.

NATIONAL INDEMNITY COMPANY (BY-LAWS)

Section 4. Officers, Agents, and Employees:

A. The officers shall be a President, one or more Vice Presidents, a Secretary, one or more Assistant Secretaries, a Treasurer, and one or more Assistant Treasurers none of whom shall be required to be shareholders or Directors and each of whom shall be elected annually by the Board of Directors at each annual meeting to serve a term of office of one year or until a successor has been elected and qualified, may serve successive terms of office, may be removed from office at any time for or without cause by a vote of a majority of the Board of Directors, and shall have such powers and rights and be charged with such duties and obligations as usually are vested in and pertain to such office or as may be directed from time to time by the Board of Directors; and the Board of Directors or the officers may from time to time appoint, discharge, engage, or remove such agents and employees as may be appropriate, convenient, or necessary to the affairs and business of the corporation.

NATIONAL INDEMNITY COMPANY (BOARD RESOLUTION ADOPTED AUGUST 6, 2014)

RESOLVED, That the President, any Vice President or the Secretary, shall have the power and authority to (1) appoint Attorneys-in-fact, and to authorize them to execute on behalf of this Company bonds and other undertakings and (2) remove at any time any such Attorney-in-fact and revoke the authority given.

NATIONAL LIABILITY & FIRE INSURANCE COMPANY (BY-LAWS)

ARTICLE IV

Officers

Section 1. Officers, Agents and Employees:

A. The officers shall be a president, one or more vice presidents, one or more assistant vice presidents, a secretary, one or more assistant secretaries, a treasurer, and one or more assistant treasurers, none of whom shall be required to be shareholders or directors, and each of whom shall be elected annually by the board of directors at each annual meeting to serve a term of office of one year or until a successor has been elected and qualified, may serve successive terms of office, may be removed from office at any time for or without cause by a vote of a majority of the board of directors. The president and secretary shall be different individuals. Election or appointment of an officer or agent shall not create contract rights. The officers of the Corporation shall have such powers and rights and be charged with such duties and obligations as usually are vested in and pertain to such office or as may be directed from time to time by the board of directors; and the board of directors or the officers may from time to time appoint, discharge, engage, or remove such agents and employees as may be appropriate, convenient, or necessary to the affairs and business of the Corporation.

NATIONAL LIABILITY & FIRE INSURANCE COMPANY (BOARD RESOLUTION ADOPTED AUGUST 6, 2014)

RESOLVED, That the President, any Vice President or the Secretary, shall have the power and authority to (1) appoint Attorneys-in-fact, and to authorize them to execute on behalf of this Company bonds and other undertakings and (2) remove at any time any such Attorney-in-fact and revoke the authority given.

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That The Continental Insurance Company, a Pennsylvania insurance company, is a duly organized and existing insurance company having its principal office in the City of Chicago, and State of Illinois, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Terri Morrison, Sandra Renea Parker, Tannis Mattson, Gina Rodriguez, Mary Ann Garcia, Mario Arzamendi Sr, Orlando Aguirre, Laura E Sudduth, Gloria Mouton, Marissa Shepherd, Individually

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

- In Unlimited Amounts -

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

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

In Witness Whereof, The Continental Insurance Company has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 30th day of January, 2018.

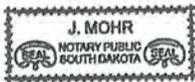


The Continental Insurance Company

Paul T. Bruflat
Paul T. Bruflat Vice President

State of South Dakota, County of Minnehaha, ss:

On this 30th day of January, 2018, before me personally came Paul T. Bruflat to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is a Vice President of The Continental Insurance Company, a Pennsylvania insurance company, described in and which executed the above instrument; that he knows the seal of said insurance company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said insurance company and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said insurance company.



My Commission Expires June 23, 2021

J. Mohr
J. Mohr Notary Public

CERTIFICATE

I, D. Johnson, Assistant Secretary of The Continental Insurance Company, a Pennsylvania insurance company, do hereby certify that the Power of Attorney herein above set forth is still in force, and further certify that the By-Law and Resolution of the Board of Directors of the insurance company printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said insurance company this 29th day of June, 2021.



The Continental Insurance Company

D. Johnson
D. Johnson Assistant Secretary

Form F6850-4/2012

Go to www.cnasurety.com > Owner / Obligee Services > Validate Bond Coverage, if you want to verify bond authenticity.

Authorizing Resolutions

ADOPTED BY THE BOARD OF DIRECTORS OF THE CONTINENTAL INSURANCE COMPANY:

This Power of Attorney is made and executed pursuant to and by authority of the following By-Law duly adopted by the Board of Directors of the Company at a meeting held on May 10, 1995.

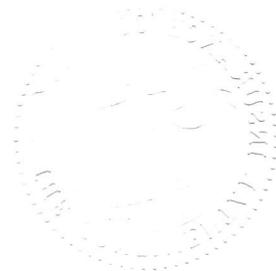
“RESOLVED: That any Group Vice President may authorize an officer to sign specific documents, agreements and instruments on behalf of the Company provided that the name of such authorized officer and a description of the documents, agreements or instruments that such officer may sign will be provided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

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

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

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

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





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

Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

Certificate No: 8203387 - 022029

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Orlando Aguirre, Mario Arzamendi, Mary Ann Garcia, Tannis Mattson, Barbara Norton, Sandra Parker, Laura E. Sudduth, Amanda Turman-Avina, Misty Witt

all of the city of Houston state of TX each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 27th day of March, 2020.



Liberty Mutual Insurance Company
The Ohio Casualty Insurance Company
West American Insurance Company

By: David M. Carey, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

State of PENNSYLVANIA
County of MONTGOMERY ss

On this 27th day of March, 2020 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.



COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Teresa Pastella, Notary Public
Upper Merion Twp., Montgomery County
My Commission Expires March 28, 2021
Member, Pennsylvania Association of Notaries

By: Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV - OFFICERS: Section 12. Power of Attorney.

Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII - Execution of Contracts: Section 5. Surety Bonds and Undertakings.

Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation - The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization - By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, 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 29th day of June, 2021.



By: Renee C. Llewellyn, Assistant Secretary

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.

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

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Illinois, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Illinois (herein collectively called the "Companies"), by **Robert D. Murray, Vice President**, in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint **Sandra PARKER, Mary Ann GARCIA, Gina A. RODRIGUEZ, Tannis MATTSON, Mario ARZAMENDI, Laura E. SUDDUTH, Amanda TURMAN-AVINA, Misty M WITT and Barbie NORTON, all of Houston, Texas**, EACH, its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: any and all bonds and undertakings, and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland, and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland, in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said **ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND**, this 30th day of March, A.D. 2020.



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

By: *Robert D. Murray*
Vice President

By: *Dawn E. Brown*
Secretary

**State of Maryland
County of Baltimore**

On this 30th day of March, A.D. 2020, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **Robert D. Murray, Vice President and Dawn E. Brown, Secretary** of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, deposeth and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

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



Constance A. Dunn, Notary Public
My Commission Expires: July 9, 2023

EXTRACT FROM BY-LAWS OF THE COMPANIES

"Article V, Section 8, Attorneys-in-Fact. The Chief Executive Officer, the President, or any Executive Vice President or Vice President may, by written instrument under the attested corporate seal, appoint attorneys-in-fact with authority to execute bonds, policies, recognizances, stipulations, undertakings, or other like instruments on behalf of the Company, and may authorize any officer or any such attorney-in-fact to affix the corporate seal thereto; and may with or without cause modify or revoke any such appointment or authority at any time."

CERTIFICATE

I, the undersigned, Secretary of the ZURICH AMERICAN INSURANCE COMPANY, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing Power of Attorney is still in full force and effect on the date of this certificate; and I do further certify that Article V, Section 8, of the By-Laws of the Companies is still in force.

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the ZURICH AMERICAN INSURANCE COMPANY at a meeting duly called and held on the 15th day of December 1998.

RESOLVED: "That the signature of the President or a Vice President and the attesting signature of a Secretary or an Assistant Secretary and the Seal of the Company may be affixed by facsimile on any Power of Attorney...Any such Power or any certificate thereof bearing such facsimile signature and seal shall be valid and binding on the Company."

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at a meeting duly called and held on the 5th day of May, 1994, and the following resolution of the Board of Directors of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at a meeting duly called and held on the 10th day of May, 1990.

RESOLVED: "That the facsimile or mechanically reproduced seal of the company and facsimile or mechanically reproduced signature of any Vice-President, Secretary, or Assistant Secretary of the Company, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power of attorney issued by the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies, this 29th day of June, 2021.



By: Brian M. Hodges
Vice President

TO REPORT A CLAIM WITH REGARD TO A SURETY BOND, PLEASE SUBMIT A COMPLETE DESCRIPTION OF THE CLAIM INCLUDING THE PRINCIPAL ON THE BOND, THE BOND NUMBER, AND YOUR CONTACT INFORMATION TO:

Zurich Surety Claims
1299 Zurich Way
Schaumburg, IL 60196-1056
www.reportsfclaims@zurichna.com
800-626-4577

3.2.10 SCC and DPOR registration documentation

ATTACHMENT 3.2.10

State Project No. 0064-114-xxx

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)							
Business Name	SCC Information (3.2.10.1)			DPOR Information (3.2.10.2)			
	SCC Number	SCC Type of Corporation	SCC Status	DPOR Registered Address	DPOR Registration Type	DPOR Registration Number	DPOR Expiration Date
Ferrovial Construction US Corp.	F2007203	Stock Corporation	Active	N/A	N/A	N/A	N/A
Parsons Transportation Group Inc.	F1943028	Stock Corporation	Active	5875 Trinity Parkway, Suite 130, Centreville, VA 20120	Business Entity Branch Office Registration	0411001042	2.28.2022
Branscome Inc.	05506134	Stock Corporation	Active	432 McLaws Circle Williamsburg, VA 23185	Class A	2705061347	02.28.2023
O.R Colan Associates, LLC	T0653610	Limited Liability Company	Active	N/A	N/A	N/A	N/A
PRR	F1841594	Stock Corporation	Active	N/A	N/A	N/A	N/A
Quinn Consulting Services Incorporated	04925517	Stock Corporation	Active	1801 Pleasure House Road, Ste 101, 102 Virginia Beach, VA 23455	ENG	0411001133	02.28.2022
Wetland Studies and Solutions, Inc.	03826229	Stock Corporation	Active	5300 Wellington Branch Drive, Suite 100, Gainesville, VA 20155	APELSCIDL A	0407003355	12.31.2021

ATTACHMENT 3.2.10
State Project No. 0064-114-xxx
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
Ferrovial Construction US Corp.	Rosario Tripiana	Fairfax, VA	3877 Fairfax Ridge Suite 300C Fairfax, VA 22030	ENG	0402061875	04.30.2022
Parsons Transportation Group Inc.	Joshua Wade	Leesburg, VA	43346 Riverpoint Leesburg, VA 20176	ENG	0402032924	01.31.2023
Quinn Consulting Services Incorporated	Anthony Kondysar	Williamsburg, VA	3905 St Mary's Circle Williamsburg, VA 23185	ENG	0402021246	07.31.2022

SCC Supporting Documentation

State Corporation Commission Clerk's Information System

Entity Information

Entity Information

Entity Name: Ferroval Construction US Corp.	Entity ID: F2007203
Entity Type: Stock Corporation	Entity Status: Active
Formation Date: 04/12/2005	Reason for Status: Active and In Good Standing
VA Qualification Date: 09/29/2015	Status Date: 01/29/2021
Industry Code: 0 - General	Period of Duration: Perpetual
Jurisdiction: DE	Annual Report Due Date: N/A
Registration Fee Due Date: Not Required	Charter Fee: \$50.00

Registered Agent Information

RA Type: Entity	Locality: HENRICO COUNTY
RA Qualification: BUSINESS ENTITY THAT IS AUTHORIZED TO TRANSACT BUSINESS IN VIRGINIA	Registered Office Address: 4701 Cox Rd Ste 285, Glen Allen, VA, 23060 - 6806, USA
Name: C T CORPORATION SYSTEM	

Principal Office Address

Address: 9600 Great Hills Trl Ste 200E Austin, TX, 78759 - 5980, USA

Principal Information

Title	Director	Name	Address	Last Updated
Treasurer, Chief Financial Officer	Yes	EDUARDO GONZALEZ	9600 GREAT HILLS TRAIL, STE 200E, AUSTIN, TX, 78759 - 0000, USA	08/04/2020
President, Chief Executive Officer	Yes	ANGEL LUIS SANCHEZ GIL	9600 GREAT HILLS TRAIL, SUITE 200E, AUSTIN, TX, 78759 - 0000, USA	08/04/2020
Secretary, General Counsel	Yes	CATHERINE DAVID	9600 GREAT HILLS TRAIL, SUITE 200E, AUSTIN, TX, 78759 - 0000, USA	08/04/2020

Current Shares

Total Shares: 100

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State Corporation Commission
Clerk's Information System

Entity Information

Entity Information	Entity Name: PARSONS TRANSPORTATION GROUP INC	Entity ID: F1942028
	Entity Type: Stock Corporation	Entity Status: Active
	Formation Date: N/A	Reason for Status: Active and In Good Standing
	VA Qualification Date: 10/08/2013	Status Date: 10/08/2013
	Industry Code: 0 - General	Period of Duration: Perpetual
	Jurisdiction: IL	Annual Report Due Date: N/A
	Registration Fee Due Date: Not Required	Charter Fee: \$50.00

Registered Agent Information	RA Type: Entity	Locality: HENRICO COUNTY
	RA Qualification: BUSINESS ENTITY THAT IS AUTHORIZED TO TRANSACT BUSINESS IN VIRGINIA	Registered Office Address: 4701 Cox Rd Ste 285, Glen Allen, VA, 23060 - 8606, USA
	Name: C.T CORPORATION SYSTEM	

Principal Office Address	Address: 100 M St SE Ste 1200, Washington, DC, 20003 - 3520, USA
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Principal Information				
Title	Director	Name	Address	Last Updated
Secretary	Yes	MICHAEL R. KOLLOWAY	1422 S. TRYON ST. STE. 700, Charlotte, NC, 28203 - 0000, USA	09/30/2020
ASST SECRETARY	No	CARLTON E WILLIAMS	16055 SPACE CENTER BLVD STE 725 HOUSTON, TX, 77062 - 0000, USA	10/29/2019
President	No	THOMAS J. TOPOLSKI	2200 W. LOOP SOUTH #200, Houston, TX, 77027, USA	09/30/2020
Officer, ASST. SECRETARY	No	SAMUEL SAAD	7600 CORPORATE CENTER DR. #104, Miami, FL, 33126, USA	09/30/2020

Current Shares	Total Shares: 500
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State Corporation Commission
Clerk's Information System

Entity Information

Entity Information

Entity Name: IRANSOON, INC.
Entity Type: Stock Corporation
Formation Date: 12/14/2000
VA Qualification Date: 12/14/2000
Industry Code: 0 - General
Jurisdiction: VA
Registration: See Due Date Not Required

Entity ID: 0506134
Entity Status: **Active**
Reason for Status: Active and in Good Standing
Status Date: 01/02/2020
Period of Duration: Perpetual
Annual Report Due Date: N/A
Charter Fee: \$30.00

Registered Agent Information

RA Type: Entity
RA Qualification: BUSINESS ENTITY THAT IS AUTHORIZED TO TRANSACT BUSINESS IN VIRGINIA
Name: CORPORATION SERVICE COMPANY

Locality: RICHMOND CITY

Registered Office Address: 100 Smoke Shop Pl E, Richmond, VA 23219 - 4100 USA

Principal Office Address

Address: 432 McLain Cir, Williamsburg, VA 23185 USA

Principal Information

Title	Director	Name	Address	Last Updated
President	Yes	GEORGE B LEAGUE JR	432 MCLAWS CIRCLE, WILLIAMSBURG, VA, 23185 - 0000 USA	11/06/2018
Secretary	No	ANTHONY L MARTINDALE	71 HEADQUARTERS PLAZA, NORTH TOWER, 10TH FLOOR, MORRISTOWN NJ, 07960 - 0000 USA	11/06/2018
Treasurer, Vice President of Finance / Asst. Secretary	No	SCOTT DANIEL	432 MCLAWS CIRCLE, WILLIAMSBURG, VA, 23185 - 0000 USA	12/20/2019
Assistant Secretary	No	JORDAN PARKER MILLS	432 MCLAWS CIRCLE, WILLIAMSBURG, VA, 23185 - 0000 USA	12/20/2019
Assistant Secretary	No	MICHAEL VAN SICKLE	432 MCLAWS CIRCLE, WILLIAMSBURG, VA, 23185 - 0000 USA	12/20/2019
Assistant Secretary	Yes	JEAN LUC BESSAIS DE DIVISM	71 HEADQUARTERS PLAZA, NORTH TOWER, 10TH FLOOR, MORRISTOWN NJ, 07960 USA	12/20/2019
Assistant Secretary	No	DOUGLAS MATTHEWS	432 MCLAWS CIRCLE, Williamsburg, VA, 23185, USA	12/20/2019
Assistant Secretary	No	KEVIN JONES	432 MCLAWS CIRCLE, Williamsburg, VA, 23185, USA	12/20/2019
Assistant Secretary	No	LORI HURLEY	432 MCLAWS CIRCLE, Williamsburg, VA, 23185, USA	12/20/2019
Assistant Secretary	No	SHARITA BRID	432 MCLAWS CIRCLE, Williamsburg, VA, 23185, USA	12/20/2019
Assistant Secretary	No	LAURA GOGA	432 MCLAWS CIRCLE, Williamsburg, VA, 23185, USA	12/20/2019
Assistant Secretary	Yes	THERRY LE ROCH	432 MCLAWS CIRCLE, Williamsburg, VA, 23185, USA	12/06/2020

Current Shares

Total Shares: 1000

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State Corporation Commission
Clerk's Information System

Entity Information

Entity Information

Entity Name: O.R. COLAN ASSOCIATES, LLC	Entity ID: T0653610
Entity Type: Limited Liability Company	Entity Status: Active
Formation Date: N/A	Reason for Status: Active
VA Qualification Date: 05/09/2016	Status Date: 06/09/2020
Industry Code: 0 - General	Period of Duration: Perpetual
Jurisdiction: FL	Annual Report Due Date: N/A
Registration Fee Due Date: Not Required	Charter Fee: N/A

Registered Agent Information

RA Type: Entity	Locality: RICHMOND CITY
RA Qualification: BUSINESS ENTITY THAT IS AUTHORIZED TO TRANSACT BUSINESS IN VIRGINIA	Registered Office Address: 100 Shockoe Slip Fl 2, Richmond, VA, 23219 - 4100, USA
Name: CORPORATION SERVICE COMPANY	

Principal Office Address

Address: 7005 SHANNON WILLOW RD STE 100, CHARLOTTE, NC, 28226 - 0000, USA

Principal Information

Management Structure: N/A

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State Corporation Commission Clerk's Information System

Entity Information

Entity Information

Entity Name: PRR Capital Region, Inc.	Entity ID: F1841594
Entity Type: Stock Corporation	Entity Status: Active
Formation Date: N/A	Reason for Status: Active and In Good Standing
VA Qualification Date: 11/09/2010	Status Date: 12/21/2020
Industry Code: 0 - General	Period of Duration: Perpetual
Jurisdiction: WA	Annual Report Due Date: N/A
Registration Fee Due Date: Not Required	Charter Fee: \$100.00

Registered Agent Information

RA Type: Entity	Locality: HENRICO COUNTY
RA Qualification: BUSINESS ENTITY THAT IS AUTHORIZED TO TRANSACT BUSINESS IN VIRGINIA	Registered Office Address: 4701 Cox Rd Ste 285, Glen Allen, VA, 23060 - 9808, USA
Name: C T CORPORATION SYSTEM	

Principal Office Address

Address: 1501 4th Ave Ste 550, Seattle, WA, 98101 - 3234, USA

Principal Information

Title	Director	Name	Address	Last Updated
Officer	Yes	DIANA STEEBLE	1501 4th Ave Ste 550, Seattle, WA, 98101 - 3234, USA	11/29/2020
Officer	Yes	COLLEEN GANTS	1501 4th Ave Ste 550, Seattle, WA, 98101 - 3234, USA	11/29/2020
Officer	Yes	KERI PATASHNICK	1501 4th Ave Ste 550, Seattle, WA, 98101 - 3234, USA	11/29/2020
	Yes	MALIKA KLINGER	1501 4th Ave Ste 550, Seattle, WA, 98101 - 3234, USA	11/29/2020
Chief Executive Officer	Yes	BJ FOSTER	1501 4th Ave Ste 550, Seattle, WA, 98101 - 3234, USA	11/29/2020

Current Shares

Total Shares: 50000

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State Corporation Commission
Clerk's Information System

Entity Information

Entity Information

Entity Name: QUINH CONSULTING SERVICES INCORPORATED	Entity ID: 04925517
Entity Type: Stock Corporation	Entity Status: Active
Formation Date: 10/24/1997	Reason for Status: Active and in Good Standing
VA Qualification Date: 10/24/1997	Status Date: 12/01/2008
Industry Code: 0 - General	Period of Duration: Perpetual
Jurisdiction: VA	Annual Report Due Date: N/A
Registration Fee Due Date: Not Required	Charter Fee: \$50.00

Registered Agent Information

RA Type: Individual	Locality: ARLINGTON COUNTY
RA Qualification: Member of the Virginia State Bar	Registered Office Address: 2108 S KNOLL ST, ARLINGTON, VA, 22102 - 2134, USA
Name: JOHN H QUINH JR	

Principal Office Address

Address: 14180 NEWBROOK DRIVE, SUITE 220, CHANTILLY, VA, 20151 - 0000, USA

Principal Information

Title	Director	Name	Address	Last Updated
COB/P/T	Yes	ELIZABETH QUINH VICINSKI	14180 NEWBROOK DRIVE, SUITE 220, CHANTILLY, VA, 20151 - 0000, USA	09/15/2017
Secretary	No	FRANCISCA I OTERO	888 17TH STREET NW, SUITE 640, WASHINGTON, DC, 20006 - 0000, USA	09/15/2017

Current Shares

Total Shares: 5000

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State Corporation Commission Clerk's Information System

Entity Information

Entity Information

Entity Name: WETLAND STUDIES AND SOLUTIONS, INC.	Entity ID: 03826229
Entity Type: Stock Corporation	Entity Status: Active
Formation Date: 10/18/1991	Reason for Status: Active and In Good Standing
VA Qualification Date: 10/18/1991	Status Date: 12/01/2020
Industry Code: 0 - General	Period of Duration: Perpetual
Jurisdiction: VA	Annual Report Due Date: N/A
Registration Fee Due Date: Not Required	Charter Fee: \$50.00

Registered Agent Information

RA Type: Entity	Locality: HENRICO COUNTY
RA Qualification: BUSINESS ENTITY THAT IS AUTHORIZED TO TRANSACT BUSINESS IN VIRGINIA	Registered Office Address: 4701 Cox Rd Ste 285 Glen Allen, VA, 23060 - 8808, USA
Name: C T CORPORATION SYSTEM	

Principal Office Address

Address: 5300 Wellington Branch Dr Ste 100, Gainesville, VA, 20155 - 4063, USA

Principal Information

Title	Director	Name	Address	Last Updated
CEO/CHAIRMAN	Yes	PATRICK M COVEY	1500 N. MANTUA ST, KENT, OH, 44240 - 0000, USA	06/30/2020
chief technical officer	No	MICHAEL S ROLBAND	1500 N MANTUA ST, KENT, OH, 44240 - 0000, USA	06/30/2020
CFO/ASST SECTY	Yes	JOSEPH R PAUL	1500 N MANTUA ST, KENT, OH, 44240 - 0000, USA	10/22/2019
Vice President	Yes	BRENT R REPENNING	1500 N. MANTUA ST, KENT, OH, 44240 - 0000, USA	06/30/2020
CONTROLLER	No	VICKI L SCHRECKENGOST	1500 N MANTUA ST, KENT, OH, 44240 - 0000, USA	10/22/2019
co-president	No	brian chromey	1500 N. MANTUA STREET, Kent, OH, 44240, USA	06/30/2020
co-president	No	frank graziano	1500 N. MANTUA STREET, Kent, OH, 44240, USA	06/30/2020

Current Shares

Total Shares: 5000

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DPOR Supporting Documentation for Firms

DPOR License Lookup License Number 0411001042

License Details

Name	PARSONS TRANSPORTATION GROUP INC
License Number	0411001042
License Description	Business Entity Branch Office Registration
Rank	Business Entity Branch Office
Address	5875 TRINITY PARKWAY SUITE 130, CENTREVILLE, VA 20120
Initial Certification Date	2013-10-24
Expiration Date	2022-02-28

Related Licenses ¹

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402032924	WADE, JOSHUA SHEPPARD	Professional Engineer License	Engineering	2023-01-31

Showing 1 to 1 of 1 entries

- 1 The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

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DPOR License Lookup License Number 2705061347

License Details

Name	BRANSCOME INC
License Number	2705061347
License Description	Contractor
Firm Type	Corporation
Rank ¹	Class A
Address	432 MCLAWS CIRCLE, WILLIAMSBURG, VA 23185
Specialties²	Highway / Heavy (H/H)
Initial Certification Date	2001-02-28
Expiration Date	2023-02-28

- 1 Refer to the Statutory Definitions (<http://law.lis.virginia.gov/vacode/title54.1/chapter11/section54.1-1100/>) for descriptions of the rank or class of license (A, B, or C) that determines the monetary limits on contracts/projects.
- 2 Refer to the Classification Definitions (<http://lis.virginia.gov/cgi-bin/legp604.exe?000+reg+18VAC50-22-20>) and Specialty Definitions (<http://lis.virginia.gov/cgi-bin/legp604.exe?000+reg+18VAC50-22-30>) for detailed definitions of these classifications and specialties.

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DPOR License Lookup build 1,472 (built 2021-02-15 10:16:48).

DPOR License Lookup License Number 0411001133

License Details

Name	QUINN CONSULTING SERVICES INCORPORATED
License Number	0411001133
License Description	Business Entity Branch Office Registration
Business Type	Corporation
Rank	Business Entity Branch Office
Address	1801 PLEASURE HOUSE RD STE 101,102, VIRGINIA BEACH, VA 23455
Initial Certification Date	2014-06-25
Expiration Date	2022-02-28

Related Licenses ¹

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402040981	CLARKE, RICHARD LAYNE	Professional Engineer License	Engineering	2023-05-31

Showing 1 to 1 of 1 entries

- 1 The data located on this website are not the public records of the Department of Professional and Occupational Regulation (DPOR). All public records are physically located at DPOR's Public Records Section: 9960 Mayland Drive, Suite 400, Richmond, VA 23233. While DPOR works to ensure the accuracy of the data provided online, the data available on these pages are updated routinely but may not be up to date at all times (due to document processing delays, technical maintenance, etc.).

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DPOR License Lookup License Number 0407003355

License Details

Name	WETLAND STUDIES AND SOLUTIONS INC
License Number	0407003355
License Description	Business Entity Registration
Firm Type	Corporation
Rank	Business Entity
Address	5300 WELLINGTON BRANCH DR STE 100, GAINESVILLE, VA 20155
Initial Certification Date	1995-12-12
Expiration Date	2021-12-31

Related Licenses ¹

License Number	License Holder Name	License Type	Relation Type	License Expiry
0402034061	CHROMEY, BRIAN MILES	Professional Engineer License	Engineering	2023-07-31
0406001885	CONNER, DILLON MICHAEL	Landscape Architect License	Landscape Architecture	2021-09-30
0403003007	LASKARIS, CHAD JEREMY	Land Surveyor License	Land Surveying	2021-07-31

Showing 1 to 3 of 3 entries

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DPOR License Lookup build 1,472 (built 2021-02-15 10:16:48).

DPOR Supporting Documentation for Key Personnel

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

04-30-2022

NUMBER

0402061875

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



ROSARIO TRIPIANA MARTINEZ
3877 FAIRFAX RIDGE RD
CENTER TOWER SUITE 300C
FAIRFAX, VA 22030



Mary Broz-Vaughan
Mary Broz-Vaughan, Director

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

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

(DETACH HERE)

 COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

BOARD FOR APESCIDLA
PROFESSIONAL ENGINEER LICENSE
NUMBER: 0402061875 EXPIRES: 04-30-2022

ROSARIO TRIPIANA MARTINEZ
3877 FAIRFAX RIDGE RD
CENTER TOWER SUITE 300C
FAIRFAX, VA 22030



(FOLD)

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

DPOR-PC (02/2017)

VOID

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COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

07-31-2022

NUMBER

0402021246

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



ANTHONY J KONDYSAR
3905 ST MARY'S CIRCLE
WILLIAMSBURG, VA 23185



Mary Broz-Vaughan
Mary Broz-Vaughan, Director

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

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DPOR-LIC (02/2017)

(DETACH HERE)



COMMONWEALTH of VIRGINIA
Department of Professional and Occupational Regulation

BOARD FOR AP/ELSCIDLA
PROFESSIONAL ENGINEER LICENSE
NUMBER: 0402021246 EXPIRES: 07-31-2022

ANTHONY J KONDYSAR
3905 ST MARY'S CIRCLE
WILLIAMSBURG, VA 23185



(FOLD)

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

DPOR-PC (02/2017)

6/16/2017 3:19:27PM E:\MKT\108

COMMONWEALTH of VIRGINIA

Department of Professional and Occupational Regulation

9960 Mayland Drive, Suite 400, Richmond, VA 23233

Telephone: (804) 367-8500

EXPIRES ON

01-31-2023

NUMBER

0402032924

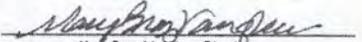
BOARD FOR ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS, CERTIFIED INTERIOR DESIGNERS
AND LANDSCAPE ARCHITECTS
PROFESSIONAL ENGINEER LICENSE



JOSHUA SHEPPARD WADE
43346 RIVERPOINT DRIVE
LEESBURG, VA 20176



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


Mary Broz-Vaughan, Director

(SEE REVERSE SIDE FOR PRIVILEGES AND INSTRUCTIONS)

DPOR-LIC (02/2017)

3.3.1 Key Personnel Resumes

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.															
a. Name & Title: Pablo Molla, Design-Build Project Manager															
b. Project Assignment: Design-Build Project Manager															
c. Name of the Firm with which you are employed at the time of submitting SOQ.: FCUS															
<p>d. Employment History: With this Firm <u>21</u>Years With Other Firms <u>0</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):</p> <p>FCUS, Design-Build Manager (2013 – Present). Management of significant and complex design-build projects (detailed below; \$2.3B Transform I-66 in Virginia and \$1.1B I-35W Segment 3A in TX).</p> <p>FCUS, Construction Manager (2010-2013). Management of a segment of a heavy civil highway project (detailed below; \$1.5B NTE 1&2).</p> <p>Ferrovial Construction SA, Area Manager (2006-2009). Served as project executive/manager for several Spanish Ministry of Public Works rail and highway construction projects in dense urban areas, including a 1.62 mile tunnel through the Madrid city center. Pablo was responsible for owner coordination as well as the project schedule, budget and risk management. He was led the project team and worked with municipalities, local groups and other stakeholders to ensure safe project completion on time and within budget.</p> <p>Ferrovial Construction SA, Project Manager (2001-2006). Management of multiple heavy civil construction projects in Spain.</p>															
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Polytechnic University, Madrid, Spain / MS/BS / 1998 / Civil Engineering															
f. Active Registration: Year First Registered/ Discipline/VA Registration #: N/A															
<p>g. Document the extent and depth of your experience and qualifications relevant to the Project.</p> <ol style="list-style-type: none"> 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> <p>(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.)</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <td style="width: 15%;">Project</td> <td style="width: 35%;">Transform 66 Outside the Beltway</td> <td style="width: 15%;">Role</td> <td style="width: 35%;">Design-Build Project Manager</td> </tr> <tr> <td>Location</td> <td>Fairfax, Virginia</td> <td>Dates</td> <td>July 2018 - Present</td> </tr> <tr> <td>Cost/Type</td> <td>\$2.3B / DBFOM</td> <td>Firm</td> <td>Ferrovial Construction</td> </tr> </table>				Project	Transform 66 Outside the Beltway	Role	Design-Build Project Manager	Location	Fairfax, Virginia	Dates	July 2018 - Present	Cost/Type	\$2.3B / DBFOM	Firm	Ferrovial Construction
Project	Transform 66 Outside the Beltway	Role	Design-Build Project Manager												
Location	Fairfax, Virginia	Dates	July 2018 - Present												
Cost/Type	\$2.3B / DBFOM	Firm	Ferrovial Construction												
<p>Description: The project will transform Northern Virginia's I-66 into a multimodal corridor that moves more people, provides reliable trips and offers new travel options. It reconstructs the general purpose lanes and adds new tolled managed lanes for 22.5 miles along the I-66 corridor between Gainesville and I-495.</p> <p>Role: Pablo is responsible for all aspects of design and construction of the extremely complex and challenging highway widening project, with several constraints derived from the urban environment, existing rail transit in the median, limited right of way, dense network of existing utilities with multiple stakeholders, and the need to maintain the existing traffic with minimal impact to the roadway users during construction.</p> <p>The project scope managed by Pablo includes 70 bridges; 200+ retaining walls of 2.5M SF; right of way acquisition of more than 270 parcels; 11 miles of new bike and pedestrian trails; 2,000 utility conflicts with more than 900 relocations (currently) and 49 different owners; new and expended transit services and park-and-ride lots with 4,000 new parking spaces; and extensive coordination with VDOT, counties, municipalities, and community organizations (with 286 community meetings conducted). *Work History Form project.</p> <p>Impact on Project: Pablo leads the critical coordination and collaboration with key stakeholder WMATA for the four miles and two stations of the Gold line in the median. During the detail design, implementation of ATCs, value-added concepts and design optimizations, prompted 23 environmental reevaluations. Under Pablo's direction, all reevaluations were successfully approved by VDOT and FHWA. The ATCs consisted of new connectivity and changes to the express lane ingress/egress and design changes that offered solutions</p>															

Design-Build Project Manager

not anticipated in the NEPA document. As a result of these optimizations, the environmental wetland impacts were greatly reduced from 30 acres to six.

Project Location	I-35W Segment 3A Fort Worth, Texas	Role Dates	Design-Build Project Manager September 2013 – July 2018
Cost/Type	\$1.1B / DBFOM	Firm	Ferrovial Construction

Description: The project consisted of 6.5 miles of managed toll lanes, general purpose lanes and frontage roads along a dense urban section of the I-35W corridor in Fort Worth. ***Work History Form project.**

Role: Pablo was responsible for all aspects of design and construction, including contract administration, traffic control, safety, quality, environmental, surveys, utilities, construction design, and project controls. He served as the primary point of contact between the design-build team and TxDOT. Pablo built and maintained relationships with the owner, independent engineers, and the developer, including attending regular meetings with the involved cities.

Pablo managed 970 total firms and the complex construction, consisting of 60 bridges, including eight direct connectors, four braided ramps, three major river crossings with significant environmental considerations; extensive use of retaining walls; a 1,900 foot-long multi-span bridge over rail; MOT of 145,000 ADT and ROW of 100 parcels valued at \$40M in 22 months. There were 295 utility conflicts with 167 relocations and 22 different utility owners. Adding complexity to the downtown project, the construction crossed five different railroads as well as levees. He expeditiously negotiated complicated agreements with entities (i.e., TxDOT, NTEMP, City of Fort Worth, TRWD, USACE, railroads, utility owners and property/landowners).

Impact on the Project: Pablo led eight NEPA reevaluations for the approval of ATCs and achieved USACE 404 and 408 permits for two major crossings over the Trinity River and Ham Branch. Two of the NEPA reevaluations were prompted by lowering the profile of the express lanes and eliminating a pedestrian bridge, by adding pedestrian elements to an existing bridge. Pablo’s team ensured the new designs complied with all permitting requirements and worked closely with FHWA and TxDOT to expedite the approval process. The reevaluations, taken at the design-builder’s risk, required updates to all aspects of the environmental documentation, including effects to waters of the US, noise mitigation, threatened and endangered species, etc. This also required extensive coordination with affected government agencies and affected third parties. The FHWA approved the NEPA reevaluations with minimal impact to design and construction schedules. Under Pablo’s leadership, the project opened to traffic two months ahead of the contracted completion date.

Project Location	North Tarrant Express Seg. 1&2 Ft. Worth, Texas	Role Dates	Project Manager/Construction Manager 2013 – 2015/2009-2013
Cost/Type	\$1.5B / DBFOM	Firm	Ferrovial Construction

Description: Segments 1&2 consisted of the complete reconstruction of 13.3 miles of the existing I 820/SH-183 urban corridor between Dallas and Fort Worth. Work was completed under live traffic conditions in a congested urban corridor. The project crossed six municipalities, impacting more than one million people.

Role: Pablo was involved in the project from design to grand opening. Design-Build Project Manager he was responsible for the overall project. Pablo held responsibility over traffic control and safety, quality, environmental, surveys, utilities, contract administration, construction, design, and project controls. He managed more than 400 local subcontractors and suppliers. Led by Pablo, the complex construction scope included 84 bridges of 3.8M SF of deck area; 5.1M CY of excavation; 2.5M SF of retaining walls; 1.1M tons of paving; \$30M in rail relocation; 397 utility lines relocated with 27 owners; MOT of 175,000 ADT; and two major connections with interstate highways, requiring interdisciplinary coordination with multiple components to minimize conflicts and facilitate construction. ***Work History Form project.**

Prior to 2013, Pablo served as the East Construction Manager, responsible for an eight mile segment of the 13.5-mile project. He managed a team consisting of four project managers, nine field engineers, 13 superintendents and foremen, and more than 500 field personnel, including subcontractors.

Impact on the project: Under Pablo’s direction, the approach to construction sequencing and flexibility in implementing diverse technical solutions resulted in nine months of construction savings. Some of these solutions include: performing concurrent design and construction in eight zones for stand-alone utility packages; identifying right-of-way acquisition needed for early construction packages; proactively coordinating utility relocations with four cities and 18 utility and gas line companies; and employing several concrete suppliers, each with at least one plant dedicated solely to the project, which allowed crews to place up to 10,000CY of concrete for structural elements per day. Under Pablo’s direction as Project Manager, the project **opened nine months ahead of schedule** with only a 0.2 OSHA incident rate.

* 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: Rosario Tripiana, PE, Designer Integrator			
b. Project Assignment: Entrusted Engineer-In-Charge			
c. Name of the Firm with which you are employed at the time of submitting SOQ.: FCUS			
d. Employment History: With this Firm <u>14</u> Years With Other Firms <u>0</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): FCUS, Design Integrator (2019 – Present). Manages of 30 in-house professional service personnel (PEs, EITs, CAD techs) on the \$2.3B Transform 66 in Virginia. Employed by the Design-Builder (FCUS). FCUS, Design Integrator (2015-2019). Managed 12 in-house professional service personnel (PEs, EITs, CAD techs) on the \$775M Highway 407 East Phase 2 project in Toronto, Ontario. Employed by the Design-Builder (FCUS). FCUS, Deputy Design Integrator and Utility Design Manager (2011-2015). Managed 15 in-house professional service personnel (PEs, EITs, CAD techs) and produced utility designs as well as performed field modifications on the \$1.5B North Tarrant Express Segments 1&2 project in Ft. Worth, Texas. Employed by the Design-Builder (FCUS). Ferrovial Construction SA, Design Integrator Assistant (2009-2011). Technical support in design, optimization and control of roadway design, drainage, structures (underpasses, overpasses, bridges and culverts) on the Ionia Odos-Highway project in Greece. Ferrovial Construction SA, Design Integrator Assistant (2007-2009). Technical support on the Autovia Del Mediterraneo (AP-7) highway project in Spain.			
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Zigurat Global Institute of Technology / MS / 2018 / BIM, GIS and Civil Engineering University of Texas, Arlington, Texas / MS / 2014 / Civil Engineering, Transportation Engineering University of Granada, Spain / MS/BS / 2006 / Civil Engineering			
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 2020 / Virginia PE / #0402061875 2020 / VDEQ / SWMPR0502			
g. Document the extent and depth of your experience and qualifications relevant to the Project. 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)			
Project	Transform I-66 Outside the Beltway	Role	Design Integrator
Location	Fairfax, Virginia	Dates	February 2019 - Present
Cost/Type	\$2.3B / DBFOM	Firm	Ferrovial Construction
Description: The project will transform Northern Virginia's I-66 into a multimodal corridor that moves more people, provides reliable trips and offers new travel options. It reconstructs the general purpose lanes and adds new tolled managed lanes for 22.5 miles along the I-66 corridor between Gainesville and I-495.			
Role: Rosario manages 30 professional services individuals including PEs, EITs, CAD, Administrators. She coordinates roadway, drainage, structures, ITS and utilities. She is responsible for the constructability of the design in accordance with the specifications. She performs project review, modification and optimization of design; manages the review process of shop drawings as well as non-conformity corrective actions, precast element deficiencies evaluations, as-built management and requests for information. Rosario provides technical support to construction, utilities, procurement and cost control department. *Work History Form project.			

Entrusted Engineer-In-Charge

Impact on Project: Rosario coordinates design modifications to adjust the project accordingly, while also filling all project related requests and needs to ensure the final product meets specific requirements (roadway specifications and special provisions are part of the modifications and technical requirements of the project). Due to the construction phasing and tight work environment, Rosario fully integrated the designs with the intended construction methods. Responsible for the constructability of the design, Rosario confirms details and field changes are quickly addressed and registered in the RFC drawings to promote construction efficiency in coordination with the lead roadway design and field engineers throughout construction. With 70 bridges to be constructed, Rosario has successfully managed hundreds of field requests in coordination with VDOT representatives.

Working with the proposed I-64 Segment 4C DB Project Manager and Construction Manager on the Transform 66 provides an established working relationship which expedites start-up, reduces learning curve and minimizes disputes.

Project	Highway 407 East Phase 2	Role	Design Integrator
Location	Toronto, Ontario, Canada	Dates	May 2015 – February 2019
Cost/Type	\$775B / DBFOM	Firm	Ferrovial Construction

Description: Phase 2 consisted of the extension of the Highway 407 roadway for 13.6 miles. This project involved design and construction of six and four lane rural divided freeway with 24 bridges and seven culverts with four bridges over CP Rail line.

Role: Rosario led a team of 12 civil engineers, surveyors and CAD technicians as well as 20 other associated staff. She oversaw design changes, managed approval for precast and as constructed elements, and provide technical support to construction, utilities, procurement and cost control department.

Impact on the Project: As the Design Integrator participating in the project since the early stages, she was involved in all design elements, including precast element revisions; as-build roadway designs; structural designs; modifications; coordination between the design and the project site; and compliance with all project specifications. Rosario's intransigent attitude in critical matters like the environment saved this project from fatal mistakes while her communicative, collaborative nature and coordination of parties, helped the team to find the correct path to a better construction methodology. With Rosario's help, the project was the first design-build, finance and maintain project in Ontario to be completed on/before the contracted completion date.

Project	North Tarrant Express Seg. 1&2	Role	Deputy Design Integrator & Utility Design Manager
Location	Ft. Worth, Texas	Dates	May 2011 – May 2015
Cost/Type	\$1.5B / DBFOM	Firm	Ferrovial Construction

Description: Segments 1&2 consisted of the complete reconstruction of 13.3 miles of the existing I 820/SH-183 urban corridor between Dallas and Fort Worth. Work was completed under live traffic conditions in a congested urban corridor. The project crossed six municipalities, impacting more than one million people.

Role: Rosario coordinated a team consisting of 15 Professional Engineers, Engineers in Training and CAD technicians as well as external consultants. She provided technical support in design and construction; and performed project review, analysis and staging modification to avoid utility conflicts. She developed utility designs and conducted field modifications; and produced the ITS design and coordination. ***Work History Form project.**

Impact on the project: Rosario directly oversaw barrier and roadway designs on this \$1.5B widening and reconstruction project. She was also responsible for coordination and helping modify the project's overall design to avoid any potential alternative relocations. By adjusting the roadway design and reducing the phases of the MOT plans, Rosario and her team overcame the obstacle of balancing the project schedule in a corridor with 175,000 ADT while maintaining quality design work. This was a massive effort to coordinate all the disciplines of the project, adjusting embankments, retaining walls, drainage, barriers, pavement packages to be fully integrated with the new configuration. Rosario participated in regular coordination meetings with the different departments.

* 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.

Rosario is an at-will employee currently serving as Design Integrator on Transform 66. She will be available full time when I-64 Segment 4C project begins.

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.			
a. Name & Title: Anthony "Andy" Kondysar, PE			
b. Project Assignment: Quality Assurance Manager			
c. Name of the Firm with which you are employed.: Quinn Consulting Services, Inc.			
<p>d. Employment History: With this Firm <u>5</u> Years with Other Firms <u>30</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):</p> <p>Quinn Consulting Services, Quality Assurance Manager (QAM) (2015 – Present). Andy provides professional services on both design-build and design-bid-build transportation and transit projects. He has held the positions of QAM, Design Engineer, Construction Manager and Project Manager. Andy's responsibilities as QAM have included supervision of Quality Assurance inspection staff to ensure all work performed on the project and testing of materials performed. He also monitors construction quality control programs and ensures samples is performed in accordance with the contract requirements and AFC plans and specifications.</p> <p>Virginia Port Authority, Project Manager (2007-2015). Project Manager for multiple building, waterfront, rail, pavement and utility construction projects on Port Authority operated shipping facilities in Norfolk, Portsmouth and Newport News, VA. His key responsibilities included oversight and consultation on civil design, waterfront structural, hydrographic surveying, architecture, environmental, fender repair, pavement maintenance and security fencing term contracts. Andy represented port interests on multiple major local infrastructure improvement projects and as design-build construction manager for the VDOT/VPA I-164 Median Rail Portsmouth/Chesapeake/Suffolk VA.</p> <p>Alpha Corporation, Quality Assurance Manager / Project Manager (2004-2007). QAM/Project Manager for various projects for Virginia Port Authority. His responsibilities included initiation and review of reports, correspondence and other communications required to maintain project schedule and budget, identification of potential conflicts, and recommendation of cost effective and timely solutions. Andy was the liaison between owner, contractor and design team to optimize quality, schedule and budget concerns. He also reviewed change orders, claims and schedule modifications in accordance with contract terms and negotiated cost for changes in scope.</p>			
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Virginia Polytechnic Institute, Blacksburg / BS / 1985 / Civil Engineering			
f. Active Registration: Year First Registered/ Discipline/VA Registration #: Professional Engineer – Virginia / 1990 / 0402021246			
Document the extent and depth of your experience and qualifications relevant to the Project.			
<ol style="list-style-type: none"> 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> 			
Project	I-64 Capacity Improvements Segment III	Role	Quality Assurance Manager
Location	York County, Virginia	Dates	July 2018 – Dec 2021 (projected)
Cost/Type	\$244M / DB	Firm	Quinn Consulting Services
<p>Description: This project widens I-64 from approximately 1.15 miles west of Route 199 (Exit 234), to 1.05 miles west of Route 199, (Exit 242), extending the three lane section of I-64 Segment II west for approximately 8.2 miles. The improvements include adding a 12ft wide travel lane and a 2ft wide shoulder in each direction. This work involves pavement reconstruction of the existing lanes, repair and widening of four bridges, three major culverts and replacement of the two Queens Creek bridges. The I-64 East off ramp to Route 143 was reconstructed and a signalized stop was installed at the end of the ramp. This project also included sound wall installation, drainage improvements, storm water management facilities, sign structure replacements, corridor-wide landscaping, maintenance of traffic, work zone traffic control and environmental monitoring.</p>			
<p>Role: Andy's responsibilities include assuring the project complies with contract documents, including the VDOT QA/QC requirements (Minimum Requirements for Quality Assurance and Quality Control on Design-</p>			

Build and Public-Private Transportation Act Projects, July 2018). He manages all aspects of the QA program, and directs inspections by QA inspectors and independent QA testing technicians. Specifically, he monitors the implementation and functioning of the project-specific QA/QC plan; chairs all preparatory meetings; initiates, distributes, and closes all project non-compliance reports (NCRs); oversees entries in the project materials book; approves project monthly payments; and maintains the project punch list. By chairing preparatory meetings, Andy actively partnered with VDOT and contractors to ensure all parties were aware of new upcoming work and the requirements necessary to complete the work. Andy proactively reviewed project documentation, such as source of materials and daily inspection reports, to ensure that all work conformed with contract documents and that non-conforming work was removed or repaired early in the construction process to prevent impacts on the project quality or schedule.

Impact on the Project: This work is also taking place in the Commonwealth, so the project-specific QA/QC plans will have to meet the same requirements as the plan Andy implemented on I-64 Segment III. Andy has extensive experience managing the quality of past roadway projects that involved many of the same activities: earthwork, subgrade, asphalt paving, pavement marking, etc.

Project	I-564 Intermodal Connector	Role	Quality Assurance Manager
Location	Norfolk, Virginia	Dates	Jan 2018 – June 2021
Cost/Type	\$92.5M / DB	Firm	Quinn Consulting Services

Description: The I-564 Intermodal Connector Project provides a safe high-speed connection from the existing I-564 to Norfolk International Terminals and Naval Station Norfolk. The project is approximately 2.82 miles of new four-lane limited access highway with a reconfigured commercial vehicle inspection station for the naval station. Improvements included construction of an interchange, bridges and local connectors, and SWM facilities.

Role: Andy assisted and worked closely with the DB Contractor and the Eastern Federal Lands Division of the FHWA in preparing and implementing a project-specific QA/QC plan that follows both the requirements set forth in VDOT QA/QC requirements (Minimum Requirements for Quality Assurance and Quality Control on Design-Build and Public-Private Transportation Act Projects, July 2018) as well as the materials acceptance and payment provisions/procedures prescribed in the contract by the FHWA. Andy partnered with FHWA, the EOR and the CM to track all field design changes, requests for information, deficiencies and NCRs, and to ensure that all project changes were resolved in a way agreed to by all parties. Andy also coordinated all QA staff to ensure that QA inspectors and technicians were onsite to monitor and inspect all construction activities, including QC activities.

Impact on the Project: Both the I-564 Intermodal Connector and the Segment 4C project consist of improvements to local roadways around major interchanges. The work includes improvement and reconstruction of many of the same elements (pavement, drainage, landscaping) and phased work on items such as maintenance of traffic and erosion and sediment control.

Project	I-64 Capacity Improvements Segment I	Role	Quality Assurance Manager
Location	Newport News, Virginia	Dates	Sept 2015 – Jan 2018
Cost/Type	\$101.5M / DB	Firm	Quinn Consulting Services

Description: This project involved an operationally independent segment of the widening of I-64. The purpose of widening was to provide immediate congestion relief to the roadway corridor. The improvements included addition of one 12ft wide travel lane and one 12ft wide shoulder in each direction, thereby widening a four lane section to six lanes, using the existing interstate median to limit the amount of right-of-way required to construct the project.

Role: Andy oversaw a team of independent QA inspectors and monitored the contractor's quality control team for compliance with both VDOT QA/QC requirements and the project specific QA/QC plan. Andy performed all necessary QA functions, both in the field and in the office. Field work consisted of managing a team of inspectors for all aspects of the project and ensuring they were up to date on all approved project documentation. In the office, Andy maintained the project materials notebook and attended preparatory and progress meetings to ensure open lines of communication with all stakeholders.

Impact on Project: Both projects are VDOT DB projects, which Andy and the Quinn team have years of experience performing from start to finish. Project similarities include roadway, survey, environmental, geotechnical, hydraulics, traffic control devices, overhead sign structures, TMP, ROW, utilities, public involvement/relations and stakeholder coordination, QA/QC, landscaping, lighting, construction engineering/inspection and project management.

g. 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.

Andy is currently assigned to I-64 Capacity Improvements Segment III, which is scheduled for on-time completion in December 2021. He will be available to be on-site full time during construction.

ATTACHMENT 3.3.1

KEY PERSONNEL RESUME FORM

Brief Resume of Key Personnel anticipated for the Project.			
a. Name & Title: Joshua Wade, PE, Principal Project Manager			
b. Project Assignment: Design Manager			
c. Name of the Firm with which you are employed at the time of submitting SOQ.: Parsons Transportation Group Inc.			
d. Employment History: With this Firm <u>27</u> Years With Other Firms <u>0</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): Parsons Transportation Group Inc., Principal Project Manager/Design Director (1994–Present). Josh has been with Parsons for his entire 27-year career, during which he progressed from Associate Engineer to Design Manager/Vice President. He oversees projects with a hands-on approach, including budgets, schedules, and financial forecasts. He manages the design staff and its efforts, including QA/QC, ATCs, value engineering, and innovative designs. Over the past 20 years, he has been the Design Manager for multiple award-winning projects, including several VDOT design-builds, and he is a member of the VTCA Design-Build Committee.			
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: University of Maryland University College, Adelphi, MD MBA 2009 Business Administration University of Maryland, College Park, MD / BS / 1993 / Civil Engineering			
f. Active Registration: Year First Registered/ Discipline/VA Registration #: 1999 / Professional Engineer / VA #0402032924			
g. Document the extent and depth of your experience and qualifications relevant to the Project. <ol style="list-style-type: none">1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i>2. <i>Note whether experience is with current firm or with other firm.</i>3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> (List only three (3) relevant projects* for which you have performed a similar function. If additional projects are shown in excess of three (3), the SOQ may be rendered non-responsive. In any case, only the first three (3) projects listed will be evaluated.)			
Project	I-64 Southside Widening and High Rise Bridge, Phase 1	Role	Design Manager
Location	Chesapeake, Virginia	Dates	2017 - Present
Cost/Type	\$409M / DB	Firm	Parsons
Description: The design-build project increases the capacity of I-64 by reconstructing four existing general-purpose lanes and adding two high-occupancy toll lanes, including all necessary tolling equipment and ITS. The project is divided into five roadway segments, three bridge widenings, the new High Rise Bridge and an overpass replacement. The project also includes the infrastructure to add another high-occupancy toll lane in the future.			
Role: As Design Manager, Josh led the design for the widening of I-64 in Hampton Roads that includes a new parallel bridge over the Elizabeth River. The 8.5-mile project features construction of a new 6,300-foot-long, fixed-span bridge over the east branch of the Elizabeth River adjacent to the existing bi-directional bridge. It also includes replacement of the Great Bridge Boulevard Bridge over I-64 and widening of six I-64 bridges over local roadways. The existing I-64 river crossing is a low-level structure with a movable span at the navigation channel. The new I-64 high-level bridge adjacent to it will carry I-64 eastbound traffic, while the existing bridge will be reconfigured to solely carry I-64 westbound traffic. Josh coordinated the design disciplines, including subconsultants, through task force meetings, schedule and risk monitoring, and work audits. Through rigorous project procedures and reviews, he ensured that the overall project design was in conformance with the contract and standards and that it met VDOT and stakeholders' goals and expectations. Josh led development of the design QA/QC plan and oversaw implementation of the design QA/QC program, including design packages, working plans, shop drawing reviews, specifications, subconsultant efforts, and			

Design Manager

constructability reviews. ***Work History Form project.**

Impact on the Project: A major element of the project was the intelligent transportation system and electronic tolling system elements, including a new managed lane and the accommodation of a part-time shoulder express lane along I-64. These facilities are part of the I-64 HREL system in the Hampton Roads District. Josh and his design team were successful in exceeding all design deadlines, obtained the environmental permits two months ahead of the already aggressive schedule, and ensured all design deliverables met the contractual documents. This design-build project is located in the Hampton Roads District and the design team included many of the same staff and subconsultant partners that are being proposed for the I-64 Segment 4C project.

Project	Military Highway CFI	Role	Design Manager
Location	Norfolk, Virginia	Dates	2015-2017
Cost/Type	\$59M / DB	Firm	Parsons

Description: This project widened Military Highway and included survey validation/additions; ROW acquisition of more than 30 locations; a new dual box culvert; retaining walls along the interstate; new SWM and drainage facilities; CCTV design and installation to provide the city with full coverage of the facility; railroad crossing upgrade and widening and coordination; final noise analysis following VDOT's process (which resulted in the recommendation of designing and constructing three noise abatement walls); roadway lighting meeting above-normal lighting levels, public meetings and coordination (including radio and other media ads); and construction engineering (including SOE review and wall type analyses).

Role: Josh served as the Design Manager for this DB project in the Hampton Roads District. As such, Josh oversaw the design of Virginia's first Continuous Flow Intersection (CFI), which included adding new lanes, signals, and traffic management technology to increase capacity and reduce congestion. He led the development of the design QA/QC plan and the implementation of the design QA/QC program. Josh also oversaw development of the TMP, the wetlands impact analyses, permit acquisitions, and dry/wet utility avoidance and relocation throughout the corridor. During construction, he managed engineering construction support services.

Impact on the Project: Josh coordinated all the design disciplines, including subconsultants, through task force meetings, schedule and risk monitoring, and work audits. Through rigorous project procedures and reviews, he ensured that the overall project design was in conformance with the contract and standards, and that it met VDOT and stakeholders' goals and expectations. As with the I-64 High Rise Bridge Project, this design-build project was in the Hampton Roads District and included many of the same staff and subconsultant partners that are being proposed as the I-64 Segment 4C project.

This project won the 2019 APWA Mid-Atlantic Chapter's Project of the Year award.

Project	Intercounty Connector Contract B	Role	Design Manager
Location	Montgomery County, Maryland	Dates	2008-2011
Cost/Type	\$560M / DB	Firm	Parsons

Description: The project consisted of 6.9 miles of a new, controlled access six-lane tolled roadway and two interchanges: ICC/MD 182 and ICC/MD 650.

Role: For this project, Josh served as the Design Manager and was responsible for design of this project. He worked closely with the DB Contractor and assisted in developing the project schedule, reviewed daily progress, and ensured successful completion per contract, on time and under budget. As with all of Josh's projects, he led development of the design QA/QC plan and oversaw the implementation of the design QA/QC program.

Impact on the Project: This roadway was designed to interstate standards and with electronic tolling similar to the Segment 4C project. The innovative bridge foundations and pier configurations design led by Josh and approved through the ATC process significantly reduced project costs and environmental impacts. The innovative MOT and construction phasing of the MD 650 SPUI also approved through the ATC process reduced neighborhood, traveling public, and utility impacts while reducing project costs and risks.

This project won several awards, including the 2012 Transportation – National Design-Build Award (Intercounty Connector) from Design-Build Institute of America; the 2012 Mid-Atlantic ENR Best Transportation Project Award; and the 2013 Award of Excellence Partnering Silver Award from Maryland Quality Initiative.

* 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: Ismael Javierre, Construction Manager															
b. Project Assignment: Construction Manager															
c. Name of the Firm with which you are employed at the time of submitting SOQ.: FCUS															
<p>d. Employment History: With this Firm <u>21</u>Years With Other Firms <u>0</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):</p> <p>FCUS, Construction Segment Manager (2017 – Present). Responsible for all construction activities including Quality Control (QC) activities to ensure the materials used and work performed meet contract requirements and the “approved for construction” plans and specifications on segment 2 of the \$2.3B Transform I-66, a heavy civil highway improvement project in Virginia.</p> <p>FCUS, Construction Segment Manager (2013-2017). Responsible for all construction activities including QC activities to ensure the materials used and work performed meet contract requirements and the “approved for construction” plans and specifications for the north segment of \$1.1B I-35W Segment 3A, a heavy civil highway improvement project in Ft Worth, Texas.</p> <p>FCUS, Construction Subsegment Manager (2010-2013). Responsible for all construction activities including QC activities to ensure the materials used and work performed meet contract requirements and the “approved for construction” plans and specifications for the west segment of \$1.5B NTE 1&2, a heavy civil highway improvement project in Ft Worth, Texas.</p> <p>Ferrovial Construction SA, Project Manager (2006-2010). Responsible for the construction of Bellvitge Hospital Station and Railway Garage for the Barcelona Metro subway in Barcelona, Spain.</p> <p>Ferrovial Construction SA, Project Manager (2004-2006). Responsible for the construction of a flight field at the Barcelona Airport in Barcelona, Spain.</p>															
e. Education: Name & Location of Institution(s)/Degree(s)/Year/Specialization: Polytechnic University, Catalunya, Spain / MS/BS / 1999 / Civil Engineering, Road Construction and Concrete Structures															
f. Active Registration: Year First Registered/ Discipline/VA Registration #: N/A															
<p>g. Document the extent and depth of your experience and qualifications relevant to the Project.</p> <ol style="list-style-type: none"> 1. <i>Note your role, responsibility, and specific job duties for each project, not those of the firm.</i> 2. <i>Note whether experience is with current firm or with other firm.</i> 3. <i>Provide beginning and end dates for each project; projects older than fifteen (15) years will not be considered for evaluation.</i> <p>(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.)</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <tr> <td style="width: 15%;">Project</td> <td style="width: 35%;">Transform 66 Outside the Beltway</td> <td style="width: 15%;">Role</td> <td style="width: 35%;">Construction Manager Segment 2</td> </tr> <tr> <td>Location</td> <td>Fairfax, Virginia</td> <td>Dates</td> <td>January 2017 - Present</td> </tr> <tr> <td>Cost/Type</td> <td>\$2.3B / DBFOM</td> <td>Firm</td> <td>Ferrovial Construction</td> </tr> </table> <p>Description: The project will transform Northern Virginia’s I-66 into a multimodal corridor that moves more people, provides reliable trips and offers new travel options. It reconstructs the general purpose lanes and adds new tolled managed lanes for 22.5 miles along the I-66 corridor between Gainesville and I-495.</p> <p>Role: Ismael is currently serving as the construction manager on two massive interchanges and six miles of roadway construction. He is responsible for all phases of construction and overseeing the construction team, with three senior project managers reporting directly to him. He supervises construction activities ensuring compliance with design and construction specifications, standards and requirements for the project, including safety, quality control and environmental compliance during construction. He is</p>				Project	Transform 66 Outside the Beltway	Role	Construction Manager Segment 2	Location	Fairfax, Virginia	Dates	January 2017 - Present	Cost/Type	\$2.3B / DBFOM	Firm	Ferrovial Construction
Project	Transform 66 Outside the Beltway	Role	Construction Manager Segment 2												
Location	Fairfax, Virginia	Dates	January 2017 - Present												
Cost/Type	\$2.3B / DBFOM	Firm	Ferrovial Construction												

responsible for utility relocation, erosion, and sediment control, safety of multiple concurrent work zones, maintenance of traffic, and installation of ITS infrastructure. ***Work History Form project.**

Impact on Project: One of the main challenges Ismael and his team have faced on the project has been to establish the critical path while receiving the design in parts. To determine which one of the two interchanges would be the critical path, Ismael and his team conducted numerous construction analyses of all phases of work to be done on one of the two interchanges. Once successfully identified, the critical path has remained a top priority for the construction crew. With Ismael's lead, three levels of design priority have been established for the project to ensure the team is always focused on the critical path with the final design in mind, while also maintaining the highest level of quality of the final product, within budget. With this approach, Ismael and his team have reduced the construction schedule for this project.

Project	I-35W Segment 3A	Role	Construction Manager North Segment
Location	Fort Worth, Texas	Dates	September 2013 – January 2017
Cost/Type	\$1.1B / DBFOM	Firm	Ferrovial Construction

Description: The project consisted of 6.5 miles of managed toll lanes, general purpose lanes and frontage roads along a dense urban section of the I-35W corridor in Fort Worth. ***Work History Form project.**

Role: Ismael was responsible for all construction activities for the north segment of the project comprised of 2.5 miles of GPLs, managed lanes and collector-distributor roads and 18 bridges and direct connectors. He was accountable for coordinating with design team members, supervising engineering, survey and QC staff. He monitored performance onsite, including subcontractor performance against the production schedule and ensured construction was conducted according to quality standards, budget and contractual specifications. He managed 46 subs and suppliers. Specific scope managed by Ismael included 1.8M CY of earthwork, 110,000 tons of asphalt paving, 315,000 SF of MSE walls and 150,000 LF of concrete girders.

Impact on the Project: Ismael worked closely with the project manager (proposed DBPM Pablo Molla). One difficult obstacle on this project was the overall design of the final product. Ismael and his team received the design in portions and it was crucial to redirect the design while work was being constructed. This meant tweaking details to satisfy TxDOT; determining all needed resources, including manpower, equipment and materials, while staying in line with budgetary requirements; working with the project construction teams to develop and organize the CPM schedule; and finalize project budgets prior to construction. Since the design was built bit-by-bit, it also directly affected the project schedule. To deliver the most effective solutions and meet the requirements within budget, Ismael successfully updated a long-term schedule to submit to the client and prepared a short-term schedule that was distributed to the construction team.

Project	North Tarrant Express Seg. 1&2	Role	Construction Manager West Segment
Location	Ft. Worth, Texas	Dates	March 2010 – September 2013
Cost/Type	\$1.5B / DBFOM	Firm	Ferrovial Construction

Description: Segments 1&2 consisted of the complete reconstruction of 13.3 miles of the existing I 820/SH-183 urban corridor between Dallas and Fort Worth. Work was completed under live traffic conditions in a congested urban corridor. The project crossed six municipalities, impacting more than one million people.

Role: He held primary responsibility over construction personnel (segment managers, project managers, associate project managers, etc) for the west segment of the project comprised of 2.3 miles of GPLs, managed lanes and collector-distributor roads, and nine bridges and direct connectors. He managed more than 50 subs and suppliers. In addition, he collaborated with design engineers during the design phase of the project to determine scope and methods of construction. He also performed constructability reviews and provided comments to the design team throughout construction as well as performing quantity take-offs and soliciting subcontractor and supplier quotations. Specific scope managed by Ismael included 300,000 CY of earthwork, 110,000 tons of asphalt paving and 100,000 SF of MSE and drilled shaft walls. ***Work History Form project.**

Impact on the project: One of the biggest challenges of this project was dealing with live traffic while constructing the highway. To overcome this challenge, Ismael and his team learned to successfully work around the traveling public to create an efficient maintenance of traffic plan. It was crucial to understand the dimensions of what was to be built, and what elements needed to fit in certain sections (to allow traffic to pass and make it feasible to build on the opposite side). To overcome the issue of maintaining traffic during construction, the highway was constructed in parts (roadways built in halves; bridges built in halves, longitudinally or transversally, depending on the configuration).

* 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.

Ismael is an at-will employee currently serving as Segment Manager on Transform 66. He will be available full time when I-64 Segment 4C project begins.

3.4.1 Work History Forms

3.4.1(a) Lead Contractor Work History Form

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 consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: Transform 66 Outside the Beltway (Transform 66) Location: Fairfax, Virginia	Name: JV of Janssen & Spaans Engineering, American StructurePoint and WSP	Name of Client/ Owner: VDOT Phone: 571-237-8229 Project Manager: HS (Charlie) Warraich, PE Phone: 571-237-8229 Email: hs.warraich@vdot.virginia.gov	12/2022	12/2022 (estimated)	\$2,142,500 (thousands)	\$2,310,389 (estimated) (DB agreement includes price revision of certain items. Also includes owner-directed changes orders)	\$1,617,272 (thousands) FCUS is 70%equity member of the Lead Contractor JV, FAM Construction, LLC

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/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form. If the Offeror chooses to submit work performed as a Joint Venture or Partnership, identify how the Joint Venture or Partnership was structured and provide a description of the portion of the work performed only by the Offeror's firm.

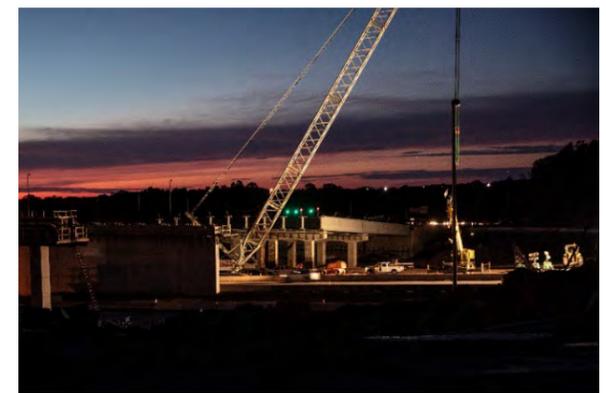
<p>Project Scope</p> <ul style="list-style-type: none"> \$2.3B design-build contract (40% Complete) Self-perform MOT of 190,000 AADT in constrained and congested urban highway ROW acquisition of more than 270 parcels 70 bridges; 500,000 SF of concrete beams and 700,000 SY of steel beams 200 new retaining walls of 2.5M SF Excavation of more than 3.5M CY of dirt and the execution of 2.4M CY of embankment New and expanded transit service and park-and-ride lots with 4,000 new parking spaces Coordination with WMATA to accommodate rail transit and preserve existing rail elements 300 community meetings stemming from an intense stakeholder coordination effort Extensive coordination with the National Park Service Preservation of complex existing ITS during construction and resolution of several conflicts without interrupting service Interchange improvements to enhance safety and reduce congestion, including auxiliary lanes between interchanges 11 miles of new bike and pedestrian trails 2,000 utility conflicts, over 900 relocations (currently)and 49 different owners ITS and ECTS civil infrastructure, including 26 toll gantries and duct bank for the system, 100+ ITS cameras, over 200 MVDs, 40+ DMS, and one full O&M building <p>Similarities with I-64 HREL Segment 4C Project</p> <ul style="list-style-type: none"> High Traffic (> 190,000 ADT) Phased bridge construction under traffic Complex MOT with existing lane and ramp detours Stakeholder and community involvement in-house team performed daily coordination/outreach Maintain mainline traffic capacity Multiple utilities conflicts Minimize property impacts Interstate highway system Congestion relief and safety improvements Relocated ramps and improved interchanges Adjacent wetland and WOUS/permit Adjacent projects and neighborhoods 	<p>Project Overview</p> <p>The reconstruction project will transform Northern Virginia's I-66 into a multimodal corridor, adding new general purpose and express lanes for 22.5 miles along I- 66 between Gainesville and I-495. The project is currently in the construction phase and proceeding on schedule.</p> <p>FCUS is responsible for 70% of the design and construction work through a fixed-price, fixed-schedule design-build contract.</p> <p>Challenging Construction: I-66 is an existing highway that is extraordinarily complex and a challenge to widen. This is mostly due to several constraints derived from the urban environment, the existing rail transit in the median, highly limited right of way, a dense network of existing utilities with multiple stakeholders and the need to maintain the existing traffic with minimal impact on roadway users during construction. One constraint that was addressed through coordination and collaboration with key stakeholder WMATA, the four miles and two stations of the Metrorail Orange Line located in the median of the I-66 project corridor.</p> <p>DBE Commitment: FCUS is committed to the project's diversity goals, including DBE objectives as well as the inclusion and participation of DBE and diverse firms on the project. The project is on target to achieve the 15% DBE goal through proven outreach and compliance efforts. To promote participation with local diverse organizations, the project team continuously collaborates with the owner and provides supportive services as needed. To date, the project has committed to 130 DBE contracts valued at \$224M to 126 DBE firms.</p> <p>Multimodal Facility: Supporting the multimodal project mission of "move more people, not more cars," the project includes two park and ride facilities, and an extensive pedestrian and bicycle trail program, I-66 Trail, that will be located within the physically-constricted corridor. The team worked closely with VDOT, Fairfax and Prince William counties, bike advocacy groups, homeowner associations, and residents to plan the facility.</p> <p>Relevancy: Transform 66 demonstrates FCUS's ability to manage construction in a dense urban corridor with complex MOT, coordinate with transit agencies and adjacent contractors, construct new ITS/ETCS while maintaining existing service, resolve hundreds of complex ROW and utility conflicts and deploy a complex stakeholder coordination effort. FCUS also conducted extensive coordination with National Parks Service as well as regional (Northern Virginia Regional Park Authority) and local park (Fairfax County Park Authority) authorities.</p>	<p>Key Project Complexities and Challenges</p> <p>ATC Innovation: During the detail design, implementation of ATCs, value-added concepts and design optimizations, prompted 23 environmental reevaluations. All were successfully approved by VDOT and FHWA. The ATCs consisted of new connectivity and changes to the express lane ingress/egress and design changes that offered solutions not anticipated in the NEPA document. As a result of these optimizations, the environmental wetland impacts were greatly reduced from 30 acres to six.</p> <p>Environmental Management: Cub Run Creek runs parallel to the roadway for a mile and half, and its associated floodplain extends within the project ROW. To mitigate impact along a significant length of the Cub Run Creek (classified as waters of the US), various solutions were adopted, such as scour protection on slopes.</p> <p>Managing Multidisciplinary Efforts: Since FCUS optimized the constructability of the final design and retaining walls of this project, special consideration was needed to resolve utility conflicts, manage temporary work designs (as required for construction), mitigate wetland and stream impacts and asses longitudinal scour. To promote coordination with all parties, we used different EDMS, including Aconex, Document Locator and SharePoint. Through multidisciplinary reviews of retaining wall geometries, typologies of walls, geotechnical recommendations and structural calculations, the design team can provide an optimized and approvable design to fully satisfy the needs of the construction schedule.</p>
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2018, 2019, 2020 HCCA Safety Award:
 General Contractor, Heavy Construction Contractors Association

2019, 2020 Contractor Safety Award:
 Greater than 750,000 man hours, Virginia Transportation Construction Alliance

**I-64 SEGMENT 4C
 PROPOSED KEY
 PERSONNEL WORKED
 TOGETHER**

DB Project Manager
 Construction Manager
 Engineer-In-Charge



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 consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: I-35W Segment 3A Location: Fort Worth, Texas	Name: AECOM Technical Services, Inc.	Name of Client/ Owner: TxDOT Phone: 817-240-1548 Project Manager: Michael Gage, PE Phone: 817-240-1548 Email: Michael.gage@txdot.gov	09/2018	07/2018	\$984,600 (thousands)	\$1,100,189 (thousands) (owner directed scope increases)	\$825,142 (thousands) FCUS was 75% equity member of the Lead Contractor JV, North Tarrant Infrastructure, LLC

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/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form. If the Offeror chooses to submit work performed as a Joint Venture or Partnership, identify how the Joint Venture or Partnership was structured and provide a description of the portion of the work performed only by the Offeror's firm.

<p>Project Scope</p> <ul style="list-style-type: none"> • \$1.1B design-build contract • Managed 970 total firms; 810 from Texas, 740 local (DFW area) • 6.5-mile highway with frontage roads, general purpose lanes and managed lanes • 60 bridges, including eight direct connectors, four braided ramps, three major river crossings and several over railroads, including a 1,900-foot multi-span bridge • Demolition of 700,000 SY of existing pavement; excavation of 3M CY • 2.5M CY of embankment; 1.3M SF of retaining walls • Construction crossed five different railroads as well as levees • MOT of 145,000 AADT, maintained four open lanes; coordinated 14,000 lane closures • Integration with adjacent express lanes and transit rail line • 295 utility conflicts with 167 relocations and 22 utility owners • Railroad coordination with multiple rail entities • ROW acquisition of 100 parcels valued at \$40M in 22 months • Preservation of complex existing ITS during construction and resolution of several conflicts without interrupting service • Achieved 13% DBE participation with 112 firms (TxDOT goal was 6%) • 8.4M man-hours with an 0.8 OSHA recordable incident rate (compared to 2.8 national average) <p>Similarities with I-64 HREL Segment 4C Project</p> <ul style="list-style-type: none"> • High traffic (> 145,000 ADT) • Phased bridge construction under live traffic • Complex MOT with existing lane and ramp detours • Stakeholder and community involvement in-house team performed daily coordination/outreach • Maintain mainline traffic capacity • Multiple utilities conflicts • Minimize property impacts • Interstate highway system • Congestion relief and safety improvements • Relocated ramps and improved interchanges • Adjacent wetland and WOUS/permit • Adjacent projects/contractors and neighborhoods • Bridges over water and rail 	<p>Project Overview</p> <p>Segment 3A involved the complete reconstruction of a 6.5-mile heavily traveled, existing urban corridor with the addition of express lanes to I-35W. The team achieved USACE 404 and 408 permits for two major crossings over the Trinity River and Ham Branch.</p> <p>FCUS was a member of the lead contractor under a fixed-price, fixed-schedule design-build contract. The construction costs were \$1.1B and FCUS was responsible for 75% of the design and construction costs. FCUS's affiliate, Webber, LLC, was responsible for the other 25%. Four miles of the Express Lanes opened in April 2018; the rest of the project opened in July 2018—two months ahead of the contracted completion date.</p> <p>Collaborative Design Development: Design, construction and maintenance collaborated to optimize long-term solutions for this project. Examples of efforts to promote long-term efficiencies and reduced costs include:</p> <ul style="list-style-type: none"> • Concurrent design review by construction and O&M teams • Changing the metal beam guard rail for a concrete barrier • Considering traffic during the construction phase when designing pavement • Optimizing the number of beams per span in structures to diminish exposed concrete and the number of bearing seats <p>Complex MOT of Freight Corridor: The DFW Metroplex is one of the largest global inland distribution centers in the world, with significant trade activity conducted by air, land and rail. The project upgraded I-35W to the current design standards to provide more efficient and safe movements of freight and passenger vehicles as well as ensure operational and design deficiencies were addressed. FCUS self-performed the traffic management during construction maintaining four open lanes and coordinating more than 14,000 lane closures and shifts.</p> <p>DBE Success: FCUS facilitated DBE involvement through a proactive and extensive outreach strategy, and implemented inclusive procurement practices and effective contract compliance measures. The project team worked closely with local industries and diverse organizations, such as the local chapter of the National Association of Minority Contractors (NAMC), to champion NAMC University to develop, educate and introduce more diverse firms to the heavy highway industry. The project issued 116 contracts to 112 DBE firms, with a total value of \$116M, achieving 13% DBE participation (exceeding the goal of 6%).</p> <p>Relevancy: Early delivery of the design and construction of a highway improvement project in a dense urban area under a design-build contract with stakeholder coordination, environmental reevaluation, complex MOT, coordination with adjacent projects/contractors, demolition of existing roadway and bridges, utility relocation, railroad coordination, bridges over water bodies, and Section 404/401 and 408 permits.</p>	<p>Key Project Complexities and Challenges</p> <p>ATC Innovation: the team implemented an ATC that lowered the profile of the express lanes to the same level as the GPLs. Benefits of this ATC included: the removal of an entire construction phase; reduced construction complexity and long-term maintenance; compressed schedule and increased safety by reducing the number of bridges required; implemented geometric changes that improved air quality; lessened noise impact on adjacent properties; eliminated impacts on several ROW parcels; and reduced traffic switches needed during construction.</p> <p>Environmental Management: Design, construction and environmental teams collaborated on two NEPA reevaluations to lower the profile of the express lanes and eliminate a pedestrian bridge (pedestrian elements were added to an existing bridge). The reevaluations, taken at the design-builder's risk, required updates to all aspects of the environmental documentation, including effects to waters of the US, noise mitigation, threatened and endangered species, etc. They ensured the new design complied with all permitting requirements and worked closely with FHWA and TxDOT to expedite the approvals. Six other NEPA reevaluations were successfully carried out by the contractor.</p> <p>Stakeholder & Public Engagement: The in-house public outreach team worked daily with design, traffic and production teams to ensure the schedule and construction activities were coordinated with all stakeholders and the general public. Major events/conflicts by the city or a specific business were considered when scheduling work. Recognizing stakeholder unity strengthens and streamlines project delivery outcomes. FCUS performed targeted coordination with the City of Fort Worth, Tarrant County Commissioners, TxDOT, Downtown Fort Worth Alliance Group, Fort Worth Stockyards, Fort Worth Chamber of Commerce, Fort Worth Visitors and Convention Bureau, adjacent property owners, railroads, and utility owners.</p>
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Best highway/Bridge 2019, Engineering News-Record Texas & Louisiana
2019 JLT Build America Award, Design-Build Civil Category, AGC of America

**I-64 SEGMENT 4C
PROPOSED KEY
PERSONNEL WORKED
TOGETHER**
DB Project Manager
Construction Manager



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 consulting firm responsible for the overall project design.	c. Contact information of the Client or Owner and their Project Manager who can verify Firm's responsibilities.	d. Contract Completion Date (Original)	e. Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Dollar Value of Work Performed by the Firm identified as the Lead Contractor for this procurement.(in thousands)
					Original Contract Value	Final or Estimated Contract Value	
Name: North Tarrant Express Segments 1 & 2 Location: Fort Worth, Texas	Name: AECOM Technical Services, Inc. & OTHON, Inc.	Name of Client/ Owner: TxDOT Phone: 817-647-5872 Project Manager: Varuna Singh, PE Phone: 817-647-5872 Email: varuna.singh@txdot.gov	06/2015	10/2014	\$1,451,400 (thousands)	\$1,491,550 (thousands) (owner directed scope increases)	\$894,930,000 (thousands) FCUS was 60% equity member of the Lead Contractor JV, Bluebonnet Contractors, LLC

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/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be considered a single project. Projects/contracts with multiple phases, segments, elements (projects), and/or contracts shall not be claimed as a single project on this form. If the Offeror chooses to submit work performed as a Joint Venture or Partnership, identify how the Joint Venture or Partnership was structured and provide a description of the portion of the work performed only by the Offeror's firm.

<p>Project Scope</p> <ul style="list-style-type: none"> \$1.5B design-build contract Managed more than 400 firms during construction, including 250 local firms 84 bridges (76 bridges along main lanes, frontage roads and ramps; four railroad bridges); four major direct connectors connecting two major interstate highways (I-35W and I-820); seven major stream crossings; and 25 highways/streets 3.8M square feet of deck area, 1.1M tons of paving, 5.1M cubic yards of excavation Achieved 21% DBE participation with 129 firms (TxDOT goal was 12%) 474 utility conflicts with 397 relocations and 27 utility owners \$30M in rail relocations, involving temporary relocation of two railroads, removal of two existing railroad bridges and four new railroad bridge crossings Extensive coordination with affected railroad entities: UPRR, DART/FWWR and GVR Self-performed MOT of 175,000+ vehicles daily, while maintaining four open lanes in each direction; coordinated 5,700 lane closures and averaged eight traffic switches per month during the last 36 months of construction ROW acquisition of 299 parcels valued at \$220M, with 259 relocations Robust community/stakeholder/business outreach and notification program 9.1Mman-hours with an 0.8 OSHA recordable incident rate (2.8 national average) <p>Similarities with I-64 HREL Segment 4C Project</p> <ul style="list-style-type: none"> High traffic (> 175,000 ADT) Phased bridge construction under live traffic Complex MOT with existing lane and ramp detours Stakeholder and community involvement in-house team performed daily coordination/outreach Maintain mainline traffic capacity Multiple utilities conflicts Minimize property impacts Interstate highway system Congestion relief and safety improvements Relocated ramps and improved interchanges Adjacent wetland and WOUS/permit Adjacent projects and neighborhoods <div style="border: 1px solid gray; padding: 5px; margin-top: 10px;"> <p align="center">Best Projects Safety Award 2015, ENR Texas and Louisiana</p> <p align="center">Best of the Best Highway/Bridge Project for 2015, ENR</p> <p align="center">2018 P3 Project of the Year, ARTBA</p> <p align="center">2015 Quality in Construction Award, National Asphalt Pavement Association</p> </div>	<p>Project Overview</p> <p>NTE 1&2 consists of the complete reconstruction of 13.3 miles of the existing I-820/SH 183 corridor between Dallas and Fort Worth. The project crossed six municipalities, impacting more than one million people; construction was completed under live traffic conditions in a congested urban corridor. FCUS was a member of the lead contractor under a fixed-price, fixed-schedule design-build contract and responsible for 60% of the design and construction costs. FCUS's affiliate, Webber, LLC, was responsible for the other 40%. The project opened nine months ahead of the contracted completion date.</p> <p>Constant Communication of MOT: Through extensive use of social media and changeable message signs to inform motorists of current and future traffic pattern changes. The website offered dynamic communication tools that allowed the traveling public to stay up-to-date on upcoming lane closures and real-time traffic conditions. FCUS supplied drivers with a free and customizable travel planning tool, called "Beat the Traffic," which was synced with current corridor conditions during construction.</p> <p>Accelerated Construction: The team's approach to construction sequencing and flexibility in implementing diverse technical solutions resulted in nine months of schedule savings. Other approaches, which resulted in an accelerated schedule and lower overall costs, included:</p> <ul style="list-style-type: none"> Performing concurrent design and construction in eight zones for stand-alone utility packages Relocating the major AT&T duct bank system, using two teams in parallel activities instead of AT&T's traditional linear approach Installing additional temporary drainage structures to funnel rainwater run-off to areas outside the construction site Employing several concrete suppliers, each with at least one plant solely dedicated to the project, allowing construction crews to place up to 10,000 CY of structural concrete per day <p>DBE Success: Proactive and extensive outreach and education efforts, working closely with industry organizations, such as the Regional Hispanic Contractors and the Fort Worth Metropolitan Black Chamber of Commerce. FCUS implemented inclusive procurement practices, including hands-on contract compliance measures with first-tier subcontractors to ensure DBE participation at every level. The DBE participation goal was surpassed halfway through construction. The team awarded 193 contracts to over 129 firms, with a contract value of over \$217M, achieving 21% DBE participation, which exceeded the required goal of 12%.</p> <p>Relevancy: Early delivery of design and construction of a highway improvement project in a dense urban area, under a design-build contract with stakeholder coordination, environmental reevaluation, complex maintenance of traffic, demolition of existing roadway and bridges and utility relocation.</p>	<p>Key Project Complexities and Challenges</p> <p>ATC Innovation: A major design optimization called for the elimination of three miles of elevated express lanes to facilitate their placement at grade within the limited ROW. This optimization saved valuable time and improved overall aesthetics.</p> <p>Environmental Justice Communities: The FCUS communications team provided extensive community outreach efforts with low-income, disadvantaged, elderly and revitalized neighborhoods; many of which were Hispanic communities and predominately Spanish speaking neighborhoods.</p> <p>Environmental Management: After successful identification and avoidance of jurisdictional waters and wetlands, FCUS received the USACE Section 404 permit for construction. Additional permits included all 100-year floodplain development permits at all crossings, and two separate construction storm water permits (one for each segment), which required significant storm water pollution prevention plans.</p> <p>Complex Utilities: The design-build team coordinated with 27 different utility owners to manage the 474 utility conflicts and 397 relocations throughout the corridor. Of note, FCUS worked with TxDOT and AT&T to develop creative solutions for relocating the major duct bank system along the south of SH 183/SH 121 near the City of Hurst. Working in two phases with concurrent activities, our team relocated 27,000 linear feet of duct bank and 111 manholes, and spliced one-million pairs of new copper. The parallel activities, which AT&T would typically implement in series, relocation time was shortened by nine months and contributed to the project's projected early completion.</p> <div style="border: 1px solid gray; padding: 5px; margin-top: 10px;"> <p align="center">I-64 SEGMENT 4C PROPOSED KEY PERSONNEL WORKED TOGETHER</p> <p align="center">DB Project Manager Construction Manager Engineer-in-Charge</p> </div> 
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3.4.1(b) Lead Designer Work History Form

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 contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement.(in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: I-64 Southside Widening And High Rise Bridge, Phase 1 Location: Chesapeake, Virginia	Name: Granite/PCG/Corman	Name of Client/Owner: VDOT Phone: 804-786-2716 Project Manager: Rick Correa Phone: 757-494-5486 Email: ricardo.correa@vdot.virginia.gov	10/2017	07/2021	\$409,596 (thousands)	\$409,596 (thousands)	\$30,921 (thousands) Parsons was an equity member of the construction joint venture (joint and several) and served as Lead Designer (arms-length subcontract).

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

<p>Project Scope</p> <ul style="list-style-type: none"> I-64 Southside Widening and HRB project length, classification, AADT: 8.5 miles of urban freeway with 93,900 VPD Construction of a new 6,300-foot-long fixed-span bridge over the east branch of the Elizabeth River adjacent to the existing bi-directional bridge. Replacement of the Great Bridge Boulevard Bridge over I-64 and widening of six I-64 bridges over local roadways and a Approximately 800,000 square feet of new sound barrier walls. Extensive stormwater management facilities and a precast sheet pile waters-edge retaining wall. Dynamic pricing, electronic and video toll collection system for managed toll lanes. Parsons' design reduced the length of the proposed High Rise Bridge by approximately 638 feet by adjusting the roadway profile which helped to reduce VDOT's initial and long-term bridge maintenance costs. The horizontal roadway alignment was optimized by introducing two 25,000-foot reverse curves, both designed above minimum standards, which eliminated cross slope transitions and reduced the construction limits by up to 14 feet over 622 linear feet. A unique project element was the design of a tide gate structure at Gilmerton Canal, which was installed at the downstream end of an existing box culvert. The tide gate was designed to address the flooding of an adjacent residential community. <p>Similarities with I-64 HREL Segment 4C Project</p> <ul style="list-style-type: none"> Interstate highway system with high traffic (> 93,000 ADT) Phased bridge construction under traffic Complex MOT/TMP Stakeholder and community involvement in-house team performed daily coordination/outreach Maintain mainline traffic capacity Multiple utilities conflicts Minimize property impacts Congestion relief and safety improvements Bridges over water bodies and WOUS/permitting Adjacent projects and neighborhoods 	<p>Project Overview</p> <p>The design-build project increases the capacity of I-64 by reconstructing four existing general-purpose lanes and adding two high-occupancy toll lanes. The existing I-64 river crossing is a low-level structure with a movable span at the navigation channel. The new I-64 high-level bridge adjacent to it will carry I-64 eastbound traffic, while the existing bridge will be reconfigured to solely carry I-64 westbound traffic. The project was divided into five roadway segments, three bridge widenings, the new High Rise Bridge and an overpass replacement. Environmental permit approvals were received two months ahead of an already aggressive schedule.</p> <p>Complex Bridge Design and Construction: The foundations for the new High Rise Bridge (HRB) include 36-inch square precast piles and 66-inch-diameter precast piles. The 36-inch piles were used to construct pile bents and in clusters under pile-caps for land piers. The 66-inch piles were only used for marine foundations, which also featured waterline footings. Precast tubs were used to construct the waterline footings to minimize disturbance of the river bottom. In all cases, the waterline footings were sized to also double as pier protection guarding against damage from vessel strikes. The HRB substructure is a combination of pile bents where the deck was less than 35 feet above grade and dual round columns for the taller piers. The 37-span HRB superstructure features a blend of precast beams (34 spans) and steel girders (three spans). The precast beams ranged in length from 137.5 feet to 196 feet. The steel girders were used for the three-span unit centered on the navigation channel, where the span configuration was 192.5 feet, 250 feet, and 207.5 feet. In addition to HRB, the existing Great Bridge Boulevard bridge over I-64 was replaced with a 303-foot long, 44-wide two-span prestressed concrete superstructure. The substructure is made of deep foundations. Detailed MOT and sequence of construction coordination was required to replace the existing structure. The project also included the widening of six existing steel bridges.</p> <p>ITS Tolling Infrastructure: ITS infrastructure work included the design of gantry structures, foundation, technical shelter and enforcement zone, generators, signing, conduit, electrical, safety lighting, and any other civil works related to the design elements that would be needed to provide the Electronic Toll Collection System for the project.</p> <p>Maintenance of Traffic: Parsons developed a comprehensive traffic management plan that maximized off-line construction, maintained existing number of travel lanes during peak hours, and allowed a safe and efficient construction staging plan. Other roadway safety features include guardrails, lighting, traffic cameras, and striping. The MOT/SOC was optimized to minimize the number of traffic switches needed to construct the job which creates a more predictable, and therefore safer environment for workers and the traveling public.</p>	<p>Key Project Complexities and Challenges</p> <p>ATC Innovation: The project included many innovative design enhancements, including the following:</p> <ul style="list-style-type: none"> The use of weir walls and stormwater management outlets, as opposed to closed outfall structures, which reduces VDOT long-term maintenance costs for these facilities. Drainage slots in noise barriers to greatly reduce the quantity of storm pipe and drainage structures. Rolling shoulder grades to eliminate the need for trench drains in areas of flat roadway profiles and provide a more efficient stormwater conveyance. Design of a bypass culvert that runs parallel to the Gilmerton Canal box culvert, which decreases upstream flooding and a redundant system that avoids manual activation during power outages. Realigned fender system beneath the high rise bridges to increase bridge and vessel safety, including adding additional LEDs along the fender system to improve navigability and safety. Improved alignment on Libertyville Road, adjacent to High Rise Bridge abutment B, which avoided all work in an adjacent tidal wetland bank and allowed typical column pile bents to be used on the north side of the road, which eliminated straddle bents shown in the RFP concept. <p>Drainage: The urban project setting and additional run-off from added pavement presents numerous hydrologic, hydraulic, and water resource challenges that were accounted for by the design team. The increased peak flow discharge was retained within the project corridor by using structural controls such as ponds, swales, grass channels and other SWM BMPs. The use of grass-lined channels parallel to the new High Rise Bridge allowed for simple construction and reduced maintenance costs while also providing the required level of treatment.</p> <p>NEPA / Environmental Compliance: Sections of the project are located within the environmentally sensitive Deep Creek and Elizabeth River watersheds and required compliance with stringent water quality regulations. This required coordination with and permits to be obtained from USACE, VA DEQ and VMRC. The construction for the new High Rise Bridge is in close proximity to nesting sites for the Peregrine Falcon, Bald Eagle and Atlantic Sturgeon, which required coordination with US Fish and Wildlife Service and Virginia Department of Games and Inland Fisheries (now the Virginia Department of Wildlife Resources) to develop concurrence protocols for implementing Time-of-Year Restrictions for sensitive species.</p>
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**KEY PERSONNEL
WORKING TOGETHER**
Design Manager Josh Wade led the HRB Design Team, which is the same group that been selected for Segment 4C.



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 contractor responsible for overall construction of the project.	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement. (in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: I-35E Managed Lanes Design-Build (35 Express) Location: Dallas, Texas	Name: AGL Constructors Joint Venture (a consortium comprising Archer Western Contractors, LLC; Granite Construction Company; and The LANE Construction Corporation)	Name of Client/Owner: TxDOT Phone: 214-320-6652 Project Manager: Varuna Singh, PE Phone: 817-647-5872 Email: varuna.singh@txdot.gov	02/2013	12/2017	\$850,000 (thousands)	\$1,064,896 (thousands) (Difference due to TxDOT exercising eight scope options and various change orders)	\$40,297 (thousands) Parsons served as Lead Designer in a design JV with HDR, Inc. The design JV was a subconsultant to the design-builder, AGL Constructors.

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

<p>Project Scope</p> <ul style="list-style-type: none"> I-35E project length, classification, AADT: 28 miles of urban freeway with 200,000 VPD Dynamic pricing, electronic toll collection system for reversible managed toll lanes 45 new bridges and widening and/or rehabilitation of 26 existing bridges, for a total 19,680 LF of bridges. Congestion management improvements included extension of acceleration/deceleration lanes, addition of auxiliary lanes, lane and ramp closure restrictions. MOT plan minimized the number of lane closures and traffic switches. Lane closures were only requested if no alternative was available. Three-level Belt Line interchange construction was accomplished through planning and execution of six phases with as many as seven sub-phases that maintained the existing number of lanes while working around ROW acquisitions and utility relocation constraints. Access to various businesses and neighborhoods was accommodated by temporary ramps and phasing of bridge construction to maintain access. ROW acquisition of 100 parcels valued at \$40 million in 22 months. NEPA Reevaluations for ATC revised alignments Other notable characteristics: 10 subconsultants integrated into the design team (over 17% DBE); over 460,000 SF of retaining walls; 3 design exceptions; coordination with USACE for 1.5 mile bridge over Lake Lewisville and with 2 counties, 8 cities, 2 railroads; accommodation of future ultimate project, modeling, renderings and animation for public information. <p>Similarities with I-64 HREL Segment 4C Project</p> <ul style="list-style-type: none"> Interstate highway system with high traffic (> 200,000 VPD) Phased bridge construction under traffic Complex MOT; coordination with adjacent projects/jurisdictions Stakeholder and community involvement in-house team performed daily coordination/outreach Maintain mainline traffic capacity Multiple utilities conflicts Minimize property impacts Congestion relief and safety improvements Relocated ramps and improved interchanges Adjacent wetlands and WOUS/permit Adjacent projects and neighborhoods 	<p>Project Overview</p> <p>The 28-mile I-35E Managed Lane project between Dallas and Denton Counties in Texas rehabilitated and widened existing lanes of the interstate, provided continuous frontage roads, and constructed new reversible managed toll lanes to keep traffic moving at 50 miles per hour utilizing dynamic pricing and electronic toll collection system. The project also constructed two system-to-system interchanges and reconstructed 12 interchanges. As Lead Designer in a design JV, Parsons provided overall management, quality assurance, roadway, structures, maintenance of traffic, miscellaneous structures, retaining walls, landscaping and aesthetics, as well as post-design services. Parsons was responsible for 35% of the design services. The project was completed on time.</p> <p>Complex Phased Design Development: A complex project phasing plan required Parsons to design the project to satisfy the owner's needs today, as well as accommodate their build-out in the future. The ultimate project scope for I-35E is extensive and exceeds TxDOT's available funds, so TxDOT awarded this interim project to build as much of the ultimate scope as possible. As designer, Parsons considered all aspects of the ultimate project and how they interact with the interim scope. Some bridge structures were built to the ultimate configuration, and others were built to a reduced interim scope. Bridge rehabilitation scope was minimized through the use of detailed inspections and condition analysis made during the proposal effort. Even interim-scope structures, such as drainage, had to demonstrate that they could accommodate the ultimate project. This issue also impacted the location and design of substructure elements, the location of overhead sign supports, and the types and location of retaining wall elements.</p> <p>Unique Maintenance of Traffic Challenges:</p> <ul style="list-style-type: none"> The project traverses two counties and eight cities; therefore, coordinating the MOT plan throughout the corridor with these counties and cities was crucial to the project's success. There are several neighborhoods within the corridor that are water-locked, with only one way in and out. These access points are connected to the I-35E's frontage road. The MOT plan maintained access at all times while multiple bridges were built in these specific areas. The MOT plan minimized the number of lane closures and traffic switches. The project included an integrated public information and traffic management plan. <p>3-D Modeling: The design JV used 3D modeling to create accurate cross sections. This approach allowed the team to efficiently create data that can be shared across several different software platforms to and from the field. The model was also utilized as a base for accurate photo renderings of seven major interchanges and to develop a corridor-wide animation and video for public information, meetings and the project website.</p>	<p>Key Project Complexities and Challenges</p> <p>ATC Innovation: Parsons led the development of 24 alternative technical concepts, seven of which were incorporated into the I-35E project saving almost \$68 million and nine months. Additional design refinements and geometric optimizations saved significant bridge reconstruction costs and right-of-way acquisitions.</p> <p>Drainage: A unique feature of the I-35E project is the drainage system on the proposed Lake Lewisville Bridge. New roadway facilities crossing the USACE-regulated lake must treat pavement runoff to prevent degradation in water quality. The stormwater treatment unit system was designed to treat the first flush, which is the first volume of rain that carries most oils and pollutants off paving and into the storm system. Bridge loading and construction costs were reduced through material selection, as the treatment systems selected do not require the heavy concrete enclosures that are commonly used.</p> <p>Environmental Reevaluations: Environmental specialists performed complex environmental re-evaluations for the Beltline and Garden Ridge major interchanges. They planned, managed, implemented and monitored all environmental compliance tasks related to these two major interchange reevaluations. The design JV environmental staff managed environmental compliance in accordance with NEPA and resource agency permit compliance, and construction-phase management of environmental commitments.</p> <p>Interface with Applicable Railroads and Utility Owners: The design JV team initially met with each and every affected utility and railroad owner, and then invited railroad and utility owners into task force meetings that affect each entity to avoid surprises regarding impacts to their operations. The design JV team completed water/wastewater relocation designs for seven different cities. Approximately 74,000 linear feet of water and wastewater lines were designed, and conduit designs were performed for 10 communication companies with relocations totaling approximately 179,000 linear feet. The weekly task force meetings, with all entities attending, resulted in everyone agreeing upon design and construction schedules and identifying necessary design team forces to complete utility designs on schedule.</p>
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2017 Top 10 Roads - Ranked No. 8 from Roads & Bridges magazine



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 contractor responsible for overall construction of the project	c. Contact information of the Client and their Project Manager who can verify Firm's responsibilities.	d. Construction Contract Start Date	e. Construction Contract Completion Date (Actual or Estimated)	f. Contract Value (in thousands)		g. Design Fee for the Work Performed by the Firm identified as the Lead Designer for this procurement. (in thousands)
					Construction Contract Value (Original)	Construction Contract Value (Actual or Estimated)	
Name: Northwest Corridor Express Lanes Location: Atlanta, Georgia	Name: Northwest Express Roadbuilders (a construction JV of Archer-Western Contractors and Hubbard Construction Company)	Name of Client/Owner: GDOT Phone: 404-656-5267 Project Manager: Darryl VanMeter Phone: 404-631-1703 Email: dvanmeter@dot.ga.gov	11/2013	08/2018	\$599,000 (thousands)	\$647,000 (thousands) (Difference due to 35 owner-directed contract change requests)	\$58,000 (thousands) Parsons served as lead designer for the Northwest Express Roadbuilders.

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

<p>Project Scope</p> <ul style="list-style-type: none"> Northwest Corridor project length, classification, AADT: 29.7 miles of urban freeway with 145,000 VPD Dynamic pricing, electronic and video toll collection system for reversible managed toll lanes. Design of six new express lane interchanges on I-75; three new access points along I-575; and 39 bridges, totaling 5.2 miles with over 1 million square feet of bridge deck supported by 195 intermediate bents and 772 prestressed concrete beams. More than 100 retaining walls up to 45 feet in height with a combined length of 10.5 miles. Approximately 1.4 million square feet of noise barriers, 640,000 square feet of mechanically stabilized earth (MSE) walls, and 261,000 square feet of soil nail cut walls. Parsons' design significantly reduced the need for additional right-of-way for the project. The owner's original design required a total of 81 parcels, which was reduced to fewer than 20 parcels. With a 15-month schedule for right-of-way acquisition, this reduction minimized the schedule risk associated with right-of-way acquisition and brought significant cost savings to the owner. Automatic Traffic Control and Surveillance System <p>Similarities with I-64 HREL Segment 4C Project</p> <ul style="list-style-type: none"> Interstate highway system with high traffic (> 145,000 VPD) Phased bridge construction under traffic Complex MOT Stakeholder and community involvement in-house team performed daily coordination/outreach Maintain mainline traffic capacity Multiple utilities conflicts Minimize property impacts Congestion relief and safety improvements Relocated ramps and improved interchanges Bridges over water bodies and WOUS/permit Adjacent projects and neighborhoods 	<p>2018 Top 10 Roads - Ranked No. 1 from Roads & Bridges magazine</p> <p>2019 PCI Design Award, Transportation (main span, more than 150 feet) category from Precast/Prestressed Concrete Institute (PCI)</p> <p>2018 Preconstruction Design Competition Grand Award from Georgia Partnership for Transportation Quality (GPTQ)</p> <p>2019 Engineering Excellence Grand Prize Award, Transportation category from American Council of Engineering Companies of Georgia (ACEC Georgia)</p> <p>2019 National Merit Award - Transportation from Design-Build Institute of America (DBIA)</p>	<p>Project Overview</p> <p>This urban freeway project included 29.7 miles of reversible toll lanes along I-75 and I-575 in Cobb and Cherokee Counties in metropolitan Atlanta. Reversible toll lanes extend northwest along I-75 from I-285 to Hickory Grove Road, and along I-575 from the I-75/I-575 interchange to Sixes Road. As Lead Designer of the consortium, Parsons performed over 82% of design work including roadway and interchange design, toll lanes, major and minor structures, ITS, traffic control, earthwork, MOT, asphalt pavement, pavement widening/overlay, grading, right-of-way, retaining walls, lighting and tolling infrastructure, drainage and utilities. The express lanes opened to traffic on September 8, 2018. Since then, the project has reduced rush hour travel time between 45 to 60 minutes.</p> <p>Complex Phased Design Development: Parsons and the consortium used a phased design and construction approach to complete final design on 866 early work package design drawings within 11 months from NTP. Parsons coordinated efforts of more than 190 full-time engineers during the peak design phase to complete 50 early work packages, 157 final packages, and 20 notices of intent to meet the aggressive schedule goals on the Northwest Corridor.</p> <p>Maintenance of Traffic: The project included new managed lane connections at two system interchanges at I-285 and I-575. Parsons and the design-build JV developed a comprehensive traffic management plan that maximized off-line construction, maintained existing number of travel lanes during peak hours, and allowed a safe and efficient construction staging plan. Other roadway safety features include guardrails, lighting, signalization, and striping.</p> <p>ITS Tolling Infrastructure: Georgia's government division of State Road and Tollway Authority (SRTA) provided the Electronic Toll Collection System (ETCS) for the project. ITS infrastructure work included general roadway work through each tolling zone, including the design of gantry structures, foundation, glass fiber-reinforced polymer rebar pavement sections, barriers, guard fence, maintenance areas, generators, signing, conduit, electrical, safety lighting, and any other civil works related to the design elements that would be needed for SRTA to provide the ETCS for the project. The project has a total of nine toll points with gantries to facilitate automatic toll collection and is known as Peach Pass.</p>	<p>Key Project Complexities and Challenges</p> <p>ATC Innovation: Parsons developed and incorporated four major alignment innovative concepts that resulted in more than \$42 million in cost savings and approximately 18 months in schedule savings. The project team saved a total of approximately \$110 million on the entire project through innovative designs and alternative technical concepts. In particular, the innovative design allowed the owner to reduce the amount of right-of-way purchased. Additional innovations proposed by the team included those related to optimization of existing assets such as pavement, bridge structures, walls, geometry and ITS. Analysis was conducted to determine if pavements were to be rehabilitated and/or reconstructed. Bridges were also assessed for their remaining service life to meet the 75-year criteria.</p> <p>Drainage: The urban project setting and additional run-off from added pavement presents numerous hydrologic, hydraulic, and water resource challenges that were accounted for by the design team. The increased peak flow discharge was retained within the project corridor by using structural controls such as ponds, swales, infiltration trenches, and in-line oversized pipe storage. The project team also used innovative slotted traffic barriers between general purpose lanes and managed lanes to minimize the number of proposed drainage inlets on the project. When used, standard inlet designs were tweaked to maximize hydraulic efficiency.</p> <p>NEPA / Environmental Compliance: Sections of the Northwest Corridor fall within the environmentally sensitive Etowah River Habitat Conservation Plan and required compliance with stringent water quality regulations. The project also crosses over several creeks, two of which required an approved letter of map revision from Cobb County and Federal Emergency Management Agency.</p> <p>Interface with Applicable Utility Owners: The project included extensive utility coordination with 26 utility companies having facilities in the project corridor and 250 potential utility conflicts, which were reduced to less than 50 with the innovative design. Embankment fills up to 35 feet in height resulted in settlement concerns for existing utility crossings. Extensive geotechnical assessments were conducted to accurately predict settlement and develop mitigation measures. More than 200 utility conflicts were eliminated by refining proposed roadway geometry and reducing the project footprint. Relocation design for water and wastewater facilities were performed by experienced Parsons staff. Other dry utilities were designed by third-party designers under contract with Northwest Express Roadbuilders.</p>
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