



Statement of Qualifications

Interstate 26 Widening

MM 85-101

Design-Build Project
Project ID P029208
Richland, Lexington,
and Newberry Counties

May 2018



3.2 INTRODUCTION

The Lane Construction Corporation (Lane) and Fluor Enterprises, Inc. (Fluor) are exclusive members of Lane-Fluor 26, with a proven team history of successfully delivering design build (DB) projects.

Our integrated team brings: proven, successful experience on recent major DB projects; best value, local execution capabilities; and SCDOT knowledge and experience in design, quality, and construction.

Lane and Fluor bring a demonstrated approach, procedures, and fully aligned cultures from our

extensive partnering history in successfully executing complex DB projects, including the I-26 Port Access Road Improvements DB project (Port Access Road) in SC and the I-495 and I-95 Express Lane mega-projects in VA.

Together, Lane and Fluor have worked together on more than **\$4 Billion in DB projects nationwide.**



HISTORY IN SOUTH CAROLINA

✓ 60+ years (Lane) ✓ 80+ years (Fluor)

LANE & FLUOR WORKING TOGETHER

✓ Strong SCDOT heritage

✓ 17 years of Lane/Fluor working together

✓ National Construction Quality Awards:

- ACPA Excellence in Concrete Pavement

- ACPA Gold for Urban Freeways

✓ Notable Projects: CRM-West, Port

Access Road, I-495 Express Lanes,

I-95 Express Lanes, and MD Purple Line

3.2.1 Contracting Entity – Lane-Fluor 26 LLC is the entity we are organizing specifically for the I-26 Interstate Widening MM 85-101 project (the Project) and with whom SCDOT will be contracting. Lane-Fluor 26 will be organized as a fully integrated Limited Liability Corporation (LLC) for which Jeffrey P. Smith has authority to sign the contract on behalf of the joint venture. The benefits of our fully integrated team follow later in this document.

Name	Address	Phone	Email
Jeffrey P. Smith	14500 Avion Parkway, Chantilly, VA, 20151	954.881.5160	jpsmith@laneconstruct.com

3.2.2 Proposer’s Point of Contact for Procurement

Name	Firm	Address	Phone	Email
Don Bryson	Lane	6125 Tyvola Centre Dr, Charlotte, NC 28217	704.679.0540	debryson@laneconstruct.com
Jim Kupferer	Fluor	100 Fluor Daniel Dr., Greenville, SC 29607	864.281.8326	jim.kupferer@fluor.com
Derek Piper	WSP	277 Bendix Road, Ste. 300, Virginia Beach, VA 23462	757.466.9602	derek.piper@wsp.com

3.2.3 Full Legal Name of Lead Contractor and Lead Designer

Lane-Fluor 26 LLC (Lane-Fluor 26) is the full legal name of the Lead Contractor.

WSP USA Inc. (WSP) is the full legal name of the Lead Designer.

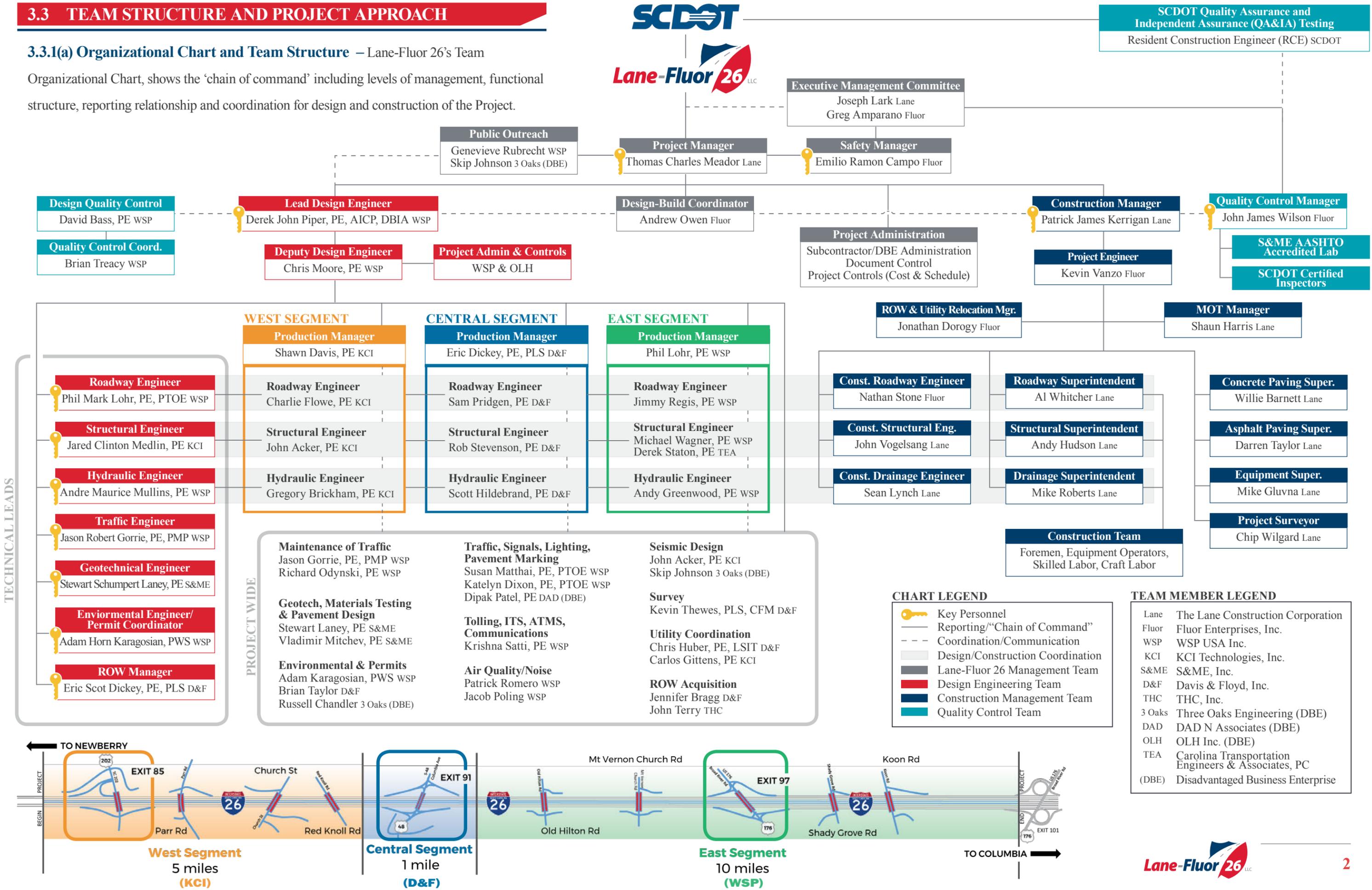


3.2.4 Commitment – Lane-Fluor 26 commits that the individuals designated as Key Personnel, as shown on Section 3.3.1(a) Organizational Chart on page 2, shall be available to serve the role so identified in connection with the I-26 Widening MM 85-101 for the duration of the project.

3.3 TEAM STRUCTURE AND PROJECT APPROACH

3.3.1(a) Organizational Chart and Team Structure – Lane-Fluor 26's Team

Organizational Chart, shows the 'chain of command' including levels of management, functional structure, reporting relationship and coordination for design and construction of the Project.



3.3.1(b) Team Structure – As Proposer/Lead Contractor, Lane and Fluor will form an integrated joint venture (JV) company specifically for this project, with Lane as lead partner. The JV will execute the job as a single entity without splitting specific scopes of work between member firms. Functionally, the Lane-Fluor 26 organization is structured with an Executive Management Committee comprising Lane and Fluor executives. Our Project Manager, Tom Meador, will have singular responsibility of leading all project personnel. Assisting Tom is a



Figure 1 - Integrated Team Structure

Management Team of direct reports to manage respective significant functions of the project, including Design, Construction, Safety, and Project Administration. The QC Manager, John Wilson, will report to Joseph Lark and Greg Amparano, as responsible officers of the Executive Management Committee. Construction Manager, Patrick Kerrigan, will be dedicated solely to the Project for the duration of construction and report directly to Tom.

As Lead Designer, WSP will lead and be responsible for overall design and integration of all design segments and project-wide elements. Derek J. Piper, PE, DBIA, will serve as Lead Design Engineer from WSP. The design team is structured to capitalize on the strengths of each firm and key personnel to maximize quality and schedule efficiency. WSP will be responsible for the East Segment, inclusive of the Exit 97 Diverging Diamond Interchange (DDI), four overpasses, and approximately 10 miles of I-26 mainline. WSP will be supported by Carolina TEA for structures. D&F will be responsible for the Central Segment, inclusive of the Exit 91 DDI, approximately one mile of I-26, and extended local roadways at Columbia Avenue. KCI will be responsible for the West Segment, inclusive of Exit 85, three overpasses, and approximately five miles of I-26. WSP, KCI, D&F, and S&ME will also provide Project-Wide design activities as shown on the Section 3.3.1(a) Organizational Chart on page 2. ***WSP’s extensive DB experience managing and integrating multiple design firms, while simultaneously advancing multiple design segments, will allow for a successful project delivery.*** This design structure also aligns with Lane-Fluor 26’s approach to work across multiple areas of the project to better manage traffic control, optimize staging, and deploy resources to deliver the project on schedule. Section 3.3.2(d) references significant past team working history.

3.3.2 CRITICAL RISKS, PROJECT APPROACH, CAPACITY & RESOURCES

3.3.2(a) Critical Risks – Understanding project risks and providing strategies to effectively mitigate and minimize them is vital to project success. Our team members are highly adept in developing and executing plans to identify, prioritize, and manage risk. Lane-Fluor 26 has identified the top five critical risks to the Project presented in Figure 2, including Team Mitigation Strategies and SCDOT roles.

Identified Risk	Critical Nature of Risk	Potential Impacts
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Risk 1 - Safety</p>	<p>Public Safety</p> <ul style="list-style-type: none"> • High-speed interstate with high truck traffic volume • Safe median access presents a challenge along 16-mile construction zone with 3 interchanges • Public traveling through active work zone • Peak-hour congestion in three existing interchanges 	<ul style="list-style-type: none"> • Increased likelihood of traffic accidents without carefully planned construction access • Temporary concrete barrier with narrow shoulders and shoulder closures could increase congestion • Incident and emergency management responsiveness • Work zone speeding increases crash potential
	<p>Team Mitigation Strategies and SCDOT Roles</p> <ul style="list-style-type: none"> • Use innovative median access solutions, such as median access ramps from existing bridge overpasses, physically separating construction traffic from the public • Lane-Fluor 26 submits Traffic Control Plans for SCDOT approval that adequately addresses safety risk • Use parallel acceleration and deceleration lanes for construction ingress/egress, as opposed to using traffic lanes for acceleration and deceleration • Lane-Fluor 26 in coordination with SCDOT employs expanded public outreach campaign to local and statewide stakeholders for notification of lane closures and night time work, such as freight carriers to allow adjustment of delivery schedules during non-peak hours or outside of construction zones • Evaluate the use of temporary movable barrier wall to expedite traffic shifts and delineate work zones • Lane-Fluor 26 requests SCDOT allow work zone speed limit reduction 	
<p>Worker Injuries</p> 	<ul style="list-style-type: none"> • Workers adjacent to high traffic volumes at peak hours • Construction work in a narrow median • Increased potential for injury during night work 	<ul style="list-style-type: none"> • Injury to workers in the work zone • Accidents with traveling public in the work zone
<p>Team Mitigation Strategies and SCDOT Roles</p> <ul style="list-style-type: none"> • Require formal site specific safety training to all Lane-Fluor 26 and SCDOT management, supervision, employees, and subcontractors prior to work on-site • <i>4 Seconds for Safety</i> - 1. Am I trained to do this? 2. Do I have the right PPE, tools, and resources? 3. Do I need help to do this? 4. Is this the safest way to do this? • Provide OSHA-10 training to field staff and OSHA-30 training to management • Provide training by SCDOT certified trainers for specialty tasks (e.g., Traffic Control, Flagging) • Require crews/supervision to perform Job Safety Analysis and daily Safety Task Assignments to identify and discuss safety risks prior to performing work including performance of safety audits with SCDOT • Use Concrete Traffic Barrier to separate work force from active roadways • Maximize distance between active work zones and traveling public through innovative MOT • Increase visibility in night work zones with light plants and additional message/arrow boards 		
<p>Work Zone Incidents</p>	<ul style="list-style-type: none"> • Traffic accidents in work zones can lead to secondary accidents and onlooker delays • Limited alternative routes around traffic congestion • Increase in travel time during peak hours/seasons 	<ul style="list-style-type: none"> • Increase in emergency management response time • Decrease safety of traveling public and workers • Additional congestion and travel delays
<p>Team Mitigation Strategies and SCDOT Roles</p> <ul style="list-style-type: none"> • Maintain one open shoulder per direction for vehicle refuge within the I-26 mainline work zone for incident management and emergency response • Provide strategically positioned emergency pull-off points along I-26 mainline for incidents and disabled vehicles • Provide mainline and interchange access and egress locations for emergency vehicles • Limit driver decision points through effective traffic management • Communicate traffic plans with SCDOT, SHEP and local emergency responders (e.g., Little Mountain Rescue & Fire Dept., Chapin Police Dept., Lexington County Fire Station 11, Columbia Fire Dept. Station 21, Columbia Fire Dept. Station 20, SC Highway Patrol) • Organize monthly incident management meetings with SCDOT, SHEP, and local emergency responders to proactively provide updates to changing traffic patterns and project conditions within the extended work zone • Provide workers with Incident Notification Plan and Emergency Response Plan to assist first responders • Notify SCDOT of accidents, allowing the Department to alert approaching traffic (e.g., VMS message boards) 		

Identified Risk	Critical Nature of Risk	Potential Impacts	
Risk 2 - Maintenance of Traffic (MOT)	I-26 Work Zone Traffic Congestion	<ul style="list-style-type: none"> • Unfamiliar traffic patterns and speed changes • Unstable traffic flow conditions 	<ul style="list-style-type: none"> • Increased traffic queuing or unintended changes in queuing locations • Reduced traffic capacity and throughput • Decreased mobility for local and regional travelers
	Team Mitigation Strategies and SCDOT Roles <ul style="list-style-type: none"> • Coordinate traffic control plans and work zone with adjacent SCDOT projects, notably Carolina Crossroads • Develop and implement a Comprehensive Transportation Management Plan (TMP) addressing Incident Management and Traffic Operations • With SCDOT approval, consider deployment of portable Variable Message Signs (VMS) with remote control capabilities displaying travel time and alternate route information to improve driver expectation • Minimize traffic shifts to reduce driver confusion (e.g., striping shadows) throughout the work zone • With SCDOT approval, consider use of variable speed limit signs to adjust speed limits based on conditions • Coordinate with SCDOT to release advanced and frequent public notifications of traffic pattern changes • Coordinate closely with SCDOT, SHEP, and Department of Public Safety (DPS) Safety Improvement Team (SIT) for construction and lane closures 		
Risk 3 - ROW Acquisition	Access to Interchanges and Local Properties	<ul style="list-style-type: none"> • Confusion and incidents caused by changing access point (i.e, switch-over from service to side road) • Several existing ramps (Columbia Avenue and Broad River Road interchanges) have 2-way traffic with numerous local road access points 	<ul style="list-style-type: none"> • Temporary driveway access restrictions during construction • Potential for driver confusion and wrong way maneuvers • Increased incidents in the work zone
	Team Mitigation Strategies and SCDOT Roles <ul style="list-style-type: none"> • Work with SCDOT and local business owners (e.g., Exit 91 BP and McDonalds) to route travelers to new access points (e.g. Newellett Road) • Prioritize service road construction with SCDOT to close two-way operations on ramps as soon as possible • Coordinate with SCDOT to provide diligent community outreach to affected interchange businesses • Implement MOT task force for traffic/safety briefings and coordination with SCDOT, public, and local officials • Use traditional and social media to notify local and interstate travelers of traffic patterns changes • Work with providers of common GPS directional services to provide work zone notifications and routing 		
Risk 4 - Utility Coord.	Delayed Right-of-Way Acquisition	<ul style="list-style-type: none"> • Potential future developments within project limits may delay fair market property valuation agreement • Richland County Conservation Easement (condemnation) - 3 parcels located within the PSA (TMS 01700-10-04, 01700-10-22, and 01700-10-26) are held in a Richland County conservation easement along Old Hilton Rd. 	<ul style="list-style-type: none"> • Construction sequencing could result in potential delays • Time consuming eminent domain and condemnation proceedings can negatively affect the schedule
	Team Mitigation Strategies and SCDOT Roles <ul style="list-style-type: none"> • Optimize design to minimize ROW impacts • Prepare for early acquisition for tracts on the critical path • Partner with SCDOT during ROW plan development and review to expedite ROW plan approval • Prioritize parcel appraisals with SCDOT by anticipated risk assessment and impact to the critical path schedule, including parcels requiring special acquisition (i.e., condemnation proceedings) • Engage and coordinate early with property owners and any required 3rd party entities • Conduct regular ROW meetings with SCDOT early in the acquisition phase to actively manage the process 		
Risk 4 - Utility Coord.	Utility Relocation Delays	<ul style="list-style-type: none"> • Delayed relocation of overhead transmission lines and UG Gas (~MM96) along interstate corridor • Maintaining service connections to Weigh Stations and ITS infrastructure during construction • 3rd Party unknown and unfunded relocations 	<ul style="list-style-type: none"> • Utility relocation delays impacting construction • Additional cost and coordination to relocate HAZMAT utilities such as asbestos containing materials
	Team Mitigation Strategies and SCDOT Roles <ul style="list-style-type: none"> • Early engagement of 3rd parties to convey potential project impacts to their facilities • Hold regular meetings with SCDOT and utility owners prior to and during construction • Partner with SCDOT to draft Utility Agreements to provide stronger language on utility relocation schedules 		

	Identified Risk	Critical Nature of Risk	Potential Impacts
Risk 5 - Environmental Impacts	Delayed Approval of Environmental Impact Mitigation	<ul style="list-style-type: none"> Impact to more than 3,800 linear feet of streams per the Environmental Assessment (EA) SCDOT Hunting Creek Mitigation Bank wetland mitigation credits may not be available in time to serve the project 	<ul style="list-style-type: none"> Lack of available mitigation credits can delay Environmental Impact Mitigation
		Team Mitigation Strategies and SCDOT Roles <ul style="list-style-type: none"> Review opportunities with SCDOT to optimize design to minimize environmental impacts Conduct pre-application meeting with SCDOT and USACE to discuss avoidance and stream mitigation strategies Engage in advanced scouting and acquire remaining credits as required 	
	Encounters with Hazardous Materials and Contaminated Sites	<ul style="list-style-type: none"> Project would require the acquisition of property identified as sites of environmental concern and/or potentially contaminated sites, including: <ul style="list-style-type: none"> Corner Pantry #154 - 11090 Broad River Rd, Irmo Corner Pantry #132 - 661 Columbia Ave, Chapin Pitt Stop #7 at 648 Columbia Ave - Chapin 10 sites with known HAZMAT contamination with moderate to high potential impacts (mostly UST) 	<ul style="list-style-type: none"> Extent of contamination at these sites is unknown Removal of materials can be costly and can have a negative affect on schedule
		Team Mitigation Strategies and SCDOT Roles <ul style="list-style-type: none"> Optimize design and coordinate with SCDOT to minimize impacts to potentially contaminated sites Prepare for early acquisition for tracts on the critical path as necessary Conduct an early Phase II Environmental Site Assessment on the site to determine health risks and the need to remove or dispose of material 	

Figure 2 - Five top critical risks the Lane-Fluor 26 team believes are most relevant to SCDOT

SCDOT and Other Agency Involvement – We have identified five major risk items that we believe SCDOT considers the most relevant to this Project and mitigation strategies and SCDOT involvement for each risk identified in Figure 2. The role we expect SCDOT and other agencies to have is to fully define their risks and actively partner with Lane-Fluor 26 in the coordination, assessment, analysis, review, and mitigation of these risks. We expect this will include early SCDOT and third party involvement, timely design and submittal reviews, collaboration with the project team in periodic coordination meetings, and stakeholder support to the project team.

3.3.2(b) Project Approach – Lane-Fluor 26 is approaching this project with a *direct focus on safety*, maintenance of traffic (MOT), and close coordination with 3rd parties and extended stakeholders. Our overall approach begins with the design of elements on the critical path and long-lead items such as right-of-way acquisition and environmental permitting. The foundation of our team’s approach and communication strategy is the implementation of our proven Technical Work Group (TWG) structure. This TWG matrix approach to project execution creates specific discipline groups to address each of the main components of the project including roadway, structures, drainage, maintenance of traffic, utilities, right-of-way, environmental, and geotechnical. TWGs integrate professionals from the design, construction, quality, safety, and public outreach functions as necessary for full design and construction coordination.

Construction personnel are involved during the design phase, and design personnel are involved during the construction phase. This is the collaboration that occurs internally within our team to capitalize on the full benefits of the DB process and to achieve a successful project delivery.

Maintenance of Traffic – Our approach to MOT will focus on the safety of motorists, pedestrians, and workers, while balancing the dynamic flow of traffic through the work zone, and maximizing Portland Cement Concrete Paving (PCCP) operations. Portable concrete barriers, including emergency pull off areas, will be utilized throughout the Project as necessary to improve traffic and worker safety, and maximize traffic flow. Lane-Fluor 26’s approach to the initial phase of construction will be to strengthen the outside shoulder sufficiently to accommodate vehicular/truck traffic, shifting traffic to the outside, and constructing the median improvements. The potential use of Ground Penetrating Radar (GPR) technologies and shoulder pavement coring will maximize the understanding of the existing conditions and provide data to determine the design required for the shoulders to handle the traffic load.

In addition, we believe there is value in considering temporary traffic crossovers whereby all existing traffic is shifted into one of the current I-26 directions. For example, I-26 WB could be widened sufficiently with temporary paving to accommodate existing eastbound and westbound traffic. This approach would allow for PCCP Construction of the proposed eastbound typical section completely away from traffic. Our team will investigate this opportunity in the context of increasing work zone safety and optimizing the project schedule. In addition, several of the proposed overpass structures are designed outside of the existing structure footprint. We will look for opportunities to eliminate the phased construction of select structures, particularly at Exit 97. Based on our team’s experience with Diverging Diamond Interchange design and construction, we will consider innovative options to eliminate the need to construct the bridges in phases while maintaining existing traffic.

Alternating Structures/Overpasses – Based on the RFP requirements and/or approval by SCDOT, we will consider alternating overpass work to allow travelers to access adjacent overpasses and neighboring secondary routes, minimizing excessive detour lengths. Local traffic will be detoured to the closest open structure. One area that would benefit significantly from the alternating overpass option is Koon Road and Shady Grove Road.

The alternating overpass concept is being successfully used on the NCDOT I-85 Widening Rowan (I-3802B) project in China Grove, NC. This congested interstate corridor has multiple overpasses and interchanges connecting suburban communities on either side of I-85. By alternating structure work among three consecutive overpasses, traffic is able to quickly detour around the closure to the next closest overpass. This has allowed the project to minimize overpass closure to less than 240 days for overpass 1 and 3, and less than 270 days for overpass 2. We expect a similar concept would equally benefit the I-26 Widening project.

Critical Path: East Segment – We understand the critical nature of the PCCP widening from Exit 97 Broad River Road to MM 101 due to existing traffic congestion within this corridor, and the interface that will be required with the Carolina Crossroads project. Beyond the structures and roadway design,



Lane-Fluor 26 will install an on-site Portland Cement Concrete (PCC) batch plant to reduce cost and provide dedicated on-time material delivery, as Lane provided on I-385.

engineering necessary to begin the right-of-way acquisition process will need to be developed and approved early to allow construction at the interchange and overpasses to be completed early in the project. Investigation into the potentially hazardous sites will be critical to allow remediation efforts to be conducted in advance of construction.

The East Segment will be divided into two sections at approximate Station 880+00 (Public Hearing roll plot). Our approach will begin with structure crews focusing on the completion of the Exit 97 DDI, and the Koon Road and Shady Grove Road overpasses. Upon completion of the new Exit 97 interchange and two overpass bridges, use of a temporary crossover traffic pattern will be investigated as described previously to accommodate a full width PCCP operation for one direction of the interstate at a time. This would provide a safer route for the traveling public, result in a higher quality end product, better rideability, higher productions during construction, and safer working conditions. Use of this temporary crossover approach should reduce the number of required traffic shifts for the traveling public, minimizing confusion and decision points within the work zone while also reducing vehicular traffic operations directly adjacent to smaller work zones. We will make efforts to stage construction in a manner to allow larger areas of pavement and bridge demolition and reconstruction as opposed to nighttime lane closures adjacent to live traffic. Utilizing Lane-Fluor 26's resources will allow us to self-perform schedule critical activities through the corridor to ensure that the necessary resources can focus in this area to complete this segment as early as possible.

Critical Path: Wetlands and Permitting – More than 3,800 linear feet of stream impacts were identified in the approved NEPA Environmental Assessment (EA), based on approximate construction and proposed right-of-way limits. Minimizing impacts to waters of the U.S., while identifying opportunities to reduce construction and maintenance costs, will be a top priority. We will evaluate designs that avoid and minimize impacts to these resources, such as steeper fill slopes, extending headwalls at culvert extensions, slight mainline alignment revisions, and optimize interchange geometry. The team will ensure compliance with permit conditions and environmental commitments included in the NEPA EA and pending Finding of No Significant Impact, including minimizing impacts to the Richland County Conservation Easement along Old Hilton Road to the maximum extent practicable. Considering recent trends in the design-build industry and current federal regulatory guidance

focused on streamlining the approval process, we will explore opportunities to accelerate the permitting process and improve the project delivery schedule.

We are aware that compensatory mitigation for unavoidable impacts to waters of the U.S., particularly jurisdictional streams, has been a significant issue throughout SC. In addition to the avoidance and minimization measures discussed previously, we will engage existing and proposed private mitigation banks immediately upon award to secure the required stream and wetland credits. In the event credits from private mitigation banks or from SCDOT’s Hunting Creek Mitigation Bank are not available, Lane-Fluor 26 has the capabilities to identify, design, permit, and implement permittee-responsible mitigation (PRM).

Self-Performed Work – As a fully integrated JV, Lane and Fluor are equally responsible for completion of the work, unlike a line item JV. Lane-Fluor 26 will self-perform approximately 75% of construction work including many critical path activities/items of work, such as earthwork, aggregate bases, concrete/asphalt paving, demolition, drainage, bridgework, noise barrier, and retaining walls. We intend to subcontract items including rebar installation, traffic signage, pavement markings, fencing, guardrail, and erosion control using local and DBE subcontractors.

As lead member of Lane-Fluor 26, Lane has experience with similar scopes of work including a total of 9 major interstate widening projects in NC and 16 cross-slope correction projects on SC interstates. Coupled with the firm’s history of successful delivery of \$985 million worth of I-85 interstate work, Lane has the knowledge, availability, and proximity to expediently and safely upgrade I-26 for SCDOT and the residents of SC.

Lane-Fluor 26 has ample resources for a project of this scope and complexity. Lane and Fluor own and operate more than **\$527 Million** of construction equipment in the U.S. and employ **8,400 personnel in the southeastern U.S.**, with substantial local staff immediately available. Additionally, Lane’s resources include ***Prestress of the Carolinas LLC*** in Charlotte, NC and a ***local asphalt plant in Columbia, SC***. These resources allow Lane-Fluor 26 to expedite the delivery of paving materials and drastically reduce hauling costs.



Lane-Fluor 26 recognizes that resource availability may become critical due to the adjacent Carolina Crossroads project. With a combined workforce of more than 8,400 personnel, Lane and Fluor have ample local resources for both projects.

Lane-Fluor 26 will maintain control of the schedule by self-performing the majority of the activities critical to the project schedule. Local subcontractors and DBE firms will be used to supplement our team’s resources and perform work on non-critical activities on the side roads and frontage roads.

3.3.2(c) Project Approach: Quality Assurance Program – The Quality Assurance Program (QAP) will consist of the following: Contractor Quality Control (QC), Quality Acceptance (QA), and Independent Assurance (IA) testing, Personnel Qualification, and Laboratory Accreditation/Qualification. The QAP includes Lane-Fluor 26’s role of design and construction QC and SCDOT’s responsibility for QA. SCDOT, or their designated agent, will be responsible for IA on the project. Lane-Fluor 26 will perform all services in accordance with the DB contract and technical provisions, with QAP processes documented in our Quality Management Program (QMP).

Design – All services will be performed in accordance with requirements in the QMP, developed by the JV with input from SCDOT and design team, and specific procedures described in the Design Quality Control Manual.

Both WSP and KCI are ISO 9001 Certified.

Construction – Lane-Fluor 26 will provide QC for the project. The QMP will include procedures specific to materials, requirements, and inspection and testing responsibilities of Lane-Fluor 26 and SCDOT. The QMP will comply with the DB contract, SCDOT standard specifications, special provisions, and SCDOT’s construction manual. The QC team will have an AASHTO accredited lab for testing purposes. Inspection personnel will have or obtain appropriate certification as required by SCDOT for each specific test to be performed. Certification will be reviewed and approved by SCDOT.

Material Testing and Inspection – Our team will sample material and will provide these samples to SCDOT, allowing simultaneous QA testing and expediting material placement on the project. SCDOT is responsible for all acceptance (QA) testing and will provide IA to confirm all data. We will facilitate sampling of materials and provide testing schedules and lists of QC personnel to SCDOT QA and IA staff.

Our team understands that SCDOT will perform verification sampling and testing as part of the QA process. In the event that QC results are not validated by SCDOT’s verification results, the project’s QMP will include a defined process to resolve the issue, including an investigation into the cause of the non-validation and/or increasing the rate of verification testing. Though SCDOT will perform verification tests for compliance, Lane-Fluor 26 is responsible for the design and construction of the final product.

Interaction with SCDOT – Lane-Fluor 26’s QC Manager, John Wilson, will be solely dedicated to this project and its QC program and will have no other project responsibilities. He will be the primary point-of-contact for SCDOT regarding all QC matters. He will report directly to the Executive Management Committee and not to the project manager or any other project personnel. He will assign adequate QC staff to maintain the quality of work at all times. He will manage a schedule of planned material deliveries and work-in-progress to allow for

direct coordination and combined scheduling of QC, QA, and IA efforts. He will notify SCDOT of all material deliveries to ensure adequate time to obtain required certifications and samples prior to their incorporation into the project. He will communicate inspection needs to SCDOT in advance to provide adequate time for SCDOT to schedule inspection activities and adjust personnel resources accordingly.

3.3.2(d) Capacity and Resources

Experience Working Together – The Lane-Fluor 26 team was formed for the I-26 Widening MM 85-101 Project to bring national DB experience together with local SC knowledge and expertise. This team has extensive experience working with each other on other successful projects, as indicated in Figure 3. This experience will allow us to focus on SCDOT and Project goals, which will result in the identification of ways to reduce cost, manage risk, and shorten schedule.

Experience of Key Individuals and Team Member Firms Working Together

Figure 3

Project Name; Type of Project	Years	Level of Participation / Firms	Reference
I-26 Port Access Road Improvements Project; \$220 million Key Individuals (Firm) Tom Meador (Lane), Patrick Kerrigan (Lane), Emilio Campo (Fluor), Eric Dickey (D&F)	2015 - 2020	Fluor – Prime Contractor Lane – Prime Contractor KCI – Major Design Consultant D&F – Major Design Consultant S&ME – Design/Material Testing WSP - SCDOT CE&I Consultant	SCDOT; Daniel Burton, PE BurtonD@scdot.org; 843.580.8801
I-95 Express Lanes P3; DB value \$691 million; complex interchanges, 29 miles of interstate widening	2012 - 2014	Fluor – Prime Contractor Lane – Prime Contractor	VDOT; Garrett W. Moore, PE garrett.moore@vdot.virginia.gov; 804.786.4798
I-495 Express Lanes P3; DB value \$1.5 billion; complex interchanges, 14 miles of interstate widening, 50 bridges and overpasses Key Individuals (Firm) Patrick Kerrigan (Lane)	2008 - 2012	Fluor – Prime Contractor Lane – Prime Contractor	VDOT; Garrett W. Moore, PE garrett.moore@vdot.virginia.gov; 804.786.4798
I-85 Davidson; \$65.5M DB, rural interstate reconstruction Key Individuals (Firm) Tom Meador (Lane, formerly AB&R)	2011 - 2013	WSP - Major Design Consultant	NCDOT; Project Manager: Khaled Al-Akhdar; kalakhdar@ncdot.gov; 919.707.6612
Maryland Purple Line P3, DB value \$2 billion; 16 miles complex light rail and infrastructure	2016 - 2021	Fluor - Prime Contractor Lane - Prime Contractor WSP - MTA Program Manager	Jeffrey Ensor; jensor@mta.maryland.gov; 443.278.7200
Bergstrom Expressway (US 183 South); \$589 million; 8 miles interstate expansion, 6 interchanges, 3 bridges over water	2015 - 2019	Fluor – Lead Contractor WSP – Lead Designer	Central Texas Regional Mobility Authority; Justin Word, PE; jword@mobilityauthority.com; 512.560.9803
Dallas Horseshoe (I-30 and I-35E); \$798 million; complex interchanges, 73 interstate miles reconstruction, 41 bridges, 60 retaining walls	2013 - 2017	Fluor – Lead Contractor WSP – Lead Designer	TxDOT; Ceason Clemens; ceason.clemons@txdot.gov; 972.421.2214
Conway Bypass (SC Hwy 22); \$386 million DB; 28 miles controlled access, 60 bridges, 3 interchanges, 300+ acres wetlands Key Individuals (Firm) Eric Dickey (D&F)	1998 - 2001	Fluor – Prime Contractor D&F – Major Design Consultant S&ME – Material Testing	SCDOT; Kyle Berry, PE BerryWK@scdot.org; 843.661.4710

Project Name; Type of Project	Years	Level of Participation / Firms	Reference
US 21 Bridge over Catawba River; \$17 million; water crossing, 1,000 feet bridge replacement, bridge demolition adjacent to gas line	2010 - 2013	Lane – Prime Contractor KCI – Engineer of Record	Former SCDOT Resident Engineer for the Project; John Huskins; john.huskins@kci.com; 803.810.3048
I-77 Bridge over Catawba River \$20 million; 8.5 mile interstate widening, heavy traffic, bridge reconstruction	1997 - 2000	Lane – Prime Contractor KCI – Engineer of Record	Former SCDOT Resident Engineer for the Project; John Huskins; john.huskins@kci.com; 803.810.3048
Route 659 Belmont Ridge Road-DB Pursuit (Active), Loudoun County, VA \$47 million DB; widening 1.9 miles of an existing two-lane roadway to a four-lane median divided facility	2015 - 2018	Lane – Prime Contractor	VDOT; Kevin Reichert, PE; Kevin.reichert@vdot.virginia.gov; 804.225.3799
Route 7 over Dulles Airport Toll Road DB Pursuit; \$29.7 million DB; major road and bridge widening	2015 - 2017	Lane – Prime Contractor	VDOT; Arif Rahman, PE; Md.Rahman@vdot.virginia.gov; 703.259.1940

Figure 3 - Experience of Key Individuals and Team Member Firms Working Together

3.3.2(e) Capacity and Resource: Project Coordination – Key individuals assigned in the development of our proposal are committed to transition into contract execution to maintain continuity during startup. As the project design develops, the management team will assign appropriate personnel to fully coordinate the construction of all portions of the Project. Our organizational and management coordination approach includes:

- Comprehensive schedule to monitor progress and detail labor/material needs.
- Weekly design, construction, and management meetings, attended by SCDOT personnel, to discuss design, construction and quality, work plans, safety, schedule, and preconstruction planning.
- A secure website for real-time access to key project documents and drawings, such as ProjectWise.
- Effective quality control coordination with the SCDOT CE&I quality assurance team.

Geographic Location – Lane-Fluor 26 will establish a central on-site office where key individuals and direct reports, including the Project Manager, Construction Manager, and Quality Control Manager, will manage project administration and construction. The central on-site office will house a plan/filing room, conference room, and workspaces for technicians/inspectors to log into the data management system for document control. Superintendents and supporting construction staff will be located in a project field office.

Design will be led primarily out of WSP’s Charlotte, NC office, with support provided by WSP’s offices in VA and SC. Major Design Consultant KCI’s work will take place in their Rock Hill, SC office along with D&F work in Columbia, SC, with frequent coordination meetings in Charlotte, NC. The proximity of the design offices to each other will promote streamlined coordination and collaboration, allowing design staff to respond immediately to construction needs.

Public/Media/Community Relations and Information – Lane-Fluor 26 will provide comprehensive public/media/community relations and information, and fully coordinate with SCDOT communications leads. Our proactive approach ensures stakeholders and the traveling public are well-informed before and during construction and will build upon our experience working with SCDOT.

Our team will leverage existing relationships to provide a multifaceted public and media relations program input and develop a robust Project Communications Plan to include Community Engagement, Business Employer Outreach, Media Relations, Government/Elected Official Outreach, and Traveler Information.



We will establish early community and project team interaction in a transparent, accountable and engaging manner with stakeholders to minimize adverse community impacts.

Our team will prioritize avoidance of impacts to the surrounding communities. Efforts will be taken, such as dust control, noise reduction, minimal light pollution, and reasonable hours for work shifts. Traffic control will focus on maintaining existing traffic with minimized impacts to the public.

3.4 EXPERIENCE OF KEY INDIVIDUALS

3.4.1 Licensure – Prior to contract execution, all team members will hold licenses required for performing work on the project under state and local laws. All design reports, plans, and design calculations will be signed and sealed by an unrestricted Professional Engineer registered in the State of South Carolina.

3.4.2 Key Individual Roles – Key personnel will have singular responsibility for assignment to the following roles: Project Manager, Lead Design Engineer, Construction Manager, and Quality Control Manager.

3.4.3 Key Individual Resumes – Key Individual resumes are included in Appendix A.

3.4.4 Project Manager – Tom Meador (Lane) will serve as the Project Manager and will be responsible for the delivery of the project in accordance with the contract requirements. He will have the authority to make final decisions on behalf of Lane-Fluor 26 and will communicate directly with SCDOT. Tom will serve as the primary contact with SCDOT and attend all regularly scheduled meetings. He will be on-site during construction and will be available for weekly status meetings during the design phase and at SCDOT’s request. He will be assigned solely to this project and will not have responsibilities to other projects. Tom has 26 years of experience in the construction industry, managing similar projects. His qualifications are detailed in his resume in Appendix A.

3.4.5 Design Engineering Team – The design engineering team exceeds the experience and expertise in roadway design and bridge structure design. Qualifications for key design individuals are summarized in Figure 4 and further detailed in the enclosed resumes in Appendix A - Key Individual Resume Forms.

Key Individual	Firm	Years of Experience	RFQ Qualifications
Derek John Piper, PE, AICP, DBIA Lead Design Engineer	WSP	33	Full time employee of the lead design firm; 33 years experience with more than 10 years in the design of highway transportation projects after acquiring Professional Engineering (PE) registration; similar projects
Phil Mark Lohr, PE, PTOE Roadway Engineer	WSP	23	23 years experience with more than 10 years in the design of highway transportation projects after acquiring PE registration; similar projects
Jared Clinton Medlin, PE Structural Engineer	KCI	15	15 years experience with more than 10 years in the design of highway transportation projects after acquiring PE registration; similar projects
Jason Robert Gorrie, PE, PMP Traffic Engineer	WSP	16	16 years experience with more than 10 years in the design of highway transportation projects after acquiring PE registration; similar projects
Stewart Schumpert Laney, PE Geotechnical Engineer	S&ME	21	21 years experience with more than 10 years in the design of highway transportation projects after acquiring PE registration; similar projects
Andre Maurice Mullins, PE Hydraulic Engineer	WSP	12	12 years experience with more than 10 years in the design of highway transportation projects after acquiring PE registration; similar projects
Adam Horn Karagosian, PWS Environmental Manager / Permit Coordinator	WSP	24	24 years experience with more than 10 years in the determination, coordination, and preparation of permits for transportation projects; understanding of the requirements set forth in the NEPA
Davis & Floyd and THC Right-of-Way Team	Both Davis & Floyd and THC are on the current SCDOT Approved Consultant Firms list and the individuals providing appraisal services are on the SCDOT Active Fee Appraisers List and the SCDOT Active Reviewers List. These firms have the combined resources and availability for successful completion of the ROW phase for the project.		
Eric Scot Dickey, PE, PLS Right-of-Way Manager	Davis & Floyd	21	21 years experience with more than 5 years in the acquisition of right-of-way projects using Federal Highway Funds; experience in acquiring ROW along interstates; relocation of outdoor advertising (billboards)

Figure 4 - Design Engineering Team

3.4.6 Construction Management Team – The construction management team has the experience and expertise in roadway and bridge construction. Qualifications for key construction individuals are summarized in Figure 5 and further detailed in the enclosed resumes in Appendix A - Key Individual Resume Forms.

Key Individual	Firm	Years of Experience	RFQ Qualifications
Patrick James Kerrigan Construction Manager	Lane	19	19 years experience with more than 10 years of progressive experience and expertise in the management of similar transportation projects
John James Wilson Quality Control Manager	Fluor	14	14 years quality control (QC) experience with more than 7 years of progressive experience and expertise in the QC management of similar transportation projects
Emilio Ramon Campo Safety Manager	Fluor	20	20 years experience in safety management on similar transportation projects <i>Active Certifications:</i> Certified Rigger – National Center for Construction Education and Research (NCCER), AED, First Aid, and CPR Certified OSHA 10 and 30 Certified, Certificate of Hazardous Waste – Association of Societies for Occupational Safety and Health (ASOSH), Certificate of Environmental Management

Figure 5 - Construction Management Team

3.5 PAST PERFORMANCE OF TEAM

3.5.1 Experience of Proposer’s Team – Work History Forms for Lane-Fluor 26 are included in Appendix B - Work History and Quality Forms - Contractor/Designer.

3.5.2 Quality of Past Performance – Responses to the questions in Section 3.5.2 are shown in Figure 6. Further explanation is provided in Appendix C - Work History and Quality Forms - Contractor/Designer.

Within the last five years, neither Lane or Fluor has been debarred, disqualified from bidding, or declared ineligible for work by any entity, nor are any such actions pending.

Question	Lane	Fluor	WSP
3.5.2(a) Delinquent or in default	No	No	No
3.5.2(b) Litigated claims	No	No	No
3.5.2(c) Liquidated damages for 30-day delay	No	Yes	No
3.5.2(d) OSHA violations (serious, willful, repeated)	Yes*	Yes	No
3.5.2(e) Claim against Errors & Omissions Insurance	No	No	No
3.5.2(f) Legal proceedings on DB contract	No	Yes	No

** There have been no OSHA violations deemed serious, willful, or repeated for design-build projects in the last 5 years. This does not include the hundreds of smaller contracts each year that are administered out of Lane’s approximately 45 plant facilities.*

Figure 6 - Quality of Past Performance

3.6 LEGAL AND FINANCIAL

3.6.1 Financial Capacity – Notarized affidavits executed by officers of Lane and Fluor are in Appendix D.

3.6.2 Bonding Capacity – Lane-Fluor 26’s surety letter is included in Appendix D.

3.6.3 Organizational Agreements – A notarized letter is provided in Appendix D stating: 1) the intent to form the Lane-Fluor 26 LLC joint venture, 2) statement evidencing agreement of the JV members to be fully liable for the performance under the contract, and 3) documenting evidence that Jeffrey P. Smith has authority to sign the contract on behalf of the JV.

3.7 PREQUALIFICATION REQUIREMENTS FOR SHORT-LISTED TEAMS

SCDOT Prequalification Certificates for Lane, Fluor, and Lane-Fluor 26 will be provided in the RFP response, per Section 3.7 Prequalification Requirements for Short-Listed Teams in the RFQ.

3.8 ORGANIZATIONAL CONFLICTS OF INTEREST

Signed Organizational Conflict of Interest forms are included in Appendix E.





Appendix A – Key Individual Resume Forms

KEY INDIVIDUAL RESUME FORM

Brief Resume of Key Individual anticipated for the Project.	
a. Name & Title:	Thomas Charles Meador District / Project Manager
b. Role of Key Individual for this Project:	Project Manager
c. Name of Firm with which you are now associated:	The Lane Construction Corporation
d. Years of Experience: With this Firm <u>6</u> Years	With Other Firms <u>20</u> Years
	<ol style="list-style-type: none"> 1. The Lane Construction Corporation: District/Project Manager – Manages and administers projects in the mid-south region; responsible for the successful operations of projects his region including: procurement of work, construction, execution, budget, schedule, personnel and equipment; reports to the Sr. VP of Projects and oversees construction managers and project engineers in the region. 2012-2018 2. Austin Bridge & Road: Design-Build Project Director – Managed the I-85 project in Davidson County, NC. Responsible for the management of the total project including; execution, schedule, budget, personnel and equipment. 2010-2012 3. Johnson Bros: Senior Project Manager – Managed several Turnpike and USACE projects in FL and LA. Responsible for the management of the total project including; execution, schedule, budget, equipment, and personnel. 2003-2010 4. J.D.Abrams: Assistant Project Manager – Managed various construction efforts and oversaw the superintendents and project engineers. 1999-2003 5. Martin K. Eby Construction Company: Project Engineer – Supervised and trained field engineers; reviewed and approved contracts; oversaw construction cost, schedule, quality, estimating and safety; and coordinated with reviewed designs for constructability. 1993-1999
e. Education:	University of Nebraska / Omaha, NE / Bachelor of Science / 1993 / Construction Engineering U.S. Air Force / Staff Sergeant / 1987-1993
f. Active Registrations:	n/a
g. Document the extent and depth of your experience and qualifications relevant to the Project.	<ol style="list-style-type: none"> 1. <u>I-26 Port Access Road Improvements Design-Build</u> Key Personnel Role: District Manager / Executive Management Committee Member Experience with Current Firm: The Lane Construction Corporation Project/Assignment Duration: Pursuit 2015, Project 2016-2020, Assigned 2015-2018 Owner Contact Information: SCDOT, Claude Ipock, ipockcr@scdot.org, (803) 737-1306 Design/Construction Value: \$220 Million Project Description: The project includes interstate improvements and interchange realignment/construction; a new viaduct connecting I-26 to the Hugh K. Leatherman Sr. Terminal; and surface street and bridge reconstruction. This will provide improved service for local and commuter traffic and allow safe integration of container terminal traffic with existing operations. The Port Access Road project has over 1.2 million square feet of new bridge deck, 88,000 linear feet of pipe pile, bridge construction over 7 railroad crossings, bridge construction over water, 2 flat slab bridges, 9.8 million pounds of structural steel, demolition of 4 existing bridges over active I-26 and railroad, and 10,500 linear feet of 66 inch to 114” diameter drilled shafts. Hazardous material management. 2. <u>Foothills Parkway Design-Build</u> Key Personnel Role: Project Manager Experience with Current Firm: The Lane Construction Corporation Project/Assignment Duration: Project 2010-2017, Assigned 2012-2017 Owner Contact Information: FHWA, Katerina Roman, katerina.roman@dot.gov, (703) 404-6291 Design/Construction Value: \$47.6 Million

Project Description:

This design build project included clearing, erosion and sediment control measures, site stabilization and revegetation, roadway excavation and embankment, aggregate base, hot asphalt concrete pavement (HACP), retaining walls, soil nailing, drainage improvements, stone masonry, micro piling, 5 cast-in-place post tensioned bridges and other miscellaneous work. The project limits are within existing National Park Service (NPS) right-of-way which was an environmentally sensitive area with a limited footprint to construct the work. Tom reported to Sr. District Manager. Tom’s responsibilities included oversight of construction including execution, budget, scheduling, estimating, personnel, equipment, owner relations, design review, site safety, and quality control.

3. I-85 Reconstruction Design-Build – Davidson County

Key Personnel Role: Design-Build Project Manager
Experience with Current Firm: Austin Bridge & Road
Project/Assignment Duration: Project 2010-2012, Assigned 2011-2012
Owner Contact Information: NCDOT, Khaled Al-Akhdar, kalakhdar@ncdot.gov, (919) 707-6612
Design/Construction Value: \$65 Million

Project Description:

This project was a \$65 million involved widening 3.8 miles of I-85 in Davidson County, NC from four lanes to eight lanes from just north of the N.C. 150 interchange to just north of I-85 Business, and reconstructing the interchange of I-85 at Belmont Road. This design build roadway widening project included bridge construction, earthwork, drainage and paving on a major interstate. Tom’s responsibilities included single point-of-contact with the owner, design-build management, and oversight of construction including execution, budget, scheduling, estimating, personnel, equipment, owner relations, design review, site safety, and quality control. **WSP was the Lead Designer for this project.**

4. US 183 Freeway Extension

Key Personnel Role: Assistant Project Manager
Experience with Current Firm: J.D.Abrams
Project/Assignment Duration: Project 2003-2005, Assigned 2003-2005
Owner Contact Information: TxDOT, Eddie Reyes, eddie.reyes@txdot.gov ,(512) 832-7000
Design/Construction Value: \$58 Million

Project Description:

Oversaw the \$58 million extension of US 183 for the Texas Department of Transportation (TxDOT). US 183 is an 11.6-mile north-south highway in northwest Austin, TX. It was constructed as a four-lane facility with the ability to expand to six lanes. Tom reported directly to the on-site Project Manager, and was responsible for schedules, estimates, and payments to subcontractors.

5. Ben White / IH35 Interchange

Key Personnel Role: Project Engineer
Experience with Current Firm: J.D.Abrams
Project/Assignment Duration: Project 1999-2003, Assigned 1999-2003
Owner Contact Information: TxDOT, Eddie Reyes, eddie.reyes@txdot.gov,(512) 832-7000
Design/Construction Value: \$89 Million

Project Description:

According to TxDOT, approximately 335,000 vehicles per day traveled on I-35 and 165,000 on Ben White in 2001, which makes their meeting place one of the top traveled intersections in the region. During construction, westbound traffic on Ben White was moved over to a new frontage road, which would help traffic move more freely traveling from the airport. Tom reported directly to the on-site Project Manager, and was responsible for schedules, estimates, and payments to subcontractors on this \$89 million 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.

Tom is not currently assigned on any specific project. He is acting in the capacity of a District Manager and is currently working on the pursuit of I-26 Widening MM 85-101. Upon successful award, he will be fully dedicated to the Project Manager position for Lane-Fluor 26.

KEY INDIVIDUAL RESUME FORM

Brief Resume of Key Individual anticipated for the Project.	
a. Name & Title:	Derek John Piper, PE, AICP Assistant Vice President, Senior Project Manager
b. Role of Key Individual for this Project:	Lead Design Engineer
c. Name of Firm with which you are now associated:	WSP USA Inc.
d. Years of Experience: With this Firm <u>22</u> Years With Other Firms <u>11</u> Years	
	WSP USA Inc. Assistant Vice President, Senior Project Manager - 2007 – Present WSP USA Inc. South Carolina Area Manager – 2005 – 2006 WSP USA Inc. South Carolina Director of Engineering and Planning – 2002- 2005 WSP USA Inc. Project Manager – 1996 - 2005
e. Education:	B.S., Civil Engineering; University of Pittsburgh, PA, 1985
f. Active Registrations:	Professional Engineer: Virginia (#0402046886), 2009; Pennsylvania (#PE-039967-E), 1990 Certified Planner (#017279) 2000
g. Document the extent and depth of your experience and qualifications relevant to the Project.	<p>1. <u>VDOT 1-264 Widening and MLK Extension Final Design – Design-Build, Portsmouth, VA</u></p> <p>Key Personnel Role: Lead Design Engineer (Design Manager) Experience with Current Firm: WSP USA Inc. Project/Assignment Duration: 2012 - 2017 Owner Contact Information: Bradley Weidenhammer/757-932-4484/ Bradley.Weidenhammer@VDOT.Virginia.gov Design/Construction Value: \$12M (Design) Project Description: Derek Piper served as the Design Manager for a Skanska construction joint venture, for over \$200M worth of improvements to I-264 including the Martin Luther King Highway Extension (MLK Extension) in urban Portsmouth, VA, during the final design and continuing into construction. Specific scope elements included: widening of I-264 to accommodate the new interchange at MLK Extension; the design of the MLK Extension including an approximately 3,900-foot, multi-lane mainline bridge over urban Portsmouth and CSX's Portsmouth Yard; five new bridges carrying I-264 ramps, two I-264 bridge widenings including widening the existing bridge over N&PBL railroad; 11 stormwater ponds/basins (including significant aesthetic treatments); three noise barriers; significant overhead guide signage; landscaping and aesthetic treatments; ITS system replacement/upgrades along I-264; and new ITS systems along the MLK Extension. Derek managed the design effort associated with delivering final roadway, structure and bridge design, TMP and MOT plans; managed water quality and stormwater permitting, aesthetic treatments design, utility coordination and in contract utility relocation design (water and sewer); and coordinated design and ROW issues with the design-build contractor and VDOT. Derek was responsible for ensuring the project design was in conformance with the contract documents. He established and oversaw a QA/QC program for the disciplines involved in the design of the project, including review of the design, working plans, shop drawings, specifications, and constructability for the project.</p> <p>2. <u>Elizabeth River Tunnel Project including 1-264 Widening and MLK Extension Preliminary Design – Design-Build, Norfolk and Portsmouth, VA</u></p> <p>Key Personnel Role: Deputy Design Manager Experience with Current Firm: WSP USA Inc. Project/Assignment Duration: 2010 – 2012 Owner Contact Information: Bradley Weidenhammer/757-932-4484/ Bradley.Weidenhammer@VDOT.Virginia.gov Design/Construction Value: \$16.8M (Design) Project Description: Derek served as the Deputy Design Manager for a Skanska construction joint venture, for preliminary design development and permitting for the Elizabeth River Tunnels Project. Mr. Piper lead roadway design, stormwater management design, utility relocation (water and sewer) design, significant</p>

environmental permitting and agency coordination with US Army Corps of Engineers (USACE), US Coast Guard (USCG), and Virginia Department of Environment Quality (VDEQ) for dredging, dredge material disposal, wetlands impacts, and federal channel impacts during construction, and preparation of a NADR for the overall Elizabeth River Tunnels Project. This project also included the preliminary design development for the I-264 Widening and MLK Extension (involving \$200M worth of improvements to I-264 and the MLK Extension in urban Portsmouth, VA). Specific scope elements included: widening of I-264 to accommodate the new interchange at MLK Extension; the design of the MLK Extension including an approximately 3,900-foot multi-lane mainline bridge over urban Portsmouth and CSX's Portsmouth Yard; five new bridges carrying I-264 ramps including a new bridge over N&PBL railroad, two I-264 bridge widenings including widening the existing bridge over N&PBL railroad; 11 stormwater ponds/basins (including significant aesthetic treatments); three noise barriers; significant overhead guide signage; landscaping and aesthetic treatments; MOT plans for the overall project, ITS system replacement/upgrades along I-264; new ITS systems along the MLK Extension; and design of approach roadways to accommodate the new Midtown Tunnel. Mr. Piper was directly involved with water quality and stormwater permitting, as the project included 21 acres of impacts to subaqueous river bottom in addition to minor wetlands impacts. Derek was responsible for ensuring the project design was in conformance with the contract documents. He established and oversaw a QA/QC program for the disciplines involved in the design of the project including review of the design drawings. The design for this project was completed in June 2011, with permitting efforts continuing through May 2012. Construction is over 80% complete and scheduled for completion by March 2017. Derek is currently leading WSP | Parsons Brinckerhoff efforts providing design support during construction, including shop drawing reviews, preparing responses to RFIs, and As-Built documentation for the overall Elizabeth River Tunnels Project including the I-264 Widening/MLK Extension.

3. I-64 Southside Widening including the High Rise Bridge, Phase 1, Design Build (Preliminary Design), Chesapeake, Virginia

Key Personnel Role: Lead Design Engineer (Design Manager)
Experience with Current Firm: WSP USA Inc.
Project/Assignment Duration: 2016-2017
Owner Contact Information: Jeffrey Roby/804.786.1103/jeffrey.robby@vdot.virginia.gov
Design/Construction Value: \$1.2M

Project Description:

Derek served as the Design Manager responsible for leading a multi-disciplined design team for the \$495M project involving widening 8-miles of interstate from 4-lanes to 6-lanes, bridge overpass widenings, a new relocated bridge crossing, a new 6,000+ foot bridge over the Southern Branch of the Elizabeth River, and three railroad crossings. Derek developed the formal Alternative Technical Concept submittals and a detailed design schedule, and conducted pre-bid meetings with the United States Army Corps of Engineers and the United States Coast Guard.

- 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

KEY INDIVIDUAL RESUME FORM

Brief Resume of Key Individual anticipated for the Project.	
a.	Name & Title: Philip Mark Lohr, PE, PTOE Senior Supervising Roadway Engineer
b.	Role of Key Individual for this Project: Lead Roadway Engineer
c.	Name of Firm with which you are now associated: WSP USA Inc.
d.	Years of Experience: With this Firm <u>2</u> Years With Other Firms <u>21</u> Years WSP USA Inc. Senior Supervising Roadway Engineer - 2016 – Present Whitman, Requardt & Associates, LLP Associate - 2015 – 2016 Volkert, Inc. Assistant VP 1995 - 2015
e.	Education: M.A., Linguistics, University of Texas at Arlington, Arlington, Texas, 1998 M.S., Civil Engineering (Structures), Georgia Tech, Atlanta, Georgia, 1995 B.C.E., (Cooperative Plan, with highest honor), Georgia Tech, Atlanta, Georgia, 1993 B.A., (Dual-Degree with GT, Summa Cum Laude) Natural Science, Covenant College, Lookout Mountain, Georgia, 1993 Transportation Project Management Institute, UVA/VTCA/VDOT, 2013
f.	Active Registrations: Registered Professional Engineer: Pennsylvania, 2014 (PE082211); Maryland, 2010 (39333); Washington, DC, 2010 (PE905927); Virginia, 2009 (0402046938); Missouri, 2007 (2007003986); North Carolina, 2004 (029781); Alabama, 2002 (25180); Georgia, 2002 (PE028196); Tennessee, 2001 (106779); Professional Traffic Operations Engineer (PTOE)
g.	Document the extent and depth of your experience and qualifications relevant to the Project. 1. <u>Martin Luther King Expressway Extension, Portsmouth, Virginia: subconsultant to WSP</u> Key Personnel Role: Civil Design Manager (Lead Roadway Engineer) Experience with Current Firm: Volkert, Inc. Project/Assignment Duration: 4 years Owner Contact Information: Bradley Weidenhammer/757-932-4484/ Bradley.Weidenhammer@VDOT.Virginia.gov Design/Construction Value: \$10M/\$210M Project Description: Phil served as his firm's civil design manager providing daily technical supervision of civil design work for the design of an urban principal arterial, including new interchanges at I-264 and High Street, modifications to the London Boulevard interchange, the widening of I-264, numerous side road improvements, retaining walls, new stormwater management (SWM) facilities, streetscape enhancements and an urban plaza on High Street to serve as a gateway into the historic district. Phil was responsible for roadway/geometric design, drainage design and erosion and sediment controls, and for coordination with SWM, landscaping, transportation management plan (TMP), structural, intelligent transportation system (ITS), lighting and toll system design and answering RFIs during construction. The project involved development of complex sequence-of-construction plans and a Type C TMP to maintain 70,000+ vehicles per day on I-264 through four phases of construction. Phil used a context-sensitive design approach that minimized impacts to historic resources while working within tight geometric constraints; maintained connectivity of neighborhoods with pedestrian friendly amenities, and incorporated aesthetically pleasing treatments on bridges and SWM facilities. He optimized the project footprint for the location of SWM ponds to minimize the need for additional right of way (ROW). With an extremely fast-track design, this P3 (design-build delivery) project progressed from 30 percent roadway plans to RFC (100 percent) drawings within 10 months.

2. I-495 Northern Section Shoulder Use, Fort Myer Construction/VDOT, Fairfax County, Virginia

Key Personnel Role: Design Manager (Lead Roadway Engineer)
Experience with Current Firm: Volkert, Inc.
Project/Assignment Duration: 1 year
Owner Contact Information: Paul Nishimoto/703-259-2362/paul.nishimoto@vdot.virginia.gov
Design/Construction Value: \$800K/\$17M

Project Description:

Design manager who coordinated all elements of design on this fast-track design-build project under the watchful eye of VDOT and the traveling public. The project enhanced safety and traffic operations by extending the merge area where the I-495 NB Express Lanes tie back into the general-purpose lanes approaching the American Legion Bridge. The design included geometric (cross slope) improvements to achieve a 70mph design speed, ITS plans, signing improvements, median barrier upgrades including a barrier gate, drainage improvements, outfall analyses, TMP plans, lighting, and supporting materials for a design exception.

3. I-65/Corridor X Interchange, Alabama Department of Transportation, Birmingham, Alabama

Key Personnel Role: Project Manager (Lead Roadway Engineer)
Experience with Current Firm: Volkert, Inc.
Project/Assignment Duration: 6 years as PM, 6 years design services during construction
Owner Contact Information: Steve Walker/(334)242-6488/ walkers@dot.state.al.us
Design/Construction Value: \$9M/\$280M

Project Description:

Project manager of a large multidisciplinary team to design seven interchanges, the widening of 5.4 miles of I-65 from six lanes to as many as 15 lanes, the addition of collector-distributor roads, and two miles of a new controlled-access highway. This \$280 million project included 27 bridges, including six with tall piers ranging from 50 to 90 feet high. The main interchange was a four-level directional interchange with 13 bridges connecting I-65 to the new controlled-access highway. The design included 40+ overhead sign structures, lighting, drainage, stormwater management, erosion and sediment control, coordination with Norfolk Southern Railroad, and the relocation of high-pressure gas lines and power lines. Phil closely collaborated with the FHWA area engineer to confirm compliance with FHWA requirements and to obtain approvals. The design minimized disturbance to two landfills that constrained the project site. The project involved traffic analyses to determine design solutions and devise complex sequence-of-construction and MOT plans that maintained six lanes of traffic (90,000 vehicles per day) on I-65 during multiple phases of construction. The project was featured in Roads and Bridges October 2007 issue as the #6 project for 2007, and was showcased in the June 2008 issue featuring megaprojects.

4. I-64 Southside Widening and High Rise Bridge – Phase I, VDOT, Chesapeake, Virginia

Key Personnel Role: Task Manager (Roadway Engineer)
Experience with Current Firm: Whitman, Requardt & Associates, LLP
Project/Assignment Duration: 1 year
Owner Contact Information: Rick Correa/(757) 494-2476/ ricardo.correa@vdot.virginia.gov
Design/Construction Value: \$20M/\$410M

Project Description:

Task manager for development of conceptual roadway plans and cost estimates for a Phasing Strategy Report for VDOT for this \$410 million project. Plans were developed to approximately 30 percent level for this eight-mile urban widening of I-64 from four lanes to six, including minor modifications to six interchanges. This effort was to support VDOT's preparations for a design-build procurement.

- 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

KEY INDIVIDUAL RESUME FORM

Brief Resume of Key Individual anticipated for the Project.	
a. Name & Title:	Jared Clinton Medlin, PE SC Structures Practice Leader
b. Role of Key Individual for this Project:	Structural Engineer Mr. Medlin will be in charge of and responsible for the structure design for the project.
c. Name of Firm with which you are now associated:	KCI Technologies, Inc.
d. Years of Experience: With this Firm <u>15</u> Years With Other Firms <u>0</u> Years	KCI Technologies, Inc. – SC Structures Practice Leader 2002 – Present Responsible for design, plan development and design management of highway bridge projects. Throughout his 15 year career with KCI, Mr. Medlin has served as bridge designer, bridge engineer, lead bridge engineer, and project manager for more than 50 bridge projects in South Carolina, North Carolina, Virginia, and Georgia. His duties include leading a bridge structures group and overseeing major bridge projects in SC. He has served as the lead bridge engineer for fast-paced value engineering and major design-build projects in SC as well as traditional design-bid projects directly for state departments of transportation.
e. Education:	University of North Carolina at Charlotte / Charlotte, NC / Bachelor of Science / 2002 / Civil Engineering
f. Active Registrations:	2007 / SC / PE / 25482 2007 / NC / PE / 032954 2009 / VA / PE / 0402045982 2017 / GA / PE / 041686 2017 / TX / PE / 126283 2007 / FL / PE / 66742
g. Document the extent and depth of your experience and qualifications relevant to the Project.	<p>1. <u>I-26 Port Access Road Improvement Design-Build</u></p> <p>Key Personnel Role: Structural Engineer Experience with Current Firm: KCI Technologies, Inc. Project/Assignment Duration: 2015-2017 Owner Contact Information: SCDOT, Chris Gaskins, gaskinscj@scdot.org, (803) 737-1473 Design/Construction Value: \$3.6 million (design), \$220 million (construction) Project Description: The project consists of the construction of a new fully directional interchange on I-26, a Bainbridge Connector Road, the extension of Stromboli Avenue and associated roadway improvements to surface streets to serve the proposed Naval Base Terminal. The project's scope includes local roadway enhancements to safely integrate container terminal traffic with existing traffic; support local and regional planning policies and strategies; and minimize adverse impacts on nearby communities, the traveling public and the environment. KCI is a major subconsultant and is providing structure design for the mainline bridges and ramps A through D, which tie into one structure, and ramps E and F that feed to and from the Bainbridge Connector. KCI is performing seismic design oversight for the entire project and seismic design for the mainline structures. The project is exposed to a high seismic hazard, and it will construct some eight miles of large bridge structures and associated roadway embankments through highly variable subsurface conditions that include significant uncontrolled fill deposits, liquefying sand strata, and highly compressible clay strata through the historic industrial "neck" area of the Charleston peninsula. Mr. Medlin is leading the design and plan production of 30 prestressed spans and two steel spans for a set of dual bridges, including one span over CSX railroad.</p> <p>2. <u>SCDOT I-77 Widening Design-Build, York County, SC</u></p> <p>Key Personnel Role: Structural Engineer Experience with Current Firm: KCI Technologies, Inc. Project/Assignment Duration: 2015-2017 Owner Contact Information: SCDOT, Tyke Redfearn, redfearnwt@scdot.org, (803) 737-1430 Design/Construction Value: \$540,000 (design), \$95 million (construction) Project Description: The project consisted of repaving and adding an additional lane to I-77 from MM15 to MM27. KCI was a subconsultant and performed the design and provided the final bridge plans for the rehabilitation and widening of four of the five sets of dual bridges, which were all on the I-77 mainline. Rehabilitation plans were developed ahead of bridge plans to allow the contractor to perform the replacement of the expansion bearings of the existing bridges prior to the widening. KCI also</p>

provided jacking plans for the bearing replacements. The bridges required staged construction and included a grade separation over a local road (Windsor Lake Blvd), an overpass over an Interstate ramp (Ramp E to I-20) with a third ramp level passing overhead (Ramp D to I-20), an overpass over a local road with a riverine crossing (Edgewater Drive), and a reservoir crossing (Windsor Lake). Superstructure design elements included rolled beams with composite concrete decks and cast-in-place flat slab concrete spans while substructure design elements included pile footing bents and pile bents consisting of prestressed concrete and steel piles with consideration of scour where required. Mr. Medlin served as a structural engineer and was responsible for checking calculations and plans.

3. NCDOT R-2247CD & EC Winston-Salem Design-Build Interchanges, Forsyth County, NC

Key Personnel Role: Structures Lead Designer
Experience with Current Firm: KCI Technologies, Inc.
Project/Assignment Duration: 2016 - present
Owner Contact Information: NCDOT, Michael Shumsky, mshumsky@ncdot.gov, (919) 707-6627
Design/Construction Value: \$3.8 million (design), \$39 million (construction)
Project Description: KCI is serving as the lead design firm for design-build project R-2247 CD & EC, which will modify the US 421/SR 1981 interchange and the US 52/NC 65 interchange on the Winston-Salem Northern Beltway. The project's primary purpose is to improve north/south connectivity in western Forsyth County and to provide congestion relief for area roadways. Mr. Medlin is currently serving as the lead structures designer for the replacement of three Y-line bridges, including one over US 421, one on Kester Mill Road over Silas Creek, and one over US 52.

4. NCTA Monroe Bypass Connector Design-Build, Mecklenburg and Union Counties, NC

Key Personnel Role: Structural Engineer
Experience with Current Firm: KCI Technologies, Inc.
Project/Assignment Duration: 2010 - 2016
Owner Contact Information: NCDOT, Beau Memory, bmemory@ncdot.gov, (919) 707-2715
Design/Construction Value: \$1.9 million (design), \$367 million (construction)
Project Description: This design-build project was NCTA's second operational toll facility; a 20-mile, all-electronic toll facility with nine interchanges extending from I-485 in Charlotte to existing US 74 west of Marshville. The one-mile section along existing US 74 on the west end is an elevated six-lane divided, controlled access toll road with two-lane frontage roads located near existing grade along each side. The remaining portion is a four-lane divided, controlled access toll road with a 46-foot median on new location. The design provided a partial interchange at its western end with existing US 74, and full movement interchanges at other locations. Mr. Medlin served as project manager for KCI's structures and oversaw the design and plan production of 17 bridges at 11 sites; six of those sites have dual structures.

5. SCDOT I-520 Palmetto Parkway Phases I and II, Aiken County, SC

Key Personnel Role: Structural Engineer
Experience with Current Firm: KCI Technologies, Inc.
Project/Assignment Duration: Project 2002-2009, Assigned 2003-2009
Owner Contact Information: SCDOT, Claude Ipock, ipockcr@scdot.org, (803) 737-4202
Design/Construction Value: \$9 million (design), \$195 million (construction)
Project Description: KCI served as the lead engineer for this \$195 million, major design-build project consisted of connecting I-20 in North Augusta, SC to I-520 Bobby Jones Expressway in Augusta, GA. This four-lane divided interstate facility on new alignment is controlled access and includes 11 major interchanges, 12 miles of interstate and 21 bridges. The project also included roadway improvements to US 25, SC 126, S-33 and various secondary and local roads. The award of contract was due in large part to the aggressive schedule set by the design-build team and the ability of KCI's engineers to produce the bridge design and plans on a very accelerated schedule in order to meet the construction deadline. This project was awarded the 2006 ACEC-SC Engineering Excellence Award for Phase I and the 2010 ACEC-SC Engineering Excellence Award for Phase II. Phase II also aided in KCI being awarded the 2010 Small Firm Award from ACEC-SC. Mr. Medlin served as the structural engineer and was responsible for the design of multiple bridges on this 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

KEY INDIVIDUAL RESUME FORM

Brief Resume of Key Individual anticipated for the Project.	
a. Name & Title:	Jason Robert Gorrie, PE Traffic Engineering Manager
b. Role of Key Individual for this Project:	Lead Traffic Engineer
c. Name of Firm with which you are now associated:	WSP USA Inc.
d. Years of Experience: With this Firm <u>6</u> Years With Other Firms <u>11</u> Years	<p>WSP USA Inc. Senior Supervising Traffic Engineer - 2012 – Present</p> <p>STV Inc. Senior Traffic Engineer – 2008 - 2012</p> <p>Stantec Project Engineer – 2007 – 2008</p> <p>Dewberry Project Engineer – 2001 – 2007</p>
e. Education:	M.S., Environmental Engineering, Virginia Polytechnic Institute and State University B.S., Civil Engineering; Auburn University
f. Active Registrations:	Professional Engineer: South Carolina, 2008 (26454); North Carolina, 2008 (34224); Virginia, 2008 (41230); Florida, 2011 (73602); Georgia, 2011 (36549)
g. Document the extent and depth of your experience and qualifications relevant to the Project.	<p>1. <u>I-85 Cabarrus (I-3802A) Design-Build, Cabarrus County, NC</u></p> <p>Key Personnel Role: Lead Traffic Engineer</p> <p>Experience with Current Firm: WSP USA Inc.</p> <p>Project/Assignment Duration: 2015 – 2017</p> <p>Owner Contact Information: Khaled Al-Akhdar / kalakhdar@ncdot.gov / (919) 707-6612</p> <p>Design/Construction Value: \$18.6M / \$230M</p> <p>Project Description:</p> <p>Lead Traffic Engineer responsible for capacity analyses, traffic control plans, and signal plans on the 8-mile interstate widening project. As part of the design-build procurement process, Jason contributed to the concept that placed two new bridges outside the footprint of the existing bridges. Constructing two new bridges in this manner avoided staged construction by allowing existing bridges to remain in service during construction activities. This approach limited disruption to the existing traffic pattern and reduced the overall construction schedule. Another innovative Maintenance of Traffic strategy designed a temporary diamond interchange at the US 29/US 601 interchange to facilitate the Maintenance of Traffic during the Interchange Modification from a full clover interchange to a Diverging Diamond Interchange (DDI). The temporary signals for the diamond were strategically located at the future cross over locations of the DDI to maximize construction away from traffic and facilitate future implementation of the DDI. Mr. Gorrie also updated the project IMR to include the roundabout capacity analysis and interchange configuration revisions. There are 3 interchanges along the project corridor, including a DDI and a diamond interchange with roundabouts at the ramp terminals.</p> <p>2. <u>Salem Creek Connector (U-2925) Design-Build, Forsyth County, NC</u></p> <p>Key Personnel Role: Lead Traffic Engineer</p> <p>Experience with Current Firm: WSP USA Inc.</p> <p>Project/Assignment Duration: 2012 – 2015</p> <p>Owner Contact Information: Khaled Al-Akhdar / kalakhdar@ncdot.gov / (919) 707-6612</p> <p>Design/Construction Value: \$5.8M / \$68.9M</p> <p>Project Description:</p> <p>Jason managed traffic engineering tasks including: traffic control, signal design, and (intelligent transportation systems) ITS design for the Salem Creek Connector. Traffic Control tasks include the phased construction of a diverging diamond interchange at U.S. 52 and the phased construction of a roundabout at the existing intersection of Salem Avenue and City Yard Drive. The ITS component of the project integrates updated camera and DMS equipment into the City of Winston Salem’s newly constructed signal system upgrade project. Signal communication for the diverging diamond signals and additional intersections within the project limits was provided via fiber optic cable and routed into the City’s signal system.</p>

3. Choctawhatchee Bay Bridge Design-Build, Florida Department of Transportation (FDOT) District Three, Florida

Key Personnel Role: Lead Traffic Engineer
Experience with Current Firm: WSP USA Inc.
Project/Assignment Duration: 2013 – 2015
Owner Contact Information: Kerrie Harrell, PE / kerrie.harrell@dot.state.fl.us / (850) 849-3719
Design/Construction Value: \$6.8M / \$118.5M

Project Description:

Jason served as the lead traffic engineer responsible for the development of traffic control plans and signal plans for the new bridge over Choctawhatchee Bay. The project sequencing includes 5 phases over 3 separate causeways. Numerous traffic shifts were required throughout the project due to the necessity of deep soil mixing and the limited space provided by the existing 2-lane roadway.

4. I-40 & NC 54 Interchange Improvements (I-5873), Wake County, NC

Key Personnel Role: Lead Traffic Engineer
Experience with Current Firm: WSP USA Inc.
Project/Assignment Duration: 2017 - present
Owner Contact Information: Ben Upshaw, PE / bjupshaw@ncdot.gov / (919) 220-4600
Design/Construction Value: \$192K / \$1.2M

Project Description:

Jason is the lead traffic engineer responsible for traffic control plans, signal plans, and marking plans. The project includes phased construction of ramp widening on the interchange off-ramps. Temporary signal designs are required during the 3-phase construction of the improvements.

- 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

KEY INDIVIDUAL RESUME FORM

Brief Resume of Key Individual anticipated for the Project.	
a. Name & Title:	Stewart Schumpert Laney, PE, DBIA Senior Project Manager
b. Role of Key Individual for this Project:	Lead Geotechnical Design Engineer
c. Name of Firm with which you are now associated:	S&ME, Inc.
d. Years of Experience: With this Firm <u>12</u> Years With Other Firms <u>6</u> Years	
	<p>S&ME, Inc. : Design Build Area Manager / Senior Pursuit Manger – Responsible for overseeing all aspects of the geotechnical and pavement components of design build projects in the Southeast region, 2014 – current.</p> <p>S&ME, Inc.: Senior Project Manager – Responsible for all aspects of geotechnical explorations and designs for NCDOT and SCDOT conventional and design build projects, 2011 – 2014.</p> <p>Barrier Geotechnical Contractors: Director of Operations – Responsible for conceptual estimation and preliminary designs for specialty shoring and foundation design build projects, 2007 – 2011.</p> <p>S&ME, Inc.: Staff Engineer / Project Manager – Responsible for all aspects of geotechnical explorations and designs for NCDOT and SCDOT conventional and design build projects 2004 – 2007.</p> <p>Tierra, Inc.: Staff Engineer – Responsible for all aspects of geotechnical explorations and designs for NCDOT and SCDOT projects, 2001 -2004.</p>
e. Education:	<p>BS, Construction Engineering, NC State University (1998)</p> <p>MS, Geotechnical Engineering, NC State University (2001)</p>
f. Active Registrations:	<p>Registered Professional Engineer: NC, #31013, 2005</p> <p>Registered Professional Engineer: SC, #24595, 2005</p>
g. Document the extent and depth of your experience and qualifications relevant to the Project.	<p><u>SCDOT I-85 (MM 98–106) - Design Build</u></p> <p>Key Personnel Role: Pursuit Manager / Geotechnical Project Engineer</p> <p>Experience with Current Firm: S&ME, Inc.</p> <p>Project/Assignment Duration: Assigned 2017- current</p> <p>Owner Contact Information: SCDOT, Trapp Harris, HarrisMD@scdot.org , (803) 737-0766</p> <p>Design/Construction Value: \$190 Million</p> <p>Project Description: This project includes 8 miles of reconstruction with 5 bridge replacements in Cherokee County, SC. Mr. Laney served as geotechnical pursuit manager and will service as in a technical support role for final pavement and geotechnical services during design and construction phases.</p> <p><u>SCDOT Emergency Bridge Package 6 - Design Build</u></p> <p>Key Personnel Role: Pursuit Manager / Geotechnical Project Engineer</p> <p>Experience with Current Firm: S&ME, Inc.</p> <p>Project/Assignment Duration: Assigned 2016 - 2017</p> <p>Owner Contact Information: SCDOT, Trapp Harris, HarrisMD@scdot.org , (803) 737-0766</p> <p>Design/Construction Value: \$7 Million</p> <p>Project Description: This project includes 3 bridge replacements in Richland County, SC. Mr. Laney served as geotechnical engineer of record for both construction and design phases of the project. Design responsibilities included geotechnical investigations and design recommendations for all roadway and structures for project. Construction phase responsibilities include management of PDA testing, Vibration Plan development, and temporary asphalt pavement designs.</p> <p><u>SCDOT Emergency Bridge Package 5 - Design Build</u></p> <p>Key Personnel Role: Pursuit Manager / Project Manager</p> <p>Experience with Current Firm: S&ME, Inc.</p> <p>Project/Assignment Duration: Assigned 2016 - 2017</p> <p>Owner Contact Information: SCDOT, Trapp Harris, HarrisMD@scdot.org , (803) 737-0766</p>

Design/Construction Value: \$10 Million

Project Description:

This project includes 1.5 miles of roadway reconstruction and 4 bridge replacements in Clarendon County, SC. Mr. Laney served as geotechnical engineer of record for both construction and design phases of the project. Design responsibilities included geotechnical investigations and design recommendations for all roadway and structures for project. Construction phase responsibilities include management of PDA testing, Vibration Plan development, and temporary asphalt pavement designs.

SCDOT I-20 Design Build

Key Personnel Role: Pursuit Manager / Geotechnical Project Engineer

Experience with Current Firm: S&ME, Inc.

Project/Assignment Duration: Assigned 2014 - current

Owner Contact Information: SCDOT, Trapp Harris, HarrisMD@scdot.org , (803) 737-0766

Design/Construction Value: \$110 Million

Project Description:

This project includes 10 miles of reconstruction with 1 bridge replacement in Lexington County, SC. Mr. Laney served as geotechnical engineer of record for both construction and design phases of the project. Design responsibilities included geotechnical investigations and design recommendations for all roadway and structures for project. Construction phase responsibilities include management of PDA testing, Vibration Plan development, and temporary asphalt pavement designs.

- 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

KEY INDIVIDUAL RESUME FORM

Brief Resume of Key Individual anticipated for the Project.	
a. Name & Title:	Andre Maurice Mullins, PE Senior Water Resources Engineer
b. Role of Key Individual for this Project:	Lead Hydraulic Engineer
c. Name of Firm with which you are now associated:	WSP USA Inc.
d. Years of Experience: With this Firm <u>3</u> Years With Other Firms <u>9</u> Years	WSP USA Inc. - Senior Water Resources Engineer - 2014 - Present STV Inc. Design Engineer 2010-2014 ESP- Project Manager III 2008-2009 The Isaacs Group- Project Manager II 2005-2008 Armstrong Glen. PC Engineering Assistant 2000-2003 (pre-graduation)
e. Education:	B.S., Engineering Technology, University of North Carolina, Charlotte, North Carolina, 2005
f. Active Registrations:	Registered Professional Engineer: North Carolina, 2014 (#41267); Pennsylvania, 2013 (#81185) NCDOT Level 3 Erosion Control Designer (#3048)
g. Document the extent and depth of your experience and qualifications relevant to the Project.	<p>1. <u>I-85 Cabarrus (I-3802A) Design-Build, Cabarrus County, NC</u> Key Personnel Role: Hydraulic Engineer Experience with Current Firm: WSP USA Inc. Project/Assignment Duration: Ongoing Owner Contact Information: Khaled Al-Akhdar / kalakhdar@ncdot.gov / (919) 707-6612 Design/Construction Value: \$18.6M / \$230M Project Description: This NCDOT Design-Build project includes widening and reconstruction of seven miles of I-85 within Cabarrus County including several interchange revisions. As the Hydraulic Engineer for this project, André was responsible for all hydraulic design services including design of roadway drainage systems and erosion control measures.</p> <p>2. <u>Cutchin Drive Storm Drainage Improvement Project Charlotte, South Carolina</u> Key Personnel Role: Engineering Designer Experience with Current Firm: WSP USA Inc Project/Assignment Duration: 2014– 2015 Owner/Contact Information: Charlotte-Mecklenburg Storm Water Services Ben Lanzillotta; (704) 432-0590 Design/Construction Value: \$5,000,000 (est) Project Description: Lead hydraulic engineer and Project Manager for 160-acre area of residential and commercial developments within the McMullen Creek. Responsible for client management, drainage system design and analysis, and development of the project's plans, specifications, and cost estimates. The project has involved the use of HEC-RAS and StormCAD. Client: Charlotte Mecklenburg Storm Water Services</p>

3. NCDOT I-485 Widening Design-Build (Southeast Charlotte) Charlotte, North Carolina

Key Personnel Role: Engineering Designer

Experience with Current Firm: STV- 3 Years.

Project/Assignment Duration: 2012 – 2014

Owner Contact Information: NCDOT, Brady McKenzie, 704-506-6987; bmckenzie@ncdot.gov

Design/Construction Value: \$94,000,000

Project Description:

(2012 – 2014): engineering designer that provided drainage design and erosion control for the expansion of eight miles of I-485 from a four-lane roadway to six- and eight-lane sections between I-77 and Rea Road in Charlotte. The widening is part of a series of projects to reduce traffic congestion on the commuter-heavy highway. The expansion also includes six interchange modifications and 14 bridge widenings, eight of which are over environmentally sensitive streams.

4. City of Charlotte M-Team Storm Water On-Call Catalina Avenue, Charlotte, North Carolina

Key Personnel Role: Engineering Designer

Experience with Current Firm: STV 4 Years

Project/Assignment Duration: 2011 – 2014

Owner Contact Information: Charlotte Mecklenburg Storm Water Services-M-Team,
Stewart Edwards;704-336-7600

Design/Construction Value: \$ 50,000 (est)

Project Description:

Engineering designer that managed projects as part of an on-call contract with the City of Charlotte. André assessed complaints from residents, determining their needs for resolution and, when needed, developed solutions. The projects involved turn-key services, including utility and hydraulic design, agency coordination, site inspection, construction administration, and quantity takeoffs at various roadway locations around Charlotte. Client: City of Charlotte Storm Water Services

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

KEY INDIVIDUAL RESUME FORM

Brief Resume of Key Individual anticipated for the Project.	
a. Name & Title:	Adam Horn Karagosian, PWS Supervising Environmental Scientist
b. Role of Key Individual for this Project:	Lead Environmental Permit Coordinator
c. Name of Firm with which you are now associated:	WSP USA Inc.
d. Years of Experience: With this Firm <u>5</u> Years With Other Firms <u>19</u> Years	
	WSP USA Inc., Supervising Environmental Scientist: 2012 – 2013, 2014 – present Karagosian Ecological Consulting, Owner: 2013 – 2014 Jacobs Engineering, Sr. Environmental Scientist: 2008 – 2012 STV/Ralph Whitehead Associates, Sr. Environmental Scientist: 2003 – 2007 HDR, Inc., Project Environmental Scientist: 2002 – 2003 Law Engineering, Project Environmental Scientist: 2000 – 2002 S&ME, Inc., Environmental Scientist II, 1997 – 2000 B. Laing Associates, Inc, Environmental Scientist, 1994 – 1996 U.S. Forest Service, Technician, 1993 – 1994
e. Education:	B.S., Environmental Studies, SUNY College of Environmental Science and Forestry, Syracuse, NY (1993) A.A.S., Business Administration, SUNY College of Technology at Farmingdale, Farmingdale, NY (1990)
f. Active Registrations:	Professional Wetland Scientist (No. 1353), National CEPSCI (No. 10306), South Carolina
g. Document the extent and depth of your experience and qualifications relevant to the Project.	
	<p>1. <u>SCDOT Small Purchase Contract: JDs and Permits for Six Maintenance Bridge Replacement in RPG 2, Lee and Sumter Counties, SC</u></p> <p>Key Personnel Role: Project Manager/ Environmental Task Lead Experience with Current Firm: WSP USA Inc. Project/Assignment Duration: 6 months Owner Contact Information: Danny Johnson, 803-737-1548, johnsoncd@scdot.org Design/Construction Value: N/A Project Description: Responsibilities included delineation of waters of the U.S. and preparation of Preliminary Jurisdictional Determination Requests, threatened and endangered species assessments and preparation of Biological Assessments, and Clean Water Act Section 404 permit applications for six maintenance bridge replacement projects in Lee and Sumter Counties. The project was awarded thorough the Small Purchase Environmental Service contract.</p> <p>2. <u>SCDOT Small Purchase Contract: US 301 at SC 33 Intersection Improvement and Bridge Replacement over N. Edisto River & Swamp, Orangeburg, Orangeburg County, SC and SCDOT, US 278 at SC 300 & SC 3 Intersection Improvement, Barnwell County, SC</u></p> <p>Key Personnel Role: Environmental Task Lead /Project Manager Experience with Current Firm: WSP USA Inc. Project/Assignment Duration: 6 months Owner Contact Information: Siobhan Gordon, 803-737-1337, gordonso@scdot.org Design/Construction Value: N/A Project Description: Responsible for wetland delineations, Preliminary Jurisdictional Determination Requests and Section 404 Permitting for bridge replacement and intersection improvement projects in Barnwell and Orangeburg Counties.</p> <p>3. <u>Five Bridge Replacements on S-31 over Waccamaw River Swamp Horry County, SC</u></p> <p>Key Personnel Role: Environmental Task Lead Experience with Previous Firm: Jacobs Engineering Project/Assignment Duration: 2 years Owner Contact Information: Henry Phillips, 803-737-1872, phillipsmh@scdot.org</p>

Design/Construction Value: \$2.5 Million Construction

Project Description:

Environmental Task Leader: Managed the wetlands permitting and NEPA documentation associated with the replacement of five deficient bridges on S-31 over the Waccamaw River Swamp. Responsibilities included managing the delineation of waters of the US, threatened and endangered species assessments, Jurisdictional Determination from the USACE, preparation of a Natural Resources Technical Memorandum, NEPA CE Type C document, Section 404 General Permit application, and public information meeting.

4. US 17 Widening Environmental Assessment (On-Call NEPA Services) Jasper County, SC

Key Personnel Role: Environmental Task Lead/Project Manager

Experience with Previous Firm: Jacobs Engineering

Project/Assignment Duration: 2 years

Owner Contact Information: Chad Long, 803-737-1395, longcc@scdot.org

Design/Construction Value: N/A

Project Description:

Managed the preparation of a NEPA Environmental Assessment for the US 17 widening project, awarded as part of the 2008-2011 SCDOT On-Call NEPA Services Contract. The project involved wetland delineations, Jurisdictional Determination, T&E studies, Natural Systems Technical Report, human environment evaluations, and public involvement for the 7.5 mile widening of US 17 into Georgia. Project funding was not secured and the NEPA EA was not advanced beyond the preliminary draft stage. A NEPA CE-C was done instead for a bridge replacement over a railroad within the original project corridor.

- 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

KEY INDIVIDUAL RESUME FORM

Brief Resume of Key Individual anticipated for the Project.	
a. Name & Title:	Eric Scot Dickey, PE, PLS Vice President
b. Role of Key Individual for this Project:	Lead ROW Manager
c. Name of Firm with which you are now associated:	Davis & Floyd, Inc.
d. Years of Experience: With this Firm <u>21</u> Years With Other Firms <u>0</u> Years	Davis & Floyd, Inc. Vice President 1997 - Present
e. Education:	BS, Civil Engineering, Clemson University (1997)
f. Active Registrations:	Registered Professional Engineer: SC, #21932, 2006 Registered Professional Land Surveyor: SC, #21932, 2002
g. Document the extent and depth of your experience and qualifications relevant to the Project.	<p>1. <u>I-26 Port Access Road Improvements Design-Build</u></p> <p>Key Personnel Role: Design Manager Experience with Current Firm: Davis & Floyd, Inc Project/Assignment Duration: 2016 to present Owner Contact Information: Jae Mattox / (803) 737-1805 / mattoxjh@scdot.org Design/Construction Value: \$220M Project Description: Davis & Floyd, Inc. (D&F) is a major subconsultant on this SCDOT Design-Build interchange project and is responsible for the design of 3 bridges and roadway, stormwater, hydrology & hydraulic, traffic control, signal, and pavement marking design for the entire \$220M project. D&F is also providing environmental permitting, utility coordination, right-of-way acquisition, and design surveying. As D&F's lead project manager, Eric is responsible for managing and coordinating all of the design items performed by D&F, which also includes attending coordination meetings with the design team, contractor, and SCDOT. Eric is also responsible for project right-of-way acquisitions (27 parcels) and responsible for overseeing right-of-way agents, reviewing appraisals, approving property owners' counter-offers and right-of-way payments to property owners.</p> <p>2. <u>I-526 Low Country Corridor Phase 1 Design-Build Prep – North Charleston, SC</u></p> <p>Key Personnel Role: Design Manager Experience with Current Firm: Davis & Floyd, Inc Project/Assignment Duration: 2017 to Present Owner Contact Information: Brent Rewis / (803) 737-7903 / rewisbl@scdot.org Design/Construction Value: TBD Project Description: I-526 Low Country Corridor Phase 1 (Design-Build Prep) – North Charleston, SC The I-526 corridor improvement project includes adding a travel lane in each direction along I-526 and (6) interchange improvements. The field surveys included setting project controls, coordination with aerial survey subconsultants, best fit existing roadway alignments courthouse research, property monument locations, property strip maps, supplemental (3D) and (2D) mapping, drainage inlet / outfall surveys, drainage structure surveys, sanitary sewer surveys, wetlands surveys, geotechnical boring surveys, existing bridge verifications, railroad coordination / surveys and traffic control coordination for interstate surveys. Eric is managing the H&H and survey work performed by Davis & Floyd on this major project.</p> <p>3. <u>S-31 (York Street Bridge) Replacement - Aiken County, SC</u></p> <p>Key Personnel Role: Project Manager Experience with Current Firm: Davis & Floyd, Inc Project/Assignment Duration: 2016 - 2017 Owner Contact Information: Adam Humphries / (803) 737-3081 / humphrieas@scdot.org Design/Construction Value: \$3.7M</p>

Project Description:

After closure of the structurally deficient S-31 Northbound Bridge, SCDOT asked D&F to accelerate the design to replace the Northbound and Southbound bridges over the Norfolk Southern Railroad. As project manager, Eric coordinated the bridge, roadway, environmental, and stormwater design. He also managed the utility coordination, geotechnical engineering, and public involvement using 3D renderings prepared by D&F.

4. Clemson Road / Sparkleberry Lane Intersection Improvements - Richland County, SC

Key Personnel Role: Project Manager
Experience with Current Firm: Davis & Floyd, Inc
Project/Assignment Duration: 2015 – to date
Owner Contact Information: Tony Edwards / (803) 576-2420 / EdwardsT@RCGov.us
Design/Construction Value: \$5.3M (Est.)

Project Description:

The Clemson Road / Sparkleberry Lane intersection modifications is currently under design to increase traffic capacity at the intersection as well as providing new bicycle and pedestrian facilities. The intersection project limits along Clemson Road begin at the intersection of Corporate Park Drive / Clemson Frontage Road and ends at the intersection of Sparkleberry Crossing Road, and along Sparkleberry Lane beginning at Clemson Road and ending at Mallet Hill Drive. Based on the alternatives evaluated, the diverging diamond intersection being reduces the number of failing LOS movements from 5-to-1. Final design of the intersection is scheduled to begin soon, with SCDOT 60% design comments currently being addressed. Eric is managing the design of the diverging diamond intersection for Richland County's Project Development Team.

5. US 278 Bridge Replacement over Three Runs Creek - Aiken County, SC

Key Personnel Role: Project Manager
Experience with Current Firm: Davis & Floyd, Inc
Project/Assignment Duration: 2016 – to date
Owner Contact Information: Adam Humphries / (803) 737-3081 / humphrieas@scdot.org
Design/Construction Value: \$6M

Project Description:

A new 214' 3-span bridge using Type III AASHTO girders was designed to replace the existing bridge. During geotechnical explorations, an aquifer was discovered and surface flooding caused the roadway to be closed. Eric coordinated with the geotechnical subconsultant onsite and SCDOT to determine a solution to plug the aquifer and re-open the road. A temporary bridge was constructed parallel to the existing bridge so the new bridge can be built online. The project also required Permittee Responsible Mitigation (PRM) for stream impacts. This required coordination with the Department of Natural Resources to secure private property. Eric oversaw the acquisition of this property. As project manager, Eric coordinated the survey, geotechnical, environmental, road and bridge design, and hydraulic and hydrologic design services.

- 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

KEY INDIVIDUAL RESUME FORM

Brief Resume of Key Individual anticipated for the Project.	
a. Name & Title:	Patrick James Kerrigan Project / Construction Manager
b. Role of Key Individual for this Project:	Construction Manager
c. Name of Firm with which you are now associated:	The Lane Construction Corporation
d. Years of Experience: With this Firm <u>9</u> Years	With Other Firms <u>10</u> Years
<p>1. The Lane Construction Corporation:</p> <ul style="list-style-type: none"> • Construction Manager – Responsible for overall construction direction, completion, and financial outcome of the SCDOT I-26 Port Access Road Improvement design-build project. 2016-2018 • Construction Manager – Managed various construction efforts and oversaw the superintendents and project engineers. 2015-2016 and 2013-2014 • Pursuit Project Manager – Coordinated pursuit through development of design, schedule, and overall project execution for two high profile design-build high speed rail projects and one large scale parkway. 2014-2015 • Project Engineer/Senior Engineer – Supervised and trained field engineers; reviewed and approved contracts; oversaw construction cost, schedule, quality, and safety; and coordinated with reviewed designs for constructability. 2008-2012 • Senior Project Controls Engineer/Civil Field Engineer – Setup and maintained project performance tracking for engineering and construction. 2005-2008 <p>2. Naismith Engineering Inc.: Environmental Technician – Provided environmental remediation solutions based on State and Federal specifications and ASTM standard environmental assessments. 2004-2005</p> <p>3. Sundance Resources: Geological Technician – Developed oil/gas prospects and prepared detailed presentations for investors in the Southern Texas coastal plains. 2004</p> <p>4. First American Flood Data Services: Senior Map Analyst – Provided flood zone determinations. 2000-2002</p> <p>5. General Carpenter – Performed general labor in carpentry craft. 1997-2000</p>	
e. Education:	Texas A&M University/Bachelors of Science/2005/Environmental Science
f. Active Registrations:	n/a
g. Document the extent and depth of your experience and qualifications relevant to the Project.	
<p>1. <u>I-26 Port Access Road Improvements Design-Build</u></p> <p>Key Personnel Role: Deputy Director – Construction Manager</p> <p>Experience with Current Firm: The Lane Construction Corporation</p> <p>Project/Assignment Duration: Project 2016-2020, Assigned 2016-Jan 2020</p> <p>Owner Contact Information: SCDOT, Daniel Burton, burtond@scdot.org, (843) 371-0342</p> <p>Design/Construction Value: \$220 Million</p> <p>Project Description: The project includes interstate improvements and interchange realignment/construction; a new viaduct connecting I-26 to the Hugh K. Leatherman Sr. Terminal; and surface street and bridge reconstruction. This will provide improved service for local and commuter traffic and allow safe integration of container terminal traffic with existing operations. The Port Access Road project has over 1.2 million square feet of new bridge deck, 88,000 linear feet of pipe pile, bridge construction over 7 railroad crossings, bridge construction over water, 2 flat slab bridges, 9.8 million pounds of structural steel, demolition of 4 existing bridges over active I-26 and railroad, and 10,500 linear feet of 66 inch to 114" diameter drilled shafts.</p>	

2. I-495 Capital Beltway Express Lanes

Key Personnel Role: Project Engineer/Senior Engineer
Experience with Current Firm: The Lane Construction Corporation
Project/Assignment Duration: Project 2008-2013, Assigned 2008-2013
Owner Contact Information: VDOT, Bret Herring, m.herring@vdot.virginia.gov, (703) 576-2858.
Design/Construction Value: \$1.48 Billion

Project Description:

This high profile, \$1.5 billion design-build project for VDOT consisted of four new general purpose, tolled lanes (two in each direction) on the outside of the existing lanes of the Capital Beltway, the reconstruction of ramps, interchanges, frontage roads, overpasses, underpasses and bridges. In addition, the project includes the installation of the electronic toll and traffic management facilities and systems necessary for the operation of the Express Lanes (including an Open Road Tolling System and Advance Transportation Management System) and all other facilities and improvements required for the opening and operation of the Express Lanes. The project was completed one month ahead of schedule.

3. I-581 Valley View Interchange, Phase 2

Key Personnel Role: Assistant Project Manager
Experience with Current Firm: The Lane Construction Corporation
Project/Assignment Duration: Project 2017-2018, Assigned 2013-2014
Owner Contact Information: VDOT, Jeremy Hendrick, PE, Jeremy.hendrick@vdot.virginia.gov, (276) 728-1524.

Design/Construction Value: \$38.5 Million

Project Description:

This \$38.5 million project includes a new diverging diamond interchange (DDI) at I-581 and Valley View Boulevard. This was accomplished by the addition of the southbound exit and northbound entry ramps serving I-581/U.S. Route 220 north of the interchange and accompanying auxiliary lanes along I-581/U.S. Route 220 to the Hershberger Road interchange. The existing southbound entry and northbound exit ramps will be adjusted and lengthened to facilitate the other improvements. Valley View Boulevard and the bridge over I-581/U.S. Route 220 was widened to provide two through lanes in each direction, dual left turn lanes for both the northbound and southbound movements to I-581 through the interchange and a right turn lane onto the northbound I-581/U.S. Route 220 entry ramp.

4. IH35 Bexar County and I-35 Solado Creek

Key Personnel Role: Assistant Project Manager
Experience with Current Firm: The Lane Construction Corporation
Project/Assignment Duration: Project 2014-2016, Assigned 2015-2016
Owner Contact Information: TXDOT, Kane Mattke, kmattke@hwlochner.com, (210) 419-5701
Design/Construction Value: \$38.5 Million

Project Description:

This \$70 Million project included 323,623 cubic yards excavation; 78,899 cubic yards embankment; 144,178 square yards concrete pavement; 103,974 square yard bridge deck; 134,673 square feet MSE wall; lighting; overhead signs; asphalt paving; lime/cement treat soil; and soil nail wall.

- 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.

Patrick is currently assigned to the I-26 Port Access Road Improvements Design-Build in Charleston, SC, which is scheduled for completion in January 2020.

KEY INDIVIDUAL RESUME FORM

Brief Resume of Key Individual anticipated for the Project.	
a.	Name & Title: John James Wilson Senior Construction Quality Control Manager
b.	Role of Key Individual for this Project: Quality Control Manager
c.	Name of Firm with which you are now associated: Fluor Enterprises, Inc.
d.	<p>Years of Experience: With this Firm 4-1/2 Years With Other Firms 37 Years</p> <p>Fluor Enterprises, Inc., Quality Manager, Governor Mario M. Cuomo Bridge (Formerly Tappan Zee Bridge) Project, 2016 – Present. In this role, responsible for the overall management of the quality organization (design & construction), development of the Quality Plan including updates, and verification that the quality program for design and construction is fully implemented and effectively executed for both temporary and permanent works.</p> <p>Fluor Enterprises, Inc., Deputy Quality Manager, Governor Mario M. Cuomo Bridge (Formerly Tappan Zee Bridge) Project, 2013 – 2016 In this role, responsible for assisting the Quality Manager with the ramp up and management of the independent QA engineering firm and QC engineering firm. Also responsible for coordination between Operations and both Quality firms requiring inspection/testing activities. Assured both Quality firms stay in compliance with approved Quality Plan and monitor the electronic quality data base system. Responsible for attending off site pre-fabrication meetings that require full time QA presence during fabrication to assure all parties understand the requirements and are agreed upon</p> <p>Tug Hill Construction, Inc., Watertown, NY. 2004 to 2013. Various positions on projects listed below.</p> <ul style="list-style-type: none"> • National QA/QC Director/Manager, 2006 to 2013. Overall responsibility for project quality and safety through team building and communications. • USACE Project, McGuire Air Force Base, New Jersey, November, 2012 to 2013. Assigned the responsibility to close out the Warfighter & Family Support Center Building project and to resolve/correct any warranty issues with the Corps of Engineers and building users through coordination with subcontractors. • USACE Projects, Fort Benning, Georgia, 2011 to 2012. Alternate CQC Manager on the Good Hope Maneuver Project to assist the CQC Manager on follow-up and completion inspections and close out documentation for the project. • USACE Projects, Fort Bliss, Texas, 2007 to 2011. Implemented the CQC Program on several projects. Conducted preparatory, initial, follow-up and completion phase inspections. • USACE Project, Fort Carson Digital Multi-Purpose Training Range, Fort Carson, Colorado, 2006 to 2007. Assisted with the overall closure of the project. Developed and implemented the CQC Plan and trained the onsite CQC System manager. • USACE Project, Fort Drum Parallel Taxiway J & Mountain Ramp Expansion, Department of Public Works Project: Actus Lend Lease, Crescent Woods, Fort Drum, New York, 2004 to 2006. CQC System Manager responsible for implementation of the CQC Program. <p>The Bell Company, Inc., Rochester, New York, 1990 to 2004.</p> <p>Black River Constructors, Black River, New York, 1987 to 1990.</p> <p>Ebasco Services, Inc. 1986 to 1987.</p> <p>Stone and Webster Engineering Corp., 1977 to 1986.</p>
e.	<p>Education: Pulaski Jr./Sr. High School/Pulaski, New York/Diploma; Latin</p> <p>Additional Training: North Metro Railroad Safety Training, Hazardous Waste Management, 40 Hours, Radiation Worker 2 Training, Confined Space: Trenching and Excavation, Universal Heavy Construction School, B.O.C.E.S. (Basic Welding Course)</p>
f.	<p>Active Registrations: None</p> <p>Professional Associations: Society of American Military Engineers, since 10/90, American Welding Society, American Concrete Institute</p> <p>Certifications/Licenses: OSHA 30 hour Safety Certification, Red Cross First Aid & Adult, Child, & Infant CPR - 2 Year Certification</p>

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

1. Governor Mario M. Cuomo Bridge (formerly Tappan Zee Bridge)

Key Personnel Role: Quality Manager
Experience with Current Firm: Fluor Enterprises, Inc.
Project/Assignment Duration: 2013 to Present
Owner Contact Information: New York State Thruway Authority, Jamey Barbas, Project Director, jamey.barbas@newnybridge.com, (914) 524-5440
Design/Construction Value: \$3.1 billion

Project Description: A new 3.1-mile twin span stay cable bridge crossing the Hudson River in Tarrytown, NY with new approaches consisting of 12 super concrete slabs & HMA super pave, roadway lighting, aesthetic lighting, security cameras, intelligent messaging signs on gantries, structural health monitoring system, shared use path for walking & biking, anti-climb fence, fire protection systems, compressed air system, power distribution system, communication system. Specific responsibilities are implementation and management of the Quality Management System for design and construction, both QA & QC, off-site fabrication inspections, coordinate with owner, conduct weekly meetings, actively involved in resolving issues with owner, commissioning of the new bridge & facilities, closeout of project.

2. USACE Infrastructure Expansion Projects at Fort Bliss Army Base, Fort Bliss, TX

Key Personnel Role: Construction Quality Control System Manager
Experience with Current Firm: Tug Hill Construction, Inc.
Project/Assignment Duration: 2007 - 2011
Owner Contact Information: US Army Corps of Engineers (*no direct reference records available*)
Design/Construction Value: \$140 million

Project Description: Projects consisted of all new underground utilities (water, natural gas, electric, commutations, sanitary sewer), reinforced concrete slipform paved roadways, HMA in parking lots, 1 million gallon aboveground water storage tank, demo of existing tanks, airfield apron concrete slipform concrete and more. Specific responsibilities are implemented in the CQC Program on several projects. Conducted preparatory, initial, follow-up and completion phase inspections. Reviewed contract drawings, materials, submittals, testing procedures and approved all submittals and procedures prior to submission to USACE. Supervised a team of CQC Managers and inspectors. Performed surveillance inspections on subcontractors work; audited/monitored independent testing agency program to assure that all tests are being performed per contract requirements. Coordinated inspection and testing with COE.

3. Fort Drum Parallel Taxiway J & Mountain Ramp Expansion, Fort Drum, New York

Key Personnel Role: Quality Manager
Experience with Current Firm: Tug Hill Construction, Inc.
Project/Assignment Duration: 2004 - 2010
Owner Contact Information: US Army Corps of Engineers (*no direct reference records available*)
Design/Construction Value: \$45 million

Project Description: This project consisted of a 10,000-foot concrete taxiway parallel to an active runway with HMA shoulders, taxiway lighting, underground utilities, drainage & two buildings. As CQC Manager, responsible for all quality control inspections, testing, commissioning, coordinate inspection with Owner, attend meetings, reviewed submittals for compliance and much more.

4. Niagara Mohawk Power Corp. Nine Mile Point, Unit 2 Nuclear Power Plant, Lycoming, NY

Key Personnel Role: QC Senior Inspector - QC Inspector Level II
Experience with Current Firm: Stone and Webster Engineering Corp.
Project/Assignment Duration: 1977 - 1986
Owner Contact Information: Niagara Mohawk Power Corp (*company sold - no reference records*)
Design/Construction Value: \$6 billion

Project Description: Project consisted of a new nuclear power generation plant with cooling tower and water intake tunnels on the southeast shore of Lake Ontario. Responsibilities included supervising inspectors performing welding for seismic and non-seismic support inspections for electrical and mechanical systems, as well as welding for modifications of electric panels and other supports in the power generation control complex system. Performed MT & PT inspections, electrical, mechanical, and structural weld inspection as required per codes, standards, and specifications. Performed field inspections on structural and miscellaneous steel followed by final inspections. Conducted laboratory testing on various soils and concrete.

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

Mr. Wilson will be dedicated on-site full-time for the duration of the I-26 Project construction.

KEY INDIVIDUAL RESUME FORM

Brief Resume of Key Individual anticipated for the Project.	
a.	Name & Title: Emilio Ramon Campo Project Safety Manager
b.	Role of Key Individual for this Project: Safety Manager
c.	Name of Firm with which you are now associated: Fluor Enterprises, Inc.
d.	Years of Experience: With this Firm <u>5</u> Years With Other Firms <u>15</u> Years
<p>Fluor Enterprises, Inc., Health, Safety, and Environmental Manager/Supervisor. Responsible for safety on construction of transportation, nuclear power, and manufacturing projects. Establishes and implements a comprehensive HSE safety program, including ensuring compliance with Fluor's Corporate Zero Incident Process policy. Also, responsible for compliance with all OSHA, state, and local HSE standards. Coordinates, implements, and tracks HSE training. Conducts incident investigations and safety audits, and provides bilingual translation of safety meetings and procedures, 2013 to Present.</p> <p>Yates Construction, Site Safety Supervisor. Responsible for overseeing and implementing safe construction procedures and practices on manufacturing and commercial projects. Conducted safety meetings and safety orientations for more than 1,500 employees and provided bilingual translation of safety instructions. Achieved 900,000 work hours without a lost workday on the manufacturing plant site where 9,000 rigid inclusions were drilled, and 30,000 yards of concrete poured. 2011 to 2013.</p> <p>Stevens Shipyard, Safety Officer. Responsible for supervising the overall safety procedures, including both OSHA and shipyard standard procedures, during the construction and repair of ships. Provided training in working in confined spaces applicable to shipbuilding and vessel repair. Fit tested employees with respiratory masks. 2011.</p> <p>KBR, Inc., Site Safety Professional. Responsible for the overall project safety and health activities during construction of a \$500 million polymer manufacturing facility with a peak work force of 1,000 employees. Achieved 1.5 million safe work hours without a lost-time incident. Provided safety orientation to more than 1,500 direct employees and subcontractors and training in hazard assessment, confined space, lockout/tagout, power tools, and fall protection, 2010 to 2011.</p> <p>Jacobs Engineering, Site Safety Professional. Responsible for the development and implementation of project site safety and health program for 1,000 day- and night-shift employees producing modular refinery structures. Project reached one million safe work hours without an injury or incident and was recognized by OSHA with a VPP certification. Duties also included helping supervisors with solutions to steel erection with limited space and different size cranes (crawler and rough terrain), 2008 to 2010.</p> <p>The Industrial Company, Safety Lead. Responsible for managing health and safety operations during construction of two coal-fired power plants with 1,500 employees at peak and subcontractors. Achieved 800,000 safe work hours. Rigged and signaled crane operators and helped direct heavy lifts into place. Translated safety meetings and procedures into Spanish for non-English speaking employees, 2006 to 2008.</p> <p>Parker Rigging, Rigger. Erected numerous steel structures in the Charleston area, including a residential project which includes an art museum at (One Vendue Range), requiring setting up cranes in alleys, unloading structural steel, and hanging steel in place as it was unloaded.</p> <p>Mid-South, Craft Laborer. Provided maintenance and construction services during shutdowns of manufacturing buildings. Assis riggers in the removal and installation of heat exchangers in power plants, 1998 to 2000.</p>	
<p>Education:</p> <p>Columbia Southern University, Orange Beach, Alabama/Pursuing B.AS./Occupational Safety and Health Columbia Southern University, Orange Beach, Alabama/A.A.S./2014/Occupational Safety and Health</p>	
<p>Active Registrations:</p> <p>Certified Rigger – National Center for Construction Education and Research (NCCER) AED, First Aid, and CPR Certified OSHA 10 and 30 Certified</p>	

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

1. I-26 Port Access Road Improvements Design-Build

Key Personnel Role: Safety Manager
Experience with Current Firm: Fluor
Project/Assignment Duration: Project 2016-2020, Assigned 2016-2020
Owner Contact Information: SCDOT, Daniel Burton, burtond@scdot.org, (843) 371-0342
Design/Construction Value: \$220 Million

Project Description:

Supervising safety activities as the initial work in the field has begun on modifying Exits 217 and 218 on I-26 and constructing a new direct access roadway from I-26 to the new port terminal on the former Charleston naval complex site. Providing bilingual (Spanish) safety orientations, training, and audits, while ensuring compliance with Fluor's Corporate Zero Incident Process policy. Responsibilities also include compliance with all OSHA, state, and local HSE standards.

2. SCE&G-Westinghouse, V.C. Sumner Nuclear Generating Station Units 2 & 3, Jenkinsville, SC

Key Personnel Role: Safety Supervisor
Experience with Current Firm: Fluor
Project/Assignment Duration: Project 2016-2017, Assigned 2016
Owner Contact Information: SC Electric and Gas Company, Chad Pillar, CPillar@SCEG.com (803)864-9785

Design/Construction Value: \$2.6 Billion

Project Description:

Assisted supervisors in the implementation of HSE practices and procedures in the management of the construction workforce for two 1,170-MW nuclear electric-generating units. Daily tasks included fall protection, hazard awareness, and rigging requirements, and conducting site inspections. He provided on-site safety orientation for approximately 1,000 new employees. He assisted in the implementation of a new program approved by the Nuclear Regulatory Commission to bring non-English speaking employees into a nuclear facility. He completed training to orientate employees in Spanish on nuclear safety culture that only Westinghouse could perform at the time, and then he managed and directed the successful program.

3. PFC-75 Carbon Electrode Expansion Project, Ridgeville, SC

Key Personnel Role: HSE Supervisor/Manager
Experience with Current Firm: Fluor
Project/Assignment Duration: Project 2013-2016, Assigned 2013-2016
Owner Contact Information: Showa Denko Carbon, Inc., Peggy Griffin, griffinp@showadenko.com, (843)875-3298

Design/Construction Value: \$300 Million

Project Description:

HSE Supervisor/Manager, Fluor Enterprises, Inc., Showa Denko, Inc., PFC-75 Carbon Electrode Expansion Project, Ridgeville, SC, \$300 Million, EPC, (2013 to 2016). Mr. Campo was responsible for implementing the Fluor and site-specific HSE Management System to accomplish building the manufacturing facility of premium graphite electrodes for electric arc furnaces in the steel industry with a commendable TRIR of 0.57. Mr. Campo translated monthly site safety meetings into Spanish to ensure understanding by all employees and provided required training on such safety topics as working at heights, scaffold and ladder uses, hazard assessment, confined space, and hazardous energy control. He held supervisor weekly HSE meetings, contributed to daily pre-shift area meetings, and orchestrated management HSE self-assessments. He enforced compliance with all OSHA requirements through all phases of construction, including excavations, steel erection, critical lifts, mechanical, electrical, and specialty crafts. He reviewed and approved all contractors' job safety analyses and safety plans before site mobilization.

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

Mr. Campo will be dedicated on-site full-time for the duration of the Port Access Road Project construction.



Appendix B – Work History and
Quality Forms – Contractor/Designer -
Section 3.5.1

WORK HISTORY AND QUALITY FORM – CONTRACTOR
Fluor Enterprises, Inc. and The Lane Construction Corporation – Fluor-Lane South Carolina LLC (FLSC)

a. Project Name & Location (City, State)	b. Name of lead responsible for the overall project design or construction	c. Contact information of the Client & their Project Manager who can verify FLSC's responsibilities	d. Actual or Estimated Construction & Professional Services Completion Date	e. Actual or Estimated Project Construction Cost (in thousands)	f. Dollar Value of Work Performed by FLSC (in thousands)
Name: I-26 Port Access Road Improvement Project (Design-Build) Location: Charleston, SC	Name: Johnson, Mirmiran & Thompson, Inc.	Name of Owner: SCDOT Project Manager: Daniel Burton, RCE Phone: 843.371.0342 Email: burtond@scdot.org	Professional Services: 2/2018 Anticipated Construction Completion: 1/2020	\$220,700	\$121,385

g. Narrative describing the work performed by FLSC.

The Port Access Road Improvement Project is a new roadway, interchange and structure project that provides direct access between the Hugh Leatherman Container Terminal, currently under construction, located on the former Navy Base and Interstate 26 (I-26), while maintaining adequate service for local, commuter, and commercial traffic. The project consists of the construction of a new fully-directional interchange on I-26, a Bainbridge Connector Road, the extension of Stromboli Avenue and associated roadway improvements to surface streets to serve the proposed Naval Base Terminal (NBT) in Charleston County, South Carolina. The project's scope includes local roadway enhancements to safely integrate container terminal traffic with existing traffic; support local and regional planning policies and strategies; and minimize adverse impacts on nearby communities, the traveling public and the environment. The Port Access Road Improvement Project will provide new interchanges with improved mobility serving the fastest growing container port in the US, enhance economic development and improve local roadway network access to I-26. Construction completion is expected in early 2020.

Fluor served as the lead partner of the design-build integrated joint venture Fluor-Lane South Carolina LLC (FLSC) with The Lane Construction Corporation. As the Lead Contractor, FLSC provides full design-build delivery and self-performs construction and associated roadway improvements to surface streets serving the proposed terminal. FLSC is also responsible for overall project management for the scope of services including roadway and bridge engineering/design and construction; geotechnical engineering; seismic design; utility coordination; right-of-way acquisition services; hazardous material management; demolition of existing interstate interchange bridges.

Key Individuals:

Tom Meador (Lane), Patrick Kerrigan (Lane), Emilio Campo (Fluor), and Eric Dickey (D&F) were key individuals on the Port Access Road project and are proposed as key individuals on the I-26 Widening project.

DB Team Members:

Fluor, Lane, KCI, D&F, and S&ME worked together as team members on the Port Access Road project and are proposed to work together on the I-26 Widening project as part of the design-build team.

h. Self-Assessment. The information provided in this section should be a self-assessment of Lane's performance on the project to identify FLSC with firms or personnel that have successfully completed projects on time and on or under budget, and to identify FLSC has records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.

The Port Access Road Improvement Project is ongoing and is currently on time and under budget. Design is substantially complete and major design consultants KCI, D&F, and S&ME have completed all work on time, on budget, and without any claims or litigation. Construction is ongoing and is on schedule, on budget, and FLSC continues to partner with SCDOT to address project elements to satisfactory resolution. We are effectively managing contracts and have no records of delays, claims, dispute proceedings, litigation, or arbitration. FLSC's use of weekly design and construction progress meetings with SCDOT allowed the joint venture to identify and address issues early. If issues could not be resolved at the job level within a reasonable amount of time, they were elevated to FLSC and SCDOT regional management to help in the resolution process. Notably, the JV reached a successful agreement of the SCE&G Power Transmission time extension change order and fully supports continued partnering. FLSC achieved Fluor's 5-Star Safety Award for Health, Safety and Environmental Awareness with nearly 350,000 work hours without a lost time accident, and received Lane's Safest Project of the Year for 2017.

i. Quality Initiatives. Discuss FLSC's quality initiatives including, but not limited to, cost control, schedule management and adherence, avoidance of claims, and other pertinent initiatives enhancing quality on the project.

FLSC incorporated several techniques into the project to increase overall quality, including: 1) incorporated structured work plans, and preparatory/pre-construction meetings with SCDOT; 2) reduced construction-related traffic delays due to proactive project scheduling; 3) optimized the schedule to minimize the effect of 3rd party delays. The project currently has no claims and remains ahead of schedule for the SCSA new terminal opening. In addition, the JV has effectively managed field quality on permanent production items, including concrete, drilled shafts, hazardous materials, erosion control, and other elements.

j. For each question in Section 3.5.2 of the RFQ for which a "Yes" answer was provided, FLSC shall provide a detailed explanation below.

Not applicable.

I-26 PORT ACCESS ROAD IMPROVEMENT
\$220 MILLION DESIGN-BUILD
CHARLESTON, SC | 2010 - 2020



FLSC Port Access Improvement Road Project receives 5 Star Safety Award. Left to Right: Joel Smith (SCDOT), Leland Colvin (SCDOT), Brian Tolbert (FLSC), Christy Hall (SCDOT), Daniel Burton (SCDOT), and Patrick Kerrigan (FLSC).

Relevancies to I-26 Widening Project

- ✓ Heavily traveled Interstate
- ✓ Work with SCDOT and WSP
- ✓ Interstate 26 interchange and concrete paving
- ✓ Structure and seismic design
- ✓ Complex demolition
- ✓ Hazardous material management

WORK HISTORY AND QUALITY FORM – CONTRACTOR
Fluor Enterprises, Inc. and The Lane Construction Corporation – Fluor-Lane 95, LLC

a. Project Name & Location (City, State)	b. Name of lead responsible for the overall project design or construction	c. Contact information of the Client & their Project Manager who can verify Fluor-Lane 95's responsibilities	d. Actual or Estimated Construction & Professional Services Completion Date	e. Actual or Estimated Project Construction Cost (in thousands)	f. Dollar Value of Work Performed by Fluor-Lane 95 (in thousands)
Name: 95 Express Lanes Location: Fairfax and Stafford Counties, Virginia	Name: HNTB	Name of Owner: Virginia Department of Transportation (VDOT) Project Manager: Garrett Moore, P.E. Phone: 804.786.4798 Email: Garrett.Moore@vdot.virginia.gov	12/2014	\$691,000	\$691,000

g. Narrative describing the work performed by Fluor-Lane 95.

The 95 Express Lanes Project expanded 14 miles of existing High Occupancy Vehicle (HOV) lanes on the I-95 corridor from two lanes to three lanes, made operational improvements to another six miles of existing HOV lanes, and built a new nine-mile extension to the facility to eliminate an existing bottleneck. The project was built in just 29 months and brings the most significant changes to the I-95 corridor in a generation. The key components of the I-95 Express Lanes Project include performing structural bridge work including building 5 new bridges, 4 new flyover ramps, 3 widened bridges, and 15 bridge/ramp repairs; building a new 9-mile roadway extension consisting of major clearing, earthwork, drainage improvements and bridge flyovers; installing more than 700 miles of cable and wire and more than 1,000 tolling and traffic management devices; and placing more than 1 million square feet of sound walls.

Fluor served as the managing partner of the design-build joint venture (Fluor-Lane 95 LLC) with The Lane Construction Corporation. The project was divided into four separate construction segments that allowed four teams to work on different sections of the project simultaneously. Each team coordinated all construction activities as well as lane closures in its area. The work zones within each area were separated by temporary traffic barriers to protect both the traveling public and the workers.

This project also included extensive public and community relations, and 3rd party coordination, with more than 1,000 outreach events.

95 EXPRESS LANES
\$691 MILLION DESIGN-BUILD
FAIRFAX / STAFFORD, VA | 2012 - 2014



Relevancies to I-26 Widening Project

- ✓ Roadway widening, bridges, and major interchanges
- ✓ Segmentation with complex, phased MOT
- ✓ Environmentally sensitive project
- ✓ Sound walls and retaining walls
- ✓ Fast track schedule: 29 miles in 29 months
- ✓ Critical path activities self-performed

h. Self-Assessment. The information provided in this section should be a self-assessment of Fluor-Lane 95's performance on the project to identify that Fluor-Lane 95's personnel that have successfully completed projects on time and on or under budget, and to identify that Fluor-Lane 95 has records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.

The 95 Express Lanes Project was successfully completed two weeks ahead of an already aggressive 29 month schedule. In addition to this, the project also achieved more than 4 million safe work hours without a lost time incident and the team maintained an OSHA recordable rate of 0.39, substantially below the industry national average of 3.6. This rating makes the project one of the safest ever in the U.S. The Project was also awarded the ARTBA and Transportation Builders Association's Transportation Development Foundation 2014 Contractor Safety Award and the VDOT and Transportation DBE Advisory Committee 2014 Prime Contractor of the Year Award. Fluor-Lane 95 delivered ahead of schedule and under budget and successfully managed the contract to minimize delays, claims, dispute proceedings, litigation, and arbitration.

i. Quality Initiatives. Discuss Fluor-Lane 95's quality initiatives including, but not limited to, cost control, schedule management and adherence, avoidance of claims, and other pertinent initiatives enhancing quality on the project.

Value Creation / Innovation. The project used innovative Technical Work Groups involving the owner, Virginia Department of Transportation (VDOT), the Concessionaire, 95 Express Lanes, LLC (95XL), 3rd party designers (HNTB/HDR), Fluor-Lane 95 estimating and construction staff to optimize the design for long-term operations and maintenance while reducing construction costs. Constructability reviews were conducted to optimize the design. **Cost Control.** The project significantly underran budgeted costs as a result of the value creation, innovation, contracting strategy and weekly/monthly monitoring of production and costs with the field staff. Continuous Value Creation initiatives such as Notice of Design Change (NDC) and Field Design Changes (FDCs) were utilized during construction which improved the design based on field conditions. An example of value creation generated by a FDC was the reduction in asphalt paving once the construction team learned that there was existing concrete pavement. An FDC was generated by the field and reviewed by our designers who modified the pavement section to utilize the strength of the existing concrete pavement versus demolishing the existing pavement. During construction over 450 FDC's were generated and approved by the Client and over 210 NDCs were generated and approved by the client.

j. For each question in Section 3.5.2 of the RFQ for which a "Yes" answer was provided, Fluor-Lane 95 shall provide a detailed explanation below.

Not applicable.

WORK HISTORY AND QUALITY FORM – CONTRACTOR

Lane Construction Corporation

a. Project Name & Location (City, State)	b. Name of lead responsible for the overall project design or construction	c. Contact information of the Client & their Project Manager who can verify Lane’s responsibilities	d. Actual or Estimated Construction & Professional Services Completion Date	e. Actual or Estimated Project Construction Cost (in thousands)	f. Dollar Value of Work Performed by Lane (in thousands)
Name: I-85 Widening Cabarrus (I-3803B) Location: Cabarrus County, NC	Name: HDR, Inc.	Name of Owner: NCDOT Project Manager: Rodger Rochelle, PE Phone: 919.707.6601 Email: rdrochelle@ncdot.gov	Construction: 6/2015	\$149,000	\$149,000

g. Narrative describing the work performed by Lane.

This design-build (DB) project widened and reconstructed a four-lane facility in a highly congested rural interstate area to an eight-lane divided facility with concrete pavement for nearly seven miles. The project included the design of two diverging diamond interchanges (DDIs) and superstreets at major side roads. The DDIs effectively extends the functional life of these interchanges by 10 years. All designs and applications were completed and approved by NCDOT in seven months. Traffic control, utility coordination, and ROW acquisition are critical aspects of this project. An innovative work zone traffic control and access plan was developed to allow unimpeded access to the existing median to improve safety, minimize impacts, reduce stress on existing peripheral infrastructure, accelerate the project schedule, and reduce cost of construction by increasing efficiency.

The majority of the new roadway width was constructed in the existing 70-foot median, creating a difficult access challenge and a potential safety concern for the travelling public. Our approach allowed unimpeded access to the existing median, thus improving safety, minimizing impacts to traffic, reducing stress on existing peripheral infrastructure, accelerating the project schedule, and reducing the cost of construction by increasing efficiency.

Awards received include:

- 2013 NAPA ‘Asphalt Operations Safety Innovations’ Award; 2012 ARTBA ‘TransOvation’ Award; 2012 ARTBA ‘Roadway Work Zone Safety Awareness’ Award.

Unique Challenges/Innovative Solutions:

- Due to severe congestion and contract hauling restrictions on the roads crossing I-85, Lane constructed temporary access ramps and a median access ramp to mitigate hauling traffic on the interstate.
- The safety improvements resulting from this concept were significant. The need to haul 40,000 loads of material across interstate traffic into the median was completely eliminated and, while hauling was critical, thousands of trips by construction and NCDOT inspection staff were also made safely without entering traffic.



**I-85 WIDENING CABARRUS
\$149 MILLION DESIGN-BUILD
CABARRUS COUNTY, NC | 2010 - 2015**

Relevancies to I-26 Widening Project

- ✓ Heavily traveled rural Interstate
- ✓ Interstate widening, bridges, and major interchanges
- ✓ Concrete pavement reconstruction
- ✓ Median construction
- ✓ Complex phased MOT
- ✓ Sound walls and retaining walls
- ✓ Public and 3rd party coordination

h. Self-Assessment. The information provided in this section should be a self-assessment of Lane’s performance on the project to identify Lane with firms or personnel that have successfully completed projects on time and on or under budget, and to identify Lane has records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.

Lane won this pursuit due to its presence both in the design-build (DB) arena as well as the region, especially considering the footprint created by our plants. This was one of the largest DB projects in the region and involved interstate maintenance of traffic plans, as well as concrete paving, which Lane is experienced in.

“The I-85 widening project is a success story that is the result of Lane’s people, effective project management, and proactive change management. Lane is committed to the delivery of a quality project that will meet the needs of the community. The project would not have been successful without Lane’s willingness to partner with the NCDOT and work together toward a common goal.” – Davis Diggs, PE, NCDOT District Engineer (former)

i. Quality Initiatives. Discuss Lane’s quality initiatives including, but not limited to, cost control, schedule management and adherence, avoidance of claims, and other pertinent initiatives enhancing quality on the project.

Lane’s financial and scheduling solutions made a high impact on this project. Through leveraging the efficiency afforded by the Access Bridge and ramps, Lane provided the NCDOT and FHWA with a very aggressive schedule and highly competitive cost proposal. Ultimately, this translated into a proposed completion date 11 months prior to the required final completion and a bid price \$8.5 million below the engineers’ estimate, while providing significant safety enhancements. The project was completed with no claims.

j. For each question in Section 3.5.2 of the RFQ for which a “Yes” answer was provided, Lane shall provide a detailed explanation below.

Not applicable.

WORK HISTORY AND QUALITY FORM – DESIGNER

Lane Construction Corporation

a. Project Name & Location (City, State)	b. Name of lead responsible for the overall project design or construction	c. Contact information of the Client & their Project Manager who can verify Lane’s responsibilities	d. Actual or Estimated Construction & Professional Services Completion Date	e. Actual or Estimated Project Construction Cost (in thousands)	f. Dollar Value of Work Performed by Lane (in thousands)
Name: I-385 Improvements Location: Greenville, SC	Name: The Lane Construction Corporation STV Incorporated - Designer	Name of Owner: SCDOT Project Manager: Claude Ipock Phone: 803-737-1306 Email: ipockcr@scdot.org	Construction: 12/2012	\$65,000	\$65,000

g. Narrative describing the work performed by Lane.

This design-build (DB) project is the largest American Recovery and Reinvestment Act (ARRA)-funded project in South Carolina. I-385 is the most direct and heavily traveled route between Greenville and Columbia. The road handles more than 60,000 vehicles per day, and that number is expected to increase to 80,000 per day by 2028. The project consists of the widening of Interstate 385 to six lanes and to reconstruct the mainline pavement to accommodate interstate traffic. The \$65 million DB project included the design and construction improvements on 5.5 miles of I-385 in Greenville.

Lane widened the interstate from four asphalt lanes to six concrete lanes with asphalt rehabilitation and cross-slope corrections on the north and south ends of the project. Two sets of dual bridges were widened along with construction of 3,000 feet of noise walls. Lane also repaved I-385 from south of Woodruff Road to south of Roper Mountain Road, resulting in a total project length of approximately seven miles. Traffic control was critical to maintaining four travel lanes on this project. An innovative median access ramp for construction vehicles was implemented which improved flow of traffic and effectively maximized safety for both the traveling public and construction crews. Except for limited night time closures, Lane kept two lanes of traffic open during construction.

Lane setup an on-site Portland Cement Concrete (PCC) central mix batch plant, that allowed the team to control product quality and provide dedicated on-time material delivery. This on-site setup enabled successful management of the critical path schedule, with reduced costs.

DB Team Members:

Lane and S&ME worked together as team members on the I-385 Improvements project and are proposed to work together on the I-26 Widening project as part of the design-build team.

**I-385 IMPROVEMENTS
\$65 MILLION DESIGN-BUILD
GREENVILLE, SC | 2010 - 2012**



Relevancies to I-26 Widening Project

- ✓ Heavily traveled rural Interstate
- ✓ Concrete pavement reconstruction
- ✓ Interstate widening
- ✓ Structure design and construction
- ✓ Interchange Modification design
- ✓ Complex Maintenance of Traffic Sequencing
- ✓ Capacity enhancements through Traffic engineering
- ✓ Erosion and sediment control compliance
- ✓ Utility design and coordination

h. Self-Assessment. The information provided in this section should be a self-assessment of Lane’s performance on the project to identify Lane with firms or personnel that have successfully completed projects on time and on or under budget, and to identify Lane has records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.

Lane worked with the designer as both the designer of record and as an outside engineering consultant and inspector to successfully complete the work for SCDOT. The team was able to partner with SCDOT on numerous occasions to work 16 sixteen change orders while keeping the project overall cost within 0.5% of the original bid price and without time penalties. Lane’s use of weekly design and construction progress meetings with SCDOT allowed us to identify and address issues early. If issues could not be resolved at the job level within a reasonable amount of time, they were elevated to Lane and SCDOT regional management to help in the resolution process. This process was successful for both Lane and SCDOT in issue resolution as evidenced by the fact that no claims, disputes resolution, litigation or arbitration proceedings were needed to complete the project.

i. Quality Initiatives. Discuss Lane’s quality initiatives including, but not limited to, cost control, schedule management and adherence, avoidance of claims, and other pertinent initiatives enhancing quality on the project.

Lane incorporated several techniques into the project to increase overall quality, including 1) improved flow of traffic along the interstate in Greenville and accommodation for future expected growth; 2) reduced construction-related traffic delays due to in-depth project scheduling; 3) lane widening decreased congestion through rush hour; 4) sound wall reduced noise to the adjacent properties; 5) job creation for surrounding companies; 6) concrete pavement provided long-term, higher quality ride for drivers; and 7) concrete roadway has a life span of at least 50 years without significant maintenance. The project was completed with no claims.

j. For each question in Section 3.5.2 of the RFQ for which a “Yes” answer was provided, Lane shall provide a detailed explanation below.

Not applicable.

WORK HISTORY AND QUALITY FORM – DESIGNER

Lane Construction Corporation

a. Project Name & Location (City, State)	b. Name of lead responsible for the overall project design or construction	c. Contact information of the Client & their Project Manager who can verify Lane’s responsibilities	d. Actual or Estimated Construction & Professional Services Completion Date	e. Actual or Estimated Project Construction Cost (in thousands)	f. Dollar Value of Work Performed by Lane (in thousands)
Name: I-4 Ultimate Improvement Project Location: Orange and Seminole County, FL	Name: I-4 Mobility Partners – Concessionaire HDR, Inc. - Designer	Name of Owner: FDOT District Construction Engineer: John Tyler, PE Phone: 386.943.5344 Email: john.tyler@dot.state.fl.us	Construction: 03/2021	\$2,320,000	\$660,000

g. Narrative describing the work performed by Lane.

This Design-Build P3 project includes the reconstruction of 21 miles of I-4 from west of Kirkman Road in Orange County to east of SR 434 in Seminole County, including the addition of four tolled express lanes to I-4 while maintaining the existing free general use lanes. The express lanes will be operated with variable tolls which will be adjusted to improve traffic flow throughout the corridor. The I-4 Ultimate project will reconstruct 15 major interchanges and construction on 140 bridges (13 will be widened, 74 will be replaced, and 53 will be newly constructed). SGL Constructors, a construction joint venture in which Lane is a major member, will pave the new and existing roadways with more than 1.1 million tons of asphalt and 180,000 CY of concrete. There will be more than 630,000 additional cubic yards of bridge and structural concrete placed on the project. The project is being managed in four project areas:

- Area 1 will feature a new pedestrian bridge and a new overpass on Grand National Drive which will connect directly to the Express Lanes.
- Area 2 will feature an updated interchange at Orange Blossom Trail, which will eliminate the left-turn exit and replace it with a right-hand exit. In addition, the westbound I-4 exit ramp will be realigned to sweep further away from I-4 before crossing Orange Blossom Trail. The on-ramps and off-ramps at the Michigan Street and Kaley Street interchanges will be braided to eliminate weaving. The Colonial Point interchange will be reconfigured to a single-point urban interchange (SPUI).
- Area 3 will feature direct-connect ramps from Ivanhoe Boulevard to the eastbound Express Lanes and from the westbound Express Lanes to Ivanhoe Boulevard. Additional improvements will be made to interchanges at Princeton Street and East Par Street. The curve at Fairbanks Avenue previously had the highest accident rate along the entire I-4 corridor. The roadway will be realigned to increase sight distance and improve safety. An additional exit lane will be added at the Lee Road interchange.
- Area 4 will feature a new interchange at Maitland Boulevard and Maitland Summit. The Wymore Road overpass will be widened, and the interchange between I-4 and SR 436 will be converted into a SPUI. A pedestrian underpass underneath SR 436 will be constructed. The interchange between I-4 and SR 434 will include a longer exit ramp to prevent traffic from backing up onto I-4.

Select Awards

Envision Platinum Certification award from the Institute for Sustainable Infrastructure (ISI) | 2015 North American P3 Awards - Best Transportation Project - Silver Award

h. Self-Assessment. The information provided in this section should be a self-assessment of Lane’s performance on the project to identify Lane with firms or personnel that have successfully completed projects on time and on or under budget, and to identify Lane has records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.

Lane, as a major member of the CJV, has worked with the design team to refine elements on the project to enhance constructability, and improve the overall implementation of temporary works. One of the key challenges we were successful in implementing is the Maintenance of Traffic in an congested urban corridor. This project is successful for Lane and FDOT as evidenced by the fact that there are no claims, disputes resolution, litigation or arbitration proceedings.

i. Quality Initiatives. Discuss Lane’s quality initiatives including, but not limited to, cost control, schedule management and adherence, avoidance of claims, and other pertinent initiatives enhancing quality on the project.

The CJV implemented a comprehensive planning process, which encompasses day to day activities, in addition to critical elements, to help streamline the day to day operations. This planning process includes managers, superintendents, foreman, and even crew level individuals. Elements of the planning process include; safety hazard identification, traffic control, erosion control, materials, equipment, material testing/inspection requirements and any other items that would be needed to successfully complete a day’s work. Due to the sheer size of the project, each area has its own dedicated scheduler, as well as an overall project schedule manager. In addition to the monthly schedule updates, 3-4 week look ahead schedules outline the day to day progression of the work.

j. For each question in Section 3.5.2 of the RFQ for which a “Yes” answer was provided, Lane shall provide a detailed explanation below.

Not applicable.

**I-4 ULTIMATE
\$2.3 BILLION DESIGN-BUILD P3
ORANGE AND SEMINOLE COUNTY, FL
2014 - 2021**



Relevancies to I-26 Widening Project

- ✓ Large, complex project with concrete express lanes
- ✓ Multi-phased construction in urban corridor
- ✓ Interstate widening, bridges, and major interchanges
- ✓ Complex phased MOT
- ✓ Environmentally sensitive project
- ✓ Community relations and public outreach
- ✓ Sound walls and retaining walls
- ✓ Public and 3rd party coordination

WORK HISTORY AND QUALITY FORM – DESIGNER
WSP USA Inc.

a. Project Name & Location (City, State)	b. Name of lead responsible for the overall project design or construction	c. Contact information of the Client & their Project Manager who can verify Designer’s responsibilities	d. Actual or Estimated Construction & Professional Services Completion Date	e. Actual or Estimated Project Construction Cost (in thousands)	f. Dollar Value of Work Performed by WSP USA (in thousands)
Name: I-85 Widening Design-Build (I-3802A) Location: Cabarrus County, NC	Name: Blythe Construction, Inc. WSP USA - Designer	Name of Owner: NCDOT Project Manager: Khaled Al-Akhdar Phone: (919)707-6612 Email: kalakhdar@ncdot.gov	05/2015 – Professional Services 05/2020-Estimated Construction Completion	\$ 230,000	\$19,000

g. Narrative describing the work performed by WSP USA.

WSP is the lead design engineer for this \$230-million design-build (DB) project in Cabarrus County, North Carolina. The project reconstructs existing pavement and widens the fully controlled access freeway for eight miles, from just north of NC 73 to the Cabarrus County line. The project will widen I-85 from four to eight lanes, reconstruct and reconfigure three interchanges, revise rest area ramps, and includes 17 bridges. The project also includes 1 mile of railroad track relocation and the reconstruction of a railroad bridge over I-85. The project will increase capacity, improve safety, and enhance connectivity to surrounding neighborhoods and businesses in this highly congested corridor.

Many innovative approaches and proposed solutions contributed to the Team’s success including an accelerated design schedule. WSP’s proposed design reduced stream and wetland impacts by nearly 30 percent. The team submitted several Alternative Technical Concepts (ATC) that were accepted by NCDOT. The ATCs not only illustrated the team’s ability to propose innovative solutions, but also reduced the overall construction and right-of-way cost by \$5 million, addressed concerns of key stakeholders and allowed for improved maintenance of traffic. The existing interchange of I-85 and US 29/US 601 is a full cloverleaf interchange. WSP designed the new Diverging Diamond Interchange (DDI) separating the opposing movements on two bridges outside the footprint of the existing bridges. Constructing two new bridges in this manner avoided staged construction by allowing existing bridges to remain in service during construction activities. This approach limited disruption to the existing traffic pattern and reduced the overall construction schedule. Another innovative Maintenance of Traffic strategy designed a temporary diamond interchange at the US 29/US 601 interchange to facilitate the Maintenance of Traffic during the Interchange Modification from a full clover interchange to a DDI. The temporary signals for the diamond were strategically located at the future cross over locations of the DDI to maximize construction away from traffic and facilitate future implementation of the DDI. WSP completed the design work in their Charlotte, NC office.

**I-85 WIDENING DESIGN-BUILD
\$230 MILLION DESIGN-BUILD
CABARRUS COUNTY, NC | 2015 - 2020**



Relevancies to I-26 Widening Project

- ✓ Pavement reconstruction design
- ✓ Interstate widening
- ✓ Structure design
- ✓ Interchange Modification design
- ✓ Complex MOT Sequencing
- ✓ Capacity enhancements through traffic engineering
- ✓ Erosion and sediment control compliance
- ✓ Utility and Railroad design and coordination

h. Self-Assessment. The information provided in this section should be a self-assessment of WSP’s performance on the project to identify that WSP’s personnel have successfully completed projects on time and on or under budget, and to identify that WSP has records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.

WSP successfully managed the design contract to minimize delays, claims, dispute proceedings, litigation, and arbitration. WSP completed the design plans and acquired the environmental permit on time. WSP managed the change control process, for owner requested changes, which included interchange reconfigurations, pavement reconstruction strategies, and MOT sequencing to keep the design tasks on schedule and reduce the construction duration of these key project areas. There are no delays or claims assessed against WSP as part of this project.

i. Quality Initiatives. Discuss WSP’s quality initiatives including, but not limited to, cost control, schedule management and adherence, avoidance of claims, and other pertinent initiatives enhancing quality on the project.

Our approach to quality management is to proactively plan, schedule, and execute design plans to provide the desired end product with no rework. As part of the I-3802A project we had a dedicated quality control manager that created a Quality Management Plan (QMP) that spelled out the requirements for quality control. Every deliverable was required to have a technical review by the responsible discipline with a sign-off sheet documenting that our quality process was followed. In addition, our QMP required that all deliverables go through an interdisciplinary review (IDR). The IDR required that every discipline manager review any design plans before being submitted to the client. This ensured there were no conflicts with other disciplines and prevented disciplines from designing in a without the proper coordination. Weekly design meetings to review deliverables were scheduled to ensure timely submittals. The weekly design meetings and QMP led to the acceptance of RFC plans on time.

j. For each question in Section 3.5.2 of the RFQ for which a “Yes” answer was provided, WSP shall provide a detailed explanation below.

Not applicable.

WORK HISTORY AND QUALITY FORM – DESIGNER
WSP USA Inc.

a. Project Name & Location (City, State)	b. Name of lead responsible for the overall project design or construction	c. Contact information of the Client & their Project Manager who can verify Designer’s responsibilities	d. Actual or Estimated Construction & Professional Services Completion Date	e. Actual or Estimated Project Construction Cost (in thousands)	f. Dollar Value of Work Performed by WSP USA (in thousands)
Name: I-85 Widening Design-Build (I-2304AD) Location: Davidson County, NC	Name: Austin Bridge & Road / Balfour Beatty Infrastructure Joint Venture HDR (formerly Florence & Hutcheson) - Designer WSP USA – Subconsultant Designer	Name of Owner: NCDOT Project Manager: Khaled Al-Akhdar Phone: (919)707-6612 Email: kalakhdar@ncdot.gov	2011 – Professional Services 09/2013 – Construction	\$65,500	\$ 1,330

g. Narrative describing the work performed by WSP USA.

This NCDOT design-build (DB) widened approximately six miles (9.7 kilometers) of I-85 from four to eight lanes and then reconstructed all existing concrete pavement. The \$65.5 million project played a critical role in not only addressing current transportation needs, but also in meeting the travel demands of the future. NCDOT awarded the second phase of this DB project to Austin Bridge & Road / Balfour Beatty Infrastructure Joint Venture. This completed project facilitates traffic flow, commerce, and speed in instances of emergency or national security.

WSP served as a major subconsultant for the project, the reconstruction of I-85 from south of Clark Road to north of the I-85 business interchange in Lexington, North Carolina. As a subconsultant, WSP was responsible for the structure design for a new Belmont Road bridge over I-85, utility coordination, water/sewer design, pavement marking plans and assisting with traffic control plans and detours. In addition, WSP was responsible for the roadway, drainage and erosion control design plans for approximately 2.5 miles (4 kilometers) of the northern end of the project as well as design for the frontage roads. WSP completed the design work from their Charlotte, NC office.

Key Individuals and DB Team Members:

Tom Meador (Lane, formerly AB&R) was the Project Manager for the project.

WSP served as a major design subconsultant on the project.

**I-85 WIDENING DESIGN-BUILD
\$65.5 MILLION DESIGN-BUILD
DAVIDSON COUNTY, NC | 2010 - 2013**



Relevancies to I-26 Widening Project

- ✓ Concrete Interstate widening
- ✓ Structure design
- ✓ Interchange Modification design
- ✓ Capacity enhancements through traffic engineering
- ✓ MOT in a highly congested corridor
- ✓ Utility design and coordination

h. Self-Assessment. The information provided in this section should be a self-assessment of WSP’s performance on the project to identify that WSP’s personnel have successfully completed projects on time and on or under budget, and to identify that WSP has records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.

WSP met all schedule assignments and budget goals for design related activities on the project. WSP successfully managed the subcontract to minimize delays, claims, dispute proceedings, litigation, and arbitration. There were no delays or claims assessed against WSP as part of this project.

i. Quality Initiatives. Discuss WSP’s quality initiatives including, but not limited to, cost control, schedule management and adherence, avoidance of claims, and other pertinent initiatives enhancing quality on the project.

WSP’s approach to quality management is to proactively plan, schedule, and execute design plans to provide the desired end product with no rework. As part of the I-2304AD project, WSP had a dedicated quality control manager that created a Quality Management Plan (QMP) that spelled out the requirements for quality control. Every deliverable was required to have a technical review by the responsible discipline with a sign-off sheet documenting that the quality process had been followed. In addition, the QMP required that all deliverables go through an interdisciplinary review (IDR). The IDR required that every discipline manager review any design plans before being submitted to the client. This ensured there were no conflicts with other disciplines and prevented disciplines from designing in a without the proper coordination. Weekly design meetings to review deliverables were scheduled to ensure timely submittals. The weekly design meetings and QMP led to the acceptance of RFC plans on time.

j. For each question in Section 3.5.2 of the RFQ for which a “Yes” answer was provided, WSP shall provide a detailed explanation below.

Not applicable.

WORK HISTORY AND QUALITY FORM – DESIGNER
WSP USA Inc.

a. Project Name & Location (City, State)	b. Name of lead responsible for the overall project design or construction	c. Contact information of the Client & their Project Manager who can verify Designer’s responsibilities	d. Actual or Estimated Construction & Professional Services Completion Date	e. Actual or Estimated Project Construction Cost (in thousands)	f. Dollar Value of Work Performed by WSP USA (in thousands)
Name: Dallas Horseshoe D-B Reconstruction Location: Dallas, TX	Name: Pegasus Link Constructors (Fluor/Balfour Beatty) WSP USA - Designer	Name of Owner: TxDOT Project Manager: Duane Milligan Phone: (214) 320-6110 Email: Duane.Milligan@txdot.gov	04/2017 – Professional Services 04/2017 - Construction Completion	\$715,200	\$26,970

g. Narrative describing the work performed by WSP USA.

WSP served as the lead designer for the Dallas Horseshoe design-build project, which include full reconstruction of the IH 30/IH 35E interchange in Dallas as well as construction of a signature bridge (the Margaret McDermott Bridge) designed by architect Santiago Calatrava. Design for the roadway expansion included widening the road to 23 lanes at its widest, the addition of 73 new lane miles on IH 30 and IH 35E, and the reconstruction of the existing interchange, including new direct connectors for major movements within the interchange. Approximately 80% of the 73 lane miles of the project are on an elevated roadway section. The project corrects existing geometric deficiencies, repairs and replaces the deteriorating structures, and adds capacity to the interchange and frontage roads.

The confined right-of-way in this corridor presented a significant challenge, which was overcome by utilizing “outside-in” construction allowing both the safe maintenance of traffic (MOT) and safe access to the work area. Access points were identified early in the design process and integrated into the traffic management plan. Temporary crossings of the Trinity River were used to simplify access to both sides of the waterway.

Additionally, the presence of a historic viaduct presented a unique MOT challenge, which WSP solved by manipulating existing and new traffic lanes through the existing arched portals of the existing Houston Street Bridge.

Significant coordination was undertaken with the numerous project stakeholders, including the North Texas Tollway Authority regarding the design and construction of the Trinity Parkway Toll Road and Dallas County Department of Public Works regarding their Riverfront Parkway. In addition, IH 30 crosses under Union Pacific Railroad (UPRR) and Dallas Area Rapid Transit (DART) Red and Blue lines. WSP worked closely with stakeholders to ensure the design accommodated significant railroad work restrictions—limited access, 24-7 site monitoring, uninterrupted rail line service and extensive night work.

DB Team Members:

Fluor and WSP worked together as team members on the Dallas Horseshoe project and are proposed to work together on the I-26 Widening project as part of the design-build team.

DALLAS HORSESHOE RECONSTRUCTION
\$715 MILLION DESIGN-BUILD
DALLAS, TX | 2013 - 2017



Relevancies to I-26 Widening Project

- ✓ Concrete pavement reconstruction design
- ✓ Major congested roadway widening
- ✓ System to system interchange reconfiguration
- ✓ Structure design
- ✓ Complex MOT
- ✓ Capacity enhancements through traffic engineering
- ✓ Railroad coordination
- ✓ Utility design and coordination
- ✓ Environmental permitting proactively sought to ensure schedule adherence
- ✓ DBE/SWaM program goals met
- ✓ Extensive and continual stakeholder outreach

h. Self-Assessment. The information provided in this section should be a self-assessment of WSP’s performance on the project to identify that WSP’s personnel have successfully completed projects on time and on or under budget, and to identify that WSP has records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.

WSP completed the design on time and within the budget. The design team was responsible for the quality, completeness, schedule, and cost of all design deliverables. These included roadway, drainage, bridge, retaining wall, traffic, hydraulic/hydrology, and maintenance of traffic design as well as geotechnical engineering, aesthetics, environmental compliance, and utilities/subsurface utility engineering for the two project segments.

i. Quality Initiatives. Discuss WSP’s quality initiatives including, but not limited to, cost control, schedule management and adherence, avoidance of claims, and other pertinent initiatives enhancing quality on the project.

The design and construction team implemented proven quality systems, like a dedicated Design Quality Control Manager (DQCM), to deliver a value-added project by utilizing proper risk assessment, life-cycle analysis, and proactive information sharing. WSP’s processes allowed the owner to effectively integrate with the DB team on transparency and accountability to deliver an on-time high quality project. The DQCM conducted independent checks for accuracy and thoroughness to confirm the project was performing to the letter of the Quality Management Plan. The project was delivered on schedule, despite the complexity of a number of its elements.

j. For each question in Section 3.5.2 of the RFQ for which a “Yes” answer was provided, WSP shall provide a detailed explanation below.

Not applicable.

WORK HISTORY AND QUALITY FORM –DESIGNER
WSP USA Inc.

a. Project Name & Location (City, State)	b. Name of lead responsible for the overall project design or construction	c. Contact information of the Client & their Project Manager who can verify Designer’s responsibilities	d. Actual or Estimated Construction & Professional Services Completion Date	e. Actual or Estimated Project Construction Cost (in thousands)	f. Dollar Value of Work Performed by WSP USA (in thousands)
Name: I-264 Widening/MLK Extension Location: Portsmouth / Norfolk, VA	Name: SKW (Skanska Kiewit Weeks, a Joint Venture) WSP USA – Designer	Name of Owner: VDOT Project Contact: Bradley Windenhammer Phone: (757) 932-4484 Email: Bradley.Weidenhammer@VDOT.Virginia.gov	05/2017 – Professional Services 05/2017 – Construction	\$ 1,493,000	\$ 74,000

g. Narrative describing the work performed by WSP USA.

WSP delivered final construction plans for the widening and modifications to I-264 and the MLK Extension (a new one mile elevated freeway) over urban Portsmouth, Virginia. Specific scope elements of the overall project included: widening of I-264 for auxiliary lanes; eight new/widened bridges including new bridges over CSX rail lines and new & widened bridges over N&PBL; 11 stormwater ponds/basins (including significant aesthetic treatments to two); preparation of the Noise Abatement Design Report (NADR) for three new noise barriers and 18 retaining walls; significant overhead guide signage; Transportation Management Plan (TMP) developed for phased MOT; ITS system replacement/upgrades along I-264.

WSP also provided design support during construction, including shop drawing reviews, preparing responses to RFIs, and As-Built documentation. WSP performed major components of the design effort including: widening of I-264 including asphalt overlays at tie-ins; Ramp EN geometrics; new Ramp EN structure over US 17; preparation of the TMP and multi-jurisdictional detours; coordination with Skanska’s right-of-way acquisition consultant; utility coordination and relocation; stormwater system modeling and stormwater basin design for all 11 basins; coordination with CSX and N&PBL Railroad; and layout design and specifications for three new noise barriers in accordance with the approved NADR. WSP worked closely with SKW to develop cost-effective and low risk solutions for ground improvements. Specifically, the Project included the use of lightweight fill, EPS embankments, and surcharging at specific locations to minimize the potential for long-term settlement. The project also architectural panels, obelisks, and aesthetic stormwater pond treatments (requested by the City of Portsmouth). The use of EPS embankments involved special details to avoid the placement of drainage collection structures within the EPS embankment material. The design team developed a Transportation Management Plan (TMP) as a “living document” for this multi-phased project. Components of the TMP were released in advance of specific construction components, to facilitate the overall project schedule. Disruptions to I-264 traffic were generally limited to temporary closures for placing superstructure elements over the existing roadway. During construction, MOT and detours were closely coordinated with the City of Portsmouth and VDOT to minimize impacts.

I-264 WIDENING/MLK EXTENSION
\$1.49 BILLION DESIGN-BUILD
PORTSMOUTH/NORFOLK, VA | 2013 - 2017



Relevancies to I-26 Widening Project

- ✓ Interstate widening
- ✓ Utility relocations
- ✓ Environmental permits
- ✓ MOT/phasing
- ✓ ITS
- ✓ Bridge structures over streets
- ✓ Noise barriers
- ✓ ROW plans/acquisition
- ✓ Public involvement/relations
- ✓ Constrained site conditions

h. Self-Assessment. The information provided in this section should be a self-assessment of WSP’s performance on the project to identify that WSP’s personnel have successfully completed projects on time and on or under budget, and to identify that WSP has records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.

This project included significant utility relocations, coordination with CSX for the new MLK Mainline bridge crossing over CSX’s Portsmouth yard, stormwater management facilities, and aesthetic treatments. The WSP design team addressed these design complexities in delivering the final design on schedule and within budget. During construction, the design team re-mobilized to re-design a new bridge pier (and adjacent spans), that an adjacent property owner claimed would restrict access to their property. The re-design was accomplished without delaying project completion as the project was completed 1-month ahead of schedule. No formal claims, litigation, or arbitration has occurred on this project.

i. Quality Initiatives. Discuss WSP’s quality initiatives including, but not limited to, cost control, schedule management and adherence, avoidance of claims, and other pertinent initiatives enhancing quality on the project.

WSP implemented a rigorous design QC program that involved formal reviews, comments, resolution, and back-checking for each formal submittal. Reviews also involved a formal interdisciplinary web-conferencing in advance of the QC review for plans submittals so that sub-consultants working from remote locations could actively participate. The design QA program confirmed that QC was performed in accordance with the project’s Quality Control Plan and that formal reviews were conducted by appropriate senior staff. In this way, VDOT comments on plan submittals were minimized.

j. For each question in Section 3.5.2 of the RFQ for which a “Yes” answer was provided, WSP shall provide a detailed explanation below.

Not applicable.

WORK HISTORY AND QUALITY FORM – DESIGNER
KCI

a. Project Name & Location (City, State)	b. Name of lead responsible for the overall project design or construction	c. Contact information of the Client & their Project Manager who can verify Designer’s responsibilities	d. Actual or Estimated Construction & Professional Services Completion Date	e. Actual or Estimated Project Construction Cost (in thousands)	f. Dollar Value of Work Performed by WSP USA (in thousands)
Name: I-26 Port Access Road Improvement Project (Design-Build) Location: Charleston, SC	Name: Fluor-Lane South Carolina LLC (FLSC)	Name of Owner: SCDOT Project Manager: Chris Gaskins Phone: (803) 737-1473 Email: gaskinscj@scdot.org	12/2017 – Professional Services: 1/2020 – Anticipated Construction Completion	\$220,000	\$3,623

g. Narrative describing the work performed by KCI.

The Port Access Road Improvement Project is a new roadway, interchange and structure project that provides direct access between the Hugh Leatherman Container Terminal, currently under construction, located on the former Navy Base and Interstate 26 (I-26), while maintaining adequate service for local, commuter, and commercial traffic. The project consists of the construction of a new fully-directional interchange on I-26, a Bainbridge Connector Road, the extension of Stromboli Avenue and associated roadway improvements to surface streets to serve the proposed Naval Base Terminal (NBT) in Charleston County, South Carolina. The project’s scope includes local roadway enhancements to safely integrate container terminal traffic with existing traffic; support local and regional planning policies and strategies; and minimize adverse impacts on nearby communities, the traveling public and the environment. The Port Access Road Improvement Project will provide new interchanges with improved mobility serving the fastest growing container port in the US, enhance economic development and improve local roadway network access to I-26. Construction completion is expected in early 2020.

KCI was a major subconsultant and provided structural and seismic design for the mainline bridges, and ramps E and F that feed to and from the Bainbridge Connector. All design work provided by KCI was performed in their Rock Hill, SC office. The two main bridges are each over 4,000 feet long with complex geometry. The structure uses prestressed concrete girders for most of the spans with the inclusion of two structural steel spans. KCI performed seismic design oversight for the entire project and seismic design for the mainline structures. KCI provided a detailed multi-modal spectral analysis with pushover using Midas 3-D modeling software. The project was exposed to a high seismic hazard, and is constructed with eight miles of large bridge structures and associated roadway embankments through highly variable subsurface conditions that include significant uncontrolled fill deposits, liquefying sand strata, and highly compressible clay strata through the historic industrial “neck” area of the Charleston peninsula. KCI worked closely with the geotechnical engineers at S&ME to calibrate the seismic model for the soil conditions.

Key Individuals:

Tom Meador (Lane), Patrick Kerrigan (Lane), Emilio Campo (Fluor), and Eric Dickey (D&F) were key individuals on the Port Access Road project and are proposed as key individuals on the I-26 Widening project.

DB Team Members:

Fluor, Lane, KCI, D&F, and S&ME worked together as team members on the Port Access Road project and are proposed to work together on the I-26 Widening project as part of the design-build team.

h. Self-Assessment. The information provided in this section should be a self-assessment of KCI’s performance on the project to identify teams with firms or personnel that have successfully completed projects on time and on or under budget, and to identify firms that have records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.

KCI delivered RFC plans in accordance with the overall project schedule and within the allotted budget. The project is currently under construction and is scheduled for completion within the proposed schedule. KCI’s bridge engineers were instrumental in developing efficient and cost saving ideas during the pursuit phase that directly helped the Fluor-Lane South Carolina team cut millions off the bid without sacrificing quality or schedule. At the former Macalloy site, which was an old chromium plant, KCI’s engineers took the hazardous materials into consideration by using pile footings instead of drilled shafts, in order to avoid the cost and schedule delays from the removal and disposal of any hazardous materials. These and other cost saving ideas helped the team save the SCDOT over \$14 million from the next low bidder.

i. Quality Initiatives. Discuss KCI’s quality initiatives including, but not limited to, cost control, schedule management and adherence, avoidance of claims, and other pertinent initiatives enhancing quality on the project.

KCI followed the requirements of the project Quality Management Program established by the Fluor-Lane South Carolina team. KCI additionally followed all of the requirements of its own Quality Management System Manual as required as a part of its certification under ISO 9001-2015. KCI also fully participated in the Technical Work Groups to coordinate the work within the team to ensure the design development stayed on schedule and upheld the quality standards established for this project.

j. For each question in Section 3.5.2 of the RFQ for which a “Yes” answer was provided, KCI shall provide a detailed explanation below.

Not applicable.

I-26 PORT ACCESS ROAD IMPROVEMENT
\$220 MILLION DESIGN-BUILD
CHARLESTON, SC | 2010 - 2020



Relevancies to I-26 Widening Project

- ✓ Heavily traveled rural Interstate
- ✓ Work with SCDOT and WSP
- ✓ Interstate 26 interchange
- ✓ Structure and seismic design
- ✓ Complex demolition
- ✓ Hazardous material management



Appendix C – Work History and
Quality Forms – Contractor/Designer -
Section 3.5.2

WORK HISTORY AND QUALITY FORM – CONTRACTOR
Fluor Enterprises, Inc. and The Lane Construction Corporation – Fluor-Lane South Carolina LLC (FLSC)

a. Project Name & Location (City, State)	b. Name of lead responsible for the overall project design or construction	c. Contact information of the Client & their Project Manager who can verify FLSC's responsibilities	d. Actual or Estimated Construction & Professional Services Completion Date	e. Actual or Estimated Project Construction Cost (in thousands)	f. Dollar Value of Work Performed by FLSC (in thousands)
Name: I-26 Port Access Road Improvement Project (Design-Build) Location: Charleston, SC	Name: Johnson, Mirmiran & Thompson, Inc.	Name of Owner: SCDOT Project Manager: Daniel Burton, RCE Phone: 843.371.0342 Email: burtond@scdot.org	Professional Services: 2/2018 Anticipated Construction Completion: 1/2020	\$220,700	\$121,385

g. Narrative describing the work performed by FLSC.

The Port Access Road Improvement Project is a new roadway, interchange and structure project that provides direct access between the Hugh Leatherman Container Terminal, currently under construction, located on the former Navy Base and Interstate 26 (I-26), while maintaining adequate service for local, commuter, and commercial traffic. The project consists of the construction of a new fully-directional interchange on I-26, a Bainbridge Connector Road, the extension of Stromboli Avenue and associated roadway improvements to surface streets to serve the proposed Naval Base Terminal (NBT) in Charleston County, South Carolina. The project's scope includes local roadway enhancements to safely integrate container terminal traffic with existing traffic; support local and regional planning policies and strategies; and minimize adverse impacts on nearby communities, the traveling public and the environment. The Port Access Road Improvement Project will provide new interchanges with improved mobility serving the fastest growing container port in the US, enhance economic development and improve local roadway network access to I-26. Construction completion is expected in early 2020.

Fluor served as the lead partner of the design-build integrated joint venture Fluor-Lane South Carolina LLC (FLSC) with The Lane Construction Corporation. As the Lead Contractor, FLSC provides full design-build delivery and self-performs construction and associated roadway improvements to surface streets serving the proposed terminal. FLSC is also responsible for overall project management for the scope of services including roadway and bridge engineering/design and construction; geotechnical engineering; seismic design; utility coordination; right-of-way acquisition services; hazardous material management; demolition of existing interstate interchange bridges.

Key Individuals:

Tom Meador (Lane), Patrick Kerrigan (Lane), Emilio Campo (Fluor), and Eric Dickey (D&F) were key individuals on the Port Access Road project and are proposed as key individuals on the I-26 Widening project.

DB Team Members:

Fluor, Lane, KCI, D&F, and S&ME worked together as team members on the Port Access Road project and are proposed to work together on the I-26 Widening project as part of the design-build team.

h. Self-Assessment. The information provided in this section should be a self-assessment of Lane's performance on the project to identify FLSC with firms or personnel that have successfully completed projects on time and on or under budget, and to identify FLSC has records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.

The Port Access Road Improvement Project is ongoing and is currently on time and under budget. Design is substantially complete and major design consultants KCI, D&F, and S&ME have completed all work on time, on budget, and without any claims or litigation. Construction is ongoing and is on schedule, on budget, and FLSC continues to partner with SCDOT to address project elements to satisfactory resolution. We are effectively managing contracts and have no records of delays, claims, dispute proceedings, litigation, or arbitration. FLSC's use of weekly design and construction progress meetings with SCDOT allowed the joint venture to identify and address issues early. If issues could not be resolved at the job level within a reasonable amount of time, they were elevated to FLSC and SCDOT regional management to help in the resolution process. Notably, the JV reached a successful agreement of the SCE&G Power Transmission time extension change order and fully supports continued partnering. FLSC achieved Fluor's 5-Star Safety Award for Health, Safety and Environmental Awareness with nearly 350,000 work hours without a lost time accident, and received Lane's Safest Project of the Year for 2017.

i. Quality Initiatives. Discuss FLSC's quality initiatives including, but not limited to, cost control, schedule management and adherence, avoidance of claims, and other pertinent initiatives enhancing quality on the project.

FLSC incorporated several techniques into the project to increase overall quality, including: 1) incorporated structured work plans, and preparatory/pre-construction meetings with SCDOT; 2) reduced construction-related traffic delays due to proactive project scheduling; 3) optimized the schedule to minimize the effect of 3rd party delays. The project currently has no claims and remains ahead of schedule for the SCSA new terminal opening. In addition, the JV has effectively managed field quality on permanent production items, including concrete, drilled shafts, hazardous materials, erosion control, and other elements.

j. For each question in Section 3.5.2 of the RFQ for which a "Yes" answer was provided, FLSC shall provide a detailed explanation below.

Not applicable.

I-26 PORT ACCESS ROAD IMPROVEMENT
\$220 MILLION DESIGN-BUILD
CHARLESTON, SC | 2010 - 2020



FLSC Port Access Improvement Road Project receives 5 Star Safety Award. Left to Right: Joel Smith (SCDOT), Leland Colvin (SCDOT), Brian Tolbert (FLSC), Christy Hall (SCDOT), Daniel Burton (SCDOT), and Patrick Kerrigan (FLSC).

Relevancies to I-26 Widening Project

- ✓ Heavily traveled Interstate
- ✓ Work with SCDOT and WSP
- ✓ Interstate 26 interchange and concrete paving
- ✓ Structure and seismic design
- ✓ Complex demolition
- ✓ Hazardous material management

WORK HISTORY AND QUALITY FORM – CONTRACTOR
Fluor Enterprises, Inc. and The Lane Construction Corporation – Fluor-Lane 95, LLC

a. Project Name & Location (City, State)	b. Name of lead responsible for the overall project design or construction	c. Contact information of the Client & their Project Manager who can verify Fluor-Lane 95's responsibilities	d. Actual or Estimated Construction & Professional Services Completion Date	e. Actual or Estimated Project Construction Cost (in thousands)	f. Dollar Value of Work Performed by Fluor-Lane 95 (in thousands)
Name: 95 Express Lanes Location: Fairfax and Stafford Counties, Virginia	Name: HNTB	Name of Owner: Virginia Department of Transportation (VDOT) Project Manager: Garrett Moore, P.E. Phone: 804.786.4798 Email: Garrett.Moore@vdot.virginia.gov	12/2014	\$691,000	\$691,000

g. Narrative describing the work performed by Fluor-Lane 95.

The 95 Express Lanes Project expanded 14 miles of existing High Occupancy Vehicle (HOV) lanes on the I-95 corridor from two lanes to three lanes, made operational improvements to another six miles of existing HOV lanes, and built a new nine-mile extension to the facility to eliminate an existing bottleneck. The project was built in just 29 months and brings the most significant changes to the I-95 corridor in a generation. The key components of the I-95 Express Lanes Project include performing structural bridge work including building 5 new bridges, 4 new flyover ramps, 3 widened bridges, and 15 bridge/ramp repairs; building a new 9-mile roadway extension consisting of major clearing, earthwork, drainage improvements and bridge flyovers; installing more than 700 miles of cable and wire and more than 1,000 tolling and traffic management devices; and placing more than 1 million square feet of sound walls.

Fluor served as the managing partner of the design-build joint venture (Fluor-Lane 95 LLC) with The Lane Construction Corporation. The project was divided into four separate construction segments that allowed four teams to work on different sections of the project simultaneously. Each team coordinated all construction activities as well as lane closures in its area. The work zones within each area were separated by temporary traffic barriers to protect both the traveling public and the workers.

This project also included extensive public and community relations, and 3rd party coordination, with more than 1,000 outreach events.

95 EXPRESS LANES
\$691 MILLION DESIGN-BUILD
FAIRFAX / STAFFORD, VA | 2012 - 2014



Relevancies to I-26 Widening Project

- ✓ Roadway widening, bridges, and major interchanges
- ✓ Segmentation with complex, phased MOT
- ✓ Environmentally sensitive project
- ✓ Sound walls and retaining walls
- ✓ Fast track schedule: 29 miles in 29 months
- ✓ Critical path activities self-performed

h. Self-Assessment. The information provided in this section should be a self-assessment of Fluor-Lane 95's performance on the project to identify that Fluor-Lane 95's personnel that have successfully completed projects on time and on or under budget, and to identify that Fluor-Lane 95 has records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.

The 95 Express Lanes Project was successfully completed two weeks ahead of an already aggressive 29 month schedule. In addition to this, the project also achieved more than 4 million safe work hours without a lost time incident and the team maintained an OSHA recordable rate of 0.39, substantially below the industry national average of 3.6. This rating makes the project one of the safest ever in the U.S. The Project was also awarded the ARTBA and Transportation Builders Association's Transportation Development Foundation 2014 Contractor Safety Award and the VDOT and Transportation DBE Advisory Committee 2014 Prime Contractor of the Year Award. Fluor-Lane 95 delivered ahead of schedule and under budget and successfully managed the contract to minimize delays, claims, dispute proceedings, litigation, and arbitration.

i. Quality Initiatives. Discuss Fluor-Lane 95's quality initiatives including, but not limited to, cost control, schedule management and adherence, avoidance of claims, and other pertinent initiatives enhancing quality on the project.

Value Creation / Innovation. The project used innovative Technical Work Groups involving the owner, Virginia Department of Transportation (VDOT), the Concessionaire, 95 Express Lanes, LLC (95XL), 3rd party designers (HNTB/HDR), Fluor-Lane 95 estimating and construction staff to optimize the design for long-term operations and maintenance while reducing construction costs. Constructability reviews were conducted to optimize the design. **Cost Control.** The project significantly underran budgeted costs as a result of the value creation, innovation, contracting strategy and weekly/monthly monitoring of production and costs with the field staff. Continuous Value Creation initiatives such as Notice of Design Change (NDC) and Field Design Changes (FDCs) were utilized during construction which improved the design based on field conditions. An example of value creation generated by a FDC was the reduction in asphalt paving once the construction team learned that there was existing concrete pavement. An FDC was generated by the field and reviewed by our designers who modified the pavement section to utilize the strength of the existing concrete pavement versus demolishing the existing pavement. During construction over 450 FDC's were generated and approved by the Client and over 210 NDCs were generated and approved by the client.

j. For each question in Section 3.5.2 of the RFQ for which a "Yes" answer was provided, Fluor-Lane 95 shall provide a detailed explanation below.

Not applicable.

WORK HISTORY AND QUALITY FORM – CONTRACTOR

Lane Construction Corporation

a. Project Name & Location (City, State)	b. Name of lead responsible for the overall project design or construction	c. Contact information of the Client & their Project Manager who can verify Lane’s responsibilities	d. Actual or Estimated Construction & Professional Services Completion Date	e. Actual or Estimated Project Construction Cost (in thousands)	f. Dollar Value of Work Performed by Lane (in thousands)
Name: I-85 Widening Cabarrus (I-3803B) Location: Cabarrus County, NC	Name: HDR, Inc.	Name of Owner: NCDOT Project Manager: Rodger Rochelle, PE Phone: 919.707.6601 Email: rdrochelle@ncdot.gov	Construction: 6/2015	\$149,000	\$149,000

g. Narrative describing the work performed by Lane.

This design-build (DB) project widened and reconstructed a four-lane facility in a highly congested rural interstate area to an eight-lane divided facility with concrete pavement for nearly seven miles. The project included the design of two diverging diamond interchanges (DDIs) and superstreets at major side roads. The DDIs effectively extends the functional life of these interchanges by 10 years. All designs and applications were completed and approved by NCDOT in seven months. Traffic control, utility coordination, and ROW acquisition are critical aspects of this project. An innovative work zone traffic control and access plan was developed to allow unimpeded access to the existing median to improve safety, minimize impacts, reduce stress on existing peripheral infrastructure, accelerate the project schedule, and reduce cost of construction by increasing efficiency.

The majority of the new roadway width was constructed in the existing 70-foot median, creating a difficult access challenge and a potential safety concern for the travelling public. Our approach allowed unimpeded access to the existing median, thus improving safety, minimizing impacts to traffic, reducing stress on existing peripheral infrastructure, accelerating the project schedule, and reducing the cost of construction by increasing efficiency.

Awards received include:

- 2013 NAPA ‘Asphalt Operations Safety Innovations’ Award; 2012 ARTBA ‘TransOvation’ Award; 2012 ARTBA ‘Roadway Work Zone Safety Awareness’ Award.

Unique Challenges/Innovative Solutions:

- Due to severe congestion and contract hauling restrictions on the roads crossing I-85, Lane constructed temporary access ramps and a median access ramp to mitigate hauling traffic on the interstate.
- The safety improvements resulting from this concept were significant. The need to haul 40,000 loads of material across interstate traffic into the median was completely eliminated and, while hauling was critical, thousands of trips by construction and NCDOT inspection staff were also made safely without entering traffic.

**I-85 WIDENING CABARRUS
\$149 MILLION DESIGN-BUILD
CABARRUS COUNTY, NC | 2010 - 2015**



Relevancies to I-26 Widening Project

- ✓ Heavily traveled rural Interstate
- ✓ Interstate widening, bridges, and major interchanges
- ✓ Concrete pavement reconstruction
- ✓ Median construction
- ✓ Complex phased MOT
- ✓ Sound walls and retaining walls
- ✓ Public and 3rd party coordination

h. Self-Assessment. The information provided in this section should be a self-assessment of Lane’s performance on the project to identify Lane with firms or personnel that have successfully completed projects on time and on or under budget, and to identify Lane has records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.

Lane won this pursuit due to its presence both in the design-build (DB) arena as well as the region, especially considering the footprint created by our plants. This was one of the largest DB projects in the region and involved interstate maintenance of traffic plans, as well as concrete paving, which Lane is experienced in.

“The I-85 widening project is a success story that is the result of Lane’s people, effective project management, and proactive change management. Lane is committed to the delivery of a quality project that will meet the needs of the community. The project would not have been successful without Lane’s willingness to partner with the NCDOT and work together toward a common goal.” – Davis Diggs, PE, NCDOT District Engineer (former)

i. Quality Initiatives. Discuss Lane’s quality initiatives including, but not limited to, cost control, schedule management and adherence, avoidance of claims, and other pertinent initiatives enhancing quality on the project.

Lane’s financial and scheduling solutions made a high impact on this project. Through leveraging the efficiency afforded by the Access Bridge and ramps, Lane provided the NCDOT and FHWA with a very aggressive schedule and highly competitive cost proposal. Ultimately, this translated into a proposed completion date 11 months prior to the required final completion and a bid price \$8.5 million below the engineers’ estimate, while providing significant safety enhancements. The project was completed with no claims.

j. For each question in Section 3.5.2 of the RFQ for which a “Yes” answer was provided, Lane shall provide a detailed explanation below.

Not applicable.

WORK HISTORY AND QUALITY FORM – DESIGNER

Lane Construction Corporation

a. Project Name & Location (City, State)	b. Name of lead responsible for the overall project design or construction	c. Contact information of the Client & their Project Manager who can verify Lane’s responsibilities	d. Actual or Estimated Construction & Professional Services Completion Date	e. Actual or Estimated Project Construction Cost (in thousands)	f. Dollar Value of Work Performed by Lane (in thousands)
Name: I-385 Improvements Location: Greenville, SC	Name: The Lane Construction Corporation STV Incorporated - Designer	Name of Owner: SCDOT Project Manager: Claude Ipock Phone: 803-737-1306 Email: ipockcr@scdot.org	Construction: 12/2012	\$65,000	\$65,000

g. Narrative describing the work performed by Lane.

This design-build (DB) project is the largest American Recovery and Reinvestment Act (ARRA)-funded project in South Carolina. I-385 is the most direct and heavily traveled route between Greenville and Columbia. The road handles more than 60,000 vehicles per day, and that number is expected to increase to 80,000 per day by 2028. The project consists of the widening of Interstate 385 to six lanes and to reconstruct the mainline pavement to accommodate interstate traffic. The \$65 million DB project included the design and construction improvements on 5.5 miles of I-385 in Greenville.

Lane widened the interstate from four asphalt lanes to six concrete lanes with asphalt rehabilitation and cross-slope corrections on the north and south ends of the project. Two sets of dual bridges were widened along with construction of 3,000 feet of noise walls. Lane also repaved I-385 from south of Woodruff Road to south of Roper Mountain Road, resulting in a total project length of approximately seven miles. Traffic control was critical to maintaining four travel lanes on this project. An innovative median access ramp for construction vehicles was implemented which improved flow of traffic and effectively maximized safety for both the traveling public and construction crews. Except for limited night time closures, Lane kept two lanes of traffic open during construction.

Lane setup an on-site Portland Cement Concrete (PCC) central mix batch plant, that allowed the team to control product quality and provide dedicated on-time material delivery. This on-site setup enabled successful management of the critical path schedule, with reduced costs.

DB Team Members:

Lane and S&ME worked together as team members on the I-385 Improvements project and are proposed to work together on the I-26 Widening project as part of the design-build team.

**I-385 IMPROVEMENTS
\$65 MILLION DESIGN-BUILD
GREENVILLE, SC | 2010 - 2012**



Relevancies to I-26 Widening Project

- ✓ Heavily traveled rural Interstate
- ✓ Concrete pavement reconstruction
- ✓ Interstate widening
- ✓ Structure design and construction
- ✓ Interchange Modification design
- ✓ Complex Maintenance of Traffic Sequencing
- ✓ Capacity enhancements through Traffic engineering
- ✓ Erosion and sediment control compliance
- ✓ Utility design and coordination

h. Self-Assessment. The information provided in this section should be a self-assessment of Lane’s performance on the project to identify Lane with firms or personnel that have successfully completed projects on time and on or under budget, and to identify Lane has records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.

Lane worked with the designer as both the designer of record and as an outside engineering consultant and inspector to successfully complete the work for SCDOT. The team was able to partner with SCDOT on numerous occasions to work 16 sixteen change orders while keeping the project overall cost within 0.5% of the original bid price and without time penalties. Lane’s use of weekly design and construction progress meetings with SCDOT allowed us to identify and address issues early. If issues could not be resolved at the job level within a reasonable amount of time, they were elevated to Lane and SCDOT regional management to help in the resolution process. This process was successful for both Lane and SCDOT in issue resolution as evidenced by the fact that no claims, disputes resolution, litigation or arbitration proceedings were needed to complete the project.

i. Quality Initiatives. Discuss Lane’s quality initiatives including, but not limited to, cost control, schedule management and adherence, avoidance of claims, and other pertinent initiatives enhancing quality on the project.

Lane incorporated several techniques into the project to increase overall quality, including 1) improved flow of traffic along the interstate in Greenville and accommodation for future expected growth; 2) reduced construction-related traffic delays due to in-depth project scheduling; 3) lane widening decreased congestion through rush hour; 4) sound wall reduced noise to the adjacent properties; 5) job creation for surrounding companies; 6) concrete pavement provided long-term, higher quality ride for drivers; and 7) concrete roadway has a life span of at least 50 years without significant maintenance. The project was completed with no claims.

j. For each question in Section 3.5.2 of the RFQ for which a “Yes” answer was provided, Lane shall provide a detailed explanation below.

Not applicable.

WORK HISTORY AND QUALITY FORM – DESIGNER

Lane Construction Corporation

a. Project Name & Location (City, State)	b. Name of lead responsible for the overall project design or construction	c. Contact information of the Client & their Project Manager who can verify Lane’s responsibilities	d. Actual or Estimated Construction & Professional Services Completion Date	e. Actual or Estimated Project Construction Cost (in thousands)	f. Dollar Value of Work Performed by Lane (in thousands)
Name: I-4 Ultimate Improvement Project Location: Orange and Seminole County, FL	Name: I-4 Mobility Partners – Concessionaire HDR, Inc. - Designer	Name of Owner: FDOT District Construction Engineer: John Tyler, PE Phone: 386.943.5344 Email: john.tyler@dot.state.fl.us	Construction: 03/2021	\$2,320,000	\$660,000

g. Narrative describing the work performed by Lane.

This Design-Build P3 project includes the reconstruction of 21 miles of I-4 from west of Kirkman Road in Orange County to east of SR 434 in Seminole County, including the addition of four tolled express lanes to I-4 while maintaining the existing free general use lanes. The express lanes will be operated with variable tolls which will be adjusted to improve traffic flow throughout the corridor. The I-4 Ultimate project will reconstruct 15 major interchanges and construction on 140 bridges (13 will be widened, 74 will be replaced, and 53 will be newly constructed). SGL Constructors, a construction joint venture in which Lane is a major member, will pave the new and existing roadways with more than 1.1 million tons of asphalt and 180,000 CY of concrete. There will be more than 630,000 additional cubic yards of bridge and structural concrete placed on the project. The project is being managed in four project areas:

- Area 1 will feature a new pedestrian bridge and a new overpass on Grand National Drive which will connect directly to the Express Lanes.
- Area 2 will feature an updated interchange at Orange Blossom Trail, which will eliminate the left-turn exit and replace it with a right-hand exit. In addition, the westbound I-4 exit ramp will be realigned to sweep further away from I-4 before crossing Orange Blossom Trail. The on-ramps and off-ramps at the Michigan Street and Kaley Street interchanges will be braided to eliminate weaving. The Colonial Point interchange will be reconfigured to a single-point urban interchange (SPUI).
- Area 3 will feature direct-connect ramps from Ivanhoe Boulevard to the eastbound Express Lanes and from the westbound Express Lanes to Ivanhoe Boulevard. Additional improvements will be made to interchanges at Princeton Street and East Par Street. The curve at Fairbanks Avenue previously had the highest accident rate along the entire I-4 corridor. The roadway will be realigned to increase sight distance and improve safety. An additional exit lane will be added at the Lee Road interchange.
- Area 4 will feature a new interchange at Maitland Boulevard and Maitland Summit. The Wymore Road overpass will be widened, and the interchange between I-4 and SR 436 will be converted into a SPUI. A pedestrian underpass underneath SR 436 will be constructed. The interchange between I-4 and SR 434 will include a longer exit ramp to prevent traffic from backing up onto I-4.

Select Awards

Envision Platinum Certification award from the Institute for Sustainable Infrastructure (ISI) | 2015 North American P3 Awards - Best Transportation Project - Silver Award

h. Self-Assessment. The information provided in this section should be a self-assessment of Lane’s performance on the project to identify Lane with firms or personnel that have successfully completed projects on time and on or under budget, and to identify Lane has records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.

Lane, as a major member of the CJV, has worked with the design team to refine elements on the project to enhance constructability, and improve the overall implementation of temporary works. One of the key challenges we were successful in implementing is the Maintenance of Traffic in an congested urban corridor. This project is successful for Lane and FDOT as evidenced by the fact that there are no claims, disputes resolution, litigation or arbitration proceedings.

i. Quality Initiatives. Discuss Lane’s quality initiatives including, but not limited to, cost control, schedule management and adherence, avoidance of claims, and other pertinent initiatives enhancing quality on the project.

The CJV implemented a comprehensive planning process, which encompasses day to day activities, in addition to critical elements, to help streamline the day to day operations. This planning process includes managers, superintendents, foreman, and even crew level individuals. Elements of the planning process include; safety hazard identification, traffic control, erosion control, materials, equipment, material testing/inspection requirements and any other items that would be needed to successfully complete a day’s work. Due to the sheer size of the project, each area has its own dedicated scheduler, as well as an overall project schedule manager. In addition to the monthly schedule updates, 3-4 week look ahead schedules outline the day to day progression of the work.

j. For each question in Section 3.5.2 of the RFQ for which a “Yes” answer was provided, Lane shall provide a detailed explanation below.

Not applicable.

**I-4 ULTIMATE
\$2.3 BILLION DESIGN-BUILD P3
ORANGE AND SEMINOLE COUNTY, FL
2014 - 2021**



Relevancies to I-26 Widening Project

- ✓ Large, complex project with concrete express lanes
- ✓ Multi-phased construction in urban corridor
- ✓ Interstate widening, bridges, and major interchanges
- ✓ Complex phased MOT
- ✓ Environmentally sensitive project
- ✓ Community relations and public outreach
- ✓ Sound walls and retaining walls
- ✓ Public and 3rd party coordination

WORK HISTORY AND QUALITY FORM – DESIGNER
WSP USA Inc.

a. Project Name & Location (City, State)	b. Name of lead responsible for the overall project design or construction	c. Contact information of the Client & their Project Manager who can verify Designer’s responsibilities	d. Actual or Estimated Construction & Professional Services Completion Date	e. Actual or Estimated Project Construction Cost (in thousands)	f. Dollar Value of Work Performed by WSP USA (in thousands)
Name: I-85 Widening Design-Build (I-3802A) Location: Cabarrus County, NC	Name: Blythe Construction, Inc. WSP USA - Designer	Name of Owner: NCDOT Project Manager: Khaled Al-Akhdar Phone: (919)707-6612 Email: kalakhdar@ncdot.gov	05/2015 – Professional Services 05/2020-Estimated Construction Completion	\$ 230,000	\$19,000

g. Narrative describing the work performed by WSP USA.

WSP is the lead design engineer for this \$230-million design-build (DB) project in Cabarrus County, North Carolina. The project reconstructs existing pavement and widens the fully controlled access freeway for eight miles, from just north of NC 73 to the Cabarrus County line. The project will widen I-85 from four to eight lanes, reconstruct and reconfigure three interchanges, revise rest area ramps, and includes 17 bridges. The project also includes 1 mile of railroad track relocation and the reconstruction of a railroad bridge over I-85. The project will increase capacity, improve safety, and enhance connectivity to surrounding neighborhoods and businesses in this highly congested corridor.

Many innovative approaches and proposed solutions contributed to the Team’s success including an accelerated design schedule. WSP’s proposed design reduced stream and wetland impacts by nearly 30 percent. The team submitted several Alternative Technical Concepts (ATC) that were accepted by NCDOT. The ATCs not only illustrated the team’s ability to propose innovative solutions, but also reduced the overall construction and right-of-way cost by \$5 million, addressed concerns of key stakeholders and allowed for improved maintenance of traffic. The existing interchange of I-85 and US 29/US 601 is a full cloverleaf interchange. WSP designed the new Diverging Diamond Interchange (DDI) separating the opposing movements on two bridges outside the footprint of the existing bridges. Constructing two new bridges in this manner avoided staged construction by allowing existing bridges to remain in service during construction activities. This approach limited disruption to the existing traffic pattern and reduced the overall construction schedule. Another innovative Maintenance of Traffic strategy designed a temporary diamond interchange at the US 29/US 601 interchange to facilitate the Maintenance of Traffic during the Interchange Modification from a full clover interchange to a DDI. The temporary signals for the diamond were strategically located at the future cross over locations of the DDI to maximize construction away from traffic and facilitate future implementation of the DDI. WSP completed the design work in their Charlotte, NC office.

**I-85 WIDENING DESIGN-BUILD
\$230 MILLION DESIGN-BUILD
CABARRUS COUNTY, NC | 2015 - 2020**



Relevancies to I-26 Widening Project

- ✓ Pavement reconstruction design
- ✓ Interstate widening
- ✓ Structure design
- ✓ Interchange Modification design
- ✓ Complex MOT Sequencing
- ✓ Capacity enhancements through traffic engineering
- ✓ Erosion and sediment control compliance
- ✓ Utility and Railroad design and coordination

h. Self-Assessment. The information provided in this section should be a self-assessment of WSP’s performance on the project to identify that WSP’s personnel have successfully completed projects on time and on or under budget, and to identify that WSP has records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.

WSP successfully managed the design contract to minimize delays, claims, dispute proceedings, litigation, and arbitration. WSP completed the design plans and acquired the environmental permit on time. WSP managed the change control process, for owner requested changes, which included interchange reconfigurations, pavement reconstruction strategies, and MOT sequencing to keep the design tasks on schedule and reduce the construction duration of these key project areas. There are no delays or claims assessed against WSP as part of this project.

i. Quality Initiatives. Discuss WSP’s quality initiatives including, but not limited to, cost control, schedule management and adherence, avoidance of claims, and other pertinent initiatives enhancing quality on the project.

Our approach to quality management is to proactively plan, schedule, and execute design plans to provide the desired end product with no rework. As part of the I-3802A project we had a dedicated quality control manager that created a Quality Management Plan (QMP) that spelled out the requirements for quality control. Every deliverable was required to have a technical review by the responsible discipline with a sign-off sheet documenting that our quality process was followed. In addition, our QMP required that all deliverables go through an interdisciplinary review (IDR). The IDR required that every discipline manager review any design plans before being submitted to the client. This ensured there were no conflicts with other disciplines and prevented disciplines from designing in a without the proper coordination. Weekly design meetings to review deliverables were scheduled to ensure timely submittals. The weekly design meetings and QMP led to the acceptance of RFC plans on time.

j. For each question in Section 3.5.2 of the RFQ for which a “Yes” answer was provided, WSP shall provide a detailed explanation below.

Not applicable.

WORK HISTORY AND QUALITY FORM – DESIGNER
WSP USA Inc.

a. Project Name & Location (City, State)	b. Name of lead responsible for the overall project design or construction	c. Contact information of the Client & their Project Manager who can verify Designer’s responsibilities	d. Actual or Estimated Construction & Professional Services Completion Date	e. Actual or Estimated Project Construction Cost (in thousands)	f. Dollar Value of Work Performed by WSP USA (in thousands)
Name: I-85 Widening Design-Build (I-2304AD) Location: Davidson County, NC	Name: Austin Bridge & Road / Balfour Beatty Infrastructure Joint Venture HDR (formerly Florence & Hutcheson) - Designer WSP USA – Subconsultant Designer	Name of Owner: NCDOT Project Manager: Khaled Al-Akhdar Phone: (919)707-6612 Email: kalakhdar@ncdot.gov	2011 – Professional Services 09/2013 – Construction	\$65,500	\$ 1,330

g. Narrative describing the work performed by WSP USA.

This NCDOT design-build (DB) widened approximately six miles (9.7 kilometers) of I-85 from four to eight lanes and then reconstructed all existing concrete pavement. The \$65.5 million project played a critical role in not only addressing current transportation needs, but also in meeting the travel demands of the future. NCDOT awarded the second phase of this DB project to Austin Bridge & Road / Balfour Beatty Infrastructure Joint Venture. This completed project facilitates traffic flow, commerce, and speed in instances of emergency or national security.

WSP served as a major subconsultant for the project, the reconstruction of I-85 from south of Clark Road to north of the I-85 business interchange in Lexington, North Carolina. As a subconsultant, WSP was responsible for the structure design for a new Belmont Road bridge over I-85, utility coordination, water/sewer design, pavement marking plans and assisting with traffic control plans and detours. In addition, WSP was responsible for the roadway, drainage and erosion control design plans for approximately 2.5 miles (4 kilometers) of the northern end of the project as well as design for the frontage roads. WSP completed the design work from their Charlotte, NC office.

Key Individuals and DB Team Members:

Tom Meador (Lane, formerly AB&R) was the Project Manager for the project.

WSP served as a major design subconsultant on the project.

**I-85 WIDENING DESIGN-BUILD
\$65.5 MILLION DESIGN-BUILD
DAVIDSON COUNTY, NC | 2010 - 2013**



Relevancies to I-26 Widening Project

- ✓ Concrete Interstate widening
- ✓ Structure design
- ✓ Interchange Modification design
- ✓ Capacity enhancements through traffic engineering
- ✓ MOT in a highly congested corridor
- ✓ Utility design and coordination

h. Self-Assessment. The information provided in this section should be a self-assessment of WSP’s performance on the project to identify that WSP’s personnel have successfully completed projects on time and on or under budget, and to identify that WSP has records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.

WSP met all schedule assignments and budget goals for design related activities on the project. WSP successfully managed the subcontract to minimize delays, claims, dispute proceedings, litigation, and arbitration. There were no delays or claims assessed against WSP as part of this project.

i. Quality Initiatives. Discuss WSP’s quality initiatives including, but not limited to, cost control, schedule management and adherence, avoidance of claims, and other pertinent initiatives enhancing quality on the project.

WSP’s approach to quality management is to proactively plan, schedule, and execute design plans to provide the desired end product with no rework. As part of the I-2304AD project, WSP had a dedicated quality control manager that created a Quality Management Plan (QMP) that spelled out the requirements for quality control. Every deliverable was required to have a technical review by the responsible discipline with a sign-off sheet documenting that the quality process had been followed. In addition, the QMP required that all deliverables go through an interdisciplinary review (IDR). The IDR required that every discipline manager review any design plans before being submitted to the client. This ensured there were no conflicts with other disciplines and prevented disciplines from designing in a without the proper coordination. Weekly design meetings to review deliverables were scheduled to ensure timely submittals. The weekly design meetings and QMP led to the acceptance of RFC plans on time.

j. For each question in Section 3.5.2 of the RFQ for which a “Yes” answer was provided, WSP shall provide a detailed explanation below.

Not applicable.

WORK HISTORY AND QUALITY FORM – DESIGNER
WSP USA Inc.

a. Project Name & Location (City, State)	b. Name of lead responsible for the overall project design or construction	c. Contact information of the Client & their Project Manager who can verify Designer’s responsibilities	d. Actual or Estimated Construction & Professional Services Completion Date	e. Actual or Estimated Project Construction Cost (in thousands)	f. Dollar Value of Work Performed by WSP USA (in thousands)
Name: Dallas Horseshoe D-B Reconstruction Location: Dallas, TX	Name: Pegasus Link Constructors (Fluor/Balfour Beatty) WSP USA - Designer	Name of Owner: TxDOT Project Manager: Duane Milligan Phone: (214) 320-6110 Email: Duane.Milligan@txdot.gov	04/2017 – Professional Services 04/2017 - Construction Completion	\$715,200	\$26,970

g. Narrative describing the work performed by WSP USA.

WSP served as the lead designer for the Dallas Horseshoe design-build project, which include full reconstruction of the IH 30/IH 35E interchange in Dallas as well as construction of a signature bridge (the Margaret McDermott Bridge) designed by architect Santiago Calatrava. Design for the roadway expansion included widening the road to 23 lanes at its widest, the addition of 73 new lane miles on IH 30 and IH 35E, and the reconstruction of the existing interchange, including new direct connectors for major movements within the interchange. Approximately 80% of the 73 lane miles of the project are on an elevated roadway section. The project corrects existing geometric deficiencies, repairs and replaces the deteriorating structures, and adds capacity to the interchange and frontage roads.

The confined right-of-way in this corridor presented a significant challenge, which was overcome by utilizing “outside-in” construction allowing both the safe maintenance of traffic (MOT) and safe access to the work area. Access points were identified early in the design process and integrated into the traffic management plan. Temporary crossings of the Trinity River were used to simplify access to both sides of the waterway.

Additionally, the presence of a historic viaduct presented a unique MOT challenge, which WSP solved by manipulating existing and new traffic lanes through the existing arched portals of the existing Houston Street Bridge.

Significant coordination was undertaken with the numerous project stakeholders, including the North Texas Tollway Authority regarding the design and construction of the Trinity Parkway Toll Road and Dallas County Department of Public Works regarding their Riverfront Parkway. In addition, IH 30 crosses under Union Pacific Railroad (UPRR) and Dallas Area Rapid Transit (DART) Red and Blue lines. WSP worked closely with stakeholders to ensure the design accommodated significant railroad work restrictions—limited access, 24-7 site monitoring, uninterrupted rail line service and extensive night work.

DB Team Members:

Fluor and WSP worked together as team members on the Dallas Horseshoe project and are proposed to work together on the I-26 Widening project as part of the design-build team.

DALLAS HORSESHOE RECONSTRUCTION
\$715 MILLION DESIGN-BUILD
DALLAS, TX | 2013 - 2017



Relevancies to I-26 Widening Project

- ✓ Concrete pavement reconstruction design
- ✓ Major congested roadway widening
- ✓ System to system interchange reconfiguration
- ✓ Structure design
- ✓ Complex MOT
- ✓ Capacity enhancements through traffic engineering
- ✓ Railroad coordination
- ✓ Utility design and coordination
- ✓ Environmental permitting proactively sought to ensure schedule adherence
- ✓ DBE/SWaM program goals met
- ✓ Extensive and continual stakeholder outreach

h. Self-Assessment. The information provided in this section should be a self-assessment of WSP’s performance on the project to identify that WSP’s personnel have successfully completed projects on time and on or under budget, and to identify that WSP has records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.

WSP completed the design on time and within the budget. The design team was responsible for the quality, completeness, schedule, and cost of all design deliverables. These included roadway, drainage, bridge, retaining wall, traffic, hydraulic/hydrology, and maintenance of traffic design as well as geotechnical engineering, aesthetics, environmental compliance, and utilities/subsurface utility engineering for the two project segments.

i. Quality Initiatives. Discuss WSP’s quality initiatives including, but not limited to, cost control, schedule management and adherence, avoidance of claims, and other pertinent initiatives enhancing quality on the project.

The design and construction team implemented proven quality systems, like a dedicated Design Quality Control Manager (DQCM), to deliver a value-added project by utilizing proper risk assessment, life-cycle analysis, and proactive information sharing. WSP’s processes allowed the owner to effectively integrate with the DB team on transparency and accountability to deliver an on-time high quality project. The DQCM conducted independent checks for accuracy and thoroughness to confirm the project was performing to the letter of the Quality Management Plan. The project was delivered on schedule, despite the complexity of a number of its elements.

j. For each question in Section 3.5.2 of the RFQ for which a “Yes” answer was provided, WSP shall provide a detailed explanation below.

Not applicable.

WORK HISTORY AND QUALITY FORM –DESIGNER
WSP USA Inc.

a. Project Name & Location (City, State)	b. Name of lead responsible for the overall project design or construction	c. Contact information of the Client & their Project Manager who can verify Designer’s responsibilities	d. Actual or Estimated Construction & Professional Services Completion Date	e. Actual or Estimated Project Construction Cost (in thousands)	f. Dollar Value of Work Performed by WSP USA (in thousands)
Name: I-264 Widening/MLK Extension Location: Portsmouth / Norfolk, VA	Name: SKW (Skanska Kiewit Weeks, a Joint Venture) WSP USA – Designer	Name of Owner: VDOT Project Contact: Bradley Windenhammer Phone: (757) 932-4484 Email: Bradley.Weidenhammer@VDOT.Virginia.gov	05/2017 – Professional Services 05/2017 – Construction	\$ 1,493,000	\$ 74,000

g. Narrative describing the work performed by WSP USA.

WSP delivered final construction plans for the widening and modifications to I-264 and the MLK Extension (a new one mile elevated freeway) over urban Portsmouth, Virginia. Specific scope elements of the overall project included: widening of I-264 for auxiliary lanes; eight new/widened bridges including new bridges over CSX rail lines and new & widened bridges over N&PBL; 11 stormwater ponds/basins (including significant aesthetic treatments to two); preparation of the Noise Abatement Design Report (NADR) for three new noise barriers and 18 retaining walls; significant overhead guide signage; Transportation Management Plan (TMP) developed for phased MOT; ITS system replacement/upgrades along I-264.

WSP also provided design support during construction, including shop drawing reviews, preparing responses to RFIs, and As-Built documentation. WSP performed major components of the design effort including: widening of I-264 including asphalt overlays at tie-ins; Ramp EN geometrics; new Ramp EN structure over US 17; preparation of the TMP and multi-jurisdictional detours; coordination with Skanska’s right-of-way acquisition consultant; utility coordination and relocation; stormwater system modeling and stormwater basin design for all 11 basins; coordination with CSX and N&PBL Railroad; and layout design and specifications for three new noise barriers in accordance with the approved NADR. WSP worked closely with SKW to develop cost-effective and low risk solutions for ground improvements. Specifically, the Project included the use of lightweight fill, EPS embankments, and surcharging at specific locations to minimize the potential for long-term settlement. The project also architectural panels, obelisks, and aesthetic stormwater pond treatments (requested by the City of Portsmouth). The use of EPS embankments involved special details to avoid the placement of drainage collection structures within the EPS embankment material. The design team developed a Transportation Management Plan (TMP) as a “living document” for this multi-phased project. Components of the TMP were released in advance of specific construction components, to facilitate the overall project schedule. Disruptions to I-264 traffic were generally limited to temporary closures for placing superstructure elements over the existing roadway. During construction, MOT and detours were closely coordinated with the City of Portsmouth and VDOT to minimize impacts.

I-264 WIDENING/MLK EXTENSION
\$1.49 BILLION DESIGN-BUILD
PORTSMOUTH/NORFOLK, VA | 2013 - 2017



Relevancies to I-26 Widening Project

- ✓ Interstate widening
- ✓ Utility relocations
- ✓ Environmental permits
- ✓ MOT/phasing
- ✓ ITS
- ✓ Bridge structures over streets
- ✓ Noise barriers
- ✓ ROW plans/acquisition
- ✓ Public involvement/relations
- ✓ Constrained site conditions

h. Self-Assessment. The information provided in this section should be a self-assessment of WSP’s performance on the project to identify that WSP’s personnel have successfully completed projects on time and on or under budget, and to identify that WSP has records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.

This project included significant utility relocations, coordination with CSX for the new MLK Mainline bridge crossing over CSX’s Portsmouth yard, stormwater management facilities, and aesthetic treatments. The WSP design team addressed these design complexities in delivering the final design on schedule and within budget. During construction, the design team re-mobilized to re-design a new bridge pier (and adjacent spans), that an adjacent property owner claimed would restrict access to their property. The re-design was accomplished without delaying project completion as the project was completed 1-month ahead of schedule. No formal claims, litigation, or arbitration has occurred on this project.

i. Quality Initiatives. Discuss WSP’s quality initiatives including, but not limited to, cost control, schedule management and adherence, avoidance of claims, and other pertinent initiatives enhancing quality on the project.

WSP implemented a rigorous design QC program that involved formal reviews, comments, resolution, and back-checking for each formal submittal. Reviews also involved a formal interdisciplinary web-conferencing in advance of the QC review for plans submittals so that sub-consultants working from remote locations could actively participate. The design QA program confirmed that QC was performed in accordance with the project’s Quality Control Plan and that formal reviews were conducted by appropriate senior staff. In this way, VDOT comments on plan submittals were minimized.

j. For each question in Section 3.5.2 of the RFQ for which a “Yes” answer was provided, WSP shall provide a detailed explanation below.

Not applicable.

WORK HISTORY AND QUALITY FORM – DESIGNER
KCI

a. Project Name & Location (City, State)	b. Name of lead responsible for the overall project design or construction	c. Contact information of the Client & their Project Manager who can verify Designer’s responsibilities	d. Actual or Estimated Construction & Professional Services Completion Date	e. Actual or Estimated Project Construction Cost (in thousands)	f. Dollar Value of Work Performed by WSP USA (in thousands)
Name: I-26 Port Access Road Improvement Project (Design-Build) Location: Charleston, SC	Name: Fluor-Lane South Carolina LLC (FLSC)	Name of Owner: SCDOT Project Manager: Chris Gaskins Phone: (803) 737-1473 Email: gaskinscj@scdot.org	12/2017 – Professional Services: 1/2020 – Anticipated Construction Completion	\$220,000	\$3,623

g. Narrative describing the work performed by KCI.

The Port Access Road Improvement Project is a new roadway, interchange and structure project that provides direct access between the Hugh Leatherman Container Terminal, currently under construction, located on the former Navy Base and Interstate 26 (I-26), while maintaining adequate service for local, commuter, and commercial traffic. The project consists of the construction of a new fully-directional interchange on I-26, a Bainbridge Connector Road, the extension of Stromboli Avenue and associated roadway improvements to surface streets to serve the proposed Naval Base Terminal (NBT) in Charleston County, South Carolina. The project’s scope includes local roadway enhancements to safely integrate container terminal traffic with existing traffic; support local and regional planning policies and strategies; and minimize adverse impacts on nearby communities, the traveling public and the environment. The Port Access Road Improvement Project will provide new interchanges with improved mobility serving the fastest growing container port in the US, enhance economic development and improve local roadway network access to I-26. Construction completion is expected in early 2020.

KCI was a major subconsultant and provided structural and seismic design for the mainline bridges, and ramps E and F that feed to and from the Bainbridge Connector. All design work provided by KCI was performed in their Rock Hill, SC office. The two main bridges are each over 4,000 feet long with complex geometry. The structure uses prestressed concrete girders for most of the spans with the inclusion of two structural steel spans. KCI performed seismic design oversight for the entire project and seismic design for the mainline structures. KCI provided a detailed multi-modal spectral analysis with pushover using Midas 3-D modeling software. The project was exposed to a high seismic hazard, and is constructed with eight miles of large bridge structures and associated roadway embankments through highly variable subsurface conditions that include significant uncontrolled fill deposits, liquefying sand strata, and highly compressible clay strata through the historic industrial “neck” area of the Charleston peninsula. KCI worked closely with the geotechnical engineers at S&ME to calibrate the seismic model for the soil conditions.

Key Individuals:

Tom Meador (Lane), Patrick Kerrigan (Lane), Emilio Campo (Fluor), and Eric Dickey (D&F) were key individuals on the Port Access Road project and are proposed as key individuals on the I-26 Widening project.

DB Team Members:

Fluor, Lane, KCI, D&F, and S&ME worked together as team members on the Port Access Road project and are proposed to work together on the I-26 Widening project as part of the design-build team.

h. Self-Assessment. The information provided in this section should be a self-assessment of KCI’s performance on the project to identify teams with firms or personnel that have successfully completed projects on time and on or under budget, and to identify firms that have records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.

KCI delivered RFC plans in accordance with the overall project schedule and within the allotted budget. The project is currently under construction and is scheduled for completion within the proposed schedule. KCI’s bridge engineers were instrumental in developing efficient and cost saving ideas during the pursuit phase that directly helped the Fluor-Lane South Carolina team cut millions off the bid without sacrificing quality or schedule. At the former Macalloy site, which was an old chromium plant, KCI’s engineers took the hazardous materials into consideration by using pile footings instead of drilled shafts, in order to avoid the cost and schedule delays from the removal and disposal of any hazardous materials. These and other cost saving ideas helped the team save the SCDOT over \$14 million from the next low bidder.

i. Quality Initiatives. Discuss KCI’s quality initiatives including, but not limited to, cost control, schedule management and adherence, avoidance of claims, and other pertinent initiatives enhancing quality on the project.

KCI followed the requirements of the project Quality Management Program established by the Fluor-Lane South Carolina team. KCI additionally followed all of the requirements of its own Quality Management System Manual as required as a part of its certification under ISO 9001-2015. KCI also fully participated in the Technical Work Groups to coordinate the work within the team to ensure the design development stayed on schedule and upheld the quality standards established for this project.

j. For each question in Section 3.5.2 of the RFQ for which a “Yes” answer was provided, KCI shall provide a detailed explanation below.

Not applicable.

I-26 PORT ACCESS ROAD IMPROVEMENT
\$220 MILLION DESIGN-BUILD
CHARLESTON, SC | 2010 - 2020

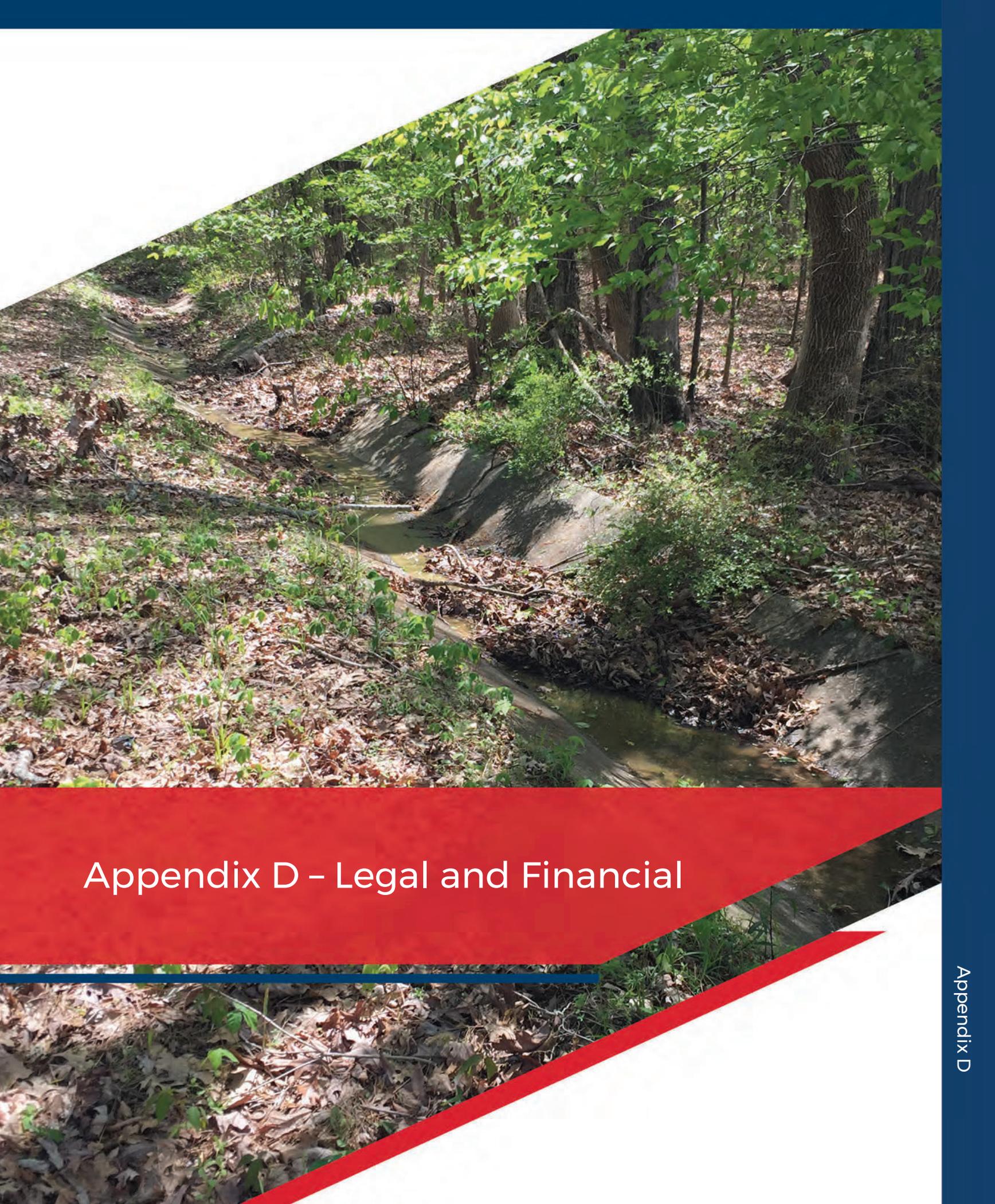


Relevancies to I-26 Widening Project

- ✓ Heavily traveled rural Interstate
- ✓ Work with SCDOT and WSP
- ✓ Interstate 26 interchange
- ✓ Structure and seismic design
- ✓ Complex demolition
- ✓ Hazardous material management







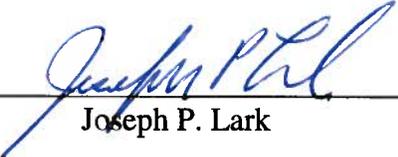
Appendix D – Legal and Financial

3.6.1 FINANCIAL CAPACITY

Further Affiant sayeth not.

April 24, 2018

Date



Joseph P. Lark

State of Virginia)
)
County of Fairfax)

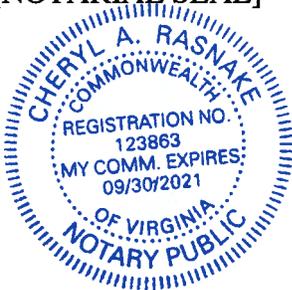
On this 24th day of April, 2018, before me, Cheryl A. Rasnake, a Notary Public for Virginia, personally appeared Joseph P. Lark, known to me to be the person described in the foregoing Affidavit, and acknowledged that he executed the same in the capacity therein stated and for the purposed therein contained. In witness thereof, I hereunto set my hand and official seal.



Notary Public

My Commission Expires: September 30, 2021

[NOTARIAL SEAL]



STATE OF CALIFORNIA)
)
COUNTY OF ORANGE)

AFFIDAVIT

COMES NOW, David Parker, who being duly sworn states as follows:

1. I am above the age of majority, of sound mind and fully competent to make this Affidavit.
2. I am a Vice President, Sales of Fluor Enterprises, Inc. ("FEI"), which is a duly organized and validly existing corporation in good standing under the laws of the State of California.
3. FEI is duly authorized to conduct business in the State of South Carolina.
4. FEI is partnering with The Lane Construction Corporation ("Lane"), and FEI and Lane are forming a new, project-specific entity known as Lane-Fluor 26 LLC ("Lane-Fluor 26"). FEI and Lane intend to use Lane-Fluor 26 for the purpose of pursuing an award from the South Carolina Department of Transportation ("SCDOT") of a contract for the Interstate 26 Widening MM85-101 Design-Build Project in Richland, Lexington, and Newberry, South Carolina (the "Project").
5. Lane-Fluor 26 will be responding to the Request for Qualifications ("RFQ") issued by SCDOT for the Project and, if shortlisted, intends to submit a proposal for the purposes of receiving an award of and performing a contract for the Project.
6. FEI and Lane are presently 45/55% participating members of Lane-Fluor 26.
7. FEI has the financial capacity and resources necessary to complete the Project as proposed in the RFQ and, together with Lane, will ensure that Lane-Fluor 26 has the necessary financial capacity and resources necessary to complete the Project as proposed in the RFQ.

Further Affiant sayeth not.

4-24-18
Date




David Parker

State of California)

County of Orange)

On this 24 day of April, 2018, before me, MaryAnn Mayshaw, a Notary Public for California, personally appeared David Parker, known to me to be the person described in the foregoing Affidavit, and acknowledged that he executed the same in the capacity therein stated and for the purposed therein contained. In witness thereof, I hereunto set my hand and official seal.

[NOTARIAL SEAL]



Mary Ann Mayshaw
Notary Public

My Commission Expires: March 27, 2021

3.6.2 BONDING CAPACITY

LIBERTY MUTUAL INSURANCE COMPANY
NATIONAL UNION FIRE INSURANCE COMPANY OF PITTSBURGH, PA
ZURICH AMERICAN INSURANCE COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND
BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY
FEDERAL INSURANCE COMPANY
TRAVELERS CASUALTY AND SURETY COMPANY

April 19, 2018

Carmen Wright
Office of Project Delivery
South Carolina Department of Transportation
955 Park Street, Room 101
Columbia, South Carolina 29201

RE: **Lane-Fluor 26 LLC**
Request for Qualifications
INTERSTATE 26 WIDENING MM 85-101 - Design-Build Project
Project ID P029208 - RICHLAND, LEXINGTON, AND NEWBERRY COUNTIES
Estimated Contract Value: \$475,000,000.00

To Whom It May Concern:

This letter will serve to confirm that Lane-Fluor 26 LLC, a to be formed joint venture between The Lane Construction Corporation and Fluor Enterprises, Inc., is a highly regarded and valued client of the sureties, Liberty Mutual Insurance Company, National Union Fire Insurance Company of Pittsburgh, PA, Zurich American Insurance Company, Fidelity and Deposit Company of Maryland, Berkshire Hathaway Specialty Insurance Company, Federal Insurance Company, and Travelers Casualty and Surety Company (the 'co-sureties'). Each surety company is licensed to conduct surety business in the State of South Carolina, and each surety company holds a Certificate of Authority as listed in the Department of the Treasury's Listing of Approved Sureties (Department Circular 570) dated July 1, 2017. Furthermore, each surety company is rated "A" or better by A.M. Best Company, all with Financial Size Category "XV".

Lane-Fluor 26 LLC will be formed as a joint venture between The Lane Construction Corporation and Fluor Enterprises, Inc., of which both firms have developed strong track records of completing complex construction projects on time and within the available budget. The co-sureties will provide surety support for Lane-Fluor 26 LLC for individual projects with contract values of at least \$475,000,000 and corresponding backlogs approaching \$7,500,000,000. At this time, Lane-Fluor 26 LLC has a single bonding capacity of at least \$475,000,000., and has more than sufficient bonding capacity available to meet the requirements of this project. The co-sureties acknowledge the future formation of the Lane-Fluor 26 LLC joint venture and are prepared to provide 100% Performance and 100% Labor and Materials Payment Bonds for this Project as proposed in the RFQ, in the amount of the anticipated cost of construction should Lane-Fluor 26 LLC be the successful bidder and enter into a contract for this Project.



Naturally, as is customary within the surety industry, the issuance of any bonds is contingent upon a favorable underwriting review of project specifics including, but not limited to, the contract terms, conditions, documents, bond forms and confirmation of complete project financing by both Lane-Fluor 26 LLC and its co-sureties at the time a request for bonds is made. We assume no liability to third parties or to you by issuance of this letter, should bid or final bonds not be issued.

Should you need additional assurance regarding the technical ability or bonding capacity of Lane-Fluor 26 LLC, please do not hesitate to contact this office.

Sincerely,

Liberty Mutual Insurance Company
National Union Fire Insurance Company of Pittsburgh, PA
Zurich American Insurance Company
Fidelity and Deposit Company of Maryland
Berkshire Hathaway Specialty Insurance Company
Federal Insurance Company
Travelers Casualty and Surety Company



Jean Correia, Attorney-in-Fact



Aon Risk Services
53 State Street
Boston, MA 02109
860-830-1769

THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.

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.

Certificate No. 7963455

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

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, Maria Chaves; Jean Correia; Jane Gilson; Mark P. Herendeen; Bryan Huft; Theresan E. Rowedder; Kevin A. White

all of the city of Boston, state of MA 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 14th day of December, 2017.



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

By: David M. Carey
David M. Carey, Assistant Secretary

STATE OF PENNSYLVANIA ss
COUNTY OF MONTGOMERY

On this 14th day of December, 2017, 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
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 19th day of April, 2018.



By: Renee C. Llewellyn
Renee C. Llewellyn, Assistant Secretary

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

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.

POWER OF ATTORNEY

American Home Assurance Company
National Union Fire Insurance Company of Pittsburgh, PA.
Principal Bond Office: 175 Water Street, New York, NY 10038

Power No. **3001**

No. **01-B-103378**

KNOW ALL MEN BY THESE PRESENTS:

That American Home Assurance Company, a New York corporation, and National Union Fire Insurance Company of Pittsburgh, PA., a Pennsylvania corporation, does each hereby appoint

---Mark P. Herendeen, Jean Correia, Maria Chaves, Jane Gilson, Theresan E. Rowedder: of Boston, Massachusetts---

its true and lawful Attorney(s)-in-Fact, with full authority to execute on its behalf bonds, undertakings, recognizances and other contracts of indemnity and writings obligatory in the nature thereof, issued in the course of its business, and to bind the respective company thereby.

IN WITNESS WHEREOF, American Home Assurance Company and National Union Fire Insurance Company of Pittsburgh, PA. have each executed these presents

this 17th day of July, 2017



Michael Yang, Vice President

STATE OF NEW YORK }
COUNTY OF NEW YORK } ss.

On this 17th day of July, 2017 before me came the above named officer of American Home Assurance Company and National Union Fire Insurance Company of Pittsburgh, PA., to me personally known to be the individual and officer described herein, and acknowledged that he executed the foregoing instrument and affixed the seals of said corporations thereto by authority of his office.

JULIANA HALLENBECK
Notary Public - State of New York
No. 01H05125071
Qualified in Bronx County
My Commission Expires April 18, 2021

CERTIFICATE

Exerpts of Resolutions adopted by the Boards of Directors of American Home Assurance Company and National Union Fire Insurance Company of Pittsburgh, PA. on May 18, 1976:

"RESOLVED, that the Chairman of the Board, the President, or any Vice President be, and hereby is, authorized to appoint Attorneys-in-Fact to represent and act for and on behalf of the Company to execute bonds, undertakings, recognizances and other contracts of indemnity and writings obligatory in the nature thereof, and to attach thereto the corporate seal of the Company, in the transaction of its surety business;

"RESOLVED, that the signatures and attestations of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the Company when so affixed with respect to any bond, undertaking, recognizance and other contract of indemnity and writing obligatory in the nature thereof;

"RESOLVED, that any such Attorney-in-Fact delivering a secretarial certification that the foregoing resolutions still be in effect may insert in such certification the date thereof, said date to be not later than the date of delivery thereof by such Attorney-in-Fact."

I, Martin Bogue, Assistant Secretary of American Home Assurance Company and of National Union Fire Insurance Company of Pittsburgh, PA. do hereby certify that the foregoing exerpts of Resolutions adopted by the Boards of Directors of these corporations, and the Powers of Attorney issued pursuant thereto, are true and correct, and that both the Resolutions and the Powers of Attorney are in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the facsimile seal of each corporation



this 19th day of April, 2018

Martin Bogue, Assistant Secretary

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

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Maryland, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Maryland (herein collectively called the "Companies"), by **DAVID MCVICKER, Vice President**, in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint **Kevin A. WHITE, Mark P. HERENDEEN, Jean CORREIA, Maria CHAVES, Theresan E. ROWEDDER, Bryan HUFT and Jane GILSON**, all of Boston, Massachusetts, 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 5th day of December, A.D. 2017.

ATTEST:

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



By: *Dawn E. Brown*
*Assistant Secretary
Dawn E. Brown*

David McVicker
*Vice President
David McVicker*

State of Maryland
County of Baltimore

On this 5th day of December, A.D. 2017, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **DAVID MCVICKER, Vice President, and DAWN E. BROWN, Assistant Secretary**, of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, depose 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

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



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

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

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

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

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

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies, this 19th day of April, 2018.



Michael Bond, Vice President

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

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



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 100 Federal Street, 20th Floor, Boston, Massachusetts 02110, **NATIONAL INDEMNITY COMPANY**, a corporation existing under and by virtue of the laws of the State of Nebraska and **NATIONAL LIABILITY & FIRE INSURANCE COMPANY**, a corporation existing under and by virtue of the laws of the State of Connecticut (hereinafter collectively the "Companies"), pursuant to and by the authority granted as set forth herein, do hereby name, constitute and appoint: **Maria Chaves, Jean Correia, Theresan E. Rowedder, Jane Gilson, Mark P. Herendeen, One Federal Street, 20th Floor of the city of Boston State of Massachusetts**, 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 November 2, 2017. 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,**

By: _____
David Fields, Executive Vice President



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

By: _____
David Fields, Vice President



NOTARY

State of Massachusetts, County of Suffolk, ss:

On November 2, 2017 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, I have hereunto affixed the seals of said companies this date of April 19, 2018.



Officer

To verify the authenticity of this Power of Attorney please contact us at: BHSI Surety Department, Berkshire Hathaway Specialty Insurance Company, 100 Federal Street, 20th floor, Boston MA 02110 (617) 936-2971 or by email at Courtney.Walker@bhspecialty.com. **THIS POWER OF ATTORNEY IS VOID IF ALTERED.**
To notify us of 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) 507-8529, or via mail 500 Northpark Town Center, 1100 Abernathy Road, N.E., Suite 1200, Atlanta, GA 30328.

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

Federal Insurance Company | Vigilant Insurance Company | Pacific Indemnity Company

Know All by These Presents, That FEDERAL INSURANCE COMPANY, an Indiana corporation, VIGILANT INSURANCE COMPANY, a New York corporation, and PACIFIC INDEMNITY COMPANY, a Wisconsin corporation, do each hereby constitute and appoint Maria Chaves, Jean Correia, Jane Gilson, Mark P. Herendeen and Bryan Huft of Boston, Massachusetts; Paul Healy and Theresan E. Rowedder of Wethersfield, Connecticut-----

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, and PACIFIC INDEMNITY COMPANY have each executed and attested these presents and affixed their corporate seals on this 9th day of August, 2017.

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 9th day of August, 2017 before me, a Notary Public of New Jersey, personally came Dawn M. Chloros, to me known to be Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY, the companies which executed the foregoing Power of Attorney, and the said Dawn M. Chloros, being by me duly sworn, did depose and say that she is Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY and knows 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 she signed said Power of Attorney as Assistant Secretary of said Companies by like authority; and that she is acquainted with Stephen M. Haney, and knows him to be Vice President of said Companies; and that the signature of Stephen M. Haney, subscribed to said Power of Attorney is in the genuine handwriting of Stephen M. Haney, and was thereto subscribed by authority of said Companies and in deponent's presence.

Notarial Seal



KATHERINE J. ADELAAR
NOTARY PUBLIC OF NEW JERSEY
No. 2318865
Commission Expires July 16, 2019

[Handwritten 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:

"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, and PACIFIC INDEMNITY 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 Companies are duly licensed and authorized to transact surety business in all 50 of the United States of America and the District of Columbia and are authorized by the U.S. Treasury Department; further, Federal and Vigilant are licensed in the U.S. Virgin Islands, and Federal is licensed in Guam, Puerto Rico, and each of the Provinces of Canada except Prince Edward Island; and
(iii) 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

19th day of April, 2018



Dawn M. Chloros

Dawn M. Chloros, Assistant Secretary

IN THE EVENT YOU WISH TO NOTIFY US OF A CLAIM, 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



**Travelers Casualty and Surety Company of America
Travelers Casualty and Surety Company
St. Paul Fire and Marine Insurance Company**

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company are corporations duly organized under the laws of the State of Connecticut (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint **Jean Correia, of Boston, Massachusetts**, their true and lawful Attorney-in-Fact to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed, and their corporate seals to be hereto affixed, this **3rd** day of **February**, 2017.



State of Connecticut
City of Hartford ss.

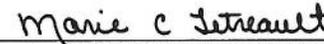
By: 
Robert L. Raney, Senior Vice President

On this the **3rd** day of **February**, 2017, before me personally appeared **Robert L. Raney**, who acknowledged himself to be the Senior Vice President of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, and that he, as such, being authorized so to do, executed 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 hereunto set my hand and official seal.

My Commission expires the **30th** day of **June**, 2021




Marie C. Tetreault, Notary Public

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

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

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

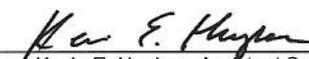
FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice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

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

I, **Kevin E. Hughes**, the undersigned, Assistant Secretary of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine 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 remains in full force and effect.

Dated this 19th day of April, 2018




Kevin E. Hughes, Assistant Secretary

**To verify the authenticity of this Power of Attorney, please call us at 1-800-421-3880.
Please refer to the above-named Attorney-in-Fact and the details of the bond to which the power is attached.**

3.6.3 ORGANIZATIONAL AGREEMENTS



April 18, 2018

Carmen Wright
Office of Project Delivery
South Carolina Department of Transportation
955 Park Street, Room 101
Columbia, SC 29201

RE: Design Build Project / Interstate 26 Widening MM85-101 / Project ID P029208 (the "Project")
Organizational Agreements / Intent to Form Joint Venture

Mr. Wright,

In response to Section 3.6.3 of the Request for Qualifications for the above-mentioned Project, we hereby confirm that The Lane Construction Corporation ("Lane") and Fluor Enterprises, Inc. ("FEI") intend to form the joint venture known as Lane-Fluor 26 LLC in order to perform the Project. If Lane-Fluor 26 LLC is short-listed, we will submit with our response to the RFP a copy of the joint venture organizational agreement.

Lane and Fluor further agree to be fully liable for the performance under the contract. In addition, Lane and Fluor hereby appoint Jeffrey P. Smith, of Lane, as its authorized representative, to sign documents for and on behalf of Lane-Fluor LLC, solely in connection with the statements of qualifications, and as mutually agreed, in connection with any joint proposals, for the Project, including the contract if Lane-Fluor 26 LLC is awarded the contract for the Project.

Signature pages to follow.

The Lane Construction Corporation

A handwritten signature in blue ink, appearing to read 'Mark A. Schiller', written over a horizontal line.

Mark A. Schiller
EVP & COO Plants & Paving

A handwritten signature in blue ink, appearing to read 'Mark J. Tomkalski', written over a horizontal line.

Mark J. Tomkalski
EVP & CFO

ACKNOWLEDGEMENT

On April 20, 2018, before me, Patricia A. Delekta, Notary Public, personally appeared Mark A. Schiller and Mark J. Tomkalski, personally known to me to be the persons whose names are subscribed to the within instrument and individually acknowledged to me that they executed the same in their authorized capacity to execute instruments on behalf of the entity indicated and that their signatures constitute execution thereof by the entity indicated.

WITNESS my hand and official seal.

A handwritten signature in blue ink, appearing to read 'Patricia A. Delekta', written over a horizontal line.

Patricia A. Delekta, Notary
My commission Expires: July 31, 2019

Notary Seal:





Fluor Enterprises, Inc.

[Handwritten signature of David Parker]



David Parker
Vice President, Sales

ACKNOWLEDGEMENT

On April 24, 2018, before me, Mary Ann Mayshaw Notary Public, personally appeared David Parker, personally known to me to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity to execute instruments on behalf of the entity indicated and that his signature constituted execution thereof by the entity indicated.

WITNESS my hand and official seal.

Mary Ann Mayshaw

Signature of Notary

Notary Seal:





Appendix E – Organizational Conflict of Interest

DISCLOSURE OF POTENTIAL CONFLICT OF INTEREST CERTIFICATION

PROPOSER hereby indicates that it has, to the best of its knowledge and belief has:

Determined that no potential organizational conflict of interest exists.

Determined a potential organizational conflict of interest as follows:

Attach additional sheets as necessary.

1. Describe nature of the potential conflict(s):

FEI's ongoing joint ventures within the Infrastructure Business Line have existing contractual (lead designer) relationships, including teaming agreements, with both AECOM and STV Group, Inc. Furthermore, FEI may have other contractual relationships with the entities listed in Section 7.8 of the RFQ outside of the Infrastructure Business Line.

However, FEI does not believe any organizational conflicts of interest exist as those entities have been rendering impartial assistance to the owner notwithstanding the noted relationships described above which FEI reports here out of the abundance of caution. Further, FEI shall comply with all federal and state conflict of interest rules and regulations.

2. Describe measures proposed to mitigate the potential conflict(s):

Not applicable.



Signature

April 24, 2018
Date

David Parker
Print Name

Fluor Enterprises, Inc.
Company

If a potential conflict has been identified, please provide name and phone number for a contact person authorized to discuss this disclosure certification with Department of Transportation contract personnel.

Name

Phone

Company

DISCLOSURE OF POTENTIAL CONFLICT OF INTEREST CERTIFICATION

PROPOSER hereby indicates that it has, to the best of its knowledge and belief has:

Determined that no potential organizational conflict of interest exists.

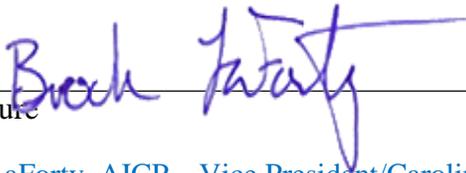
Determined a potential organizational conflict of interest as follows:

Attach additional sheets as necessary.

1. Describe nature of the potential conflict(s):

2. Describe measures proposed to mitigate the potential conflict(s):

Signature



4/30/2018
Date

Brock LaForty, AICP – Vice President/Carolinas Area Manager
Print Name

WSP USA Inc.
Company

If a potential conflict has been identified, please provide name and phone number for a contact person authorized to discuss this disclosure certification with Department of Transportation contract personnel.

Name

Phone

Company

DISCLOSURE OF POTENTIAL CONFLICT OF INTEREST CERTIFICATION

PROPOSER hereby indicates that it has, to the best of its knowledge and belief has:

Determined that no potential organizational conflict of interest exists.

Determined a potential organizational conflict of interest as follows:

Attach additional sheets as necessary.

1. Describe nature of the potential conflict(s):

2. Describe measures proposed to mitigate the potential conflict(s):



Signature

04/30/18

Date

W. MERRITT KING

Print Name

KCI TECHNOLOGIES, INC.

Company

If a potential conflict has been identified, please provide name and phone number for a contact person authorized to discuss this disclosure certification with Department of Transportation contract personnel.

Name

Phone

Company

DISCLOSURE OF POTENTIAL CONFLICT OF INTEREST CERTIFICATION

PROPOSER hereby indicates that it has, to the best of its knowledge and belief has:

Determined that no potential organizational conflict of interest exists.

Determined a potential organizational conflict of interest as follows:

Attach additional sheets as necessary.

1. Describe nature of the potential conflict(s):

2. Describe measures proposed to mitigate the potential conflict(s):



Signature

4/27/18
Date

D. BRUCE URENHART
Print Name

DAVIS & FLOYD INC.
Company

If a potential conflict has been identified, please provide name and phone number for a contact person authorized to discuss this disclosure certification with Department of Transportation contract personnel.

Name

Phone

Company

DISCLOSURE OF POTENTIAL CONFLICT OF INTEREST CERTIFICATION

PROPOSER hereby indicates that it has, to the best of its knowledge and belief has:

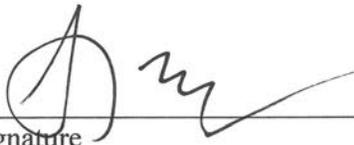
Determined that no potential organizational conflict of interest exists.

Determined a potential organizational conflict of interest as follows:

Attach additional sheets as necessary.

1. Describe nature of the potential conflict(s):

2. Describe measures proposed to mitigate the potential conflict(s):



Signature

4-30-18
Date

STEWART LANCY
Print Name

S&ME, INC.
Company

If a potential conflict has been identified, please provide name and phone number for a contact person authorized to discuss this disclosure certification with Department of Transportation contract personnel.

Name

Phone

Company

DISCLOSURE OF POTENTIAL CONFLICT OF INTEREST CERTIFICATION

PROPOSER hereby indicates that it has, to the best of its knowledge and belief has:

Determined that no potential organizational conflict of interest exists.

Determined a potential organizational conflict of interest as follows:

Attach additional sheets as necessary.

1. Describe nature of the potential conflict(s):

2. Describe measures proposed to mitigate the potential conflict(s):



Signature

04/27/18

Date

Joe Alan Carroll, President

Print Name

THC, Inc.

Company

If a potential conflict has been identified, please provide name and phone number for a contact person authorized to discuss this disclosure certification with Department of Transportation contract personnel.

Name

Phone

Company

DISCLOSURE OF POTENTIAL CONFLICT OF INTEREST CERTIFICATION

PROPOSER hereby indicates that it has, to the best of its knowledge and belief has:

- Determined that no potential organizational conflict of interest exists.
 Determined a potential organizational conflict of interest as follows:

Attach additional sheets as necessary.

1. Describe nature of the potential conflict(s):
2. Describe measures proposed to mitigate the potential conflict(s):



Signature

4/27/2018

Date

IRWIN B. JOHNSON

Print Name

THREE OAKS ENGINEERING, INC.

Company

If a potential conflict has been identified, please provide name and phone number for a contact person authorized to discuss this disclosure certification with Department of Transportation contract personnel.

Name

Phone

Company

DISCLOSURE OF POTENTIAL CONFLICT OF INTEREST CERTIFICATION

PROPOSER hereby indicates that it has, to the best of its knowledge and belief has:

Determined that no potential organizational conflict of interest exists.

Determined a potential organizational conflict of interest as follows:

Attach additional sheets as necessary.

1. Describe nature of the potential conflict(s):

2. Describe measures proposed to mitigate the potential conflict(s):

Signature



DIPAK MOHANLAL PATEL

Print Name

DAD N ASSOCIATES LLC

Company

4/26/2018

Date

If a potential conflict has been identified, please provide name and phone number for a contact person authorized to discuss this disclosure certification with Department of Transportation contract personnel.

Name

Phone

Company

DISCLOSURE OF POTENTIAL CONFLICT OF INTEREST CERTIFICATION

PROPOSER hereby indicates that it has, to the best of its knowledge and belief has:

Determined that no potential organizational conflict of interest exists.

Determined a potential organizational conflict of interest as follows:

Attach additional sheets as necessary.

1. Describe nature of the potential conflict(s):

2. Describe measures proposed to mitigate the potential conflict(s):

Regina K. Bennett
Signature

05/01/2018
Date

Regina K. Bennett
Print Name

OLH Inc.
Company

If a potential conflict has been identified, please provide name and phone number for a contact person authorized to discuss this disclosure certification with Department of Transportation contract personnel.

Name

Phone

Company

DISCLOSURE OF POTENTIAL CONFLICT OF INTEREST CERTIFICATION

PROPOSER hereby indicates that it has, to the best of its knowledge and belief has:

Determined that no potential organizational conflict of interest exists.

Determined a potential organizational conflict of interest as follows:

Attach additional sheets as necessary.

1. Describe nature of the potential conflict(s):

2. Describe measures proposed to mitigate the potential conflict(s):



Signature

April 27, 2018

Date

Derek Cardon Staton, PE

Print Name

Carolina Transportation Engineers & Associates, PC

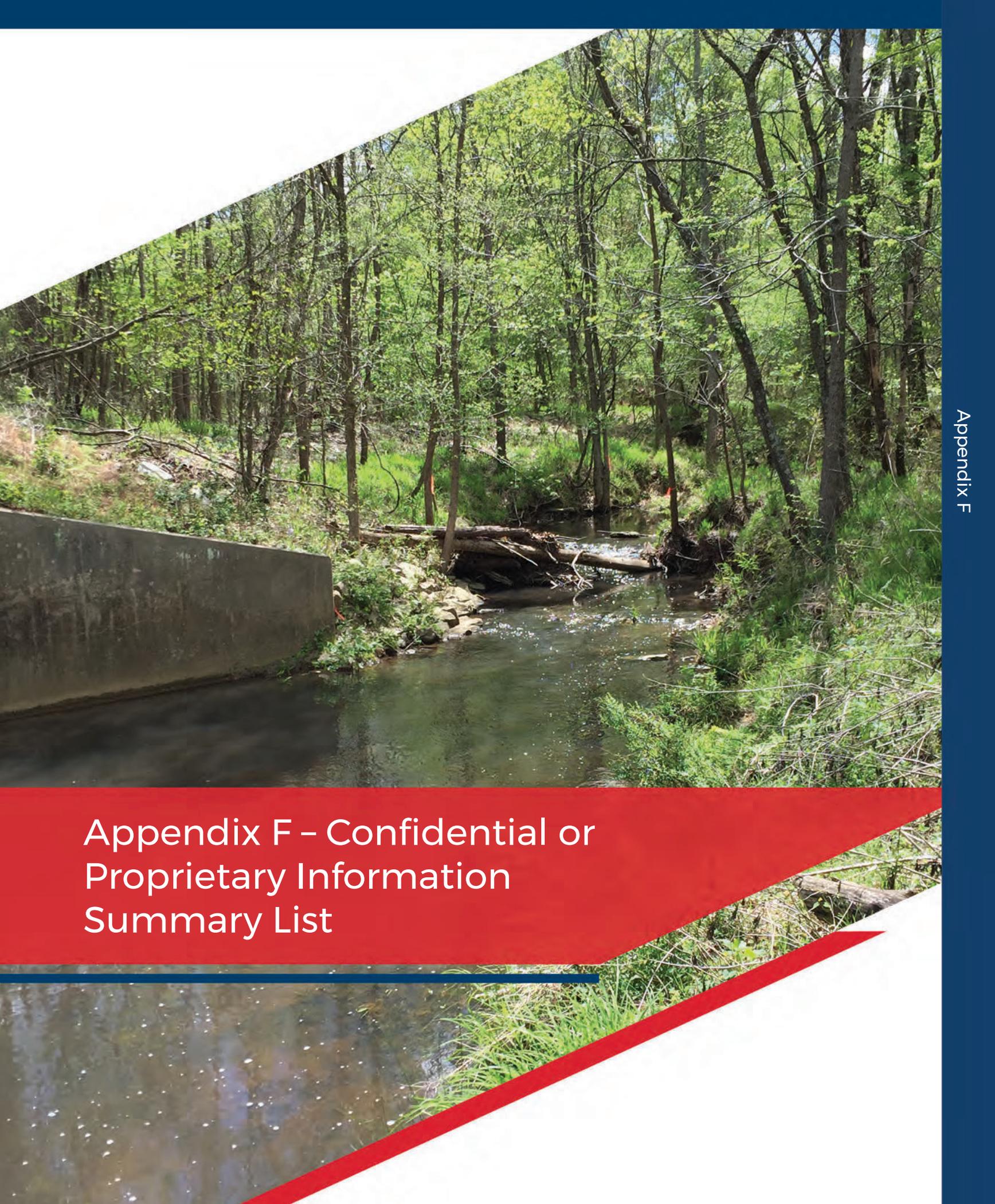
Company

If a potential conflict has been identified, please provide name and phone number for a contact person authorized to discuss this disclosure certification with Department of Transportation contract personnel.

Name

Phone

Company



Appendix F – Confidential or
Proprietary Information
Summary List

APPENDIX F - CONFIDENTIAL OR PROPRIETARY INFORMATION SUMMARY LIST

The following table specifies those sections/pages of the Lane-Fluor 26 LLC Statement of Qualifications that contain confidential or proprietary information and are marked accordingly on the respective pages.

Document Title	Page Numbers
Appendix C - Quality of Past Performance (Section 3.5.2)	C-11, C-12



Appendix G – Addendum Receipt Form(s)

NOTICE OF RECEIPT- RFQ Addendum #1

**I-26 Widening MM 85-101
Design-Build – Project ID P029208
Richland, Lexington, and Newberry Counties**

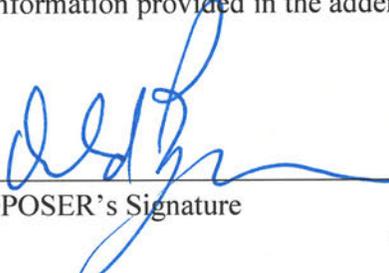
RFQ Addendum 1

The information in this addendum shall be made part of the contract documents. PROPOSERS are instructed to incorporate the information into the previously provided RFQ documents.

PROPOSERS are required to sign this document and enclose it with their Statement of Qualifications. Receipt of this signed document by The South Carolina Department of Transportation serves as confirmation that the PROPOSER has received and incorporated this Addendum into the contract documents.

Confirmation Statement:

I, the PROPOSER confirm that I have received this addendum package and have incorporated the information provided in the addendum into the contract documents.



PROPOSER's Signature

4/30/18

Date

DONALD E. BRYSON JR.

Printed Name

For: LANE - FLOOR 26

Design-Build Team Name





Appendix H – Key Individual and Contractor/Designer Reference Forms

APPENDIX H – CONTRACTOR-DESIGNER REFERENCE FORM

Email	First Name	Last Name	Company Name	Project Name	Team
BurtonD@scdot.org	Daniel	Burton	SCDOT	I-26 Port Access Road Improvement DB (Contractor)	Fluor, Lane, WSP, KCI, D&F, S&ME
garrett.moore@vdot.virginia.gov	Garrett	Moore	VDOT	I-95 Express Lanes P3	Fluor, Lane
garrett.moore@vdot.virginia.gov	Garrett	Moore	VDOT	I-495 Express Lanes P3	Fluor, Lane
kalakhdar@ncdot.gov	Khaled	Al-Akhdar	NCDOT	I-85 Davidson (TIP No. I-2304AD)	WSP
jensor@mta.maryland.Gov	Jeffrey	Ensor	MTA	Maryland Purple Line P3	Fluor, Lane, WSP
jword@mobilityauthority.com	Justin	Word	Central Texas Regional Mobility Authority	Bergstrom Expressway (US 183 South)	Fluor, WSP
ceason.clemons@txdot.gov	Ceason	Clemens	TxDOT	Dallas Horseshoe (I-30 and I-35E)	Fluor, WSP
BerryWK@scdot.org	Kyle	Berry	SCDOT	Conway Bypass (SC Hwy 22)	Fluor, D&F, S&ME
john.huskins@kci.com	John	Huskins	SCDOT	US 21 Bridge over Catawba River	Lane, KCI
john.huskins@kci.com	John	Huskins	SCDOT	I-77 Bridge over Catawba River	Lane, KCI
Kevin.reichert@vdot.virginia.gov	Kevin	Reichert	VDOT	Route 659 Belmont Ridge Road-DB Pursuit	Lane
Md.Rahman@vdot.virginia.gov	Arif	Rahman	VDOT	Route 7 over Dulles Airport Toll Road DB Pursuit	Lane
rdrochelle@ncdot.gov	Rodger	Rochelle	NCDOT	I-85 Widening Cabarrus (I-3803B)	Lane
ipockcr@scdot.org	Claude	Ipock	SCDOT	I-385 Improvements	Lane, S&ME
john.tyler@dot.state.fl.us	John	Tyler	FDOT	I-4 Ultimate Improvement Project	Lane
kalakhdar@ncdot.gov	Khaled	Al-Akhdar	NCDOT	I-85 Widening Design-Build (TIP I-3802A)	WSP
Duane.Milligan@txdot.gov	Duane	Milligan	TxDOT	Dallas Horseshoe D-B Reconstruction	Fluor, WSP
Bradley.Weidenhammer@VDOT.Virginia.gov	Bradley	Windenhammer	VDOT	I-264 Widening/MLK Extension	WSP
gaskinscj@scdot.org	Chris	Gaskins	SCDOT	I-26 Port Access Road Improvement DB (Designer)	Fluor, Lane, WSP, KCI, D&F, S&ME



APPENDIX H – KEY INDIVIDUAL REFERENCE FORM

Email	First Name	Last Name	Key Individual Name	Project Name	Role of Key Individual	Team
ipockcr@scdot.org	Claude	Ipock	Thomas Charles Meador	I-26 Port Access Road Improvements DB	Executive Management Committee Member	Lane
kalakhdar@ncdot.gov	Khaled	Al-Akhdar	Thomas Charles Meador	I-85 Reconstruction Design-Build – Davidson County	Design-Build Project Manager	Austin Bridge & Road
katerina.roman@dot.gov	Katerina	Roman	Thomas Charles Meador	Foothills Parkway Design-Build	Project Manager	Lane
Eddie.reyes@txdot.gov	Eddie	Reyes	Thomas Charles Meador	Ben White / IH35 Interchange	Project Engineer	J.D. Abrams
Eddie.reyes@txdot.gov	Eddie	Reyes	Thomas Charles Meador	US 183 Freeway Extension	Assistant Project Manager	J.D. Abrams
Bradley.Weidenhammer@VDOT.Virginia.gov	Bradley	Weidenhammer	Derek John Piper, PE, AICP	VDOT 1-264 Widening and MLK Extension Final Design – Design-Build, Portsmouth, VA	Lead Design Engineer (Design Manager)	WSP
Bradley.Weidenhammer@VDOT.Virginia.gov	Bradley	Weidenhammer	Derek John Piper, PE, AICP	Elizabeth River Tunnel Project including 1-264 Widening and MLK Extension Preliminary Design – Design-Build, Norfolk and Portsmouth, VA	Deputy Design Manager	WSP
jeffrey.robby@vdot.virginia.gov	Jeffrey	Roby	Derek John Piper, PE, AICP	I-64 Southside Widening including the High Rise Bridge, Phase 1, Design Build (Preliminary Design), Chesapeake, Virginia	Lead Design Engineer (Design Manager)	WSP
Bradley.Weidenhammer@VDOT.Virginia.gov	Bradley	Weidenhammer	Philip Mark Lohr, PE, PTOE	Martin Luther King Expressway Extension, Portsmouth, Virginia: subconsultant to WSP	Civil Design Manager (Lead Roadway Engineer)	Volkert, Inc.
paul.nishimoto@vdot.virginia.gov	Paul	Nishimoto	Philip Mark Lohr, PE, PTOE	I-495 Northern Section Shoulder Use, Fort Myer Construction/VDOT, Fairfax County, Virginia	Design Manager (Lead Roadway Engineer)	Volkert, Inc.
walkers@dot.state.al.us	Steve	Walker	Philip Mark Lohr, PE, PTOE	I-65/Corridor X Interchange, Alabama Department of Transportation, Birmingham, Alabama	Project Manager (Lead Roadway Engineer)	Volkert, Inc.
ricardo.correa@vdot.virginia.gov	Rick	Correa	Philip Mark Lohr, PE, PTOE	I-64 Southside Widening and High Rise Bridge – Phase I, VDOT, Chesapeake, Virginia	Task Manager (Roadway Engineer)	Whitman, Requardt & Associates, LLP
gaskinscj@scdot.org	Chris	Gaskins	Jared Clinton Medlin, PE	I-26 Port Access Road Improvements DB	Structural Engineer	KCI
redfearnwt@scdot.org	Tyke	Redfearn	Jared Clinton Medlin, PE	SCDOT I-77 Widening Design-Build, York County, SC	Structural Engineer	KCI
mshumsky@ncdot.gov	Michael	Shumsky	Jared Clinton Medlin, PE	NCDOT R-2247CD & EC Winston-Salem Design-Build Interchanges, Forsyth County, NC	Structures Lead Designer	KCI
bmemory@ncdot.gov	Beau	Memory	Jared Clinton Medlin, PE	NCTA Monroe Bypass Connector Design-Build, Mecklenburg and Union Counties, NC	Structural Engineer	KCI
ipockcr@scdot.org	Claude	Ipock	Jared Clinton Medlin, PE	SCDOT I-520 Palmetto Parkway Phases I and II, Aiken County, SC	Structural Engineer	KCI
kalakhdar@ncdot.gov	Khaled	Al-Akhdar	Jason Robert Gorrie, PE	I-85 Cabarrus (I-3802A) Design-Build, Cabarrus County, NC	Lead Traffic Engineer	WSP
kalakhdar@ncdot.gov	Khaled	Al-Akhdar	Jason Robert Gorrie, PE	Salem Creek Connector (U-2925) Design-Build, Forsyth County, NC	Lead Traffic Engineer	WSP
kerrie.harrell@dot.state.fl.us	Kerrie	Harrell	Jason Robert Gorrie, PE	Choctawhatchee Bay Bridge Design-Build, Florida Department of Transportation (FDOT) District Three, Florida	Lead Traffic Engineer	WSP
bjupshaw@ncdot.gov	Ben	Upshaw	Jason Robert Gorrie, PE	I-40 & NC 54 Interchange Improvements (I-5873), Wake County, NC	Lead Traffic Engineer	WSP
HarrisMD@scdot.org	Trapp	Harris	Stewart Schumpert Laney, PE, DBIA	SCDOT I-85 (MM 98–106) - Design Build	Pursuit Manager / Geotechnical Project Engineer	S&ME
HarrisMD@scdot.org	Trapp	Harris	Stewart Schumpert Laney, PE, DBIA	SCDOT Emergency Bridge Package 6 - Design Build	Pursuit Manager / Geotechnical Project Engineer	S&ME
HarrisMD@scdot.org	Trapp	Harris	Stewart Schumpert Laney, PE, DBIA	SCDOT Emergency Bridge Package 5 - Design Build	Pursuit Manager / Project Manager	S&ME



Email	First Name	Last Name	Key Individual Name	Project Name	Role of Key Individual	Team
HarrisMD@scdot.org	Trapp	Harris	Stewart Schumpert Laney, PE, DBIA	SCDOT I-20 Design Build	Pursuit Mgr. / Geotechnical Project Engineer	S&ME
kalakhdar@ncdot.gov	Khaled	Al-Akhdar	Andre Maurice Mullins, PE	I-85 Cabarrus (I-3802A) Design-Build, Cabarrus County, NC	Hydraulic Engineer	STV
(704) 432-0590	Ben	Lanzillotta	Andre Maurice Mullins, PE	Cutchin Drive Storm Drainage Improvement Project Charlotte, South Carolina	Engineering Designer	WSP
bmckenzie@ncdot.gov	Brady	McKenzie	Andre Maurice Mullins, PE	NCDOT I-485 Widening Design-Build (Southeast Charlotte) Charlotte, North Carolina	Engineering Designer	WSP
704-336-7600	Stewart	Edwards	Andre Maurice Mullins, PE	City of Charlotte M-Team Storm Water On-Call Catalina Avenue, Charlotte, North Carolina	Engineering Designer	STV
johnsoncd@scdot.org	Danny	Johnson	Adam Horn Karagosian, PWS	SCDOT Small Purchase Contract: JDs and Permits for Six Maintenance Bridge Replacement in RPG 2, Lee and Sumter Counties, SC	Project Manager/ Environmental Task Lead	WSP
gordonso@scdot.org	Siobhan	Gordon	Adam Horn Karagosian, PWS	SCDOT Small Purchase Contract: US 301 at SC 33 Intersection Improvement and Bridge Replacement over N. Edisto River & Swamp, Orangeburg, Orangeburg County, SC and SCDOT, US 278 at SC 300 & SC 3 Intersection Improvement, Barnwell County, SC	Environmental Task Lead /Project Manager	WSP
phillipsh@scdot.org	Henry	Phillips	Adam Horn Karagosian, PWS	Five Bridge Replacements on S-31 over Waccamaw River Swamp Horry County, SC	Environmental Task Lead	Jacobs Engineering
longcc@scdot.org	Chad	Long	Adam Horn Karagosian, PWS	US 17 Widening Environmental Assessment (On-Call NEPA Services) Jasper County, SC	Environmental Task Lead/Project Manager	Jacobs Engineering
mattoxjh@scdot.org	Jae	Mattox	Eric Scot Dickey, PE, PLS	I-26 Port Access Road Improvements DB	Design Manager	Davis & Floyd
rewisbl@scdot.org	Brent	Rewis	Eric Scot Dickey, PE, PLS	I-526 Low Country Corridor Phase 1 Design-Build Prep – North Charleston, SC	Design Manager	Davis & Floyd
humphrieas@scdot.org	Adam	Humphries	Eric Scot Dickey, PE, PLS	S-31 (York Street Bridge) Replacement - Aiken County, SC	Project Manager	Davis & Floyd
EdwardsT@RCGov.us	Tony	Edwards	Eric Scot Dickey, PE, PLS	Clemson Road / Sparkleberry Lane Intersection Improvements - Richland County, SC	Project Manager	Davis & Floyd
humphrieas@scdot.org	Adam	Humphries	Eric Scot Dickey, PE, PLS	US 278 Bridge Replacement over Three Runs Creek - Aiken County, SC	Project Manager	Davis & Floyd
burtond@scdot.org	Daniel	Burton	Patrick James Kerrigan	I-26 Port Access Road Improvements DB	Deputy Director – Construction Manager	Lane
m.herring@vdot.virginia.gov	Bret	Herring	Patrick James Kerrigan	I-495 Capital Beltway Express Lanes	Project Engineer/Senior Engineer	Lane
Jeremy.hendrick@vdot.virginia.gov	Jeremy	Hendrick	Patrick James Kerrigan	I-581 Valley View Interchange, Phase 2	Assistant Project Manager	Lane
kmattke@hwlochner.com	Kane	Mattke	Patrick James Kerrigan	IH35 Bexar County and I-35 Solado Creek	Assistant Project Manager	Lane
jamey.barbas@newnybridge.com	Jamey	Barbas	John James Wilson	Governor Mario M. Cuomo Bridge (Formerly Tappan Zee Bridge)	Quality Manager	Fluor
(no direct reference records available)	US Army Corps of Engineers	USACE	John James Wilson	USACE Infrastructure Expansion Projects at Fort Bliss Army Base, Fort Bliss, TX.	Construction Quality Control System Manager	Tug Hill Construction, Inc.
(no direct reference records available)	US Army Corps of Engineers	USACE	John James Wilson	Fort Drum Parallel Taxiway J & Mountain Ramp Expansion, Fort Drum, New York	Quality Manager	Tug Hill Construction, Inc.
(company sold - no reference records)	Niagara Mohawk Power Corp	Niagara Mohawk Power Corp	John James Wilson	Niagara Mohawk Power Corp. Nine Mile Point, Unit 2 Nuclear Power Plant, Lycoming, NY	QC Senior Inspector - QC Inspector Level II	Stone and Webster Engineering Corp.



Email	First Name	Last Name	Key Individual Name	Project Name	Role of Key Individual	Team
burtond@scdot.org	Daniel	Burton	Emilio Ramon Campo	I-26 Port Access Road Improvements DB	Safety Manager	Fluor
cpillar@sceg.com	Chad	Pillar	Emilio Ramon Campo	V.C. Sumner Nuclear Generating Station Units 2 and 3, Jenkinsville, SC	Safety Supervisor	Fluor
griffin@showadenko.com	Peggy	Griffin	Emilio Ramon Campo	PFC-75 Carbon Electrode Expansion Project, Ridgeville, SC	HSE Supervisor/Manager	Fluor





6125 Tyvola Centre Drive
Charlotte, NC 28217-6432