



## Statement of Qualifications



## I-20 over Wateree River Bridge Replacement and Swamp Overflow Bridge Rehabilitations

### Design-Build Project

Contract ID 2847360

Kershaw County, SC



June 9, 2022





*This document is bookmarked for your convenience.*

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simply type  + *

## Narrative







## 3.2 INTRODUCTION

**3.2.1 Contracting Entity** | Crowder Construction Company (Crowder) will be the Contracting Entity, responsible for the successful delivery of this I-20 Wateree River Bridge Replacement and Swamp Overflow Bridge Rehabilitations. Crowder is a wholly-owned subsidiary of Crowder Constructors Inc. (parent) and both are incorporated in the state of North Carolina. Crowder will be responsible for the overall Design-Build (DB) project and will self-perform most of the key elements on the project including major bridge construction, demolition, and ancillary roadway components. Crowder is a prequalified prime contractor with SCDOT and has enlisted the design expertise, experience, and resources of **RK&K**. As Lead Designer, RK&K will serve as the prime design consulting firm responsible for the overall design and will be supported by trusted local subconsultants that specialize in various disciplines, including utility coordination, surveying, SUE, right-of-way, and environmental/permitting. Our team will partner with SCDOT and other agencies to assure a successful design build project.



### Contracting Entity and Project Management Office

**George Franklin Ellis, PE**  
Crowder Construction Company  
PO Box 30007, Charlotte, NC 28230  
704.332.8184 (phone) | 704.995.4757 (mobile)  
[gellis@crowderusa.com](mailto:gellis@crowderusa.com)

### 3.2.2 Points of Contact and 3.2.3 Full Legal Name of Lead Contractor & Lead Designer

#### 3.2.4 D-U-N-S Numbers

Team Member	D-U-N-S No.
Crowder Construction Company	00-677-9896
Rummel, Klepper & Kahl, LLP	08-106-3447
CES Group Engineers, LLP	96-841-1350
F&ME Consultants	04-369-2631
Robbins & DeWitt	11-857-2839
Surveying & Mapping, LLC	86-720-3556
TELICS	04-191-2254
Wilson Ferguson Associates	07-964-5371

#### Lead Contractor: Crowder Construction Company (Crowder)



**Christopher Alan Boyd, PE, DBIA**  
PO Box 30007, Charlotte, NC 28230  
704.348.1304 (phone) | 704.942.6580 (mobile)  
[CBoyd@crowderusa.com](mailto:CBoyd@crowderusa.com)

#### Lead Designer: Rummel, Klepper & Kahl, LLP (RK&K)



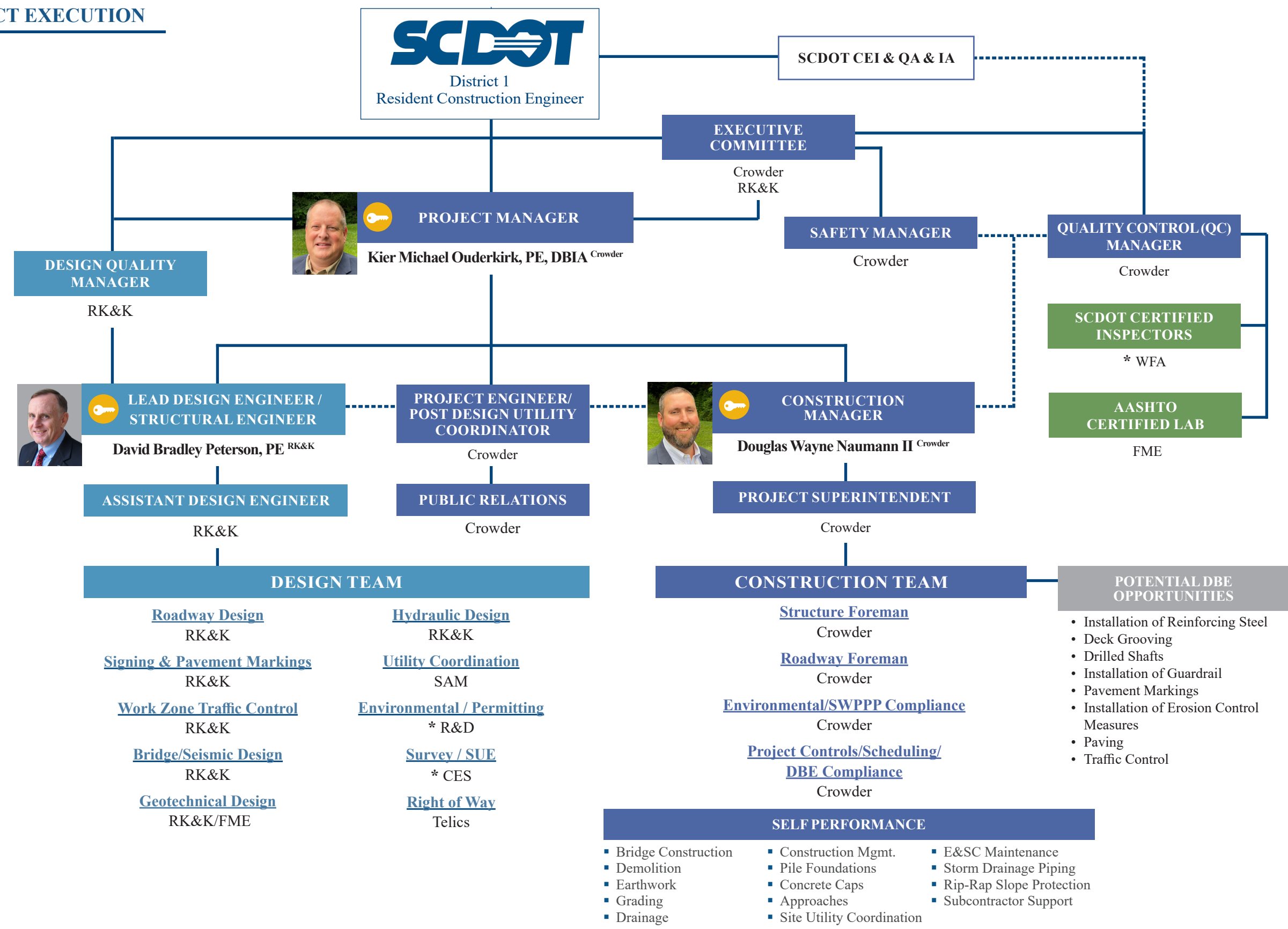
**David Bradley Peterson, PE**  
8601 Six Forks Rd., Forum 1, Suite 700, Raleigh, NC 27615  
919.878.9560 (phone) | 919.621.4149 (mobile)  
[dpeterson@rkk.com](mailto:dpeterson@rkk.com)




No Crowder-RK&K Team individual or firm has been suspended, debarred, disqualified from bidding, or declared ineligible for work by any entity. Additionally, there have been no such actions pending against an individual or firm within the last five years.

**3.2.5 Commitment of Key Individuals** | Our Key Individuals are **fully committed to this Project**, driven to meet and exceed SCDOT's quality and schedule expectations, and will be **available as required by the RFQ**. Our Team is also committed to providing all resources and personnel required to successfully deliver the Project.



3.3 TEAM STRUCTURE AND PROJECT EXECUTION



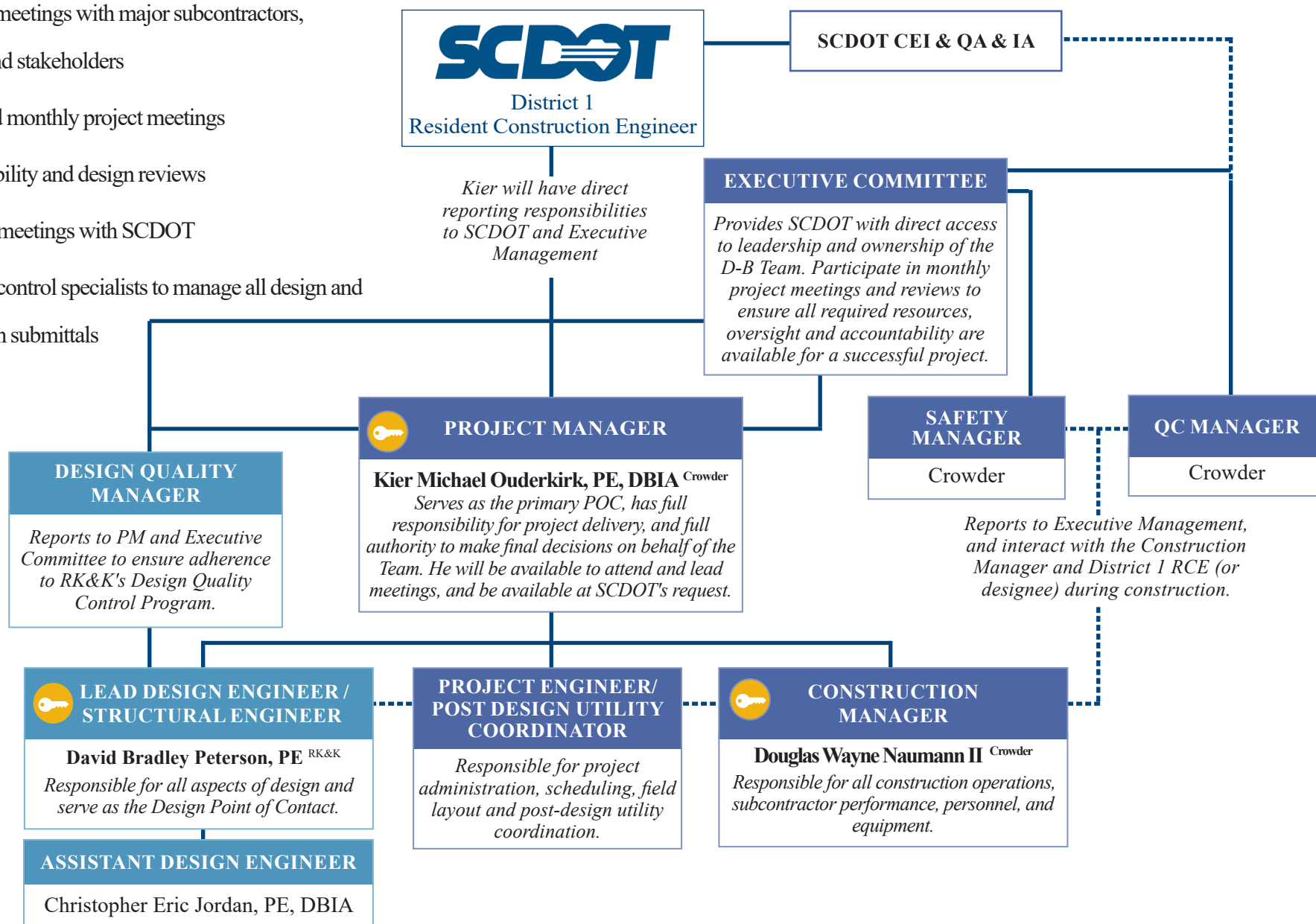
Team Member	
Crowder	Crowder Construction Company
RK&K	Rummel, Klepper & Kahl, LLP
CES	CES Group Engineers, LLP *
FME	F&ME Consultants
R&D	Robbins & DeWitt *
SAM	Surveying & Mapping, LLC
TEL	TELICS
WFA	Wilson Ferguson Associates *
	RFQ Key Individuals
	Direct Report
	Communication
*	Disadvantaged Business Enterprise (DBE)





**Team Integration** | The following illustrates functional relationships and how our proposed organization will seamlessly function as an integrated team through:

- Task force meetings with major subcontractors, SCDOT, and stakeholders
- Weekly and monthly project meetings
- Constructability and design reviews
- Pre-design meetings with SCDOT
- Document control specialists to manage all design and construction submittals







## Firms and Key Individuals Working Together and Teaming Success

| The construction strengths of Crowder combined with the design expertise of RK&K creates a desirable design-build team. Crowder and RK&K have worked together on several projects, as noted in this table, with each having been a successful venture. Through our joint experiences, our firms' cultures, assets, and focus on client service provide the foundation for an outstanding partnership.

There are three beneficial reasons why we chose to partner on this project.

1 Successful past personal experience of Crowder's

Operations Manager, John Tuschak, with RK&K on design-build projects, including a \$42M Design-Build project in Virginia.

2 RK&K's ability to self-perform geotechnical investigations and analysis. Having geotechnical design performed by our Lead Designer rather than a third party allows our team to better control major schedule risks.

3 Recent support Crowder received from RK&K on the Route 671 Bridge over the Nottoway River project in VA to address a pile repair that was quickly and efficiently resolved. This could have been a timely and costly problem.

Crowder and/or RK&K have also worked successfully on a variety of other projects with our subconsultant professional services partners including F&ME, Robbins & DeWitt, Surveying & Mapping, and TELICS.

References for the projects listed above are included in [Appendix H.](#)

Project Name & Location	Team Role	Years	Reference
City of Raleigh, Crabtree Creek West Greenway project, Raleigh, NC	Crowder: Prime Contractor RK&K: CEI/CA services	2021-2023	Benjamin Possiel, Sr. Eng. Tel: 919-96-4057 benjamin.possiel@raleighnc.gov
NCDOT, Emergency Express Design-Build, Liberty Hill Road, SR 1651 Bridge 136 over the South Yadkin River	Crowder: Prime Contractor RK&K: CEI	2021-2022	Larry Carpenter, PE Tel: 980.552.4200 lcarpenter@ncdot.gov
Virginia DOT, Replacement of bridge on Route 671 over overflow Nottoway River, \$22M. RK&K investigated a broken pile at Bent 2 and provided pile repair plans, calculations, and pile wall thickness calculations and report.	Crowder: Prime Contractor RK&K: Pile repair design	2021	Miranda Kidd, PE Tel: 757.996.3342 mirandakidd@vdot.virginia.gov
NCDOT, Piedmont Rail Corridor Improvement Program, Harrisburg to Charlotte Project, 10 miles, \$25M, which included the Grier Road grade separation	Crowder: Prime Contractor RK&K: Corridor Utility Coordination, Design - Grier Road grade separation	2013-2016	Douglas Horrell Construction PM Tel: 919.707.4113 ddhorrell@ncdot.gov
Charlotte Water, Goose Creek Sanitary Sewer PDB	Crowder: Prime Contractor Telics: Right-of-way	2019-2020	Jeffrey McClanahan, PE Tel: 704.336.7600 jeffrey.mcclanahan@ci.charlotte.nc.us
SCDOT, CLRB 2020-1 - District 2 Design-Build Bridge Package	RK&K: Lead Designer SAM: Utility Coordination	2020-2022	Brad Reynolds Tel: 803.347.1440 ReynoldsBS@scdot.org





**3.3.2 Critical Risks** | Our Team has a thorough understanding of the project. We also understand that there are inherent risks associated with any project of this type. As illustrated by the following table we have investigated the critical risks and have identified avoidance strategies to mitigate and eliminate these risks.

Critical Risk	Mitigation / Avoidance Strategies	Expected Role of SCDOT/Agencies
<b>Limitations on in-water and over-water construction and demolition</b> <ul style="list-style-type: none"> <li>In-water moratoriums</li> <li>Seasonal high water events</li> <li>Channel Migration due to river bend</li> <li>Securing Section 404 and Navigable Waters permits</li> </ul>	<ul style="list-style-type: none"> <li>Use a mix of work barges, temporary work bridges, cofferdams, and isolation casings to work within the confines of these limitations</li> <li>Use of mitigation techniques such as turbidity curtain, TSS (Total Suspended Solids) monitoring, bubble curtains, and slow-tap pile driving techniques to mitigate hydroacoustic concerns</li> <li>Ensure proposed final structure and roadway alignments provide access for cranes, materials, and workers</li> <li>Address velocity/shear stress and provide adequate foundation in the overbanks</li> <li>Follow SCDOT RGP #4 for impacts to wetlands and Waters of the US</li> <li>Maintain/increase horizontal and vertical clearances to avoid permit delays</li> <li>Minimize impacts by using north side of the bridges for staging and construction access to the greatest extent practicable (wetlands and Archsite 38KE1191/1192)</li> <li>Purchase credits where available from one or more existing mitigation banks covering the project area (Hunting Creek - primary; Toms Branch, Mill Creek - secondary)</li> <li>Construction will adhere to all NMFS guidance and environmental commitments to avoid impacts to sturgeon and avoid further consultation (e.g., use of trestles)</li> <li>Coordinate with SCDOT ESO office weekly during in-water work to confirm compliance with environmental commitments related to sturgeon</li> <li>Potential coordination with FERC upon receipt of a No- Rise certification from FEMA</li> </ul>	<ul style="list-style-type: none"> <li>Review and approve plans, reports, and permits</li> </ul>
<b>Limited site access</b> <ul style="list-style-type: none"> <li>Primary risks - safety and Level of Service for the traveling public</li> <li>Tight equipment work areas &amp; staging areas</li> </ul>	<ul style="list-style-type: none"> <li>Traditional methods of temporary roadway widening, traffic shifts, and night time lane closures</li> <li>Non-traditional methods such as accessing worksite from a temporary overpass, median crossovers, and barges, and temporary work bridges</li> <li>Design traffic management scheme so the first through last stages of construction have adequate space and access for bent and superstructure construction</li> <li>Sequence staging and structure construction schedule to minimize or eliminate crossovers between adjacent structure construction thereby maintaining work zone space and access</li> </ul>	<ul style="list-style-type: none"> <li>Review and approve MOT plans and potential field adjustments</li> </ul>
<b>Maintenance of traffic for replacements and rehabilitations</b> <ul style="list-style-type: none"> <li>Extended detour durations can lead to unpopular public opinion of the project, greater exposure to traffic risk and risk to traveling public</li> <li>Unscheduled lanes closures</li> <li>Close proximity of bridges along I-20</li> </ul>	<ul style="list-style-type: none"> <li>Ensure adequate design for spacing, constructability, lane shifts, and decision-making. Design for above-minimum standards where appropriate and feasible</li> <li>Evaluate construction phasing alternatives to minimize risk, improve construction access, and safety for all stakeholders</li> <li>Coordinate with SCDOT Public Information Office to notify traveling public of detours and lane closures</li> <li>Coordinate with emergency services, local school districts, and regional employers on timing and duration of detours</li> <li>Staff project with highly experienced design and construction traffic management personnel</li> <li>Create a traffic management task force and a traffic incident plan with enforcement strategies</li> <li>Provide clear markings and signing for all temporary patterns, monitor daily</li> </ul> <p><i>Protection/maintenance of existing facilities:</i></p> <ul style="list-style-type: none"> <li>Document existing conditions. Closely monitor detour during construction for pavement deterioration or failures.</li> <li>Early coordination with SCDOT on assessments, potential risks, and any signs of impairment</li> <li>Develop response plan to address maintenance issues and use of equipment mats to protect pavement</li> </ul>	<ul style="list-style-type: none"> <li>Review, approve, and provide public information for detours and/or lane closures</li> <li>Coordination of rehabilitation items</li> </ul>







Critical Risk	Mitigation / Avoidance Strategies	Expected Role of SCDOT/Agencies
<b>Geotechnical seismic hazards</b> <ul style="list-style-type: none"> <li>Moderate seismic activity zone - Seismic Category B</li> <li>Primary risks - embankment stability, liquefaction settlement, and lateral spreading</li> <li>Lateral stability of deep foundations impacted by liquefaction - provided shear wave velocity indicates B-C boundary at 75 feet</li> </ul>	<ul style="list-style-type: none"> <li>Perform geotechnical seismic hazard study for the bridge, approach embankments, and roadway structures</li> <li>Bridges classified as Operational Classification I, require evaluation using both the Safety Evaluation Earthquake (SEE) and Functional Evaluation Earthquake (FEE)</li> <li>Seismic hazard mitigation strategies for approach embankments - geosynthetic reinforcement and earthquake drains</li> <li>Structural mitigation will be investigated to avoid excessive improvements</li> <li>Soil resistance in liquefiable soil layers will be discounted in deep foundations at interior bents</li> </ul>	<ul style="list-style-type: none"> <li>Provide seismic design parameters (ADRS curve for FEE and SEE events)</li> <li>Review and approve geotechnical reports</li> </ul>
<b>Market conditions</b> <p><i>Labor:</i></p> <ul style="list-style-type: none"> <li>Availability of craft labor</li> <li>Availability of DBE participation</li> </ul> <p><i>Pricing:</i></p> <ul style="list-style-type: none"> <li>Changing supplier terms</li> <li>Material pricing volatility</li> <li>Supply chain issues affecting availability of material suppliers, fabricator and precast providers</li> </ul> <p><i>Lead Times:</i></p> <ul style="list-style-type: none"> <li>Unexpected material and shop labor shortages</li> </ul>	<p><i>Labor:</i></p> <ul style="list-style-type: none"> <li>Ability to hire and retain craft labor by offering competitive compensation, training, growth opportunities, and a safe environment ensures skilled labor remains consistent and available</li> <li>Controlled, intentional growth that never stretches forces</li> <li>Leverage existing DBE relationships built over many years and continue to build on our DBE's skill sets and trades. Tap our other markets to assist other minority businesses who are potential SCDOT DBEs. Talk through the schedule at bid time with DBEs and provide iterative updates as the project progresses to assist DBEs in appropriately planning their resources. Consider planning added DBE assistance during construction if needed.</li> </ul> <p><i>Pricing:</i></p> <ul style="list-style-type: none"> <li>In-depth discussions with material suppliers/subcontractors during the estimating phase to assess price stability</li> <li>Detailed and frequently updated scheduling</li> <li>Suppliers may add a price hold date or give information on escalations, if not use historical pricing/projected trendlines to anticipate costs 12-18 months in the future</li> <li>Write Purchase Orders as soon as possible to lock in pricing and avoid potential future increases</li> </ul> <p><i>Lead Times:</i></p> <ul style="list-style-type: none"> <li>Early work design packages to finalize quantities quickly</li> <li>To address precast long lead times, get piles into production months ahead of need to be onsite</li> <li>Delivery agreements with multiple haulers for precast elements to ensure delivery schedules</li> <li>Coordinate multiple purchase orders for ready mix suppliers</li> <li>Weekly schedule updates</li> <li>HDPE alternatives for pipe culverts will also be evaluated as this material currently has shorter lead times than precast</li> <li>Use of standardized designs (like standard girders) and off the shelf products. Minimize customized design features that add complexity and time to the submittal process</li> </ul>	<ul style="list-style-type: none"> <li>Expedited award once apparent low bidder is announced</li> <li>Expedited design reviews and approval of early work design packages</li> <li>Timely response to proposed schedule adjustments designed to address materials delays and shortages</li> <li>Price indexing of key material components that experience market volatility</li> </ul>

**3.3.3 Project Resources, Strategies, and Execution** | Crowder has both the financial and resource strength (craft labor, equipment, and materials) to complete this project without any limitations due to market conditions. Our Lead Designer also maintains extensive resources. The **following matrix** demonstrates our Team's extensive amount of resources and equipment, and illustrates our strategies to successfully execute this project.





**TEAM CAPACITY, AVAILABLE RESOURCES and STRATEGY FOR IMPLEMENTATION**

	Crowder	RK&K
<b>Capacity</b>	<ul style="list-style-type: none"> <li>Headquartered in Charlotte, NC</li> <li>900+ full-time employees in multiple divisions, including: structures, crane operators, laborers, pile driving, equipment operators, carpenters, and others</li> <li>10 structures crews and 3 grading/drainage crews</li> <li>Equipment fleet: 16 50-300-ton cranes, 6 vibratory &amp; pile hammers; manlift, 2 dozers, 11 excavators, 4 loaders various screeds, excavators, and other equipment</li> </ul> 	<ul style="list-style-type: none"> <li>400 staff in the Carolinas, 1,400+ firm-wide</li> <li>18-person South Carolina design staff</li> <li>Key Team members in Columbia and Raleigh</li> <li>238 D-B bridges in the Carolinas, including 121 over water</li> <li>\$2.5 billion in Design-Build awards as lead designer in the Carolinas</li> </ul> 
<b>Strategies to Implement Available Resources</b>	<ul style="list-style-type: none"> <li>Utilize bridge and grading crews located near the SC Midlands and Charlotte, including at least two crews ready to mobilize and begin upon NTP.</li> <li>Plan the project in detail with Project Manager, Construction Manager, Superintendent(s), and overall Division Management to include safety, subconsultants needs, materials deliveries, subcontractor schedules, and project limitations to assure mitigation strategies are discussed and reviewed in the plan throughout design and construction.</li> <li>Intentionally bid for controlled growth, planned use of resources.</li> <li>Review monthly with executive management to allocate appropriate personnel and equipment.</li> <li>Self-perform major scopes of the work to maintain control of schedule and budget.</li> </ul>	<ul style="list-style-type: none"> <li>Lead Design Engineer/ Structural Engineer David Peterson will be complete with current commitments and will be immediately available for this project.</li> <li>Experienced Lead Design Engineer/Structural Engineer and Assistant Design Engineer.</li> <li>Staffing resources to meet and accelerate the design schedule, as needed.</li> <li>Use of a fully refined design and QC process for delivering large bridge replacements.</li> <li>Intimate understanding of SCDOT design submittal/review process, policies, and procedures.</li> <li>Self-performing all critical design functions, with ability to provide all design requirements.</li> </ul>
<b>Self-Perform</b>	<ul style="list-style-type: none"> <li>Bridge Construction</li> <li>Demolition</li> <li>Earthwork</li> <li>Grading</li> <li>Drainage</li> <li>Construction Management</li> <li>Pile Foundations</li> <li>Concrete Caps</li> <li>Approaches</li> <li>Site Utility Coordination</li> <li>E&amp;SC Maintenance</li> <li>Storm Drainage Piping</li> <li>Rip-Rap Slope Protection</li> <li>Subcontractor Support</li> </ul>	<ul style="list-style-type: none"> <li>Bridge/seismic Design</li> <li>Geotechnical Design</li> <li>Roadway Design</li> <li>Hydraulic Design</li> <li>Work zone traffic control</li> <li>Signing and Pavement Markings</li> </ul>

**Ideal Geographical Location** | Crowder will manage the project from our Charlotte office, located two hours from the project site, as well as a large mobile office that will serve as the Construction Manager's office. The mobile office will also have flex workspaces for the project manager and assistant project manager when they are working on-site, and for RK&K designers to co-locate as needed. The unit will also contain a meeting room for owner progress meetings and on-site training. Crowder currently has bridge and grading crews located near the SC Midlands and Charlotte, with at least two crews ready to mobilize and begin construction upon NTP and early design package approval. RK&K will coordinate the design from their Columbia, SC office, only 30 minutes from the site. The proximity of the offices to the site and SCDOT headquarters will allow for enhanced communication, planning, and brainstorming via face-to-face and virtual meetings, coupled with in-person project meeting attendance.





**DBE Participation** | We recognize the importance of DBE participation and providing subcontracting opportunities. As a standard operating procedure, Crowder has personnel, processes and practices in place to encourage DBE participation. Crowder is committed to meeting the 12.3% DBE participation goal, and our DBE professional services partners participation will meet the 0.3% goal by including **CES Group (survey/SUE)**, **Robbins & DeWitt (environmental/permitting)**, and **Wilson Ferguson Associates (Contractor QC)**.

#### Approach to DBE Participation

- Holistic approach to DBE, small and minority subcontracting
- Strengthen small contractors through training, encourage under-served community training and career path education. Small business owners get to know Crowder as a trusted resource.
- Attend and present at DBE outreach events conducted by SCDOT
- Solicit DBEs by email for all bids, follow up with phone calls
- Break bids down into manageable packages
- Executive management team has served on Carolinas Association of General Contractors Human Resources Committee for 20+ years; chairs/serves on CAGC Diversity and Inclusion Committee
- Executive management team supports CAGC HR Committee's annual two-day conference, focused on helping small/minority subs strengthen their knowledge base on issues such as DOT work, DBRA projects, Affirmative Action Plans, EEO regulations and support
- Directly advocate, support, and provide safety training, offering the member discounted rate to smaller companies who may not have ability to join CAGC
- Directly involved with Rebuilding Opportunities in Construction and Central Piedmont Community College's Harper Campus Construction Institute. Both target underserved populations to provide access to careers in construction
- Offer training in Crowder YOUNiversity to balance potential escalation of subcontractor issues at the jobsite

### 3.4 EXPERIENCE OF KEY INDIVIDUALS ■ 3.4.1 - Licensed ■ 3.4.2 - Roles ■ 3.4.3 - Resumes ([Appendix A](#))

#### 3.4.4 - Project Management Team



**KIER MICHAEL OUDERKIRK, PE, DBIA** | PROJECT MANAGER ([Kier's Resume](#))

- 25 years of progressive experience managing large structure projects | SC PE #37939
- Successfully managed SCDOT structures projects involving interstate and design-build construction
- Exceptional communicator who partners with our clients, suppliers, subcontractors and other agencies to deliver successful projects

#### 3.4.5 - Design Engineering Team



**DAVID BRADLEY PETERSON, PE** | LEAD DESIGN ENGINEER / STRUCTURAL ENGINEER ([David's Resume](#))

- Veteran manager and bridge engineer with 39 years of experience managing and delivering short, medium and long span steel, curved steel, concrete and pre-stressed concrete bridges for highway and transit projects | SC PE #16755
- Extensive D-B bridge replacement experience, including four interstate widening projects

#### 3.4.6 - Construction Management Team



**DOUGLAS WAYNE NAUMANN II** | CONSTRUCTION MANAGER ([Doug's Resume](#))

- 16 years of progressive construction management experience
- Experience managing segments of large design-build projects with complex MOT involving interstate and large bodies of water
- Successful record of coordinating and managing craft workers, equipment, subcontractors, and supplies on large projects at the jobsite





## ADDITIONAL PRIMARY STAFF



**CHRISTOPHER ERIC JORDAN, PE,  
DBIA** | ASST. DESIGN ENGINEER

30 years experience | SC PE #31177  
Former SCDOT Upstate Program Manager

- Thorough understanding of SCDOT's design review process, policies, and procedures
- SCDOT Design-Build experience



**KELLY STAPLETON HAWKINS, PE**  
LEAD BRIDGE/SEISMIC ENGINEER

12 years experience | SC PE #32015

- SCDOT structural design and design-build experience in compliance with AAHSTO, FHWA, & SCDOT criteria, specifications and policies



**GEORGE RANDALL MUNGO, PE**  
LEAD HYDRAULIC ENGINEER

33 years experience | SC PE #19843; CEPSCI

Former SCDOT Hydraulic Dgn. Support Engineer

- Water resources expert in drainage, erosion control, culvert and bridge survey reports, permit drawings, stormwater management, bridge backwater analyses, and scour analyses

**3.5 PAST PERFORMANCE OF TEAM** **3.5.1 Experience of Proposer's Team** | Our Team brings to this Project extensive experience designing and constructing similar bridge replacement projects. In addition to the project examples provided in [Appendix B Lead Contractor and Lead Designer Work History and Quality Forms](#), the table below further demonstrates our Team's qualifications to manage, design, and construct this project.

Relevant Experience		Both Crowder and RK&K maintain substantial bridge expertise.													
Project	Project Features	Delivery Method	Riverine Environment	Bridge Clearance	Interstate MOT	Demolition (* if over water)	Seismic Design	Limited Site Access	Girder Type	Foundation Types (P=Pile D=Drilled Shafts)	Bridge Rehab.	Construction Approach	On Schedule/ On Budget	Multi-Bridge Replacement	Multi-Agency Coordination
Crowder	<b>Charlotte Gateway Station</b> Charlotte, NC (\$57M)	DBB		28'-6"		⬇		⬇	Steel	P/D		Detour/shut down	⬇	⬇	⬇
	<b>Rainbow &amp; Leaphart Bridges over I-26</b> West Columbia, SC (\$19.9M)	DBB		17'-0"	⬇	⬇		⬇	72" & 65" MBT	P/D		Detour/shut down	⬇	⬇	⬇
	<b>SC 9/49 Multi-Bridge Replacement,</b> Chester/ Union Cos., SC (\$25M)	DBB	⬇	58'-6"		⬇*			74" MBT	P/D		Staged/shift & causeway	⬇	⬇	⬇
	<b>US 78/SC 7 Multi-Bridge Replacements</b> Charleston Co., SC (\$35M)	DBB		29'-4"		⬇	⬇		Steel	P/D		Offline & Staged	⬇	⬇	⬇
	<b>Interstate 85, (including bridge rehabilitation)</b> Mecklenburg County, NC (\$25M)	DBB		N/A	⬇	⬇		⬇	N/A	N/A	⬇	Nightly closures	⬇	N/A	N/A
	<b>Route 671 over Nottoway River</b> Southampton County, VA (\$12M)	DBB	⬇	17'-6"		⬇*		⬇	45" precast bulb - T beams	P/D		Detour	⬇	⬇	⬇





Relevant Experience		Delivery Method	Riverine Environment	Bridge Clearance	Interstate MOT	Demolition (* if over water)	Limited Site Access	Girder Type	Foundation Types (P=Pile D=Drilled Shafts)	Bridge Rehab.	Construction Approach	On Schedule/ On Budget	Multi-Bridge Replacement	Multi-Agency Coordination
Both Crowder and RK&K maintain substantial bridge expertise.														
Project	Project Features													
RK&K	<b>I-40 over the Yadkin River</b> Forsyth County, NC (\$72M)	1,104' Interstate Bridge	DB	✓	30'	✓	✓*	77" MBT	P/D		3 stages w/ causeway	✓		✓
	<b>NC 12 Roadanthe Bridge</b> Dare County, NC (\$145M)	12,987' Bridge	DB	✓	17'		✓	72" FIB	P		Advancing rail system	✓		✓
	<b>Perquimans River Swing Span Bridge</b> Perquimans County, NC (\$57M)	2,691' Bridge	DB	✓	10'		✓*	54" FIB	P		Barges	✓		✓
	<b>I-95 Widening and Improvements</b> Cumberland & Harnett Cos., NC (\$410M)	12 Bridges (3 riverine crossings)	DB	✓	5'	✓	✓*	PSG	P	✓	Staged	✓	✓	✓
	<b>I-40 Widening and Improvements,</b> Wake & Johnston Cos., NC (\$408M)	15 Bridges (2 riverine crossings)	DB	✓	10'	✓	✓*	PSG/Steel	P/D	✓	Staged	✓	✓	✓

### 3.5.2 Quality of Past Performance | As

award winning firms, we are committed to being responsible partners with the stakeholders and are prepared to provide a quality product in a timely manner. No individuals or firms have been suspended, debarred, disqualified from bidding, or declared ineligible within the last five years.

**SC 9/49 CAGC Pinnacle Award**

**95**

Average SCDOT D-B Tech Score (5 Projects)

**94**

**Technical Score**

SCDOT's Closed and Load Restricted Bridge D-B Package 2021-1

**Emergency D-B Packages 3 & 6 ACEC Award**

**National AGC Construction Safety Excellence Award 2020 2021 2022**

**Engineering Excellence Awards**

NCDOT Triangle Parkway D-B  
NCDOT I-40 Widening D-B  
NCDOT Macy Grove Road D-B  
NCDOT I-73 / PTI D-B

**Toxaway D-B Pedestrian Bridge Rehabilitation CAGC Pinnacle & DBIA Awards**





# Appendix A

## Key Individual Resume Forms







## KEY INDIVIDUAL RESUME FORM

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

a. Name & Title:  
**Kier Michael Ouderkirk, PE, DBIA**  
Senior Project Manager

b. Role of Key Individual for this Project:  
**Project Manager**

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

d. Years of Experience: With this Firm 7 Years With Other Firms 18 Years  
Crowder Construction Company: Sr. Project Manager – Responsible for successful contract delivery, 2015 – Current  
Lane Construction: Field Engineer to Project Manager –Entry level to Project Management team leader on heavy roadway design build projects, 1997 to 2015

e. Education:  
State University of New York Institute of Technology at Utica/Rome, Utica, NY / Bachelor of Science / 1997 / Civil Technology  
State University of New York at Canton, Canton, NY / Associates in Applied Science / 1995 / Civil Engineering Technology

f. Active Registrations:  
2015 / NC / Civil / 041212  
2020 / SC / Engineering / 37939

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

#### **SCDOT File 3283411 Rainbow & Leaphart Drive Bridges over Interstate 26 (West Columbia, SC)**

**Key Personnel Role:** *Senior Project Manager*  
**Experience with Current Firm:** *Current, Crowder Construction Company*  
**Project/Assignment Duration:** *Assigned 2016-2019*  
**Owner Contact Information:** *SCDOT, Jeremy Yuhas, [yujasjd@scdot.org](mailto:yujasjd@scdot.org), 803.360.7235*  
**Design/Construction Value:** *\$17.4 Million*

Project Description: Leaphart bridge over I-26 was originally planned to be an offline replacement; however, a significant, tractor-trailer truck strike required emergency demolition of portions of this bridge over I-26; the Rainbow bridge, also spans I-26 and the demo was systematic with minimal impact to traffic. The entire project was completed with final interstate paving and marking in Spring 2019. Significant work on this project included Maintenance of Traffic, construction over and around a busy interstate highway, demolition over a temporarily detoured interstate at a time and in a duration least likely to interrupt traffic flow.



#### **SCDOT Emergency Design-Build Bridge Replacement Package #3 SC File No. 8803450**

**Key Personnel Role:** *Senior Project Manager*  
**Experience with Current Firm:** *Crowder Construction Company*  
**Project/Assignment Duration:** *2015-2016*  
**Owner Contact Information:** *SCDOT, David Rister, [risterdg@scdot.org](mailto:risterdg@scdot.org), 864-980-5491 - cell*  
**Design/Construction Value:** *\$7.4 Million*

**Project Description:** Design-build project included 3 bridges located each in Fairfield, Florence and Newberry Counties SC. Bridges are constructed on steel and concrete pile foundation. Single and double span decks using cored slabs, type II and modified bulb tee beams. Also included embankment, excavation and asphalt paving to re-profile bridge tie-ins. Responsibilities include overall project management, and contract compliance, safety, scheduling, quality, design and cost control.





**NCDOT I-485/I-85 Interchange Design-Build No. NC R-2123CE (Mecklenburg County, NC)**

**Key Personnel Role:** *Project Manager*  
**Current/Other Firm:** *Other (Lane Construction)*  
**Project/Assignment Duration:** *2013-2015*  
**Owner Contact Information:** *NCDOT, Andy McManus,*  
*[amcmanus@ncdot.gov](mailto:amcmanus@ncdot.gov),*  
*704.906.1614*

**Design/Construction Value:** *\$97 Million*

**Project Description:** This \$97 million design-build project included 19 bridge structures, box culverts and numerous MSE walls all connected with new concrete pavement on the new alignment. The interchange uses a turbine design and was constructed under traffic. Responsibilities include supervision and management of foreman, subcontractors, engineers, safety, scheduling, quality, design and cost control.



**NCDOT, I-85 Widening I-85 Widening South of SR-2894 to North of SC-73, Concord, C202522 Design-Build (Cabarrus County, NC)**

**Key Personnel Role:** *Assistant Project Manager*  
**Experience with Current Firm:** *No (Lane Construction)*  
**Project/Assignment Duration:** *2012-2013*  
**Owner Contact Information:** *NCDOT, Andy McManus,*  
*[amcmanus@ncdot.gov](mailto:amcmanus@ncdot.gov) 704.906.1614*

**Design/Construction Value:** *\$125 Million*

**Project Description:** This \$125 million design-build project consisted of an 8-lane concrete divided freeway on I-85 from Bruton Smith Boulevard to north of NC 73 (7.0 miles) and interchange modifications. Work includes four pre-stressed concrete beam bridges, soundwall, erosion control, lighting, signing, traffic control, ROW and utility relocation, storm drainage, excavation and embankment. Responsibilities included supervision of foreman, safety scheduling, cost control.



**VDOT, I-495 Capital Beltway Express Lanes Area 2 & 3 (Fairfax VA)**

**Key Personnel Role:** *Senior Project Engineer*  
**Experience with Current Firm:** *No (Lane Construction)*  
**Project/Assignment Duration:** *2009-2012*  
**Owner Contact Information:** *VDOT, Timothy Ratcliffe, PE, [shawdow3@infionline.net](mailto:shawdow3@infionline.net), 757.615.3509*  
**Design/Construction Value:** *\$1.34 Billion*


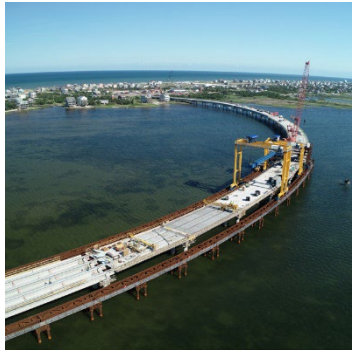
**Project Description:** P3-design-build project for VDOT. Construction on the project consists of four new general-purpose traffic lanes (two in each direction) on the outside of the existing lanes of the Capital Beltway, the reconstruction of ramps, interchanges, frontage roads, systematic phased constructing and demo of bridges over traffic, and other necessary crossings. Also included, the installation of the electronic toll and traffic management Major responsibilities include, team leader, working with designer, field design changes, cost, revenue, and schedule.



- 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.

Kier Ouderkirk is currently managing a runway bridge project at Charlotte Douglas International Airport which will be completed prior to award of the Wateree project. Kier will be dedicated full time to the design and construction of I-20 over Wateree River and will not have other responsibilities for the duration of the project.



<b>Brief Resume of Key Individual anticipated for the Project.</b>			
a.	Name & Title: David Bradley Peterson, PE Director, Structures		
b.	Role of Key Individual for this Project: Lead Design Engineer		
c.	Name of Firm with which you are now associated: RK&K		
d.	Years of Experience: With this Firm <u>16</u> Years      With Other Firms <u>23</u> Years  Firm 1: RK&K, Director, Structures: David has 40 years of experience in project management, design, design-build, inspection, coordination, estimating, and personnel responsibilities for bridge and transportation projects. His work has included the structural design of short, medium and long span steel, curved steel, concrete and prestressed concrete bridges (both grade separations and water crossings) for highway and transit projects for state DOTs, transit agencies and municipalities. 2005 to Present  Firm 2: Parsons, Regional Manager: Responsible for all engineering projects within region. 1995 to 2005 Firm 3: URS, Inc., Structures Manager: Managed engineering projects. 1990 to 1995 Firm 4: HSMM, Inc., Structures Engineer: Structural design and engineering. 1986 to 1990 Firm 5: HNTB, Inc., Structures Engineer: Structural design and engineering. 1983 to 1986		
e.	Education: Name & Location of Institution(s)/Degree(s)/Year(s)/Specialization(s): Virginia Polytechnic Institute and State University/Blacksburg, Virginia/Bachelor of Science/1982/Civil Engineering		
f.	Active Registrations: Year First Registered/State/Discipline/All Active Registration #s: 1995/SC/Civil/16755; 1991/NC/Civil/017428; 1989/VA/Civil/040219248; 2004/MD/Civil/31103; 1995/GA/Civil/22043; 1991/FL/Civil/44547; 1994/TN/Civil/31103		
g.	Document the extent and depth of your experience and qualifications relevant to the Project.		
<p><b><u>B-2500B, NC 12 – Rodanthe Bridge Design-Build, Dare County, NC</u></b></p> <p><b>Key Personnel Role:</b> <i>Project Manager/Engineer of Record</i>  <b>Experience with Current Firm:</b> <i>Yes</i>  <b>Project/Assignment Duration:</b> <i>2015-2022 / 2015-2022</i>  <b>Owner Contact Information:</b> <i>NCDOT, David Hering, LG, PE, <a href="mailto:dthering@ncdot.gov">dthering@ncdot.gov</a>, 984.920.8901</i>  <b>Design/Construction Value:</b> <i>\$145.3 Million</i>  <b>Project Description:</b> RK&amp;K is serving as the Lead Designer for this bridge on NC 12 over the Pamlico Sound. This included a 12,987-foot long bridge with 24" cored slabs and 45" &amp; 72" FIB prestressed concrete girder superstructure (4 spans at 60 feet, 22 spans at 97.25 feet, 50 spans at 137 feet, 25 spans at 135.79 feet and 6 spans at 60 feet) on concrete pile bents supported by pile caps with 54" diameter cylinder prestressed concrete piles. The interior bents were designed for vessel impact load and an extreme scour event (EL- 52). David was also responsible for overall QA/QC for the other disciplines on this project.</p> <p>David's responsibility as Design Project Manager included being responsible for all aspects of management, coordination, and oversight of this unique and publicly sensitive project. He was also responsible for the design and preparation of structure plans.</p> <p><b><u>I-0911A, I-40 over the Yadkin River Design-Build, Davie &amp; Forsyth Counties, NC</u></b></p> <p><b>Key Personnel Role:</b> <i>Project Manager/Engineer of Record</i>  <b>Experience with Current Firm:</b> <i>Yes</i>  <b>Project/Assignment Duration:</b> <i>2017-2021 / 2017-2021</i>  <b>Owner Contact Information:</b> <i>NCDOT, Malcolm Watson, PE, <a href="mailto:mcwatson@ncdot.gov">mcwatson@ncdot.gov</a>, 919.707.6614</i>  <b>Design/Construction Value:</b> <i>\$72.0 Million</i></p>			



**Project Description:** RK&K served as the Lead Designer for the widening of 3.6 miles of I-40 to a six-lane divided facility with a major bridge crossing over the Yadkin River. The bridge was 1,104 foot long, 8-span structure constructed in three stages to minimize traffic impacts. The stages of the superstructure were linked through reinforced concrete deck closure pours to be continuous across the bridge width. The precast concrete girders were 78" precast Florida I-Beams that allow for longer than typical spans to minimize the total number of spans. The interior bents consisted of 30" and 24" diameter battered steel pipe pile bents with reinforced concrete caps on land and 4.5 ft diameter drilled shaft bents with reinforced concrete caps in the water way.



David's responsibility as Design Project Manager included being responsible for all aspects of management, coordination, and oversight of this unique and publicly sensitive project. He was also responsible for the design and preparation of structure plans.

**R-2507A, US 13/158 over the Chowan River Design-Build, Hertford & Gates Cos. NC**

**Key Personnel Role:** *Project Manager/Engineer of Record*  
**Experience with Current Firm:** *Yes*  
**Project/Assignment Duration:** *2011-2017 / 2011-2017*  
**Owner Contact Information:** *NCDOT, David Stutts, PE, [dstutts@ncdot.gov](mailto:dstutts@ncdot.gov), 919.707.6642*

**Design/Construction Value:** *\$58.5 Million*

**Project Description:** RK&K served as the Lead Designer for the widening of 7.1 miles of US 13/US 158 from US 158/NC 45 to the US 158 Bypass. In addition to this four-lane divided facility, the project included the design of a 1,121-foot long, 9-span major bridge crossing over the Chowan River and 84' long dual bridges over Buckhorn Creek.



David's responsibility as Design Project Manager included being responsible for all aspects of management, coordination, and oversight of this unique and publicly sensitive project. He was also responsible for the design and preparation of structure plans.

**R-4467, US 17 Perquimans River Swing Bridge Design-Build, Perquimans Co., NC**

**Key Personnel Role:** *Project Manager/Engineer of Record*  
**Experience with Current Firm:** *Yes*  
**Project/Assignment Duration:** *2017-2022 / 2017-2022*  
**Owner Contact Information:** *NCDOT, David Stutts, PE, [dstutts@ncdot.gov](mailto:dstutts@ncdot.gov), 919.707.6642*

**Design/Construction Value:** *\$57.0 Million*

**Project Description:** RK&K served as the Lead Designer for the widening of a portion of US 17 Business/NC 37 and the replacement of the historic swing bridge over the Perquimans River. The new 2,691-foot long structure includes a swing span section over the navigational channel and bridging the adjacent earthen causeway. The includes 45" & 54" FIB prestressed concrete girder superstructure (1 span at 67 feet, 2 swing spans at 98 feet, 12 spans at 88 feet and 14 spans at 98 feet) on pile bents supported by concrete pile caps with 30" prestressed concrete piles. Interior bents were designed for a significant amount of scour (EL-28).



David's responsibility as Design Project Manager included being responsible for all aspects of management, coordination, and oversight of this unique and publicly sensitive project. He was also responsible for the design and preparation of structure plans.

- 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.

David is not required to be onsite during construction





## KEY INDIVIDUAL RESUME FORM

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

a. Name & Title:

**Douglas Wayne Naumann II**  
Senior Construction Manager

b. Role of Key Individual for this Project:

**Construction Manager**

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

**Crowder Construction Company**

d. Years of Experience: With this Firm 4 Years With Other Firms 12 Years

Crowder Construction Company: *Senior Construction Manager* – Responsible for successful contract delivery, 2018 – Present

Skanska USA Civil Southeast: *Field Engineer to Area/ General Superintendent* – Entry level to Project Management team member on Heavy Civil Bid Build / Design-build projects, 2006 – 2018

e. Education:

University of North Carolina at Charlotte / Charlotte, NC / Bachelor of Science / 2006 / Civil Engineering (Structural)

f. Active Registrations: NA

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

#### **Gateway Station, Charlotte, NC, NCDOT Rail**

**Key Personnel Role:** *Construction Manager*

**Current/Other Firm:** *Current; Crowder*

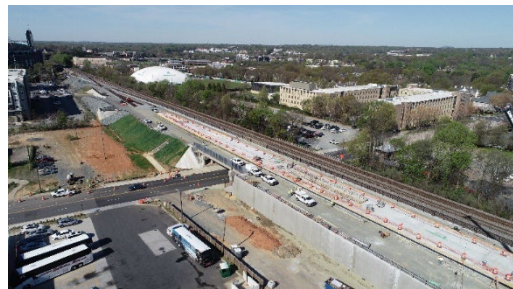
**Project/Assignment Duration:** *Assignment 7/2018-present*

**Owner Contact Information:** *NCDOT Rail, Douglas Horrell/  
Construction Proj. Mgr.  
[ddhorrell@ncdot.gov](mailto:ddhorrell@ncdot.gov)  
Tel: 919-707-4113*

**Construction Value:** *\$57 million*

**Project Description:**

Bid Build Gateway Station Project located in up-town Charlotte adjacent to Bank of America Stadium that spread out over  $\frac{3}{4}$  of a mile. Consists of 8 elevated bridges a 53,000 SF Amtrak train station elevated platform with 11 retaining walls and 95,000 CY of select fill. Project also included the replacement of a 24" gravity sewer and 12" water main adjacent to the Panthers Stadium. Responsibilities primarily included construction of the elevated platform and bridges which underwent several design changes where Doug worked closely with the owner and designer to ensure constructability of the structure. MOT and management of pedestrian traffic on a high-profile project was required daily.



#### **I-4 Ultimate, SGL PPP Design-Build, Various Counties, FL, FDOT**

**Key Personnel Role:** *Area/ General Superintendent II*

**Current/Other Firm:** *Other; Skanska USA Civil Southeast*

**Project/Assignment Duration:** *Assignment 1/2017-9/2018*

**Owner Contact Information:** *Volkert, Alan Dickson,  
407-453-0368,  
[alan.dickson@volkert.com](mailto:alan.dickson@volkert.com)*

**Construction Value:** *\$2.54 Billion*

**Project Description:**

Design-build project includes 144 bridges, pedestrian bridges and 21 miles of Interstate widening through Orlando and surrounding cities. Doug's responsibilities were focused to area 4 in the construction of steel and concrete bridge superstructure installation and an arch suspension pedestrian bridge spanning I-4. Responsibilities also includes MSE wall erection and excavations. Management included area project management, MOT, subcontracts, safety, scheduling, quality, and design and cost control.





## **Bayonne Bridge Project SKK PPP Design-Build, Cape Charles, VA, New York New Jersey Port Authority**

**Key Personnel Role:** *Area/ General Superintendent II*  
**Current / Other Firm:** *Other; Skanska USA Civil Southeast*  
**Project/Assignment Duration:** *Assignment 10/2015-6/2016*  
**Owner Contact Information:** *New York, New Jersey Port Authority, Kyle Bastien, 860-823-8882, [kyle.bastien08@gmail.com](mailto:kyle.bastien08@gmail.com)*  
**Construction Value:** *\$800 million +*



### **Project Description:**

This design-build project portion was located at a precast plant in Cape Charles, VA called Bayshore Concrete Products. Precast entailed the fabrication of a precast segmental bridge. Responsibilities included supervision for casting substructure and superstructure segments, segment point and patch repair and barge loadout, management of foreman, subcontractors, engineers, safety, scheduling, quality, and cost control.

## **Midtown Tunnel Project, SKW PPP Design Build, Virginia Beach, VA, VDOT**

**Key Personnel Role:** *Area Superintendent II*  
**Current / Other Firm:** *Other; Skanska USA Southeast*  
**Project/Assignment Duration:** *Assignment 4/2012-6/2015*  
**Owner Contact Information:** *Elizabeth River Crossing, Jeffrey Mosher, 843-296-7796, [jmosher@sugarcreekllc.us](mailto:jmosher@sugarcreekllc.us)*  
**Construction Value:** *\$1.5 Billion*



### **Project Description:**

This design-build project consisted of tunnel fabrication elements in a dry dock in Baltimore MD then floated down the Chesapeake Bay to Hampton Roads. Here they were prepped and then submerged to create a tunnel that went from Norfolk to Portsmouth Virginia. The fabrication portion of the project was of 11 Elements, each 350' long and contained 6500 cubic yards of concrete for a total of 72000 CYS. After completion of the elements I was transferred to Portsmouth VA to help finalize the Hwy 58 interchange at 264. This consisted of all elevated bridge work. Responsibilities included supervision of field engineers and foreman for formwork and all concrete placement, sub-contract management, safety, scheduling, and cost control.

## **Indian River Inlet Bridge Design Build, Rehoboth Beach, DE, DELDOT**

**Key Personnel Role:** *Engineer/ Superintendent I*  
**Current / Other Firm:** *Other; Skanska USA Civil Southeast*  
**Project/Assignment Duration:** *Assignment 10/2009-1/2011*  
**Owner Contact Information:** *DelDOT, David Duke, 302-332-5090, [David.duke@aecom.com](mailto:David.duke@aecom.com)*  
**Construction Value:** *\$350 million*



### **Project Description:**

Construction on the project consisted of building a concrete cable stay bridge over the Indian River Inlet. Main span was 900' long with 450' back spans with 4 concrete pylons that were 260' tall. Decks in the transition piers were post tensioned and large mass concrete pours. Responsibilities included superintendent of pylon erection on the north side, working with foreman, field engineers, designers, cost, subcontractors, and schedule.

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.

Doug is currently working on the Charlotte Gateway Station handling all final closeout. Crowder will assure that Doug is solely assigned to construction services for the I-20 over Wateree River Bridge Replacement.





# Appendix B

## Work History and Quality Forms


(Section 3.5.1)





WORK HISTORY AND QUALITY FORM – CONTRACTOR



Crowder Construction Company

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 A’s or B’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 A or B (in thousands)
Name: Charlotte Gateway Station Location: Charlotte, NC	Name: This project is Bid Build Contract Delivery	Name of Owner: NCDOT - Project Manager: Douglas Horrell/Construction Proj. Mgr. <a href="mailto:ddhorrell@ncdot.gov">ddhorrell@ncdot.gov</a> Tel: 919-707-4113	03/2022	\$57,000	\$57,000
g. Narrative describing the work performed by A or B. If submitting work completed by an affiliated or subsidiary company of A, identify the full legal name of the affiliate or subsidiary and their role on the Project. Include the office location(s) where the design work was performed and whether B was the lead designer or a sub-consultant.					
The Charlotte Gateway Station project is a multi-staged progressive project to move the intercity passenger rail station from the current undersized, flood-prone, and poorly connected location in the Norfolk Southern general classification freight yard, which is currently located on Tryon Street north of the square, to a location in Uptown Charlotte, closer to Charlotte’s employment center and within blocks of the City’s major sporting facilities. The project is approximately three quarters of a mile long and includes grading, drainage, 8 bridges, 1,100 LF Amtrak passenger platform, 7 retaining walls, rock plating, utility re-locations, sub-ballast installation, bridge plumbing systems, paving, egress stairs, tunnel and walkways, caissons, micro-piles, temporary pedestrian walkway enclosures, bridge demolition, and temporary shoring. Relocating and replacing water and sanitary sewer utilities. We have built bridges over 6th, 5th, Trade, and 4th Streets, as well as the Panther walkway located at the old P&N railroad Bridge, and demolished the 6th street bridge, P&N Bridge and the Old Greyhound Bus Station. This project was constructed in an extremely busy section of uptown Charlotte. A definite challenge during construction was pedestrians on the project site. Signage and hard barriers are at times disregarded and construction must stop until we can safely remove individuals. An additional challenge was contractor coordination. In the same area as this project are four different contractors working on four separate projects with very different objectives and schedules. Crowder initiated coordination meetings with all the contractors to work through the conflicts and rework/prioritize big activities so that we all benefitted. Access to the Greyhound Station was delayed 286 days creating a bit of a bottleneck of construction in a 350 LF location and forcing schedule change. Crowder suggested shoring in the area of the station to prevent undermining of the structure and parking lot while allowing platform construction to continue. Additional Team members for this project who will also be involved in Wateree are George Ellis, PE, Division Manager, John Tuschak, DBIA, Operation Manager, Michael Wilson, General Superintendent.			 <div><p><b>Key Personnel:</b> Douglas Naumann, Construction Manager</p><p><b>Relevance</b></p><ul style="list-style-type: none"><li>• Multi-Bridge</li><li>• Multi-Agency Involvement – Railroad/Charlotte Water/CDOT</li><li>• Limited Site Access in Uptown Charlotte</li><li>• Complex MOT for vehicular and pedestrian traffic</li><li>• Drilled Shafts near active Railroad Track</li><li>• Auger Cast Pile Panel Retaining Wall</li><li>• Utility Relocation</li><li>• Cast-in-place concrete</li></ul></div>		
h. Self-Assessment. The information provided in this section should be a self-assessment of A’s or B’s performance on the project to identify As or Bs with firms or personnel that have successfully completed projects on time and on or under budget, and to identify As or Bs that have records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.					
Crowder completed this complex project with inner city vehicular and pedestrian traffic in the work zone area within contract time. Crowder successfully worked with multiple agencies, managed through rescheduling of the project due to availability of work in conflict with the contract documents and managed through coordination of four other contracts/contractors in the area of this project.					
i. Quality Initiatives. Discuss A’s or B’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.					
<b>There are no claims on the project.</b> With the ongoing shortage of skilled craftsmen and the actions required for protection of our workforce during a pandemic, Crowder had the manpower ready, willing, and able to complete all aspects of our projects meeting our high-quality expectations. Crowder managed through constructability and schedule issues, surrounding the concrete platform construction, presented by a significant delay in access to the Greyhound Station. The platform design required constructability considerations and Crowder proposed a design change which was accepted allowing linear construction from Trade St. to 4 <sup>th</sup> Street.					
j. For each question in Section 3.5.2 of the RFQ for which a “Yes” answer was provided, A or B shall provide a detailed explanation below.					
All answers to the questions in Section 3.5.3. are “No” for this project.					



WORK HISTORY AND QUALITY FORM – CONTRACTOR



Crowder Construction Company

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 A’s or B’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 A or B (in thousands)
Name: SC File 3283411 Lexington Location: Rainbow & Leaphart Bridges over I-26, West Columbia	<b>Name:</b>  This project is Bid Build Contract Delivery	Name of Owner: SCDOT Project Manager: Jeremy Yuhas, PE Phone: 803-360-7235 Email: <a href="mailto:YuhasJD@SCDOT.org">YuhasJD@SCDOT.org</a>	Construction to completed: April 2019	\$19,977	\$19,977
g. Narrative describing the work performed by A or B. If submitting work completed by an affiliated or subsidiary company of A, identify the full legal name of the affiliate or subsidiary and their role on the Project. Include the office location(s) where the design work was performed and whether B was the lead designer or a sub-consultant.					
<div><p>This CAGC Construction Excellence Award winning project is for construction of replacement bridges and approaches on Rainbow Rd and Leaphart Rd to widen shoulders and raise to provide additional clearance under the bridge over I-26 in West Columbia. Since both bridges were built in the 1950’s and were too low for new interstate standards, both have been hit multiple times. Work involved demolition and new bridge construction along with 125,000 CY of embankment to be placed for new approaches and relocated frontage roads. To gain access to the center bents of each structure, temporary widening was constructed to I-26 and traffic shifted to the outside to allow access to the median where nightly lane closures allowed construction to be performed. The Rainbow Rd. Bridge was completely shut down for the new construction. The original plan was to maintain traffic on the Leaphart Ave. bridge and build the new bridge in phases with a new alignment; however, a significant strike by a tractor trailer truck required emergency demolition which was completed during a night shut-down with traffic back on the interstate in less than four hours. Project included drilled shafts, driven pile, temporary shoring, spread footers, concrete girders, precast box culvert, MSE walls, two bridge structures and approaches, signalization, cross slope corrections, heavy volume interstate traffic control.</p><p>This Project Team Members who will also contribute to Wateree: George Ellis, PE – Division Mgr., John Tuschak, DBIA Operations Manager, and Michael Wilson, General Superintendent.</p></div> <div><div><p><b>Key Personnel</b> – Kier Ouderkirk, Project Manager</p><p><b>Relevance:</b></p><ul style="list-style-type: none"><li>• Multi-Bridge</li><li>• Bridges over Interstate</li><li>• Interstate MOT</li><li>• Limited Site Access</li><li>• Planned Demolition over Interstate (Rainbow)</li><li>• Four-Hour Emergency Demolition (Leaphart) in nighttime shutdown</li><li>• Utility Relocation</li><li>• Drilled Shafts</li><li>• Cast-In-Place Concrete</li><li>• OGFC Paving on Interstate</li></ul></div><div></div></div>					
h. Self-Assessment. The information provided in this section should be a self-assessment of A’s or B’s performance on the project to identify As or Bs with firms or personnel that have successfully completed projects on time and on or under budget, and to identify As or Bs that have records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.					
<p>This project is on one of the most congested areas of Interstate in South Carolina. Crowder partnered with SCDOT to complete the systematic demolition of Rainbow Bridge and in-depth planning of the emergency demolition of the Leaphart Bridge. Crowder worked with the utility companies to make several relocations to keep work flowing. This project completed on-time and near budget. The budget overruns were associated with the emergency demolition.</p>					
i. Quality Initiatives. Discuss A’s or B’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.					
<p><b>There are No claims on this Project.</b> This project was completed with the highest quality. Weekly meetings between Crowder, SCDOT, and major subcontractors serve as a means to collaborate on the project and address issues to minimize negative affects to the project.</p>					
j. For each question in Section 3.5.2 of the RFQ for which a “Yes” answer was provided, A or B shall provide a detailed explanation below.					
All answers to the questions in Section 3.5.3. are “No” for this project.					




WORK HISTORY AND QUALITY FORM – CONTRACTOR

Crowder Construction Company

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 A’s or B’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 A or B (in thousands)
Name: SCDOT File 5485020-SC9/49 Multi-Bridge Replacement, Location: Chester/ Union Counties	Name:  This project is Bid Build Contract Delivery	Name of Owner: SCDOT - Project Manager: (Wes Spencer-retired) Melanie Mobley PE District 4 Const. Engineer Phone:803-385-4233-O – 803-246-0065-C Email: <a href="mailto:mobleyMF@scdot.org">mobleyMF@scdot.org</a>	09/2020	\$25,232	\$25,232
g. Narrative describing the work performed by A or B. If submitting work completed by an affiliated or subsidiary company of A, identify the full legal name of the affiliate or subsidiary and their role on the Project. Include the office location(s) where the design work was performed and whether B was the lead designer or a sub-consultant.					
<p>Crowder is submitting because of the phased construction, work over water and interagency coordination managed to accomplish the construction. This CAGC Pinnacle Award-Winning project consists of replacing four bridges; the largest of bridges is the 700’ long SC 9/49 bridge over the Broad River. The second is a bridge over the Lockhart Canal, which Lockhart Power uses to make power for small portion of the state, and the last two bridges are flat slab bridges over Canal Road and Lockhart Drive, local Town of Lockhart roads.</p> <p>The entire project was built with continuous traffic flow utilizing both new alignment and phased construction.</p> <p>The Broad River bridge which was built in 1947, has had structural issues for the past few years and was closed for emergency repairs in 2017. This bridge was a challenge due to the river access, 90” diameter drilled shafts and 120,000 girders set out over the middle of the river. The Lockhart Canal bridge which was built in 1931, had challenges as it is designed to resemble the nearby historic pedestrian bridge, and was being built integral with the canal banks so the Federal Energy Regulatory Commission (FERC) has been heavily involved. The 1/2 mile of roadway included substantial temporary traffic shifts, two large MSE walls, and large temporary shoring walls; approximately 800’ 6” &amp; 8” DIP reinforced joint water lines, DIP reinforced joint sewer force main, as well as storm drain installation 15” to 48”, catch basins, drop inlets, and manholes and, of course, erosion control, grading, and paving. Crowder removed a historic rock wall and delivered to the town for use in town signage, and replaced with a similar stamped concrete wall.</p> <p>Homes were monitored for vibration and foundation needs to maintain the integrity of the historic structures. Due to permitting and historic structures, interagency communication and coordination was required with SCDOT, Lockhart Power, FERC, SCDHEC, and SHPO. In total this was a three-year project. Team members for this project who will be involved in Wateree are George Ellis, PE, Division Manager, John Tuschak, DBIA, Operation Manager, Michael Wilson, General Superintendent, Rich Hauser, Jobsite Superintendent.</p>					
<div><div><p><b>Relevance:</b></p><ul style="list-style-type: none"><li>• Multi-Bridge</li><li>• Multi-Agency Coordination – SHPO and FERC</li><li>• Riverine Environment</li><li>• River Access</li><li>• Complex MOT – Staged Construction, Traffic Shifts</li><li>• Demolition over the Broad River</li><li>• Demolition over the Lockhart Power Hydro-Canal</li><li>• Drilled Shafts in water utilizing slurry</li><li>• Cast-in-place bridge deck with large modified bulb-T girders</li><li>• Instrumentation and Drilling in historic banks of canal</li></ul></div><div></div></div>					
h. Self-Assessment. The information provided in this section should be a self-assessment of A’s or B’s performance on the project to identify As or Bs with firms or personnel that have successfully completed projects on time and on or under budget, and to identify As or Bs that have records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.					
<p>Crowder closed the job with an excellent relationship with the SCDOT office of the resident engineer, as well as Lockhart Power, Mead &amp; Hunt, and area residents. Crowder successfully value engineered the broad river and canal bridges by mitigating the environmental risk and FERC involvement with alternate plans for substructure construction methods. Canal pile driving and demolition of the old bridge coordinated during annual drawdowns for Lockhart Power did not adversely affect power operations. Our project management team worked in partnership to keep change orders to a minimum, to manage through the changed conditions that affected permitting and schedules. The project had quantity overruns, particularly with rock excavation of drilled shafts and sand fills in the canal zone. The project was completed within contract time with no liquidated damages. This three-year project was completed safely, within contract time and budget, in partnership with SCDOT, Lockhart Power, FERC, SHPO, and area residents.</p>					
i. Quality Initiatives. Discuss A’s or B’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.					
<p><b>There are no claims on the project.</b> With the ongoing shortage of skilled craftsmen and the actions required for protection of our workforce during a pandemic, Crowder had the manpower ready, willing, and able to complete all aspects of our projects meeting our high-quality expectations.</p>					
j. For each question in Section 3.5.2 of the RFQ for which a “Yes” answer was provided, A or B shall provide a detailed explanation below.					
All answers to the questions in Section 3.5.3. are “No” for this project.					




WORK HISTORY AND QUALITY FORM – CONTRACTOR/DESIGNER  
Lead Designer – Rummel, Klepper & Kahl, LLP (RK&K)

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 RK&K’ 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 RK&K (in thousands)
Name: I-40 over the Yadkin River DB Location: Forsyth County. NC	Name: Flatiron Constructors, Inc. – Design-Builder RK&K – Lead Designer	Name of Owner: NCDOT Project Manager: Mr. Malcolm Watson, PE Phone: (919) 707-6614 Email: <a href="mailto:mcwatson@ncdot.gov">mcwatson@ncdot.gov</a>	8/2018 - Design 11/2021 – Construction	\$72,000	\$5,319
g. Narrative describing the work performed by RK&K. If submitting work completed by an affiliated or subsidiary company of RK&K, identify the full legal name of the affiliate or subsidiary and their role on the Project. Include the office location(s) where the design work was performed and whether RK&K was the lead designer or a sub-consultant.					
<div><div><p>RK&amp;K was the Lead Designer for the I-40 design-build project in Davie and Forsyth Counties, North Carolina. The project included the reconstruction and widening of the dual bridges over the Yadkin River, and the construction of a pedestrian bridge over I-40. The project also provided pavement rehabilitation and construction of additional lanes for a 3.8-mile stretch West of NC 801 in Davie County to East of SR 1101 in Forsyth County . This much-needed widening of a heavily utilized interstate helped to alleviate traffic in the area, and improved driving conditions for travelers. RK&amp;K, along with Flatiron Construction, received the highest score of 95% for the technical proposal during the design-build selection process. All design work was performed in RK&amp;K’s Raleigh, N.C. office.</p><p>The dual bridges over the Yadkin River were reconstructed to accommodate three 12-foot travel lanes with two 10-foot shoulders. The existing Bert’s Way Bridge in the Town of Bermuda Run was reconstructed as a pedestrian bridge that crossed over the newly rehabilitated six-lane I-40. The Town worked closely with RK&amp;K to ensure the look of the new bridge fits in with the historic area. I-40 was widened from a four-lane divided, to a six-lane facility with a minimum 26-foot median, and continues to meet the 70-mph freeway design speed.</p><p>There were many environmental and community impacts considered while designing the roadway improvements. The Team designed the Yadkin River Bridge to reduce impacts to the river banks and 100-year storm elevation, while keeping the river open for recreational use during construction.</p><p>RK&amp;K proposed a shift in the alignment of the roadway design eliminating impacts from the roadway widening to the Twin City Youth Soccer Association Property and the Win-Mock Farm Complex, a historic property on the south side of I-40 just west of the Yadkin River.</p><p>Careful design measures were implemented for traffic maintenance during project construction, as this section of I-40 regularly supports a high traffic volume, ADT 2017: 58,600 ADT 2037: 74,800. Careful coordination of MOT, roadway, structures, and hydraulics ensured that the project was completed safely with optimal constructability. The project was completed with minimal lane and ramp closures, keeping traffic moving during peak travel times.</p></div><div><div><p><b>Key Personnel:</b> David Peterson, Structures Design Manager</p><p><b>Relevance</b></p><ul style="list-style-type: none"><li>• Design-build delivery</li><li>• Riverine environment</li><li>• 30’ bridge clearance</li><li>• Demolition of existing bridge</li><li>• Limitations on in-water and over-water construction</li><li>• Limited site access, use of causeway for 3-stage construction</li><li>• Completed under accelerated schedule and within budget</li></ul></div></div></div>					
h. Self-Assessment. The information provided in this section should be a self-assessment of RK&K’s performance on the project to identify RK&K with firms or personnel that have successfully completed projects on time and on or under budget, and to identify Lead Designers that have records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.					
<ul style="list-style-type: none"><li>• The structure plans for the bridge over the Yadkin River were broken up into multiple submittals to get plans to the contractor during the various construction stages quicker than could be achieved by submitting the entire set at once.</li><li>• RK&amp;K coordinated with the contractor to streamline the design process. We focused design efforts to fit with the contractors preferred design and construction methods.</li><li>• RK&amp;K responded to RFI’s within 48 hours and worked with the contractor and NCDOT to find common solutions. For example, when a battered steel pipe pile walked outside the limits of an interior bent cap during driving, RK&amp;K and the contractor worked together to come up with alternative solutions and then presented the options to NCDOT. RK&amp;K then performed engineering checks to verify the chosen alternative and issued revised RFC plans.</li></ul>					
i. Quality Initiatives. Discuss RK&K’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.					
<p>The team mentality between RK&amp;K, the contractor, and NCDOT helped to solve problems, reduce costs, and provide a quality final product.</p> <ul style="list-style-type: none"><li>• Quality initiatives, ATCs</li><li>• Management</li></ul> <p>Weekly meetings between the contractor and the various design leads at RK&amp;K were held during the design. These meetings continued monthly during construction after design was complete.</p>					
j. For each question in Section 3.5.2 of the RFQ for which a “Yes” answer was provided, RK&K shall provide a detailed explanation below.					
All answers to the questions in Section 3.5.3. are “No” for this project.					




WORK HISTORY AND QUALITY FORM – CONTRACTOR/DESIGNER  
Lead Designer – Rummel, Klepper & Kahl, LLP (RK&K)

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 RK&K’ 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 RK&K (in thousands)
Name: NC 12 Roadanthe Bridge DB Location: Dare County, NC	Name: Flatiron Constructors, Inc. – Design-Builder RK&K – Lead Designer	Name of Owner: NCDOT Project Manager: Mr. David Hering, LG, PE Phone: (984) 920-8901 Email: <a href="mailto:dthering@ncdot.gov">dthering@ncdot.gov</a>	12/31/2018 - Design 6/3/2022 - Construction	\$145,336	\$6,000
g. Narrative describing the work performed by RK&K. If submitting work completed by an affiliated or subsidiary company of RK&K, identify the full legal name of the affiliate or subsidiary and their role on the Project. Include the office location(s) where the design work was performed and whether RK&K was the lead designer or a sub-consultant.					
<p>RK&amp;K served as the Lead Designer for this 3.03-mile new location Design-Build project on Hatteras Island. The typical section includes two lanes with eight-foot shoulders and one roundabout intersection. The highlight of the project is a 2.46-mile bridge that extends into the Pamlico Sound. This allows for the realignment of NC 12 into the Sound to eliminate future washouts of the existing road. When designing this bridge, scour calculations, wave force calculations, and abutment protection design were all considered. The 100-year and 500-year design storms were analyzed taking into account sediment characteristics, flow parameters, and pier geometry. The flow parameters included the depth, velocity, and angle of attack. The pier geometry included the dimensions of the pile cap (especially given their wide widths), and the pile group. Wave forces on the horizontal components of the bridge substructure were developed as well as wave forces on the vertical components.</p> <p>This large coastal bridge project required complex 2D hydrodynamic modeling for NCDOT. RK&amp;K teamed with INTERA, who is a leader in coastal hydraulics and complex hydraulic modeling. INTERA also completed NCDOT’s Bridge Superstructure Level III Wave Vulnerability Study that includes a 2D model of the entire NC Coast.</p> <p>RK&amp;K’s inhouse geotechnical team completed subsurface explorations and roadway and transition bridge geotechnical engineering reports, along with the design of a prestressed concrete sheet pile retaining wall. Foundations for the bridge include 530 30-inch prestressed square and 54-inch cylinder piles ranging in length from 75 to 140 feet to accommodate 50’ of future scour. Substructure lateral design was performed with the FB MultiPier software. The project included a demonstration pile program consisting of three test piles. The combined total length of piles needed for the entire project is more than 8.5 miles.</p> <p>By utilizing nearly every in-house engineering discipline, RK&amp;K’s design elevated this portion of NC 12 onto a bridge that extends from the southern end of the Pea Island National Wildlife Refuge over the Pamlico Sound into Rodanthe. RK&amp;K’s design minimizes impacts to the Pea Island National Wildlife Refuge, submerged aquatic vegetation (SAV), and the community of Rodanthe, while maintaining safe and reliable access for area residents and visitors to southern Hatteras Island.</p>				<div><p><b>Key Personnel:</b> David Peterson, Assistant PM Lead Design Engineer</p><p><b>Relevance</b></p><ul style="list-style-type: none"><li>• Design-build delivery</li><li>• Limitations on in-water and over-water construction</li><li>• Project-specific construction method</li><li>• Limited site access</li><li>• 17’ of clearance above mean sea level</li><li>• Complex geotechnical investigations and engineering</li><li>• Completed under accelerated schedule and within budget</li></ul></div>	
h. Self-Assessment. The information provided in this section should be a self-assessment of RK&K’s performance on the project to identify RK&K with firms or personnel that have successfully completed projects on time and on or under budget, and to identify Lead Designers that have records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.					
<ul style="list-style-type: none"><li>• Quickly completed designs for the repair of several damaged piles that prevented delays to construction. Separated design between multiple engineers, separated submittals to allow early start on transition spans, precasting, and long lead items. Replicated bridge elements to allow for the use of multiple locations (piles, girders, deck panels)</li></ul>					
i. Quality Initiatives. Discuss RK&K’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.					
<ul style="list-style-type: none"><li>• No claims, disputes, or litigation.. Due to the geometry of the bridge, environmental limitations, and accelerated schedule, developed a project-specific “Advancing Rail System” (2,600 feet, 1,300 feet on each side) that used previously constructed sections of the bridge for access with a gantry and platform cranes to straddle the bridge. Advanced from both ends of the bridge simultaneously. Developed and executed a mitigation program to harvest and relocate subaquatic vegetation impacted by the bridge.</li><li>• 72” FIBs in the tangent superstructure of the main bridge and the edge girder system eliminated the need for overhang falsework and allowed for more rapid deck construction. Used precast 54” diameter concrete cylinder piles where possible to eliminate footings and columns and decrease the total number of piles required. Stainless steel rebar used with cast-in-place concrete in the footings, cap, diaphragms and deck to reduce future maintenance cost and extend the life of the bridge. Utilized precast concrete deck panels to reduce removable deck formwork. Included precast sheet pile wall at North end to reduce ROW impacts to Pea Island NWLR. Collaborated closely with contractor to optimize bridge components for means and methods.</li></ul>					
j. For each question in Section 3.5.2 of the RFQ for which a “Yes” answer was provided, RK&K shall provide a detailed explanation below.					
All answers to the questions in Section 3.5.3. are “No” for this project.					



WORK HISTORY AND QUALITY FORM – CONTRACTOR/DESIGNER  
Lead Designer – Rummel, Klepper & Kahl, LLP (RK&K)

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 RK&K’ 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 RK&K (in thousands)
Name: Perquimans River Swing Span Bridge DB Location: Perquimans County, NC	Name: McLean Contracting – Design Builder RK&K – Lead Designer	Name of Owner: NCDOT Project Manager: Mr. David Stutts, PE Phone: (919) 707-6642 Email: <a href="mailto:dstutts@ncdot.gov">dstutts@ncdot.gov</a>	7/2019 – Design 8/2022 – Construction	\$56,925	\$7,500
g. Narrative describing the work performed by RK&K. If submitting work completed by an affiliated or subsidiary company of RK&K, identify the full legal name of the affiliate or subsidiary and their role on the Project. Include the office location(s) where the design work was performed and whether RK&K was the lead designer or a sub-consultant.					
<p>RK&amp;K is Lead Designer for the widening of a portion of US 17 Business/NC 37 and the replacement of the historic swing bridge over the Perquimans River.</p> <p>This project provides a direct and reliable route between the Towns of Hertford and Winfall. The two-lane facility north of the proposed new bridge was designed to meet a 50-mph design speed for a rural collector and the remaining portion, including the bridge, was designed to meet a 30-mph design speed for an urban collector. The new 2,691 foot long structure includes a swing span section over the navigational channel and bridges the adjacent earthen causeway.</p> <p>Common for these unique swing span bridges, RK&amp;K is providing the design for the bridge tender’s house. Additionally, the team was responsible for the demolition and disposal of the existing bridge.</p> <p>During the design-build selection process, RK&amp;K received a technical score of 94% – the highest of all responding firms.</p> <p>The structure is a 2,691 foot long bridge with 45” &amp; 54” FIB prestressed concrete girder superstructure (1 span at 67 feet, 2 swing spans at 98 feet , 12 spans at 88 feet and 14 spans at 98 feet) on pile bents supported by concrete pile caps with 30” prestressed concrete piles. Interior bents were designed for a significant amount of scour (EL. -28).</p>					<div><p><b>Key Personnel:</b> David Peterson, Structures Design Manager</p><p><b>Relevance</b></p><ul style="list-style-type: none"><li>• Design-Build delivery</li><li>• Riverine environment</li><li>• 10’ bridge clearance</li><li>• Demolition of existing bridge</li><li>• Limitations on in-water and over-water construction</li><li>• Limited site access, use of barges</li><li>• Completed under accelerated schedule and within budget</li></ul></div>
h. Self-Assessment. The information provided in this section should be a self-assessment of RK&K’s performance on the project to identify RK&K with firms or personnel that have successfully completed projects on time and on or under budget, and to identify Lead Designers that have records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.					
<ul style="list-style-type: none"><li>• Utilized specialized subconsultant for swing-span and squads for superstructure and substructure design.</li><li>• RK&amp;K efficiently responded to all contractor RFIs within 48 hours.</li></ul>					
i. Quality Initiatives. Discuss RK&K’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.					
<ul style="list-style-type: none"><li>• RK&amp;K’s quality was demonstrated as this project did not include any claims, disputes, or litigation.</li><li>• Reconfigured alignment at north end of project that matches existing traffic patterns which converted NC 37 to a through movement and US 17Bus to a -Y- line.</li><li>• Realigned bridge parallel to existing roadway/causeway to allow existing bridge to remain open for a longer period of time.</li><li>• Constant coordination with Sub to ensure no conflicts from swing span to fixed bridge.</li><li>• Utilized reusable aluminum bracing for overhang falsework to decrease time to set forms for deck pours.</li><li>• Held monthly team meetings during construction. Held weekly meetings during design, including separate structure weekly calls.</li></ul>					
j. For each question in Section 3.5.2 of the RFQ for which a “Yes” answer was provided, RK&K shall provide a detailed explanation below.					
All answers to the questions in Section 3.5.3. are “No” for this project.					





# Appendix C

## Work History and Quality Forms

(Section 3.5.2)







## Quality of Past Performance (Section 3.5.2)

Number	Question	Crowder	RK&K
3.5.2 (a)	Has the Lead Contractor or any member of the joint venture been declared delinquent or placed in default on any Project?	No	N/A
3.5.2 (b)	Has the Lead Contractor or any member of the joint venture submitted a claim on a project that was litigated? If litigated, explain the results.	No	N/A
3.5.2 (c)	Have any projects been delayed more than 30 days such that liquidated damages were assessed?	No	No
3.5.2 (d)	Has the Lead Contractor been cited by OSHA for violations deemed serious, willful, or repeated?	No	N/A
3.5.2 (e)	Have any projects under contract with the Lead Contractor or any member of the joint venture been subject to remediation actions, stop work orders, or project delays in excess of 30 days as a result of Section 404/ Section 401 permit violations?	No	N/A
3.5.2 (f)	Has an owner, a Lead Contractor, or any member of a joint venture pursued compensation from the Lead Designer due to errors and omissions?	No	Yes
3.5.2 (g)	Has the Lead Designer filed legal proceedings against the Lead Contractor, or vice versa, on a design-build contract?	No	No

In response to **3.5.2 (f)** above, we offer the following response to the question and as requested within the RFQ.

RK&K, Delaware River & Bay Authority (DRBA), Bridge 6	The owner and RK&K have engaged in the dispute resolution process of the contract regarding the alleged design errors and omissions. The parties have participated in mediation but were unable to resolve the matter. The Owner has sent its notice to proceed with arbitration, but there is currently no timeline for if or when arbitration will occur. RK&K and the owner are working to schedule a second mediation to hopefully resolve the dispute.
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WORK HISTORY AND QUALITY FORM – CONTRACTOR/DESIGNER  
RK&K, LLP

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 Lead Contractor’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 Lead Contractor (in thousands)
Name: <b>DRBA Bridge 6</b> Location: New Castle County, DE	Mumford & Miller Concrete, Inc., Lead Contractor  RK&K – Lead Designer	Name of Owner: Delaware River & Bay Authority Project Manager: David Hoppenjans Phone: 302-571-6300 Email: <a href="mailto:david.hoppenjans@drba.net">david.hoppenjans@drba.net</a>	2/2020 12/2019	\$35,000	\$2,600
g. Narrative describing the work performed by Lead Designer					
<p>RK&amp;K was the Lead Designer. The overall project intent was to add another lane to SB I-295. The design of Bridge 6 was a replacement and widening of the steel superstructure and concrete deck of the bridge with strengthening and widening of the existing concrete piers. The design was performed in RK&amp;K’s Baltimore office.</p> <p>No proposed Key Individuals proposed for this I-20 over Wateree River Bridge Replacement &amp; Swamp Overflow Bridge Rehabilitation project were involved in this project.</p>					
h. Self-Assessment. The information provided in this section should be a self-assessment of Lead Contractor’s performance on the project to identify Lead Contractor with firms or personnel that have successfully completed projects on time and on or under budget, and to identify Lead Contractors that have records of managing contracts to minimize delays, claims, dispute proceedings, litigation, and arbitration.					
N/A					
i. Quality Initiatives. Discuss Lead Contractor’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.					
N/A					
j. For each question in Section 3.5.2 of the RFQ for which a “Yes” answer was provided, Lead Contractor shall provide a detailed explanation below.					
<p>3.5.2 (f) Has an owner, a Lead Contractor, or any member of a joint venture pursued compensation from the Lead Designer due to errors and omissions?</p> <p>The owner and RK&amp;K have engaged in the dispute resolution process of the contract regarding the alleged design errors and omissions. The parties have participated in mediation but were unable to resolve the matter. The Owner has sent its notice to proceed with arbitration, but there is currently no timeline for if or when arbitration will occur. RK&amp;K and the owner are working to schedule a second mediation to hopefully resolve the dispute.</p>					





## Appendix D Legal and Financial







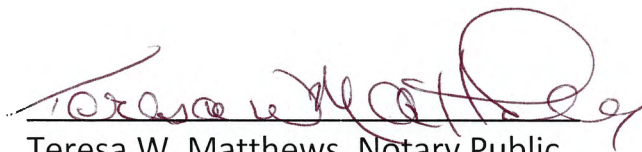
## PROPOSER'S AFFIDAVIT OF FINANCIAL CAPACITY

Crowder Construction Company has the financial capacity and resources necessary to complete the I-20 over Wateree River Bridge Replacement and Swamp Overflow Bridge Rehabilitations Design-Build Project Contract ID 2847360 KERSHAW COUNTY as proposed herein. A letter from our bonding company attesting to our good standing and bonding capacity is attached.

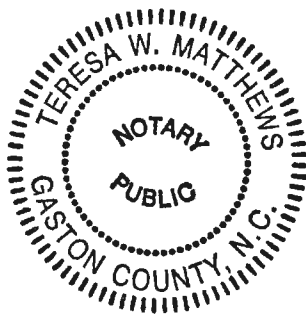
  
\_\_\_\_\_  
George F. Ellis, Vice President

June 9, 2022

Subscribed and witnessed before me this 9th day of June 2022.

  
\_\_\_\_\_  
Teresa W. Matthews, Notary Public

My Commission Expires August 1, 2025







USI Insurance Services  
6100 Fairview Drive  
Suite 1400  
Charlotte, NC 28210  
www.usi.com  
Tel: 704.543.0258

May 27, 2022

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

RE: Our Client: Crowder Construction Company  
Project: I-20 over Wateree River Bridge Replacement and Swamp Overflow Bridge Rehabilitations  
Design-Build Project Contract ID 2847360 Kershaw County

Dear Ms. Wright:

Liberty Mutual Insurance Company has met the bonding needs of Crowder Construction Company since 1996. Crowder has a single bonding capacity of \$300,000,000 and their aggregate bonding capacity is \$800,000,000. They have an unutilized bonding capacity of \$300 million.

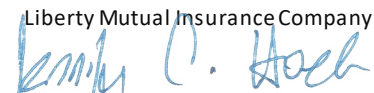
Based on Crowder Construction Company's prior experience and based on present circumstances and bonding capacity, Liberty Mutual Insurance Company will be willing to provide bid, performance and payment bonds on requested projects Crowder Construction Company undertake.

Subject to the normal underwriting considerations, including, but not limited to current financial information, final contract terms, conditions and construction financing, we would be most willing to work with them on a 100% Performance and Payment Bond requirement, in the event that they are awarded a contract and enter into a contract which is satisfactory to all parties. We assume no liability to third parties or to you if for any reason we do not execute said bonds.

Liberty Mutual Insurance Company is on the U.S. Department of Treasury's Listing of Approved Sureties (Department Circular 570) Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies, carries an A.M. Best Rating of A (Excellent) with a Financial Size Category of XV (\$2 Billion or greater), and is licensed to act as surety in all fifty states.

If I may provide any additional information, please don't hesitate to let me know.

Sincerely,

Liberty Mutual Insurance Company  
  
Jennifer C. Hoehn  
Attorney-In-Fact







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

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

Certificate No: 8202325-969489

## 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, Donna K. Ashley; Jacqueline Hampton; Jennifer C. Hoehn; John D. Leak, III; J. David Pollack, Jr.; William J. Quinn; Angela D. Ramsey; G. Timothy Wilkerson all of the city of Charlotte, state of NC each individually if there be more than one named, its true and lawful attorney-in-fact, with full power and authority hereby conferred to sign, execute and acknowledge the above-referenced surety bond.

**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 10<sup>th</sup> day of October, 2019.

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



By: 

David M. Carey, Assistant Secretary

STATE OF PENNSYLVANIA ss  
COUNTY OF MONTGOMERY

On this 10<sup>th</sup> day of October, 2019, before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Insurance Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

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



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

By: 

Teresa Pastella, Notary Public

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

### ARTICLE IV – OFFICERS: Section 12. Power of Attorney.

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

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

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

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

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

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, of Liberty Mutual Insurance Company, The Ohio Casualty Insurance Company, and West American Insurance Company do hereby certify that this 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 27<sup>th</sup> day of May, 2022



By: 

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 9:00am and 4:30pm EST on any business day.





### 3.6.3 | Organizational Agreements

Not applicable - Our Team is not a partnership, limited partnership, joint venture, or other association.





## Appendix E

# Organizational Conflicts of Interest





## DISCLOSURE OF POTENTIAL CONFLICT OF INTEREST CERTIFICATION

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

  X   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):

George F. Ellis  
Signature

June 9, 2022  
Date

George F. Ellis  
Print Name

Crowder Construction Company  
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**

Crowder Construction Company and Rummel, Klepper & Kahl, LLP (RK&K) (Lead Designer) do not hold any of the information in this submittal as confidential or proprietary.





# Appendix G

## Addendum Receipt Forms







South Carolina  
Department of Transportation

## NOTICE OF RECEIPT

I-20 over Wateree River Bridge Replacement  
and Swamp Overflow Bridge Rehabilitations  
Design-Build Project Design-Build – Contract  
ID 2847360  
Kershaw County

### 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

June 9, 2022  
Date

George F. Ellis  
Printed Name

For: Crowder/RK&K  
Design-Build Team Name







# Appendix H

## Key Individual and Contractor/Designer Reference Forms





[illegible]



Email	First Name	Last Name	Company Name	Project Name	Team
<b>References from 3.3.1 - Not shown in Work History</b>					
benjamin.possiel@raleighnc.gov	Benjamin	Possiel	City of Raleigh	Project C-5604-OD Crabtree Creek West Greenway project	Crowder/RK&K
lcarpenter@ncdot.gov	Larry	Carpenter	NCDOT	Emergency Express Design-Build, Liberty Hill Road, SR 1651 Bridge 136 over the South Yadkin River	Crowder/RK&K
mirandakidd@vdot.virginia.gov	Miranda	Kidd	VDOT	VDOT C00101495B62 -Replacement of bridge on Route 671 over overflow Nottoway River	Crowder/RK&K
ddhorrell@ncdot.gov	Douglas	Horrell	NCDOT	NCDOT C203206 Piedmont Rail Corridor Improvement Program, Harrisburg to Charlotte Project	Crowder/RK&K
jeffrey.mcclanahan@ci.charlotte.nc.us	Mac	McClanahan	Charlotte Water	Goose Creek Sanitary Sewer PDB	Crowder/Merrick/TELICS
ReynoldsBS@scdot.org	Brad	Reynolds	SCDOT	SCDOT, CLRB 2020-1 - District 2 Design-Build Bridge Package	RK&K/SAM
<b>References from 3.5.1 - Not shown in Work History</b>					
turnermk@scdot.org	M Kevin	Turner	SCDOT	US 78 Bridges over Meeting Street & NS/CSXT Railroads and SC7 Cosgrove Ave over Meeting Street & NS/CSXT RR tracks	Crowder
jhinson@ncdot.gov	Jon	Hinson	NCDOT	I-85 Concrete Rehab - Exit 36 to Moore's Chapel Road	Crowder
mirandakidd@vdot.virginia.gov	Miranda	Kidd	VDOT	VDOT C00101495B62 - Replacement of bridge on Route 671 over overflow Nottoway River	Crowder
mpenney@ncdot.gov	Michael	Penney	NCDOT	I-95 Widening and Improvements	S.T. Wooten/RK&K
rwbullock1@ncdot.gov	Robert	Bullock	NCDOT	I-40 Widening and Improvements	S.T. Wooten/RK&K
<b>References from Work History Forms and 3.5.1</b>					
ddhorrell@ncdot.gov	Douglas	Horrell	NCDOT	NCDOT C204058 - Gateway Station, Charlotte, NC	Crowder
yuhasjd@scdot.org	Jeremy	Yuhas	SCDOT	SC File 3283411 Rainbow & Leaphard over I-26, West Columbia	Crowder
mobleymf@scdot.org	Melanie	Mobley	SCDOT	SC File 5485020 SC9/49 Multi-Bridge replacements over Broad River, Lockhart Canal, Canal Road, and Lockhart Drive, Chester/Union Counties	Crowder
mcwatson@ncdot.gov	Malcolm	Watson	NCDOT	I-40 over the Yadkin River	Flatiron/Blythe/RK&K
dthering@ncdot.gov	David	Hering	NCDOT	NC 12 Rondanthe Bridge	Flatiron/RK&K
dstutts@ncdot.gov	David	Stutts	NCDOT	Perquimans Swing Span Bridge	McLean/RK&K







📍 PO Box 30007, Charlotte, North Carolina 28230  
☎ 704.332.8184 🌐 [www.crowderusa.com](http://www.crowderusa.com)

