Submitted To:
Louisiana Department of Transportation and Development

Qualifications Statement

IDIQ Contract for Engineering and Technical Support Services for Critical Projects, Statewide

Contract Nos. 4400029195, 4400029196 and 4400029197

Submitted By:

4545 Sherwood Common Boulevard, Building 3, Suite A | Baton Rouge, LA 70816

4545 Sherwood Common Blvd.
Building 3, Suite A
Baton Rouge, LA 70816

T 225.216.7483
TRCcompanies.com

June 20, 2024

Department of Transportation and Development
Attn.: Project Evaluation Team (PET)
Consultant Contract Services
1201 Capitol Access Road, Room 405-E
Baton Rouge, LA 70802-4438

Re: Professional Engineering and Related Services
IDIQ Contract for Engineering and Technical Support Services for Critical Projects, Statewide
Contract Nos. 4400029195, 4400029196 and 4400029197

Dear Project Evaluation Team Members,

TRC Engineers, Inc. (TRC), in associated with a team of locally and nationally respected subconsultants, is pleased to submit our *Qualifications Statement* on DOTD Form 24-102 for consideration of providing the needed engineering and technical support services for the above-referenced contract. As demonstrated herein, our team offers a highly-qualified group of professionals with related planning, engineering, design, and consulting expertise that comes with enthusiasm and a commitment to provide quality-based services and deliver all tasks quickly and with a high level of quality so the DOTD can meet your obligations. TRC has progressively built a very competent and highly experienced staff in our Baton Rouge office that has had the pleasure of working on challenging and highly complex projects for the LADOTD over the past 20 years. Leveraging such capabilities, the majority of the work we will perform as the Prime for this contract will be performed right here in Louisiana. Our team offers the experience of having provided broad services for critical projects throughout the country, including in Louisiana for the LADOTD, many of which have been progressed using a variety of Alternative Delivery Methods or in accordance with accelerated schedules. Drawing upon those experiences, we look forward to continuing our successful working relationship with the Department on this extremely important contract as well.

TRC is highly appreciative of your review and consideration of our team's credentials and looks forward to your decision. We welcome having the opportunity to continue our service to the LADOTD and delivering work under an assigned IDIQ contract in a timely, cost-effective, and technically-superior manner as we have done so for other projects as part of Louisiana's capital improvement initiatives.

Sincerely,

TRC Engineers, Inc.

Durk H. Krone, P.E.
Principal / Project Manager

DOTD FORM: 24-102

PROPOSAL TO PROVIDE CONSULTANT SERVICES

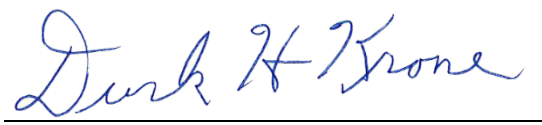
(Revised January 1, 2023)

Prime consultant shall complete the DOTD Form 24-102 without altering the Form's text; however, the instruction and/or guidance for Sections 12 through 24 can be removed but do not remove Section title and number.

ANY CONSULTANT FAILING TO SUBMIT ANY OF THE INFORMATION REQUIRED ON THE DOTD FORM 24-102, OR PROVIDING INACCURATE INFORMATION ON THE DOTD FORM 24-102, MAY BE CONSIDERED NON-RESPONSIVE.

1. Contract title as shown in the advertisement	**IDIQ Contract for Engineering and Technical Support Services for Critical Projects, Statewide**
2. Contract number(s) as shown in the advertisement	4400029195, 4400029196, 4400029197
3. State Project Number(s), if shown in the advertisement	N/A
4. Prime consultant name (name must match as registered with the Louisiana Secretary of State where such registration is required by law)	TRC Engineers, Inc.
5. Prime consultant license number (as registered with the Louisiana Professional Engineering and Land Surveying Board (LAPELS) if registration is required under Louisiana law)	License # EF.0003249
6. Prime consultant mailing address	4545 Sherwood Common Blvd., Building 3, Suite A Baton Rouge, LA 70816
7. Prime consultant physical address (existing or to be established, if location is used as an evaluation criteria)	See Item 6 above
8. Name, title, phone number, and email address of prime consultant's contract point of contact	Durk Krone, PE, Vice President (225) 229-2968 e-mail: dkrone@trccompanies.com
9. Name, title, phone number, and email address of the official with signing authority for this proposal	Durk Krone, PE, Vice President (225) 229-2968 e-mail: dkrone@trccompanies.com

Prime consultant should enter firm name in the footer at the bottom of this page. (It will carry over to subsequent pages.)

10. This is to certify that all information contained herein is accurate and true, and that the team presently has sufficient staff to perform these services within the designated time frame. By submitting this proposal, proposer certifies that it is not engaged in a boycott of Israel and it will, for the duration of its contract obligations, refrain from a boycott of Israel. Proposer also certifies and agrees that the following information is correct: In preparing its response, the proposer has considered all proposals submitted from qualified, potential subcontractors and suppliers, and has not, in the solicitation, selection, or commercial treatment of any subcontractor or supplier, refused to transact or terminated business activities, or taken other actions intended to limit commercial relations, with a person or entity that is engaging in commercial transactions in Israel or Israeli-controlled territories, with the specific intent to accomplish a boycott or divestment of Israel. The proposer also has not retaliated against any person or other entity for reporting such refusal, termination, or commercially limiting actions. DOTD reserves the right to reject the response of the bidder or proposer if this certification is subsequently determined to be false, and to terminate any contract awarded based on such a false response.	 Signature above shall be the same person listed in Section 9: June 20, 2024 Date:
11. If a Disadvantaged Business Enterprise (DBE) goal has been set for this advertisement, indicate which firm(s) will be used to meet the DBE goal and each firm(s)' percentage.	Firm(s): Vectura Consulting Services, LLC Firm(s)':%: 6%

12. Past Performance Evaluation Discipline Table:

Past Performance Evaluation Discipline(s)	% of Overall Contract	TRC	HDR	GeoEngineers	KPMG	NTB	Vectura	ITS	Each Discipline must total to 100%
Road	20	70	30						100%
Bridge	40	70	30						100%
Traffic	5						100		100%
Geotech	4			100					100%
Survey	3					100			100%
Environmental	7	50	50						100%
ITS	3						35	65	100%
Planning	11	30	50		20				100%
Other	7	10	40		50				100%
Identify the percentage of work for the **overall contract** to be performed by the prime consultant and each sub-consultant.									
Percent of Contract	**100%**	50	31	4	4	3	6	2	100%

13. Firm Size:

Firm name	DOTD Job Classification	Number of personnel committed to this contract	Total number of personnel available in this DOTD Job Classification (if needed)
TRC Engineers, Inc.	Principal	2	3
	Supervisor - Engineer	8	15
	Supervisor - Other	1	1
	Engineer	10	30
	CADD Technician	2	7
	Administrative	1	4
	Engineer - Other	3	34
	Inspector - Bridge	4	20
HDR Engineering, Inc.	Economist	2	18
	Engineer	1	15
	Environmental Pro	2	5
	Inspector – Bridge	3	13
	Planner	1	17
	Principal	1	10
	Supervisor – Eng	6	46
	Supervisor – Other	6	12
GeoEngineers, Inc.	Administrative	1	4
	CADD Technician	1	1
	Driller	3	3
	Engineer	2	5
	Engineer Intern	1	4
	Environmental Pro	0	3
	Principal	3	7
	Sr. Technician	1	2
	Technician	1	6
KPMG LLP	Other (Financial/Commercial)	3	250
NTB Associates, Inc.	Principal	1	1
	Engineer	1	1
	Surveyor	3	6

Firm name	DOTD Job Classification	Number of personnel committed to this contract	Total number of personnel available in this DOTD Job Classification (if needed)
	Supervisor Other	1	3
	Senior Technician	0	1
	CADD Technician	1	6
	Technician	1	1
	CADD Drafter	2	6
	Party-Chief	5	18
	Instrument-Man	4	7
	Rodman	4	10
Vectura Consulting Services, LLC	Supervisor-Eng	2	2
	Engineer	3	3
	Engineer Intern	2	2
	Inspector	1	1
	Senior Technician	1	1
	Supervisor-Other	1	1
	Clerical	1	1
Intelligent Transportation Systems, LLC	Supervisor-Eng	2	2
	Engineer	3	3
	Engineer Intern	2	2
	Inspector	1	1

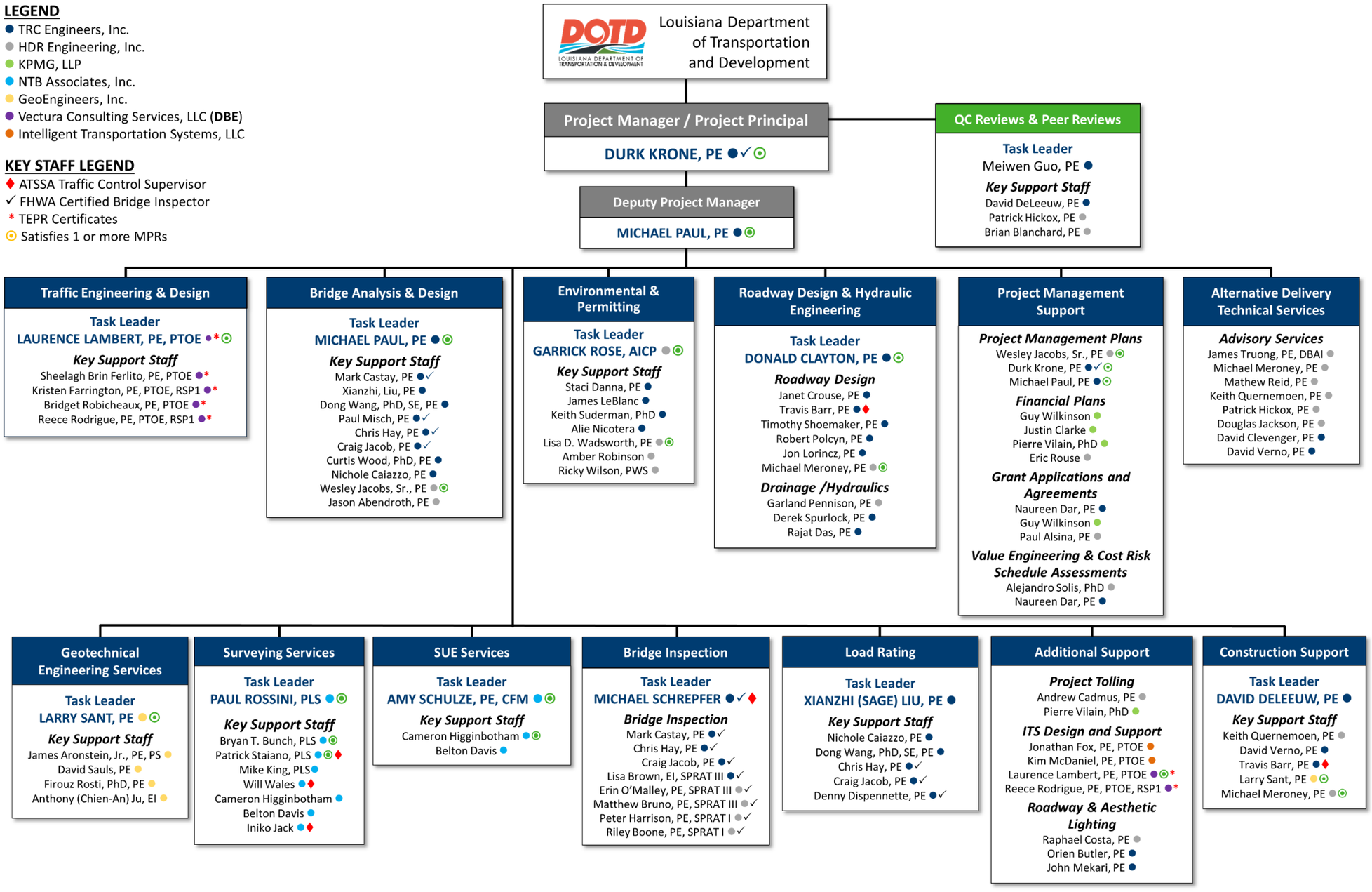
14. Organizational Chart:

LEGEND

- TRC Engineers, Inc.
- HDR Engineering, Inc.
- KPMG, LLP
- NTB Associates, Inc.
- GeoEngineers, Inc.
- Vectura Consulting Services, LLC (**DBE**)
- Intelligent Transportation Systems, LLC

KEY STAFF LEGEND

- ♦ ATSSA Traffic Control Supervisor
- ✓ FHWA Certified Bridge Inspector
- * TEPR Certificates
- ⊙ Satisfies 1 or more MPRs



15. Minimum Personnel Requirements:

MPR No. Do not insert wording from ad	Personnel being used to meet the MPR (Individual(s) may not satisfy more than one MPR unless specifically allowed by Attachment B of the advertisement)	Firm employed by	Type of license and discipline meeting MPR/ certification & number (Ex: PE # - Civil)	State of license	License / certification expiration date
1	Durk Krone, PE	TRC Engineers	PE - #PE.0031955 – Civil	LA	03-31-2026
2	Durk Krone, PE	TRC Engineers	PE - #PE.0031955 – Civil	LA	03-31-2026
3	Durk Krone, PE	TRC Engineers	PE - #PE.0031955 – Civil	LA	03-31-2026
4	Garrick Rose, AICP	HDR Engineering, Inc.	N/A	N/A	N/A
	Lisa Wadsworth, PE	HDR Engineering, Inc.	N/A	N/A	N/A
5	Laurance Lambert, PE, PTOE	Vectura Consulting Services, LLC	PE - #PE.0029901 - Civil	LA	03-31-2026
6	Paul Rossi, PLS	NTB Associates	PLS - #PLS.0004731	LA	09-30-2024
	Brian Bunch, PLS	NTB Associates	PLS - #PLS.0005014	LA	03-31-2026
7	Paul Rossi, PLS	NTB Associates	PLS - #PLS.0004731	LA	09-30-2024
	Patrick Staiano, PLS	NTB Associates	PLS - #PLS.0005130	LA	09-30-2025
8	Amy K. Schulze, PE, CFM	NTB Associates	PE - #PE.0030295 - Civil	LA	03-31-2025
9	Larry D. Sant, PE	GeoEngineers, Inc.	PE - #PE.0035625 - Civil	LA	09-30-2024
10	Donald Clayton, PE	TRC Engineers, Inc.	PE - #PE.0019634 - Civil	LA	03-31-2025
	Michael P. Meroney, PE	HDR Engineering, Inc.	PE - #PE.0034489 - Civil	LA	09-30-2025
11	Michael Paul, PE	TRC Engineers, Inc.	PE - #PE.0032172 - Civil	LA	03-31-2026
	Durk Krone, PE	TRC Engineers, Inc.	PE - #PE.0031955 – Civil	LA	03-31-2026
	Wesley D. Jacobs Sr., PE	HDR Engineering, Inc.	PE - #PE.0030774 - Civil	LA	09-30-2024

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**Durk Krone, P.E.**	Years of experience with this employer	19
Title	Principal-in-Charge/Sr. Project Manager	Years of experience with other employer(s)	21
Degree(s) / Years / Specialization		M.S. / 1984 / Civil Engineering B.S. / 1982 / Civil Engineering	
Active registration number / state / expiration date		#PE.0031955 / LA / 03-31-2026	
Year registered	2005	Discipline	Civil Engineering
		Other Pertinent Training / Certifications	
		LADOTD Maintenance & Rehabilitation of Historic Bridges Training Course, 2016 FHWA / NHI #130055 - Safety Inspection of In-Service Bridges, 1999 FHWA / NHI #130053 – Bridge Inspection Refresher Training, 2011 FHWA / NHI #130078 – Fracture Critical Inspection Techniques for Steel Bridges, 2007 FHWA / NHI #130110 – Tunnel Safety Inspection, 2017	
Contract role(s) / brief description of responsibilities		**Principal-in-Charge/Project Manager – Satisfies MPRs #1, #2, #3, #11** Mr. Krone brings 40 years of experience to this contract. Highly relevant to this IDIQ, he has successfully managed several major LA DOTD contracts including the $171 million I-49 North project (I-220 to MLK, Jr. Drive) in Caddo Parish (Bridge Design Complex) and the approximately $100 million US Route 190 Mississippi River Bridge Rehabilitation and Painting Project (Bridge Design Complex), as well as the ongoing LA1/LA 415 Connector which is estimated at $290 million and recently transitioned to a CMAR project during final design. As a subconsultant, he also led TRC's efforts for pre-procurement services in connection with the I-10 Calcasieu River Bridge P3 Project in Lake Charles.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
03/20-Present	**S.P. No.: H.005121, LA1/LA415 Connector – Construction Manager at Risk (CMAR), West Baton Rouge Parish, LA (LADOTD)** – Project Manager for this high-profile project that involves the design of a new connector between LA 1 and I-10 which will improve resiliency and safety by providing a direct connection and evacuation route for areas south of I-10. The estimated $290 million project is approximately 3 miles in length and includes a new four-lane roadway and bridge(s) over the Gulf lntracoastal Waterway. Initiated as a Design-Bid-Build procurement, the LADOTD transitioned the project's delivery method near the end of TRC's preliminary engineering to a CMAR where TRC is now the Lead Designer working hand-in-hand with the LADOTD and a CMAR contractor. TRC was issued an advanced Notice-to-Proceed to deliver this project under an accelerated schedule. As part of the transition, TRC developed recommendations to establish segment work packages to facilitate a future early project kick-off if deemed appropriate. A study was also completed to modify the half diamond interchange at LA 1 to a full diamond interchange to avoid the need for reconstruction to meet future traffic demands.
02/24-04/24	**CMAR Statute Draft (Title 48)** – ACEC Formed a subcommittee and asked Mr. Krone to review draft legislation that the DOTD authored to create their own CMAR Statue in Title 48. Mr. Krone reviewed the proposed CMAR legislation, prepared edits, and issued to the ACEC President for consideration and issuance to the LADOTD

04/23-08/23	**S.P. No.: H.009300, Hooper Road Widening CMAR – Appointment to Selection Review Committee** – Mr. Krone was appointed by Dr. Eric Kalivoda, Secretary of Transportation, to the CMAR Selection Review Committee for evaluation of the responses to the Request for Qualifications by JB James Construction, LLC and Barber Brothers Contracting Co., LLC. Mr. Krone attended several meetings with the CMAR Selection Review to review SOQs, send requests where necessary to the Contractor's requesting either clarification or supplemental information, and ultimately score the proposals. Mr. Krone completed two 27 page Evaluations, one for each contractor, and issued them to the LA DOTD
01/21-07/23	**S.P. No.: H.003931, I-10 Calcasieu River Bridge P3 Project, Lake Charles, LA –** Deputy Project Manager for the WSP Team and Project Manager during the execution of services that included Data Review, Capital Construction Cost Estimation and Schedule. Assisted with development of the technical inputs to the RFP that supported delivery of the Draft RFP, and provided RFP phase preliminary support that included reviews of the draft RFP package documents, development of the Technical Proposal Requirements, drafting of preliminary Technical Provisions (TP) Performance Specifications, and reviewing KPIs and LDs. Oversaw development of the TPs for Environmental Compliance, Railroad, Demolition, Bridge, Miscellaneous Structures, Sign Structures and Support, Signing, and Pavement Markings, Maintenance of Traffic, and Traffic. TRC also conducted the review and evaluation of Developer Proposals. The project extends from the I-10/I-210 west interchange to the Ryan Street exit ramp and consists of replacing the I-10 Calcasieu River Bridge using P3 project delivery, including the reconfiguration of interchanges and interstate widening.
07/13 - 11/13 01/15 – 03/15 09/19 – 06/20 10/22 – 01/23	**Design-Build Pursuits –** Project Manager for TRC as the Lead Designer during the RFP Phase for the following Design-Build Projects: **1. S.P. No.: H.010620 US 90 (Future I-49) Albertson's Parkway to Ambassador Caffery – Contractor – J.B. James Construction** **2. S.P. No.: H.004932 US 90 (Future I-49) LA 318 Interchange – Contractor – Conti** **3. S.P. No.: H.013897 I-10 and I-12 College Dr. Flyover Ramp – Contractor – J.B. James Construction** **4. S.P. No.: H.001779 Jimmie Davis Bridge (LA 511) (HBI) – Contractor – Thalle Construction Co., Inc.** Services included managing all subconsultants and assisting with the development of SOQs. Once shortlisted provided reviews and issue questions on the draft and final ITPs & RFPs, attended One-on-One Meetings, conducted oral presentations with Contractor, authored and implemented approved ATCs, calculated quantities for the Contractor, prepared the Technical Proposal, and assisted the Contractor in developing the cost proposal, Design Units and a cost loaded schedule.
12/10-Present	**S.P. No.: H.001234, LA 1 Port Allen Canal Bridge Replacement, West Baton Rouge Parish, LA** – **Bridge Study:** Project Manager for the development of a detour bridge study where two different detour alignments were developed. Each consisted of a 2,500' detour bridge over the Intracoastal Waterway where the proprietary Acrow system was considered and where adequate vertical clearance was provided. Conceptual bridge designs were developed for each alignment. **Rehabilitation Study:** Project Manager for the feasibility study that investigated three bridge rehabilitation options and one bridge replacement option for the existing twin bridges that carry LA 1 over the ICWW. The Study included the development of new roadway alignment options, construction phasing, traffic control schematics, investigating rehabilitation options for the existing bridge and preliminary design of a new bridge option. The rehabilitation and replacement options also investigated and proposed the use of Accelerated Bridge Construction techniques. **Preliminary & Final Design:** Project Principal for preliminary and final design and associated plans which included roadway, traffic control, maintenance of traffic, ITS, traffic signal, MSE wall, highway lighting and bridge plans. Coordinated with UPRR, the US Army Corps of Engineers, the USCG, and the Port of Baton Rouge. The project included a 1.5-mile "superstreet" (Access Management Improvements) portion.
03/15-Present	**Walter O. Bigby Carriageway, Bossier City, LA (Bossier Parish) –** TRC Project Manager for design of the North Parkway Extension from North of Eatman Street to Benton Highway. The project follows existing roadway for a portion of the alignment, then continues northward on new alignment between the Red River Levee and Union Pacific Railroad, crosses existing tracks with a new bridge structure (1,550' long consisting of a horizontally curved, haunched 4-span (185'-225'-300'-225') steel plate I-girder main span continuous unit with BT-72 prestressed concrete girder approach spans) and connects to Benton Highway at a new signalized intersection.
06/06-10/18	**S.P. No.: H.003886.5, I-49 & I-220 Interchange, Shreveport, Caddo Parish, LA -** Project Manager on this new, multi-lane divided roadway, 4-level interchange project. The project was completed on an accelerated schedule and involved his management of five design teams to complete the work. Involved with the review of conceptual and structural designs and worked with the roadway design consultant to develop span arrangements, structure depths, pier concepts, and roadway geometry for a dual bridge design that included post-tensioned segmental concrete and steel box girder superstructures. The project consists of five new bridges and two bridge widenings.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**Michael Paul, P.E.**	Years of experience with this employer	16
Title	Project Manager/Senior Bridge Engineer	Years of experience with other employer(s)	6
Degree(s) / Years / Specialization	M.S. / 2003 / Civil Engineering B.S. / 2000 /Civil Engineering		
Active registration number / state / expiration date	#PE.0032172 / LA / 03-31-2026		
Year registered	2006	Discipline	Civil Engineering
			Other Pertinent Training / Certifications FHWA/NHI #130055 - Safety Inspection of In-Service Bridges, 2007 FHWA/NHI #130078 - Fundamentals of LRFR and Applications of LRFR for Bridge Superstructures LADOTD Highway Safety Manual Workshop, 2011 FHWA/NHI #130092 - Fracture Critical Techniques for Steel Bridges, 2015 ATSSA – Traffic Control Supervisor ASBI Grouting Training Certificate, 2012 LADOTD Maintenance & Rehabilitation of Historic Bridges Training Course, 2016 FHWA-NHI #132082 – LRFD for Highway Bridge Substructures FHWA-NHI #134006 – Utility Coordination for Highway Projects
Contract role(s) / brief description of responsibilities	**Deputy PM and Bridge Design Task Leader – Satisfies MPR #11** Mr. Paul has over 22 years of experience in transportation and civil engineering consulting involving conceptual, preliminary, and final structural design which have been gained while working primarily on bridge-related projects involving rehabilitation as well as superstructure, substructure and foundation design for several complex urban highway projects for the LADOTD.		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. E Experience dates should cover the time specified in the applicable MPR(s).
01/21-07/23	**S.P. No.: H.003931, I-10 Calcasieu River Bridge P3 Project, Lake Charles, LA -** Project Engineer responsible for development of the Structures, Demolition, and Railroad Technical Provisions that were included in the RFP document. Mr. Paul also conducted the review and evaluation of Developer Proposals. The project extends from the I-10/I-210 west interchange to the Ryan Street exit ramp and consists of replacing the I-10 Calcasieu River Bridge using P3 project delivery, including the reconfiguration of interchanges and interstate widening.
03/20-Present	**S.P. No.: H.005121.5, LA 1/LA 415 Connector CMAR, West Baton Rouge Parish, LA (DOTD) -** Deputy Project Manager for the development of preliminary plans for this new 2.7 mile corridor between LA 1 near LA 988 (Beaulie Lane) and I-10 at the 415 interchange. The project includes a four-lane roadway, bridges over the Gulf Intracoastal Waterway and flyover ramps at the LA 1 connection. Served as conceptual structural designer and developed the Evaluation of Single Versus Dual Bridge Options Over the GIWW report. Worked with stakeholders for the development and selection of the conceptual alternate alignment when it was determined the EA Report alignment was no longer feasible due to recent development. Mr. Paul worked with the Traffic Engineering subconsultant and Roadway Geometric Designers to develop lane configuration and geometry at the LA 1 and LA 415 tie-in areas and modification of the LA 1 superstreet layout. Mr. Paul also developed the Project QA/QC Plan, Design Criteria and Project Schedule.
06/15-Present	**Walter O. Bigby Carriageway, Bossier City, LA -** Bridge Task Leader for the design of a new bridge that will be 1,520' long and consist of a horizontally curved, haunched 4-span (185'-225'-300'-225') steel plate I-girder main span continuous unit over the Union Pacific Railroad and BT-72 prestressed concrete girder approach spans. The bridge will consist of 4-12' travel lanes, a 4' left shoulder, and a 9'-8" right shoulder, and have an out-to-out width of 66'-2" for the majority of the bridge length. The northern portion of the bridge will flare out to a total width of 70' to accommodate a turning lane. The

	bridge substructures will consist of reinforced concrete piers and deep prestressed precast concrete pile foundations. As the bridge is located adjacent to the Bossier Levee, Mr. Paul also took the lead in working with the US Army Corps of Engineers to develop the 408 permit request.
12/10-Present	**S.P. No.: H.001234.5, LA 1 Port Allen Canal Bridge Replacement, Port Allen, LA - Detour Bridge Study** – Lead engineer for the development of a detour bridge study where two different detour alignments were developed. Each consisted of a 2,500' detour bridge over the Intracoastal Waterway where the proprietary Acrow system was considered and where adequate vertical clearance was provided. Conceptual bridge designs were developed for each alignment. **Rehabilitation Study** - Lead engineer in conducting a **Stage 0 Feasibility Study** that investigated three different bridge rehabilitation options and one bridge replacement option for the existing twin bridges that carry LA 1 over the Intracoastal Waterway. As part of the study, Mr. Paul was involved with the development of new roadway alignment options, construction phasing, traffic control schematics, investigating rehabilitation options for the existing bridge and preliminary design of a new bridge option. The rehabilitation and replacement options also investigated and proposed the use of Accelerated Bridge Construction techniques. **Preliminary & Final Design** – Project Manager in developing the Stage 3 preliminary (bridge and roadway) and final design (roadway only) and associated plans which included roadway, traffic control, maintenance of traffic, ITS, traffic signal, MSE wall, highway lighting and bridge plans. Coordinated with UPRR, the US Army Corps of Engineers, the USCG, and the Port of Baton Rouge. A traffic analysis was conducted with the submittal of a Level 3 Transportation Management Plan. The project included a 1.5-mile "superstreet" portion that consists of signalized and un-signalized J-turns. The proposed LA 1 SB and LA 1 NB bridges are 2,680' and 2,700', respectively, and consist of PPC girder approach spans and 3 span continuous steel I-girder spans over the Intracoastal Waterway.
07/06-10/19	**S.P. No.: H.003886.5, I-49 & I-220 Interchange, Shreveport, Caddo Parish, LA -** Deputy Project Manager, Design Coordinator and Baton Rouge Team Leader on this new, multi-lane divided roadway, 4-level interchange project. Mr. Paul served as conceptual and structural designer and worked with the roadway design consultant in developing span arrangements, structure depths, pier concepts and roadway geometry for a dual bridge design that includes post-tensioned segmental concrete and steel box girder superstructures. Mr. Paul was also involved with the development of the Project Design Criteria, development and implementation of the Project Quality Control Management plan and working with the team architect to develop aesthetic bridge design schemes. The project consisted of 5 new bridges (Ramp EN 3,070', Ramp SE 3,300', Ramp WN 700', I-49 NB and SB over MLK Dr. 462' each) and 2 bridge widenings (I-220 over Russell Rd. 322.5' each). The Ramp EN, SE and WN bridges consist of a dual design with precast segmental post-tensioned concrete and steel trapezoidal box girder superstructure alternates.
08/07-02/09	**S.P. No.: 450-09-0026, I-10 Mississippi River Bridge at Baton Rouge Rehabilitation (DOTD) -** Developed the design documents and plans for floor beam and floor beam connection distortional crack retrofit repairs.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**Donald Clayton, P.E.**	Years of experience with this employer	18
Title	Project Manager/Senior Roadway Engineer	Years of experience with other employer(s)	32
Degree(s) / Years / Specialization		B.S. / 1973 / Civil Engineering	
Active registration number / state / expiration date		#PE.0019634 / LA / 3-31-2025	
Year registered	1981	Discipline	Civil Engineering **Other Pertinent Training / Certifications** ATSSA - Traffic Control Supervisor and Technician
Contract role(s) / brief description of responsibilities		**Roadway Task Leader – Satisfies MPR #10** Mr. Clayton brings over 50 years of professional experience with regard to civil engineering design and project management. Projects he has handled include preliminary and final construction plans for major urban interstate highway systems, limited access urban roadways, and arterial street improvements. Over the course of his career he has leveraged his expertise to lead the roadway design efforts for several complex urban highway projects, including the ongoing LA1/LA415 Connector Project (CMAR) and the $60 million Walter Bigby Carriageway Project, as well as the pre-construction work for a major LADOTD P3 Project.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
04/21-06/23	**I-10 Calcasieu River Bridge P3, Lake Charles, LA** – Senior Roadway Engineer responsible for preparing the technical provisions for MOT and signing with regard to a reconstruction of I-10. The Project is a P3 project involving LADOTD, several consultants and several private proposers. Work included his preparation of technical provisions, responding to RFI's from proposer's, and coordination with the LADOTD.
03/20-Present	**S.P. No.: H.005121, LA1/LA415 Connector - Construction Manager at Risk (CMAR), West Baton Rouge Parish, LA (LADOTD) –** Roadway Design Manager/Sr. Roadway Engineer for the design of a new connector between LA 1 near LA 988 (Beaulieu Lane) and I-10 at the LA 415 interchange. The project, which is approximately 2.7 miles in length, includes a new four-lane roadway and bridge(s) over the Gulf lntracoastal Waterway, with a full diamond interchange at LA 1/LA 415. Work on LA 1 includes adding ramps for the interchange and shifting LA 1 to fit within the ramps. Modifications of the I-10 ramps at LA 415 will be required. Current conceptual construction cost is $290 million. Responsibilities include horizontal and vertical alignments for roadways and ramps; intersection design; drainage design; typical sections; sequence of construction; maintenance of traffic; quantity computation. Initiated as a Design-Bid-Build procurement, the LA DOTD transitioned the project's delivery method near the end of preliminary engineering to a Construction Manager at Risk (CMAR) where TRC is the Lead Designer working hand-in-hand with the LA DOTD and a CMAR contractor and TRC was issued an advanced Notice-to-Proceed to deliver this project under an accelerated schedule. As part of the transition, he assisted with the development of recommendations to establish segment work packages to facilitate a future early project kick-off if deemed appropriate. Also participated in a study to modify the half diamond interchange at LA 1 to a full diamond interchange to avoid the need for a reconstruction in the future to meet traffic demands.
11/16-Present	**Walter O. Bigby Carriageway, Bossier City, LA** – Roadway Task Manager during design of the Walter O. Bigby Carriageway extension from north of Eatman Street to Benton Highway. Walter O. Bigby follows existing roadway for a portion of the alignment and then continues northward on new alignment between the Red River Levee and Union Pacific Railroad, crossing existing Union Pacific Railroad tracks with a bridge structure, and connecting to Benton Highway at a new signalized intersection. Work includes the design of two roundabouts at the intersections of Hamilton Road and Shed Road, and the reconstruction of three side roads to tie-in to the new roadway. Design work also includes the widening of Hamilton Road from south of US 80 to the new roundabout, and the addition of a left-turn lane and driveway reconfigurations along Benton Highway. Total project length includes approximately 5,300 feet of reconstructed city streets and 3,600 feet of new four-lane streets which includes a 1,470-foot bridge structure. Mr. Clayton's tasks include typical

	section development, geometric design, subsurface drainage design, pavement striping plans, detailed Maintenance of Traffic plans, joint layout design, quantities and cross sections. Provides responses to RFI's during construction.
01/12-Present	**S.P. No.: H.001234 - Port Allen Canal Bridge, LA 1, West Baton Rouge Parish, LA (DOTD)** – Roadway Task Manager responsible for **preliminary and final design for 2.26 miles of LA 1** over the Intracoastal Waterway in Port Allen, LA. Project features 0.98 miles of new four lane roadway for LA 1 on new alignment including a separate exit ramp for I-10 EB traffic; coordination with the design of new 2700' twin bridges over the Intracoastal Waterway; and the reconstruction of existing frontage road and a railroad at-grade crossing for Ernest Wilson Road. Maintenance of Traffic plans were developed to maintain four lanes of traffic for LA 1 at all times with connections to the I-10 ramps. The project also included drainage design, geometric details, striping, joint layout, sequence of construction, cross sections and quantities. Provides responses to RFI's during construction
02/16-12/19	**44-4920 (H.009859.5 Complex Load Rating and Inspection, Statewide, LA (DOTD) –** Task Leader responsible for the design of maintenance of traffic plans for bridge inspections completed for LA 47 over IWGO, US 90 Riverbound Expressway, Intracoastal Waterway Bridge at Ellenders (vertical lift), LA 654 over Bayou LaFourche (vertical lift), LA 657 over Bayou LaFourche (vertical lift), LA 319 Intracoastal Canal Bridge (bascule), LA 83 over Patout Bayou (swing), Local Road over Bayou Terrebonne (swing), and Bridge over Bayou Teche at Adeline (swing).
12/12-04/13	**S.P. No. 002562.5 – Bayou LaLoutre Bridge Rehabilitation, St. Bernard Parish, LA (DOTD) –** Task Leader responsible for design of the maintenance of traffic plans for the inspection of this vertical lift bridge.
03/17-03/18	**H.011965.5 LA 47: IWGO Bridge Rehabilitation, Orleans Parish, LA (DOTD)** – Roadway Task Leader responsible for the design of preliminary maintenance of traffic plans and detours for the rehabilitation construction of this historic complex bridge.
12/09-10/13	**Old Hammond Highway, Phase 2, East Baton Rouge, LA** - Project involved the design for reconstructing a two-lane highway to a four-lane divided highway under the City's Green Light Program. Included the development of typical sections, new vertical alignments, a new subsurface drainage system to replace existing roadside ditches, maintenance of traffic plans and quantities. Served as Project Engineer and designed the vertical alignments, designed a portion of the sub-surface drainage system, designed the maintenance of traffic plans including traffic design management, and assisted in the quantity computations. Work adhered to the LADOTD Roadway Design Procedures and Details Manual.
12/12-11/14	**S.P. No.: 4400002184 – Retainer Contract for Bridge Preventative Maintenance, Statewide (DOTD)** – Senior Engineer responsible for providing engineering and related services under a retainer contract that involved the repair and/or preventative maintenance of bridge structures throughout the State of Louisiana. Task Order 1 involved bridges in East Baton Rouge, West Baton Rouge, East Feliciana and West Feliciana Parishes and included bridges on I-10, I-110, LA-1 and LA-67 crossing local roads and creeks. Responsible for preparing Maintenance of Traffic plans for 10 bridge sites as well as preparing the general plan sheets, quantity sheets and other miscellaneous sheets.
08/06-12/12	**S.P. No.: 700-99-0429, Retainer Contract for Bridge Preservation (On-System), Statewide (DOTD)** – Senior Engineer responsible for providing engineering and related services under a retainer contract that involved the repair and/or rehabilitation of bridge structures throughout the State of Louisiana. Prepared Maintenance of Traffic plans for work during the completion of construction work on the I-10 Bridge over the Mississippi. Responsible for the development of approach roadway alignment alternatives for the LA 1 Port Allen Bridge Rehabilitation/Replacement Study. Also involved with the development and QA/QC of roadway and bridge designs for LA 705 and LA 557.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**Xianzhi ("Sage") Liu, P.E.**	Years of experience with this employer	13
Title	Structural Engineer	Years of experience with other employer(s)	5
Degree(s) / Years / Specialization	M.S. / 2003 / Civil Engineering M.S. / 1999 / Coastal Engineering B.S. / 1996 / Civil Engineering		
Active registration number / state / expiration date	#PE.0034727 / LA / 09-30-2025		
Year registered	2009	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities	**Bridge Analysis and Design; Load Rating** Mr. Liu possesses 18 years of experience in the structural engineering field that includes bridge design, rating, inspection, structure monitoring and testing, and flood control structure design, along with skills and expertise that include finite element modeling and wind loads on structures. He is also experienced with the load rating provisions in the current AASHTO Manual for Bridge Evaluation and the DOTD Policies and Guidelines for Bridge Rating and Evaluation.		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
11/23-Present	**H.005121 LA 1/LA 415 Connector, West Baton Rouge, LA -** Served as the bridge task lead to develop span layout, bridge type selection, and preliminary design of superstructure and substructure for a mix of long span steel girders and prestressed LG girders spans.
11/19-03/20	**H.013284, Level 1 Toll Feasibility Study of 3rd Crossing of Mississippi River Bridge, Baton Rouge, LA -** Reviewed proposed alignments for the 3rd cross conceptual study, investigated bridge superstructure and substructure types for the cable-stayed river crossing main spans and approach spans. Using RM bridge to create the rendering of the proposed cable-stayed bridge. Evaluated advantages and disadvantages for the proposed alternates.
06/21-Present	**Contract No. 4400020156 (H.011965.5), LA 47 IWGO Bridge Rehabilitation, New Orleans, LA (DOTD) -** Served as Bridge Engineer responsible for inspection and rehabilitation of the main spans for this tied arch truss bridge included in the state historic bridge management plan. Responsibilities included a review of inspection reports, load rating results, identifying deficient elements and developing repair plans for the rehabilitation of various bridge components, including main truss members, false chord bearings, lateral bracing members, and arch tie-girders. He also answered RFIs and reviewed shop drawing during the construction phase.
01/19-05/20	**Walter O. Bigby Carriageway, Bossier City, LA –** Served as the lead engineer for superstructure design of the main steel girder spans. He has performed design modeling, analysis and plan development for the main continuous curved steel girder spans with maximum span length of 300'. He has utilized several structural analysis software packages including LUSAS, MDX for structural analysis. He also is responsible for reviewing shop drawings, erection plans for the steel girder superstructure.
01/13-07/14 05/17-12/17	**S.P. No. 003905 – I-49 North (I-220 to MLK Drive), Caddo Parish, LA (DOTD) –** Served as the lead engineer for superstructure design of the segmental bridge alternative. He developed calculations and final plans for the ramp EN bridge which is a 15-span, precast post-tensioned segmental bridge with total length of 3,030 ft. He also developed the complete as-designed and as-built load rating reports for the superstructure of the ramp EN bridge.
03/11-01/12	**S.P. No. 700-24-0031 – US 190 Mississippi River Bridge Rehabilitation, Baton Rouge, LA (DOTD) -** Performed structural analysis for the purpose of rehabilitating this major truss bridge. Functioned as an inspector performing a special condition inspection of the main truss. Performed at an accelerated pace, Mr. Liu reviewed existing plans and drawings, inspected and assessed deteriorated structures and developed plans for repair locations, repair schemes and details, which include repair/replacement of main truss members, lateral bracings and expansion bearings, and adding new safety cable system. He also reviewed load rating reports for the both the super-truss and the approach span steel bent towers, evaluated the bridge conditions and prioritized the bridge repair items. Mr. Liu reviewed the submitted shop drawings for structural repair and answered RFIs from the contractor during construction.

04/16-03/20	**Contract No.: 4400004920 (H.009859.5), Complex Load Rating, Statewide, LA (DOTD) –** Served as the lead engineer for superstructure and substructure **load rating for multiple complex bridges**, including LA1 truss bridge over Atchafalaya river, LA47 IWGO tied arch truss bridge, US 90B Riverbound Expressway deck truss bridge and the following movable bridges: Intracoastal Waterway Bridge at Ellenders (**vertical lift**), LA 654 over Bayou LaFourche (**vertical lift**), LA 657 over Bayou LaFourche (**vertical lift**), LA 319 Intracoastal Canal Bridge (**bascule**), LA 83 over Patout Bayou (**swing**), Local Road over Bayou Terrebonne (**swing**), Bridge over Bayou Teche at Adeline (**swing**). He performed inspections, load ratings, and developed load rating reports. He also led the efforts to analyze several bridges with unique configurations and high complexities. During his performance of the work, he has utilized several structural analysis software packages including LUSAS, MIDAS Civil and AASHTOWare BrR for structural analysis, validations, and load ratings.
10/16-11/17	**3rd Street Movable Bridge Load Rating and Rehabilitation, San Francisco, CA (City of San Francisco) –** Served as the lead for superstructure load rating of this Strauss Bascule truss bridge. Using LUSAS software, he performed a detailed 3-D Finite Element analysis of the bridge which has unique configurations of traffic lanes and sidewalks. He also performed structural analysis and generated governing load cases for truss member, floor beam, stringers and gusset plate ratings.
09/14-03/15	**Bayou Lafourche Movable Bridge Inspections, Lafourche Parish, LA (off-system bridge inspections)** – Served as Bridge Engineer for the special emergency inspections of two pontoon off-system bridges. He led the inspection teams, reviewed as-built plans, performed inspections, and developed repair recommendation and cost estimates based on the bridge conditions.
09/15-11/15	**S.P. No. H.002562 -- Bayou Lafourche Movable Bridge Rehabilitation, St Bernard Parish, LA** – Bridge Engineer for the design of the new operator's house as part of the vertical lift bridge rehabilitation. He designed the elevated operator's house foundation slab supported on battered piles with consideration of hurricane surge related load conditions.
05/07-08/07	**MLK Jr. Bridge over Maumee River Rehabilitation, Toledo, OH -** Performed Finite Element analysis on the MLK Jr. bascule bridge using in house Finite Element software during the post-design phase. Analyzed the structural panel for the reduced counter-weight load cases to ensure the current structure meeting temporary operation requirements.
11/19-10/20	**Contract No.: 4400004920 (H.012485.1), Off-system Bridge Load Rating (DOTD)** - Technical lead for the load rating of more than 400 **off-system bridges**. He performed load rating, QC/QA of the load rating for superstructure and substructures, develop load rating reports, and propose repair options for bridges with posting drop.
11/07-08/08	**S.P. No. 006-01-0018 - Huey P. Long Mississippi River Bridge Widening, Jefferson Parish, LA (DOTD)** – Performed structure modeling of both the existing and widened truss; reviewed existing shop drawings; assisted with determining the existing truss geometry and performed camber analysis for fabrication of the widening truss. Led the truss monitoring task during the truss erection. Worked closely with bridge monitoring teams, and predicted truss member stresses under calibration loads, dead loads and erection loads for various construction stages.
08/10-05/14	**Phill G. McDonald Bridge of I-64 over Glade Creek, Raleigh County, WV (WVDOH) -** Served as the structural lead for the truss analysis, gusset plate rating, and bridge monitoring for this structure which is one of the highest deck truss bridges in the world (560'-784'-560' spans). He performed a detailed 3-D Finite Element analysis of the bridge using LUSAS software, generated governing load cases for gusset plate ratings, developed a rating spreadsheet in accordance with FHWA publications for gusset plate rating, and quality controlled the final rating report. He also led efforts to develop bridge monitoring schemes, deploy sensors, and perform data analysis and interpretation for the purpose of diagnosing and rehabilitating abnormal bridge expansion and racking. He performed quality control reviews of the final plans for rehabilitation design.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**Meiwen Guo, PhD, P.E.**	Years of experience with this employer	1.5
Title	Senior Structural Engineer	Years of experience with other employer(s)	23
Degree(s) / Years / Specialization	Ph.D. / 1995 / Structural Engineering M.S. / 1988 / Structural Engineering B.S. / 1982 / Civil Engineering		
Active registration number / state / expiration date	#PE119680 / TX / 12-31-2024		
Year registered	2015	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities	**QC and Peer Review Task Leader** Dr. Guo possesses nearly 25 years of experience in the design of transportation related structures. During 17 years of his career as an engineer, he has worked on several design-build projects that have ranged in construction value from a few million dollars to billion dollar mega projects.		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
11/21-09/23	**I-405, Renton to Bellevue Widening and Express Toll Lanes Project, Seattle, WA -** Led the design efforts in retaining wall final design. Wall types include CIP wall, MSE wall, and soldier pile wall (cantilever and tied).
08/20-03/21	**SR-417 Widening Narcoossee Road to SR 528 (Sign Structures), Orlando, FL -** The main task involved design of median uprights supporting tri-chord sign trusses in both bounds. The client provided standard plans that had never been used before with major flaws. For instance, the sign trusses were connected to web members of the median upright frame which is parallel to roadway with details unable to transfer axial forces of truss chords, while the sign trusses are designed assuming moment connections at both ends. Redeveloped the truss-upright connection concept, performed structural design, and generated 60% and 100% plans for median upright frames and their foundations.
08/19-07/20	**JFK International Airport Project, New York City, NY –** Project involved the design of seven bridges around the new Terminal 1. All structures are plated girder bridges mostly with steel integral bent caps. Participated in the preliminary design of superstructures and 60% design of foundations, including columns and foundations that each supported three bridges at two levels. Developed connection concepts of outrigger caps and seismic details of pile cap and columns.
07/16-10/18	**Purple Line P3 Project, Montgomery and Prince George's Counties, MD -** Designed and detailed a 190-foot single span steel trapezoidal box girder bridge. Four requirements made this signature bridge unique: 1) Vibration Control: Without dynamic analysis under train traffic, the natural frequency for vertical vibration shall not be less than 2.5Hz; 2) Aesthetics: the girders shall look like an arch in elevation view which complicates design and detailing; 3) Internal Redundancy: the girders are designed and detailed as Fracture Critical Member (FCM), internal redundancy are required as well; 4) Rail-Structure Interaction (RSI): RSI analysis was required and effects of RSI shall be considered in design. Among other involvement on the project involved in stress evaluation of Direct Fixation Fasteners on a tightly curved steel bridge.
09/14-06/15	**SH183 Segment 2 Design-Build Project, Dallas, TX -** Reviewed the substructure design and drawings for a 26-span structure. Designed and detailed multi column bent, hammer head bent, post tensioned C bent, and post-tensioned straddle bent with inverted T cap on another structure.
06/11-08/12	**118th Avenue Project, Pinellas Park, FL -** The project connects US-19 to Roosevelt Boulevard over 118th Ave. Worked on superstructures of two key bridges: a spliced BT girder unit on the 118th Avenue Viaduct, and a 12 span steel box girder flyover. The spliced girder unit is three span with length of 511ft. This task involved staged construction analysis, erection sequence; pre-stressing strand and post-tensioning tendon layout; precast segment stress and strength, closure stress and strength during construction and after completion, and PT anchorage. The span length of the steel box girder bridge varies from 140 ft to 302 ft. In addition to girder design, this work involved design of field splices, cross members, lateral bracings, stiffeners, bearings, expansion joints, and erection sequencing. The project was canceled in August 2012 prior to 90% submittal and became part of the Gateway project.

04/13-08/14	**I-49 North Segment K Project, Shreveport, LA -** The main component of this $175 million project was the I-49/I-220 interchange. All three ramp structures on the project have a typical span around 245 ft. Developed preliminary design and plans for one C-bent and two PT straddle bents and carried thru 60% submittal. Designed and developed drawings for a 127 ft cast-in-place end span that is a double cell box with a tapered deck variable width.
01/14-07/14	**Rehabilitation of US-190 Bridge over the Mississippi River, Baton Rouge, LA -** This through truss bridge carries rail traffic between two trusses and two highway lanes in each overhangs on floor beam outriggers. Most of the repair needs were under the deck. In addition to structural safety during repair, the challenge was construction access, taking out existing components and bringing in replacement within rail traffic down window while highway lanes are still open. Developed design and details for structural steel repair that include: tower column base repair; anchor bolt replacement; bearing replacement; strengthening of severely corroded gusset plates and lower lateral bracings.
08/10-03/11	**US460 Connector Design-Build Project, Buchannan, VA -** The main component of the project was the 1,700 ft Grassy Creek Twin Bridge. The CIP segmental spans are 269 ft - 489 ft - 489 ft - 269 ft long designed by Janssen & Spaans. Performed independent review of the superstructure design. Developed a finite element global model for staged construction analysis to check the longitudinal design, and two transverse models to check deck design. LARSA was used on this task.
12/08-08/09	**I-15 Widening Design-Build Project, Salt Lake City, UT -** This $200 million project is location right north of downtown SLC, the first project in the U.S. on which bridges were designed operational for a major earthquake event. Checked abutment design including seismic analysis. Developed details for diaphragms, shear keys and modular expansion joints, and designed foundations for sign structures and high mask light poles.
11/07-05/08	**I-15 North Corridor Design-Build Project, Las Vegas, NV -** Led the efforts in design and detailing of a three span box girder superstructure, including design for longitudinal flexure, transverse (overhang and deck slab), webs (shear), diaphragms, anchorages, and bearings.
06/08-09/08	**Golden Ears Bridge P3 Project, Vancouver, BC, Canada –** Involved in a major design change fora simple span plate girder bridge on a sharp curve, after the girders had been fabricated. The original design was based on line girder run. Grillage analysis predicted that the differential deflection between the outside and inside girders would be as much as 19 inches. To reduce the differential deflection, top and bottom flange lateral bracings were added. To minimize size of lateral bracings, the lateral diagonal bracings are oriented such that they are subject to net tension only.
12/98-10/07	**Antelope Valley Revitalization Project, Lincoln, NE -** The traditional project is near downtown Lincoln along the Antelope Creek. There are total of 10 new highway bridges and one railway bridge (replacement). Among them are eight post-tensioned slab bridges, one P/S beam bridge, one rolled beam (rail road) bridge, and one plate girder bridge. Mr. Guo worked on this project from conceptual design to final construction submittal. A key component of the project was the East Leg Bridge, a 1080 ft five span plate girder bridge on an “S” shaped alignment which brings six lanes from one side to the other side of a four track railroad corridor that is parallel to the roadway in general. Carried out steel design and detailing efforts, including a 124 ft steel box integral cap that straddles the rail tracks. A paper was presented at the 2009 World Symposium of Steel Bridges about this bridge.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**David DeLeeuw, P.E.**	Years of experience with this employer	13
Title	Senior Project Manager	Years of experience with other employer(s)	30
Degree(s) / Years / Specialization		M.S. / 1981 / Civil Engineering B.S. / 1979 / Civil Engineering	
Active registration number / state / expiration date		#PE.0038327 / LA / 03-31-2026	
Year registered	2013	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		**QA/QC Reviewer and Construction Support** Mr. DeLeeuw has over 43 years of experience in transportation engineering. Over the course of his career he has served as a Project Manager on numerous significant projects for several departments of transportation which have included several major Environmental Assessments, numerous planning studies, and a significant number of major roadway widening and bridge design projects that have involved preliminary and final design plans, feasibility and engineering studies, roadway lighting and roadside development, highway safety improvements, traffic control plans, signing and pavement marking, traffic signals and ITS. He has also served as a Resident Engineer during the construction phases of projects, including several contracts involving a major seismic retrofit of the I-40 Bridge over the Mississippi River between Tennessee and Arkansas..	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
02/23-07/23	**Tennessee Department of Transportation, I-155 over Mississippi River, Dyer County, TN -** Served as the QC Reviewer for repairs to expansion joint assemblies, bearings, prestressed concrete beams, concrete cap beams using, steel joint supports, and steel floor beams and stringers.
01/20-11/20	**Contract No. H.012485.1 Off-system Load Rating, Statewide, LA (LADOTD) –** Served as project QA Manager for the load rating of 426 off-system bridges to include COSLAB and COPCSS bridges. He ensured that deliverables conformed to DOTD standards, requirements and TRC's Project Quality Control Plan. Contracted services include: Plan and Document Retrieval and Review; Bridge Inspection; Structural Modeling and Analysis; and generation of Repair Strategies and Plan Documents for bridges when needed. The project is being completed on an accelerated schedule.
04/16-03/20	**Contract No. 4400004920 (H.009859.5), Complex Load Rating and Inspection, Statewide, LA (DOTD) –** Mr. DeLeeuw served as a project QC/QA Manager for the load rating inspections of complex bridges to include trusses and movable bridges that included Intracoastal Waterway Bridge at Ellenders (vertical lift), LA 83 over Patout Bayou (swing), LA 654 over Bayou LaFourche (vertical lift), Local Road over Bayou Terrebonne (swing), LA 657 over Bayou LaFourche (vertical lift), Bridge over Bayou Teche at Adeline (swing), LA 319 Intracoastal Canal Bridge (bascule). He ensured the deliverables conform to DOTD standards, requirements and TRC's Project Quality Control Plan.
06/13-07/16	**S.P. #H.003886.5, I-49 North – Segment K (I-220 to MLK Drive), Caddo Parish, LA (DOTD)** - Mr. DeLeeuw served as the Lead QA Officer for all bridge design work on this project. He led a QA Review on all eight (8) sets of plans at the 60% and 95% submittal stages, while a certificate of compliance with the QC/QA Program was furnished at the 100% submittal stage. The project included three (3) new ramp structures (2 alternate designs for each – Steel Box Girder and Segmental Concrete Box Girder), new twin bridges carrying I-49 over Martin Luther King Drive, and the widening of twin bridges carrying I-220 over Russell Road.
06/11-05/16	**Tennessee Department of Transportation, Interstate 40 Mississippi River Bridge, Ramps and Project I-2 (Phase 8), Memphis, TN** - Served as Resident Engineer for the seismic retrofit of the ramps and Project I-2. Retrofit work included abutment, footing, column, bent cap and bearing retrofit. Lead core isolation bearings were installed at several bents and large modular joints were installed at a few locations in the deck. Construction Cost: $43.2 million.

07/11-08/15	**Tennessee Department of Transportation, Interstate 40 Mississippi River Relief Bridges, Group C and D (Phase 9), Crittenden County, AR** - Served as Assistant Resident Engineer for the seismic retrofit of the Group C and D structures located in Arkansas. Group C was the seismic retrofit of an existing P/S I-girder relief bridge consisting of 16 spans with an expansion joint at Pier W12 and PierW21. Group D was the seismic retrofit of an existing welded plate girder relief bridge consisting of 7 spans. Construction Cost: $46.5 million.
07/2011	**Tennessee Department of Transportation, I-40 Mississippi River Relief Bridges, Group C and D, Crittenden County, AR** - Served as Constructability Reviewer for the seismic retrofit of the Group C and D structures located in Arkansas. Group C involved the seismic retrofit of an existing P/S I-girder relief bridge consisting of 16 spans with an expansion joint at Pier W12 and PierW21. Group D involved the seismic retrofit of an existing welded plate girder relief bridge consisting of 7 spans.
01/97-12/98	**I-55 Widening - DeSoto County, MS (MDOT)** - Mr. DeLeeuw managed and performed the bridge design for widening I-55 from 4 lanes to 6, 8, and 10 lanes. He served as overall Project Manager and QA Manager of Design, as well as supervised all roadway design efforts by a sub-consultant. Work also included the preparation of construction details for the first noise walls ever constructed in MS.
06/85-01/90	**I-55, I-20, U.S. 49 Interchange Rehabilitation, Jackson, MS (MDOT) -** Managed the complete rehabilitation design for major urban interchanges (I-55, I-20 and U.S. 49) in downtown Jackson. He served as the lead QA Manager of Design. The project involved reconstruction, widening or new construction on more than 15 miles of mainline roadway, ramps, and collector/distributor roads and 27 bridges including 10 new structures. Mr. DeLeeuw supervised all bridge design efforts and the development of traffic control plans for the replacement, under traffic, of all existing pavement with new concrete pavement. He also served as lead design engineer for all continuous, curved steel-plate girders.
07/15–04/17	**Tennessee Department of Transportation, Repair of the Bridge on I-40 over the Mississippi River, Memphis, TN** - Project Manager/Resident Engineer for the complete construction management and inspection of this repair work. Construction began in the summer of 2015. The initial work, including emergency repairs to critical structural cracks was completed in February 2016 and rehab/repair of a modular expansion joint was completed in March 2016. Additional cracks were discovered in the eastern most 13 spans of the mainline. Repairs and other measures were developed jointly with TDOT and the Contractor returned to work in January 2017 and completed all repairs by April 2017, including the remaining repair of the modular expansion joint. Total construction cost was $6.7 million.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**Naureen Dar, PE**	Years of experience with this employer	3.8
Title	Regional Vice President	Years of experience with other employer(s)	27
Degree(s) / Years / Specialization	MBA / 2012 / University of Phoenix M.Sc. / 2001 / Geotechnical/Transportation M.S. / 1994 / Structures B.S. / 1992 / Civil Engineering		
Active registration number / state / expiration date	#PE.0047439 / LA / 09-30-2025		
Year registered	2023	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities	**Grant Applications/Agreements, Project Management Plans, Value Engineering** Ms. Dar has extensive experience in project management, construction management, quality control/quality assurance, contract administration and program management. She has managed and coordinated design-bid-build and design-build construction projects, in addition to the performance of risk assessments for P3 projects. Ms. Dar's experience includes alternative contracting, cost estimate reviews, environmental documents, project risk assessments, value engineering and value engineering change proposals, access modifications and safety studies. While with the Federal Highway Administration, she provided oversight on projects in Ohio and was Program Manager for Contract Administration, Consultant Services and Value Engineering.		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
02/21–Present	**ODOT District 11, HAS-151-4.85, Harrison, OH -** Principal-in-Charge for this $6 million Design-Build project involving the replacement of a curved six-span bridge over the CUOH Railroad. Includes new piers, abutments and foundations, along with all necessary roadway, maintenance of traffic and other work necessary for contract completion. As Principal-in-Charge, she is responsible for contract management and negotiations with the Design-Build contractor.
03/17–06/19	**ODOT District 12, CUY-480-18.42 - Cleveland, OH –** FHWA Project Manager for this Design-Build project with a total estimated cost of $256M. The twin structures are 4,155-feet-long and 200-feet above the valley, and exist along one of the most heavily travelled routes in the area. The project was delivered using a Two-Step Design-Build procurement process. Ms. Dar assisted ODOT with development of the RFP/RFQ and review of contractor SOQs. The project was sold as two contracts: one for the new structure in the median and a second one for re-decking the existing structures. She also reviewed and approved the design exception needed for super-elevation rates of the express lanes on the proposed center structure which tied into FHWA PBPD initiatives.
05/18–06/19	**ODOT District 2, WOO/LUC-75-30.70, Toledo, OH** – FHWA Project Manager for this $225M project to address traffic flow and safety concerns along 3.48-mile stretch of Interstate 75. Work included the mitigation of geometric deficiencies, bridge replacement, addition of auxiliary lanes, noise walls and interchange improvements. Reviewed the Alternative Evaluation Report (AER), IMS and design exceptions in-line with the FHWA PBPD concepts for the project.
04/18–04/19	**ODOT District 2, LUC-2-18.62, Toledo, OH –** FHWA Project Manager and contract administrator for the Anthony Wayne Bridge dehumidification and dynamic lighting project. This $12M contract was the first bridge cable dehumidification system in Ohio and third in the United States. As project manager she was involved in evaluating the SOQ's for contractor selection. She also headed the effort for Buy America requirements and waiver request with ODOT and FHWA headquarters.
04/17–06/19	**Reconnecting Cleveland Tiger Grant Project, Cleveland, OH** – FHWA Project Manager and Contract Administrator for the Cleveland Metroparks' $7.950M Re-Connecting Cleveland: Pathways to Opportunity grant for the Transportation Investment Generating Economic Recovery (TIGER) grant program through the US Department of Transportation. TIGER funds were used to construct five trail projects totaling over four miles, including a new

	bridge. The Cleveland Lakefront Bikeway Connector, Canal Basin Park Connector, the Red Line Greenway, Wendy Park Bridge, and Whiskey Island Connector will fill critical gaps in the active transportation network for the City of Cleveland.
02/12–12/13	**ODOT District 12, Opportunity Corridor, Cleveland, OH –** FHWA Project Manager for this $350M project that was politically sensitive and located in an Environmental Justice (EJ) community with 88 relocations involved. Worked with ODOT to re-write and improve their environmental document to meet the legal sufficiency for receiving approval of the first EIS/ROD in Ohio. Also conducted a Cost Estimate Review (CER) for the project to verify the accuracy and reasonableness of the total cost estimate to complete the project which addressed planning, environmental design costs, inflation factors, threats and opportunities. Worked with and reviewed ODOT's EJ tech memo outlining the mitigation measures to provide additional benefits beyond the proposed transportation improvements during project development.
04/13–06/14	**ODOT District 9, Portsmouth Bypass, Portsmouth, OH -** As the FHWA's contract administration and alternative contracting program manager, she reviewed and analyzed the Risk Matrix for this innovative delivery P3 (Design-Build-Finance-Operate-Maintain) project. This $634M, 16-mile, four-lane, limited access highway around the City of Portsmouth in South Central Ohio was the first of its kind in the state of Ohio.
09/13–06/14	**ODOT District 6 / John Glenn International Airport, Pickaway East West Connector, Columbus, OH –** FHWA Project Manager. The grant agreement development process required coordination within the FHWA, the recipient, and ODOT. Worked successfully with ODOT in finalizing the TIGER grant agreement for the construction of Duvall Road and right of way acquisition for Ashville Pike.
02/18–12/18	**FHWA NEPA Audit Team –** Member of the NEPA Audit review team assembled within the FHWA's Ohio Division that was tasked with conducting the FHWA's first audit of ODOT regarding their responsibilities and obligations assigned under a memorandum of understanding (MOU) signed on December 11, 2015.
03/09–09/10	**ODOT District 12, Central Viaduct, Cleveland, OH –** ODOT Project Manager for the $600M Central Viaduct rehabilitation project. In this capacity, she reviewed the study that resulted in the project and also reviewed the plans for moving truss span 1 of the central viaduct over the Cuyahoga River which was completed as an ODOT Type B Emergency. This work had to be completed before the onset of warm weather which would have introduced unacceptable thermal stresses in the truss members. A waiver for advertising was obtained from the FHWA with all other provisions for competitive bidding still being applicable.
03/06–08/07	**ODOT District 12, CUY-77-3.45 Bridge Replacement, Cleveland, OH -** ODOT Project Manager for this Design-Build project involving a least cost based Design-Build project scope. The project included special accommodations for a scenic bike path. Responsible for the D-B scope of services, preliminary cost estimate, evaluating the submissions, and coordinating with the stakeholders/utilities to address design team concerns.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**David E. Clevenger, PE**	Years of experience with this employer	20
Title	Vice President / Sr. Project Manager	Years of experience with other employer(s)	19
Degree(s) / Years / Specialization		B.S. / 1985 / Civil Engineering	
Active registration number / state / expiration date		#10944 / WV / 12-31-2024	
Year registered	1990	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		**Alternative Delivery Technical Services** Mr. Clevenger has over 39 years of engineering design experience, 19 of which was acquired while an employee of the WVDOH in progressively more responsible positions that saw him oversee the management of several billion dollar plus corridor programs. He has led the design of numerous roadway and bridge projects of varying scope and complexity including new bridge structures; bridge replacements, repairs and renovations; highway facilities on new alignment; reconstructed and rehabilitated highways and interchanges; urban roadway improvements; environmental studies; and roadway and bridge design studies. He has served as the Design Manager on three Design-Build/P3 projects, led the Quality Management Services involving a major Design-Build procurement for widening I-64 in WV to six lanes, and participated as a subconsultant on two other Design-Build projects with construction values over $100 million. As a result, he is very familiar with the various pre-procurement and procurement support services associated with Innovative Project Delivery methods.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
06/17-Present	**I-64 Six Lane Widening and Improvements, Quality Assurance Management Services (Design-Build), Putnam County, WV** – Principal-in-Charge for the Quality Assurance Management (QAM) services being provided on behalf of the West Virginia Division of Highways with respect to a planned widening of Interstate 64 from four to six lanes for approximately 3.8 miles. As the WVDOH's QAM consultant, TRC is responsible for performing all quality assurance duties normally performed by the State with regard to design review, construction inspection, environmental monitoring, and materials certification. He also led the completion of a number of pre-procurement activities including development of the Design-Build RFQ and RFP, development of various project criteria, development and review of project estimated costs, assistance with the development and review of all project amendments, review of proposer ATC's, participation in the Proposer One-on-One Meetings, and the review of each proposer's Technical Proposal.
07/15-03/20	**US Route 35: WV 869 to Mason CR 40 (Design-Build/Public-Private Partnership), Putnam and Mason Counties, WV –** Served as TRC's Project Manager for the design portion of this project which represented a new $196 million four-lane section of U.S. Route 35 that extends 14.6 miles (13.8 miles of actual construction) from WV 869 in Putnam County to north of County Route 40 in Mason County. As the D-B team's Lead Designer, TRC led the effort for the roadway alignment design, drainage design, hydraulic analysis, culvert design, bridge design and geotechnical design. In addition, TRC led the construction quality control and inspection for the project. This was the second P3 project to be undertaken in the State of West Virginia and the largest construction contract ever let by the state.
07/14-08/19	**Coalfields Expressway: Mullens to E CO 12/1 and Mullens Connector (Design-Build/Public-Private Partnership), Wyoming County, WV –** Served as the Project Manager responsible for the design of this $45 million Design-Build/P3 project which involved the design and construction of a 4-lane, fully-controlled access facility on new location for a total distance of nearly 3 miles. No pavement design or operations were included in the project. As the D-B team's Lead Designer for the project, TRC led the effort for the roadway alignment design, drainage design, hydraulic analysis, NPDES permitting, culvert design and overall management of the geotechnical design. In addition, TRC led the construction quality control and inspection for the project. This was the first P3 project undertaken in the State of West Virginia. Mr. Clevenger led the preparation of a preliminary design during the proposal stage that incorporated a number of efficiencies and innovations that helped the contractor develop a winning bid that was $18 million under the engineer's estimate while still achieving the requirements stipulated by the WVDOH for the project.

11/13-7/17	**Coalfields Expressway, East of CR 12/1to West Helen (Design-Build), Raleigh and Wyoming Counties, WV –** Project Manager for this $13.5 million Design-Build project that involved the grading and drainage (no pavement) for a new 1.6-mile section of the Coalfields Expressway in southern West Virginia. This section of the new expressway connects with existing highways in the area to provide safer, shorter commutes for motorists. TRC's responsibilities as Lead Designer for the Design-Build team included roadway drainage design, permitting, geotechnical analysis and report, construction inspection, construction engineering support and as-built plans. Mr. Clevenger worked closely with the contractor in studying several different roadway alignments during the bid process to minimize the excavation that would be required for construction and to balance the overall earthwork while still achieving the best workable alignment and profile for construction. Also spearheaded the development of an innovative technique in the large drainage areas that helped realize a major cost savings on the project.
07/02-09/06; 01/14-08/16	**I-64 Widening, Putnam County, WV –** Project Manager for the planning study, design and preparation of a design report, NEPA documentation and preliminary contract plans for widening Interstate 64 (I-64) to six lanes for approximately 3.8 miles. The project consisted of the modification of two (2) Interstate interchanges, widening of three (3) interstate overpass bridges, two (2) new interstate ramp bridges, a replacement of a County Route overpass bridge and a new bridge crossing of the Kanawha River. Interchange modification reports were prepared for the above two interchanges mentioned. In addition, during the Value Engineering Study phase of the project, a diverging diamond interchange layout was developed and evaluated as an additional option to the original study.
06/11-06/18	**Jefferson Road Study, Kanawha County, WV –** Project Manager for this planning study associated with needed improvements that would be required to Jefferson Road (WV Route 601) in order to relieve the current and anticipated future traffic congestion along this route which is highly travelled with an ADT of nearly 30,000 vehicles. The route connects US Route 119 to the South with US Route 60 and Interstate 64 to the North. Mr. Clevenger participated in the development of four (4) alignment alternatives that were studied. He evaluated all of the alternatives with respect to the required maintenance of traffic that would be needed during the construction of each alternative, as well as coordinated the traffic modeling that was performed for this project. The project also included the development of potential right of way takes for the properties involved with each alternative. In addition, Mr. Clevenger evaluated each alternative as to the potential construction phasing with respect to available funding of the project. A design report was developed for the project, which included the cost estimates for each alternative and a recommendation of the preferred alternative. The estimated cost of the preferred alternative is approximately $46 million.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**David Verno, PE**	Years of experience with this employer	26
Title	Sr. Project Manager / Senior Bridge Engineer	Years of experience with other employer(s)	5
Degree(s) / Years / Specialization		B.S. / 1993 / Civil Engineering	
Active registration number / state / expiration date		#13640 / WV / 12-31-2024	
Year registered	1998	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		**Alternate Delivery Technical Services** Mr. Verno has more than 31 years of bridge design and engineering experience involving complete bridge design, composite deck designs, and retaining structures. A 26-year veteran of TRC, he has worked on numerous bridge replacement and rehabilitation projects for a variety of bridge types including adjacent concrete box beams, prestressed concrete beams, steel I-beams, steel plate girders, and reinforced concrete box culverts. In addition to traditional Design-Build-Build, he has led the bridge design for several alternative delivery projects which has included his involvement in various pre-procurement activities.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
06/17-Present	**Quality Assurance Management (QAM) Services for the I-64 Six Lane Widening and Improvements Design-Build Project, Putnam County, WV –** $225 million Design-Build project involving the widening of Interstate 64 (I-64) from four to six lanes for approximately 3.8 miles. As Bridge Project Manager, Mr. Verno participated in a variety of pre-procurement activities that included developing the RFQ and RFP documents, attendance at planning meetings with the owner, and oversight of the necessary testing, preliminary analysis and design to help advance the project. The project's bridge structures consist of the widening/replacement of three Interstate overpass bridges, two new Interstate ramp bridges, replacement of a County Route overpass bridge, and replacement of the existing 1,400' long Kanawha River Bridge. Mr. Verno currently performs design reviews during construction and attends project meetings while coordinating closely with WVDOH staff.
07/15-03/20	**US Route 35: WV 869 to Mason CR 40 (Design-Build/Public-Private Partnership), Putnam and Mason Counties, WV –** Served as TRC's Bridge Project Manager for a new $196 million four-lane section of U.S. Route 35 that extends 14.6 miles (13.8 miles of actual construction) from WV 869 in Putnam County to north of County Route 40 in Mason County. This was the second P3 project to be undertaken in the State of West Virginia and the largest construction contract ever let by the state at the time. US 35 over CR 29 was a twin, two-span (170' – 210') steel plate girder bridge carrying US 35 over CR 29 and Little Sixteenmile Creek. Tasks included span arrangement determination, contouring substructure units and MSE wall layout. He coordinated with multiple design teams to oversee preliminary and final plan development, and worked closely with hydraulic engineers to relocate a portion of Little Sixteenmile Creek to avoid a conflict with the bridge piers. US 35 over CR 40 was a twin, curved, two-span (195' – 155') steel plate girder bridge carrying US 35 over CR 40 and Upper Ninemile Creek. Tasks included span arrangement determination, contouring substructure units and MSE wall layout. He coordinated with multiple design teams to oversee preliminary and final plan development, and worked closely with roadway engineers to relocate CR 40 in order to eliminate the potential for vehicular collision force to the bridge piers.
07/14-08/19	**Coalfields Expressway: Mullens to E CO 12/1 and Mullens Connector (Design-Build/Public-Private Partnership), Wyoming County, WV –** $45 million accelerated Design-Build/P3 project which involved the design and construction of a 4-lane, fully-controlled access facility on new location for a total distance of nearly 3 mile**s.** Bridge Project Manager responsible for preliminary design and project oversight for a 1,175', four-sided concrete box culvert with a 6.5' x 6.5' opening. The culvert was placed under 266' of fill and carries US Route 121. The culvert was designed using the induced trench method of construction using geofoam to reduce the design forces applied to the culvert itself. Mr. Verno worked closely with TRC geotechnical and hydraulic engineers and was the direct point of contact with the contractor regarding the culvert. He also participated in regular meetings and conference calls with the contractor and the WVDOH to help ensure completion of the culvert plans and ensure compliance with the project requirements and specifications.

03/22-Present	**West Virginia Department of Transportation – Division of Highways, WV 16-Mullens (Coalfields Expressway Pineville to Mullens Section), Wyoming County, WV -** Assistant Project Manager. Project involves the Study, Design and Preparation of Contract Plans for the Coalfields Expressway project from an access at Pineville to Mullens for a distance of 8.2 miles. TRC's design work also includes proposed accesses at Mullens, Twin Falls and Pineville which consist of an additional four miles of design work. In addition to his role as Asst. PM for the entire project length, Mr. Verno is responsible for the design of TS&L documents and Final Detail Bridge Plans for the Still Run Bridge (1,138', 4-span steel plate girder bridge, 260' +/- above the creek/valley floor) and the Marsh Fork Bridge (91.5', single span steel plate girder bridge). In addition to the bridges, he is also overseeing the design of five single-cell and one multi-cell precast concrete box culverts ranging in length from approximately 250' to 1,630' with fill heights varying from 41' to nearly 262'.
03/21-Present	**West Virginia Division of Highways, Coalfields Expressway PIE Study, Wyoming County, WV -** Bridge Project Manager. Project involved the completion of a Preliminary Investigation Engineering (PIE) Study for completing the remaining 47 miles of the Coalfield Expressway Corridor from Welch in Wyoming County to the WV/VA State Line in McDowell County. The project is currently in the second phase which involves alignment development, preliminary design, and environmental re-evaluation for a 15-mile section of the Corridor from the WV 16 Interchange at Indian Creek to Mullens. Mr. Verno managed the generation of span arrangement reports, including 30% plan sheets, for three twin structures designed by TRC which carry four lanes of mainline traffic (Guyandotte River bridge, Indian Creek bridge, and Still Run bridge). He also oversaw the design of two twin structures (Pinnacle Creek bridge and Mullens bridge) being completed by a subconsultant.
01/18-10/20	**West Virginia Division of Highways, I-70 Bridges Rehabilitation, Ohio County, WV -** Bridge Project Manager for TRC's role as a subconsultant responsible for the rehabilitation design of seven bridges (six in West Virginia and one in Ohio) that are part of a 26 bridge package of I-70 Bridge rehabilitations. Directed multiple in-house design teams for the work which consisted of the rehabilitation of all substructure units, one superstructure replacement, four deck replacements, joint replacements, use of link slabs, semi-integral abutment conversions, structural steel repairs and bridge load ratings. This project was on an accelerated schedule that required close coordination with the WVDOH, ODOT, various TRC offices and other design consultant team members. Upon award of the construction contract, Mr. Verno was responsible for answering contractor's requests for information (RFI's), construction submission reviews and shop drawing reviews.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**Janet Crouse, P.E.**	Years of experience with this employer	12
Title	Roadway Engineer	Years of experience with other employer(s)	7
Degree(s) / Years / Specialization		B.S. / 2003 / Civil Engineering	
Active registration number / state / expiration date		#PE.0040798 / LA / 9-30-2024	
Year registered	2016	Discipline	Civil Engineering **Other Pertinent Training / Certifications** ATSSA – Traffic Control Design Specialist ATSSA – Traffic Control Technician
Contract role(s) / brief description of responsibilities			**Roadway Design** Ms. Crouse's nearly 20 years of experience as a project engineer includes work on such projects as interstate highways, state and local roads, and site development parcels. Project tasks have included geometric design, drainage and site design, development of erosion control, signing and marking, and right of way plans.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
03/20-Present	**LA1/LA415 Connector, West Baton Rouge Parish, LA (DOTD) –** Roadway Design Engineer for the preliminary design of approximately 2.7 miles of new four-lane roadway and bridge(s) over the Gulf Intracoastal Waterway. Project includes the design of a full diamond interchange connection at LA 1 and the realignment of LA 1 in both directions to accommodate ramp configuration and future widening. Project also includes modifications of the I-10 ramps at LA 415, the realignment/extension of the I-10 Frontage Road and S. Westport Drive and the design of a backage road on new alignment.
11/14-Present	**SPN# H.001234, Port Allen Canal Bridge, LA 1, West Baton Rouge Parish, LA (DOTD)** – Roadway Design Engineer for the preliminary and final design of 2.26 miles of LA 1 over the Intracoastal Waterway. Project features 0.98 miles of new four lane roadway for LA 1 on new alignment including a separate exit ramp for I-10 EB traffic; coordination with design of new 2,700' twin bridges over the Intracoastal Waterway; reconstruction of an existing frontage road; and a railroad at-grade crossing for Ernest Wilson Road. Initial design featured 1.27 miles of "Super Street" improvements to LA 1 including the removal of eight median openings, four new signalized "J-Turns" and left-turn storage. Developed MOT plans required to maintain four lanes of traffic on LA 1 with connections to the I-10 ramps. Project also included involvement with drainage design, geometric details, striping, joint layout, sequence of construction, cross sections, and quantities.
08/15-01/21	**Walter O. Bigby Carriageway, Bossier City, LA** - Project Engineer for the design of North Parkway Extension roadway from North of Eatman Street to Benton Highway. Work included the design of two roundabouts at the intersections of Hamilton Road and Shed Road; the reconstruction of three side roads to tie into the new North Parkway Extension; the widening of Hamilton Road from South of US 80 to the new roundabout; and the addition of a left-turn lane and driveway reconfigurations along Benton Highway. Total project length was approximately 5300 feet of reconstructed city streets and 3600 feet of new four lane roadway, which included a 1,470-foot bridge structure. Tasks involved the geometric design of the new alignment and roundabouts, the development of plan and profile sheets, geometric detail sheets, joint layout sheets, cross sections, quantities, and assistance with the storm drainage design.
10/12-09/14	**SPN# H.011111, I-49 North – Preliminary & Final Bridge Plans, Caddo Parish, LA** – Project Designer for engineering and related services for the bridge design and rating for the I-49/I-220 interchange bridges, specifically directional ramps EN, SE and WN, and the widening of existing I-220 bridges. Areas of responsibility included the design and plan sheet preparation for median barrier and barrier rail layout, bridge deck drainage, and quantity sheets, and design coordination with roadway design team and other team members.
06/21-07/22	**City of Marble Falls, Avenue N Bridge at Backbone Creek, Marble Falls, TX -** Design Engineer for the preliminary and final design of Avenue N bridge approaches. Tasks included the geometric design of bridge approaches; walk paths connecting new sidewalk to existing crushed granite trails and a

	new cul-de-sac at Backbone Street; and the development of roadway plan and profile sheets, walk path plan and profile sheets, quantities, and cross-section sheets.
04/23 – 09/23	**Delaware County Engineers Office, DEL-CR98-01.58 Roundabout Design, Delaware County, OH –** Roadway engineer for the preliminary design and layout of a roundabout to replace an existing 4-way intersection located at Piatt Road and Peachblow Road. Challenges included constraints due to right of way and existing drainage features. Areas of involvement included horizontal and vertical layout of roundabout and associated design checks, storm sewer and ditch design and development of Stage 1 plans using MicroStation ORD.
06/14-10/14	**West Virginia Department of Transportation, I-64 Design Study, Saint Albans Interchange, Nitro, WV -** Responsible for providing engineering design during the preliminary layout for a diverging diamond interchange along I-64 at US 35 (St. Albans Interchange). The design included her review of the proposed traditional diamond interchange for US 35 and the layout of a diverging diamond interchange to improve traffic flow on ramps.
08/12-10/13	**Old Hammond Highway Improvements, Segment 2, Baton Rouge, LA (East Baton Rouge Parish)** – Project Designer during the design of reconstruction work along Old Hammond Highway as part of the City's Green Light Plan. Work consisted of the design for a new four-lane divided highway, intersection layout, roadway profiles, sub-surface drainage, sequence of construction drawings, and utility relocation including new 8" gravity sewer, a lift station and a force main. Task involvement included plan revisions and the development of drainage plans.
01/13-11/14	**SPN# 44-2184, Louisiana Department of Transportation, Retainer Contract for Bridge Preventative Maintenance - Statewide -** Responsible for providing engineering and related services under a retainer contract that involved the repair and/or preventative maintenance of bridge structures throughout the State of Louisiana. Task Order 1 involved bridges in East Baton Rouge, West Baton Rouge, East Feliciana and West Feliciana Parishes and included bridges on I-10, I-110, LA-1 and LA-67 crossing local roads and creeks. Areas of responsibility included preparing traffic control plans for several bridge sites as well as assisting in the preparation of general plan sheets, quantity sheets and other miscellaneous sheets.
10/08-05/11	**US 441/SR 15 Widening from Clayton County Limits to North Carolina State Line, Rabun County, GA (GDOT) -** Project Designer for the conceptual and preliminary design associated with widening over 7 miles of roadway between the northern city limits of Clayton to the North Carolina State line. The project included both urban and rural typical sections for widening to a four lane divided facility. Retaining walls were required to limit right-of-way impacts due to the steep terrain. Context sensitive design solutions were utilized to reduce the property and socio-economic impacts in the municipalities of Mountain City and Dillard. Tasks included on this project were geometric design, roadway drainage design, hydraulic design of major culverts, design of bicycle and pedestrian facilities, preparation of staged construction and maintenance of traffic plans and preparation of erosion and sediment control plans.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**William Travis Barr, PE**	Years of experience with this employer	.2
Title	Project Manager / Senior Project Engineer	Years of experience with other employer(s)	12
Degree(s) / Years / Specialization		B.S. / 2012 / Civil Engineering	
Active registration number / state / expiration date		#PE.0045675 / LA / 09-30-2025	
Year registered	2021	Discipline	Civil Engineering **Other Pertinent Training / Certifications** ATSSA - Traffic Control Supervisor ATSSA - Traffic Control Technician
Contract role(s) / brief description of responsibilities			**Roadway Design, Drainage and Construction Support** Mr. Barr has more than 12 years of experience and progressive responsibility in the fields of civil and roadway engineering consulting. His qualifications include extensive hands-on experience consisting of design, cost estimating and project management. He currently serves as a Project Manager and Roadway Engineer with responsibility for roadway geometrics, drainage design and project management involving quality, financial performance, and administrative operations.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
11/22-03/24	**Louisiana Department of Transportation and Drainage, LA 447 Safety Improvements, Livingston Parish, LA -** Served as responsible engineer-in-charge for the preliminary layout, design checks, calculations, and plan preparation for two (2) LA 447 highway roundabouts which included one multi-lane and one single-lane configuration. Mr. Barr additionally provided roadway design on adjoining roadway realignments.
03/21-11/22	**MOVEBR Transportation Program – Program Management, East Baton Rouge Parish, LA -** Responsible for the management of eight projects in the program. He assisted in the leadership of each project through oversight of cost estimation, budgeting and adherence to design standards, as well focused on the overall constructability/feasibility of each project. As a part of his project management tasks, he assisted with the identification of project goals, economic development benefits, and overall feasibility.
03/17-03/21	**Texas Department of Transportation – I-820 (SH-287 to I-20) Interchange Reconstruction (Southeast Connector Design-Build), Dallas, TX -** Responsible for the evaluation of interstate plans, establishment of retaining wall locations to facilitate a proper sequence of construction, identification of bridge limits, and development of retaining wall structural requirements. He additionally produced exhibits, provided QA/QC of deliverables, coordinated work with stakeholders, and presented findings to key stakeholders. Travis led weekly task force meetings with major stakeholders to present status, potential roadblocks, project timelines, design philosophies and approach.
03/17-06/20	**Washington Department of Transportation, SR 520 (I-5 to 84th Avenue) Interchange Reconstruction Design-Build, Seattle, WA -** In responsible charge for the evaluation of interstate plans, maintenance of traffic, and pier and wall locations to facilitate sequence of construction, alternative design analysis, production of exhibits, and QA/QC of deliverables. Additionally coordinated and presented his findings to key stakeholders.
11/22-03/24	**MOVEBR Transportation Program, Terrace Avenue, East Baton Rouge Parish, LA –** Sr. Engineer responsible for the project wide modeling, ADA design, Right of Way/ construction access, wall design and project wide drafting standards. Mr. Barr performed 1 mile of complex modeling within a confined urban corridor. Due to Right of Way restrictions, Mr. Barr designed multiple retaining walls. The project is a corridor improvements project tasked with widened the roadway and adding sidewalks while no impacting right of way in the area.
11/22-03/24	**MOVEBR Transportation Program, Lee Drive, East Baton Rouge Parish, LA –** Project Manager in responsible charge of quality control and assurance, geometric design, vertical design, site grading, suggested sequence of construction, scheduling, and construction cost development for a ¾ mile segment of the capacity improvement project. The project is a 2 mile roadway widening and drainage improvement project for a five-lane roadway.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**Mark Castay, P.E.**	Years of experience with this employer	9
Title	Bridge Engineer	Years of experience with other employer(s)	7
Degree(s) / Years / Specialization	M.S. / 2008 / Civil Engineering B.S. / 2006 / Civil Engineering		
Active registration number / state / expiration date	#PE.0039430 / LA / 9-30-2025		
Year registered: 2015	Discipline: Civil Engineering		
Contract role(s) / brief description of responsibilities	**Bridge Design, Bridge Inspection and Load Rating** Mr. Castay possesses 16 years of engineering experience that has been acquired while working on a wide array of projects ranging from structural and geotechnical design to detailed computer analysis and load rating. His responsibilities have included bridge design; preparation of reports, specifications, and construction plans; and bridge inspection and rating. He has performed load rating analysis using AASHTOWare BrR software for various bridge types and generated hand calculations for complex components including pin and hangers, gusset plates, and truss chord splices.		

Other Pertinent Training / Certifications
FHWA-NHI-130055 - "Safety Inspection of In-Service Bridges", 2016
FHWA / NHI - Bridge Inspection Refresher, 2020
FHWA / NHI – LRFD for Highway Bridge Substructures, 2017
LTRC/LADOTD-AASHTOWare Bridge Rating Fundamentals Training, 2017
FHWA / NHI – NEPA and Transportation Decision Making, 2009
LTRC / LADOTD-AASHTOWare Bridge Rating Fundamentals Training, 2017
ATSSA / LADOTD-Traffic Control Supervisor, 2020

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
8/23-2/24	**Contract No. P028743, Woodruff Road Parallel Bridge over I-85, Greenville, SC (SCDOT) –** Bridge design engineer assigned to assist with the design of a 2-span continuous 256' integral abutment bridge. His responsibilities included design of the deck, bearings, wingwalls, mash barriers, substructure components and approach slabs. He also performed QC of the plan set and quantities.
6/21-Present	**S.P. No. 44-17264; H.011965.5, LA 47 over IWGO, Bridge Rehabilitation, New Orleans, LA (DOTD) –** Team leader during the performance of a bridge inspection for the rehabilitation design of this 6,620' tied arch/deck truss bridge included in the state historic bridge management plan. He led the superstructure and deck inspections. As a Bridge Engineer, his responsibilities included design and plan generation for the rehabilitation of various bridge components, including CFRP strengthening of prestressed girders and columns, deck joints, spalls and fractures on superstructure and substructure components, ancillary steel and aluminum frames, bearing replacement, and structure jacking schemes.
02/21	**Contract No. H.013321, Complex Bridge Inspections, Statewide, LA (DOTD) –** Bridge Inspector assigned to inspect the box girders, cable anchors, and towers of the I-310 over Mississippi River bridge (cable stayed bridge).
12/19-12/20	**Contract No. 4400004920 (H.012485.1), Complex Off-system Bridge Rating and Evaluation, Statewide, LA (DOTD) –** Bridge Inspector and load rating engineer for the site assessments and load ratings of 345 off-system concrete slab span (COPCSS, COSLAB) bridges supported on concrete caps and concrete or timber piles. He used AASHTOWare BrR and LRFR to perform the load ratings. He also provided repair recommendations for bridges with 3 ton or closure ratings.

01/19-05/19	**City of Bossier, Walter O. Bigby Carriageway Bridge, Bossier, LA -** Bridge Engineer responsible for the design of end bents, deck and approach slabs, steel girder cross frames, along with the rating of prestressed girders.
03/18-04/18	**Contract No. 4400010099 (H.009859.5), Complex Off-system Bridge Rating and Evaluation, Statewide, LA (DOTD) –** Bridge Inspector and load rating engineer for the site assessment and load rating of an off-system truss bridge over the Tensas River. He led the assessment of the superstructure elements, operated a platform snooper truck and developed the load rating for the bridge using AASHTOWare BrR.
09/17-02/18	**Mississippi Department of Transportation, State Aid Bridge Inspection and Load Rating IDIQ Master Contract -** Bridge Inspector and load rating engineer for 160 concrete and timber off-system bridges. Performed routine inspections and load ratings in accordance with the National Bridge Inspection Standards (NBIS) and AASHTO MBE on selected bridges located statewide. He used AASHTOWare BrR and LRFR to perform the load ratings. He also provided repair recommendations for bridges with 3 ton or closure ratings.
04/16-06/19	**Contract No. 4400004920 (H.009859.5) On-system Complex Load Rating, Statewide, LA (DOTD) –** Bridge load rating engineer and Inspector responsible for site visits, assessments and load rating of complex truss and movable bridges under this retainer contract. For the Bayou Teche bridge (swing span) he performed the bridge inspection and documented deficiencies to be used in the load rating analysis. For the LA 27 over ICWW (vertical lift/truss) bridge he inspected the lift span and truss, rated pile cap bents and performed QC on gusset plates, truss models/chord splices, and PCC and steel girder analyses. For LA319 over ICWW (double leaf bascule) he performed rating analysis on PCC girder spans and hammerhead bent caps using strut and tie in addition to QC of the remainder of the bridge components. For the LA 654 over Bayou Lafourche (vertical lift) he performed QC on the bridge rating calculations and analysis models. For LA657 over Bayou Lafourche (vertical lift) he performed rating analysis on the slab spans and main span girders, floor beam and stingers. For the LA 83 Bridge over Patout Bayou (swing span) and St. Anne Bridge over Terrebonne Bayou (swing span), he performed QC on the bridge rating calculations and analysis models. For LA 47 over IWGO (tied arch truss) he performed load rating analysis for the pin and hangers, link plates and chord splices, as well as completed rating analyses for the pile supported reinforced concrete caps. He also calculated the truss panel point dead loads for inclusion in the AASHTOWare BrR model. For LA 1 over Atchafalaya (cantilevered Warren through truss) he performed the bridge inspection and load ratings for pin and hangers and an analysis for the truss gusset plates in BrR. For the US 90B Riverbound Expressway (riveted plate girder and deck truss) bridge he performed the bridge inspection and documented deficiencies to be used in the load rating analysis. He performed a load rating analysis of the girders, floor beams, stringers, gusset plates and truss members.
03/16-09/16; 06/18	**Contract No. 4400005960 (H.009730.5), In-depth Bridge Inspection of Complex Structures, Statewide, LA (DOTD) –** Bridge Inspector for cantilevered truss bridges on I-10 over Lake Calcasieu and the Mississippi River, along with the US 90 Danziger Bridge (vertical lift). Involved in-depth inspection of the bridge superstructure and substructure, element level conditions/quantities, and composing the final report.
07/17-12/17	**S.P. No.: H.004266 (700-24-0031), Route US190 Rehabilitation over Mississippi River, East and West Baton Rouge Parishes, LA (DOTD) -** Performed calculations and assisted in the development of schemes for general structural rehabilitation of items including bearings and connections angles
05/09-08/10	**S.P. No.: 713-42-0143, Georgie Ridge Bridge, Richland Parish, LA (DOTD) –** Assisted in the design of a 7-span pre-stressed girder superstructure and pile supported substructure. He also compiled quantities for the bridge in addition to calculations for geometrics. Mr. Castay was tasked with executing a detailed lateral pile analysis which incorporated the soil/pile interaction to justify a pile size reduction. This analysis was able to verify that a pile size reduction on the bridge would reduce construction costs considerably. A comprehensive report was generated to substantiate results created in the model.
07/08-12/10	**S.P. No.: 455-09-0003, I-49 North Extension: LA 169 to LA 530, Caddo Parish, LA (DOTD) –** The bridges consisted of 12-102 ft. AASHTO Type IV girder spans supported by column bents and drilled shaft foundations spanning Twelve Mile Bayou. Mr. Castay's responsibilities included calculating vertical and horizontal alignments; design of the structural deck, pre-stressed girders, caps and column bents; and quantity calculations and cost estimates.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**Dong Wang, Ph.D., S.E., P.E.**	Years of experience with this employer	9.5
Title	Civil/Structural Engineer	Years of experience with other employer(s)	0
Degree(s) / Years / Specialization	Ph.D. / 2014 / Civil Engineering M.S. / 2009 / Structural Engineering B.S. / 2007 / Engineering Mechanics		
Active registration number / state / expiration date	#PE.0042845 / LA / 03-31-2025		
Year registered	2018 (PE of LA) 2020 (SE of LA)	Discipline	Civil/Structural Engineering **Other Pertinent Training / Certifications** FHWA-NHI-130092-Fundamentals of LRFR for Bridge Superstructures, 2015 LADOTD AASHTOWare Bridge Rating Fundamentals Training FHWA-NHI-130081-LRFD for Highway Bridge Superstructures, 2022 FHWA-NHI-130126-Strut-and-Tie Modeling (STM) for Concrete Structures, 2022 FHWA-NHI-134001-Principles and Applications of Highway Construction Specifications, 2023 FHWA-NHI-130102-Engineering for Structural Stability in Bridge Construction, 2024
Contract role(s) / brief description of responsibilities	**Bridge Design & Analysis and Load Rating** Dr. Wang possesses seven years of experience in the field of structural engineering with a particular emphasis on steel bridge rehabilitation and load rating of both simple and complex bridge structures using AASHTO BrR software.		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
11/22-12/22; 04/24-05/24	**ODOT, PID 116592/TRC 491195 – Statewide Load Rating, OH –** Load rater for the performance of LRFR and LFR ratings of steel beam and plate girder bridges. Completed the rating of a bridge with multiple doglegs on a curved alignment with variable flares rated in midas Civil and pegged to a BrR line girder. QC check the load ratings performed by AASHTOWare BrR.
04/23-08/23	**TIDD Bridge Load Rating, Brilliant, OH (Private Client)** – TRC was assigned the deck replacement design and load rating for a 7-span, 400' long bridge. Dr. Wang developed the 3D FEA modeling of the bridge using midas Civil. The superstructure (the main girders, floorbeams, stringers) and substructure (the columns) were both included.
03/23-08/23	**Bridge Load Rating, US DOE** – Performed load rating using AASHTO BrR and midas Civil on six bridges of different types. Members that were rated consisted of the steel beams, grid deck, voided concrete box beams, and arch culvert.
05/23-06/23	**Timber Bridge Load Rating, Cameron Parish, LA (Private Client)** – Performed load rating on the super/substructure of two timber bridges using AASHTOWare BrR and midasCivil.
06/22-09/22	**ODOT, HAS-151-04.85 – SR 151 over the Columbus & Ohio River Railroad, Harrison County, OH** – The project involved replacement of a curved six-span bridge over the CUOH Railroad. The bridge was curved and highly skewed to the railroad. An integral straddle bent and a refined analysis were required. Dr. Wang assisted with the midas Civil modeling of the bridge which encompassed both the superstructure and straddle bent.
06/21-12/21	**Contract No. 4400020156 (H.011965.5), LA 47 IWGO Bridge Rehabilitation, New Orleans, LA (DOTD) -** Bridge engineer responsible for an inspection of the bridge and rehabilitation design for the steel plate girder spans. Generated plan sheets for the rehabilitation of various bridge components of the steel plate girder spans, including concrete barrier, drainage trough, stiffener, cross-frame, lateral bracing, and girder splice.
10/21	**Elevated Pedestrian Walkway Load Rating, US DOE** – Performed load rating using AASHTOWare BrR for the superstructure (main girders and transverse supporting beam) and substructure (steel column) members.

02/21-04/21	**Broadmore Bridge Inspection and Special Haul Load Rating, Lake Arthur, LA (Private Client)** – Load rating engineer responsible for the load rating of a concrete slab off-system bridge for special hauling vehicles. He used AASHTO BrR for the concrete superstructure, load rated the timber piles and concrete caps, and issued posting recommendations.
02/20-12/20	**Contract No. H.012485.1, Load Rating of 426 Off-System Bridges, Statewide, LA (LADOTD) –** Load rating engineer responsible for the load rating of **346 off-system bridges** (COSLAB, COPCSS, concrete and steel girders). He performed the LRFR load rating analyses using AASHTOWare BrR and other software for the superstructures and substructures (timber and concrete piles). He developed influence lines and models for the cap and pile elements. He performed the quality control for the load rating calculations and analysis models rated by fellow engineers.
07/18-10/20	**Walter O. Bigby Carriageway Bridge – Bossier City, LA (City of Bossier City)** – Load rating engineer for the load ratings of steel girder spans and prepared the load rating report. Checked the load rating of one pile bent. As served as a Bridge engineer responsible for designing and detailing the bridge deck overhang, bearing pads, pile bents and abutments. Checked the modeling and design of steel girder spans. Performed stability analysis of steel girder spans. Prepared quantities and design calculation books.
06/16-08/19	**Contract No. 4400004920 (H.009859.5), Complex Load Rating and Inspection, Statewide, LA (DOTD)** – Load rating engineer responsible for completing the complex load rating of truss and movable bridge superstructure elements of the LA 47 IWGO Bridge (tied arch/deck truss), LA1 over Atchafalaya River Bridge (truss), LA 27 over ICWW Bridge (vertical lift), LA 654 Bayou Lafourche Bridge (vertical lift), LA 83 Patout Bayou Bridge (swing), LA 319 Intracoastal Bridge (bascule), St. Ann Bridge over Bayou Terrebonne (swing) and US 90 Riverbound Expressway Bridge (deck truss/plate girder). Work was completed using the load rating provisions in the current AASHTO Manual for Bridge Evaluation and the DOTD Policies and Guidelines for Bridge Rating and Evaluation. Developed the AASHTOWare BrR load rating, MIDAS/Civil modeling, and Excel/MathCAD data processing. Wrote portions of the load rating reports.
07/19	**BEL-70-2684C Bridge Load Rating, Ohio Department of Transportation, Statewide, OH** – Load rating engineer responsible for load rating of the BEL-70-2684C bridge. He used AASHTO BrR for the superstructures and provided posting recommendations
05/19-06/19	**Off-system Bridge Load Rating, South Carolina Department of Transportation, Statewide, SC** – Load rating engineer responsible for the load rating of **several off-system bridges** in South Carolina. He used AASHTO BrR and LRFR for the concrete superstructures, load rated the substructure elements, and issued posting recommendations.
10/17-02/18	**Mississippi Department of Transportation, Office of State Aid, Bridge Inspection and Off-system Load Rating Contract** – Load rating engineer for load rating the concrete and timber superstructure elements and substructure elements of off-system bridges in accordance with AASHTO MBE. He used AASHTOWare BrR for the analysis of the superstructure elements.
07/15-03/16	**Contract No. 4400002791, (H.009859.5), LA 1 Port Allen Canal Bridge, West Baton Rouge Parish, LA (DOTD) –** Bridge engineer responsible for preliminary design of steel girder spans, PCC girder spans, and column bents. Performed quantity calculations, CAD drawings for GP&E sheets, typical sections, framing plan and foundation plan. Performed the QC for vertical clearance calculations.
05/15-11/15	**Contract No. 4400002791 (H.003495 & H.011111), I-49 & I-220 Interchange, Caddo Parish, LA (DOTD)** – Load rating engineer responsible for developing and performing the AASHTOWare BrR load rating for the I-49 over MLK Bridge, including writing of the load rating report.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**Christopher Hay, P.E.**	Years of experience with this employer	8
Title	Sr. Bridge Engineer	Years of experience with other employer(s)	9
Degree(s) / Years / Specialization		B.S. / 2007 / Civil Engineering	
Active registration number / state / expiration date		#PE.0043025 / LA / 03-31-2026	
Year registered	2018	Discipline	Civil Engineering **Other Pertinent Training / Certifications** FHWA / NHI #130055 - Safety Inspection of In-Service Bridges, 2016 FHWA / NHI #130053 – Bridge Inspection Refresher Training, 2021 FHWA/NHI #130078 – Fracture Critical Inspection Techniques for Steel Bridges, 2014 FHWA / NHI #130092 – LRFR for Bridge Superstructures, 2019
Contract role(s) / brief description of responsibilities			**Bridge Analysis, Bridge Design, Bridge Inspection and Load Rating** Mr. Hay possesses 17 years of structural design experience, with the last 12 in various aspects of bridge engineering including preliminary and detailed bridge design, plan preparation and development, project management, quality control, field inspection and reporting, cost estimates and bridge inspection. He has been involved in the design of a variety of bridge projects, including concrete slabs, pre-stressed concrete I-beams and rolled steel beam bridges. He also offers expertise with integral, semi-integral and stub abutments; T-type and cap-and-column piers; soldier pile, cast-in-place and MSE retaining walls, and such foundation types as multi-row piles, drilled shafts and spread footings.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
11/22-Present	**ODOT PID 116592/TRC 491195, Statewide Load Rating, OH –** Load rater performing LRFR and LFR ratings of steel beam and plate girder bridges. Was responsible for training, checking and QA of numerous steel beam and concrete slab bridges. Completed the rating of a bridge with multiple doglegs on a curved alignment with variable flares rated in BrR using line girders calibrated for live load distribution factors calculated in Midas Civil.
03/19-11/23	**Ohio Department of Transportation, District 2, LUC-120-11.32 Bridge Replacement, Toledo, OH -** Lead structural engineer for this bridge replacement project over the Ottawa River and adjacent to Toledo Metroparks Wildwood Preserve. This project included replacement of a two-barrel concrete arch with a three-span prestressed concrete I-beam bridge supporting five lanes of traffic (two through lanes in each direction and a center turn lane) along with a 5-foot sidewalk and 10-foot multi-use path. Currently authorized for Stage 3 Plans. Mr. Hay has been responsible for all structural design elements, including the Structure Type Study and detail design (including superstructure, substructure and foundation design), as well as directing the plan development for all components.
11/19-12/20	**Contract No. H.012485.1 Off-system Load Rating, Statewide, LA (DOTD)** – Bridge inspector responsible for the site assessments for 50 off-system bridges (COPCSS and COSLAB with concrete or timber piles). He documented current conditions and geometric data for the load ratings. Served as the load rating engineer for off-system bridges which included the performance of load rating analysis of the superstructures and substructures (timber and concrete piles) using AASHTOWare BrR, LRFR, and STAAD.
12/18-01/19	**West Virginia Department of Highways and Ohio Department of Transportation, I-70 Bridges Design/Rehabilitation Inspections, Ohio County, WV and Belmont County, Ohio –** Inspection team leader for the expedited inspection/evaluation of 7 bridges (steel girders). Responsible for identification and documentation of deficiencies to be included in the rehabilitation of assigned structures.
11/18-12/18	**West Virginia Department of Highways, District 9, Kanawha Falls Emergency Inspection, Fayette County, WV -** Kanawha Falls Bridge is a 90-year-old, three-span, riveted through truss over the Kanawha River. Team leader tasked with performing an emergency inspection of the floor beam to

	lower chord connections for the entire floor system to verify their condition and advise if additional emergency repairs were required. Led an inspection of the truss lower chords and stringers looking for critical findings that might require immediate repairs or preclude the bridge from reopening.
09/18; 01/19	**Ohio Department of Transportation, District 8, HAM-50-2180N Inspection, Hamilton County, OH -** Team leader for the District 8 bridge inspection task order to include fracture critical element level inspections of steel truss bridges, deck arches with plate girder approach spans, and substructure elements.
09/18-10/18	**Ohio Department of Transportation, District 2, LUC-280 VGCS Inspection, Toledo, OH –** Team leader for the routine and element level inspections of this cable stayed and concrete segmental box girder bridge consisting of a series of nine bridges, including ramps, carrying I-280 over the Maumee River. He performed QA/QC checks of the inspection reports.
09/18	**Ohio Department of Transportation, District 8, HAM-50-0376L Inspection, Hamilton County, OH -** Team leader for the District 8 bridge inspection task order to include the fracture critical element level inspections of steel through truss bridges.
06/18-10/19	**West Virginia Department of Highways, I-70 Bridges Rehabilitation, Ohio County, WV and Bridgeport, OH -** Bridge Design Engineer during the replacement or rehabilitation of several bridges. For the 7-span BEL-70-26.84 bridge (620 feet) the entire superstructure, including concrete deck, concrete barrier parapets, steel beams, expansions joints and bearings and rear abutment backwall, were replaced. The new bridge was constructed without a center joint allowing a single median concrete barrier to be used for safety. The rear abutment was rehabilitated with a new backwall and a new full width approach slab. New PTFE elastomeric bearings will be used to limit loading additions. He also assisted with rehabilitation design efforts at three (3) other bridge sites by providing plan and calculation checking involving rehabilitation work that included substructure patching, conversion to semi-integral, new elastomeric bearings and elimination of deck joints. All substructures had to be analyzed for the changes in loading due to joint eliminations, increase loading and bearing type changes.
09/17 and 01/19	**VAR-D08 Fracture Critical Bridge Inspections No. 2017-2, Fort Ancient and Oregonia, OH** - Participated in the Routine Element Level inspection of truss bridges and post-tensioned bridges in ODOT District 8. Inspected the abutments, piers, floor beams and all lower chords, as well as participated in the review of bridge inspection reports.
09/17 and 12/17	**Ohio Department of Transportation, District 8, WAR-71-1514L/R Inspection, Warren County, OH –** Team leader for the routine and element level inspection of the Post Tensioned, CIP Segmental boxes on the Jeremiah Morrow Bridge and substructure elements.
07/17	**West Virginia Department of Transportation - Division of Highways, 5th Street Bridge, Wood County, WV –** Bridge inspector for the performance of an In-Depth inspection of this bridge that consists of a 350' simple span riveted Warren Through Truss and 13 steel wide flange beam spans. The bridge is supported by reinforced concrete abutments and piers, along with steel bents on concrete pedestals.
03/15-04/16	**South Carolina Department of Transportation, Interchange Rehabilitation, I-85/I-385 Design-Build, Greenville, SC -** Structural Engineer on this unique Design-Build project that included a road widening, interstate rehabilitation and intersection improvements. The project was developed using Design-Build to reduce construction time and provide for better management of cost, reduce environmental impacts and shorten travel delays for motorists.
02/11-10/11	**Ohio Department of Transportation, District 6, I-670/71 Interchange, FRA-71-17.16/FRA-670-4.19, Franklin County, OH -** Bridge Engineer on this $200 million Design-Build project which involved improvement of the safety and operational efficiency of the I-670/71 Interchange. Goals included providing a multi-modal solution for the interchange and surrounding streets, access points, pedestrian facilities, and aesthetic enhancement to support the City of Columbus' complete streets philosophy. The RFC (Released for Construction) plans were completed in a nine (9) month period for all of the drainage and SWPPP design, seven bridges (which included a 1000' long flyover structure), and 26 retaining walls (MSE, CIP, and T-Type).

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**Curtis Wood, Ph.D., P.E.**	Years of experience with this employer	3
Title	Civil/Structural Engineer	Years of experience with other employer(s)	20
Degree(s) / Years / Specialization	Ph.D. / 2018 / Structural Engineering M.S. / 2006 / Structural Engineering B.S. / 2000 / Engineering Mechanics		
Active registration number / state / expiration date	#PE.0046293 / LA / 03-31-2024		
Year registered	2021	Discipline	Civil/Structural Engineering **Other Pertinent Training / Certifications** NHI-130056 - Safety Inspection of In-Service Bridges for Professional Engineers
Contract role(s) / brief description of responsibilities	**Bridge Design & Analysis** Dr. Wood has extensive experience in structural engineering, primarily in roadway structures, and has been involved with the design and review of bridge projects ranging from deck replacement projects, highly skewed and curved steel plate girder projects requiring Finite Element Modeling (FEM), post-tensioned segmental girders, and accelerated bridge construction projects using transversely post tensioned prestressed box-beams with an integral wearing surface. Over the course of his career, he has participated on or managed the design efforts for multiple design-build projects, several of which were in the hundreds of millions in construction value.		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
11/21-Present	**Ohio DOT District 11, HAS-151-485, Harrison County, OH -** Project Manager for this design-build project involving the replacement of a curved six-span bridge over the CUOH Railroad. The bridge was highly skewed to the RR and required an integral straddle bent and a refined analysis. Multiple foundation types were designed due to variable rock depths and skewed slopes. The proposed design saved 25% compared to the second-place bid by recognizing the risks associated with poor geotechnical material.
03/20-03/24	**West Virginia DOH, I-64 Nitro Design-Build QAM, West Virginia -** This $225 million I-64 improvement project completed using Design-Build served to widens the interstate from four to six lanes for 3.8 miles between the US 35 and Nitro Interchanges. Dr. Wood served as Project Manager for the Quality Management Services which included the provision of design reviews during the entire construction period.
11/22-Present	**ODOT, PID 116592, Statewide Load Rating, OH –** Assigned as a Load Rater responsible for performing LRFR and LFR ratings of steel beam and plate girder bridges with multiple doglegs on a curved alignment with variable flares pegged to a BrR line girder.
3/22-Present	**Cardinal Operating Company, Bridge Inspections –** Reviewer for the FEA load rating of this 7-span, 400-foot-long bridge. The structure is privately owned and consists of two riveted, haunched, hinged plate girders framed into steel piers along with transverse floor beams and stringers.
08/20	**ODOT District 12, CUY-2-14.41 (Main Ave.), Cleveland, OH -** Team leader for the NBIS inspection of this fracture critical bridge.
07/19	**ODOT District 12, CUY-10-15.94 (Lorain Road over Columbus Road), Cleveland, OH -** Team leader for an NBIS inspection of the CUY-10-15.94 bridge in Cleveland.
11/21-12/21	**Contract No. H.013321 - Complex Bridge Inspections, Statewide -** Team leader for the routine and element level inspections of I-10 over the Calcasieu River bridge (6,607-foot-long steel cantilever through truss and deck truss). Led inspections of the deck, superstructure (steel plate girders and rolled girders with pin and hangers), floor system (steel floor beams and stringers), and steel tower bents using an Aspen A-62 snooper. Coordinated with aerial access teams, two other engineering firms' teams, and the traffic control team. Developed element level quantities and condition states.

10/19	**Greater Columbus Convention Center, High-Third Connector Bridge Inspection, Ohio -** Project manager and inspection team leader for the high-third connector bridges, including fracture critical inspections of steel pier caps.
01/14-07/17	**Ohio Department of Transportation, District 7, MOT-75-1044/1078, Montgomery County, OH -** Lead Bridge Engineer for deck replacement and girder hinge removal on two 940' long structures over the Great Miami River. The existing girders included kink points, hinges, and additional girders that were framed in midspan. Both structures were modeled using finite element analysis (FEA) to verify more traditional beam line analysis techniques which allowed the submitted bridge rating files to the owner to be simplified.
02/17-01/18	**Ohio Department of Transportation, CUY-77-1409, Broadway Ave over I.R. 77, Cuyahoga County, OH -** Lead Bridge Engineer. As part of the CCG6B Cleveland innerbelt project, the design-build team was tasked with replacing the heavily skewed Broadway Ave. structure that spanned I.R. 77. Though the mandated two spans of the bridge extended well beyond the typical limits of concrete girders, Dr. Wood developed the unique solution of utilizing spliced, precast, post-tensioned concrete I-girders due to their efficient resistance to adverse skew effects. This proved to be a very cost-effective solution.
03/18-11/18	**Ohio Department of Transportation, CUY-490/10-2.09/19.28, Opportunity Corridor 3, Ohio -** The OC3 $150 million design-build project completed approximately 2 miles of new boulevard from I-490 to E. 89th Street and includes 6 new bridges, 12 retaining walls, 7 new intersections and numerous improvements to the drainage and combined sewer system. Dr. Wood was the lead design engineer for developing novel top-down abutment construction techniques for several bridges.
01/20-12/20	**CSX (Create P3/GS19), CSX Blue Island Subdivision, Chicago, IL -** Dr. Wood was the Bridge Lead Engineer for the main span over 69th Street. The bridge consists of 56" web plate girders spanning 70 ft with four stringers per track and designed to support a four-track system. The substructure consists of highwall abutments with wingwalls supported on drilled shafts. Construction staging was a significant aspect of the design. The overall project will involve constructing a bridge that significantly reduces conflicts between CSX and BRC, Metra and NS (P3). The project also includes constructing a road-rail grade separation with 71st Street and the CSX freight line (GS19) including associated signals, tracks, crossovers, and bridge work.
01/14-12/15	**Texas Department of Transportation, I-345, Dallas, TX -** The IH-345 Bridge is a 1.6-mile long elevated expressway connecting I-30 and I-45 on the south with Texas Route 366 on the North in Dallas, Texas. The fracture-critical two-girder structure consists of over 60 independent bridge units. Completed in 1971, the structure has exhibited distortion-induced fatigue cracking at the floor beam-to-girder connections. The IH-345 Critical Analysis Project involves condition assessment, structural analysis, and retrofit design development to address the ongoing crack problem. Dr. Wood served as project manager.
06/13-08/13	**Ohio Department of Transportation - District 1, ALL-75-703, Allen County, OH -** Dr. Wood developed a 3-D FE model to design a unique substructure supported on drilled shafts as part of a VE submitted to ODOT. He worked closely with the geotechnical engineer to reduce foundation costs while maintaining a robust design.
01/11-12/11	**Ohio Department of Transportation, SHE-29-1539 – Shelby County, OH -** Dr. Wood was involved in the forensic investigation of a complex steel plate girder that buckled during construction. As part of the investigation, Dr. Wood developed a 3-D FE model of the structure based on survey data taken after the girder failure.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**Nichole Caiazzo, P.E.**	Years of experience with this employer	9
Title	Bridge Engineer	Years of experience with other employer(s)	7
Degree(s) / Years / Specialization		B.S., 2008, Civil Engineering	
Active registration number / state / expiration date		#PE.0041078 / LA / 03-31-2025	
Year registered	2016	Discipline	Civil Engineering **Other Pertinent Training / Certifications** FHWA-NHI-130092 - Fundamentals of LRFR for Bridge, 2016 FHWA-NHI-132082 - LRFD for Highway Bridge Substructures, 2018 FHWA-NHI-132010B - LRFD for Foundation Design, 2018
Contract role(s) / brief description of responsibilities			**Load Rating and Bridge Design** Ms. Caiazzo has over 18 years of experience in the discipline of bridge engineering which has been focused on the inspection, design and review processes associated with bridge maintenance and repair, as well as the load rating of existing and rehabilitated bridges. She has load rated movable and complex truss bridges using AASHTOWare BrR in accordance with the AASHTO Manual for Bridge Evaluation (MBE) using the Load Resistance Factor Rating (LRFR) method, and is familiar with DOTD Policies and Guidelines for Bridge Rating and Evaluation.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
05/23-Present	**Ohio Department of Transportation, Statewide Load Rating -** Performing checks and load rating of reinforced concrete slab bridges using AASHTOWare BrR software.
11/19-12/20	**Contract No. 4400004920 (H.012485.1), Complex Off-system Bridge Rating and Evaluation, Statewide, LA (DOTD) –** Load rating engineer responsible for inspection and load rating of 346 off-system bridges (COSLAB, COPCSS). She performed load rating analysis using LRFR with AASHTOWare BrR for the superstructures and substructures (timber and concrete piles). She provided repair recommendations for bridges with 3 ton or closure ratings.
05/19-12/21	**South Carolina Department of Transportation, Bridge Load Rating and Evaluation Services – District 4, SC -** Engineer-of-Record, load rater and reviewer responsible for reviewing as-built plans, recent inspection reports and completing load capacity ratings and related tasks for 60 on- and off-system bridges consisting of steel plate girder, prestressed cored slab, reinforced concrete flat slab and reinforced concrete precast panel superstructures. Load rating was performed using AASHTOWare BrR in accordance with the SCDOT Load Rating Guidance Document and AASHTO Manual for Bridge Evaluation (MBE) using the Load Resistance Factor Rating (LRFR) and Load Factor Rating (LFR) methods. Led the load rating QA process.
09/21-11/21	**City of Bossier City, Walter O. Bigby Carriageway – Bossier City, LA -** Bridge Engineer responsible for the review of shop drawings for a steel girder superstructure included in the design. The structure encompassed a new 1,550-foot, 10-span bridge consisting of a horizontally curved, haunched 4-span steel plate I-girder main span continuous unit over the Union Pacific Railroad and prestressed concrete bulb tee approach spans.
08/18-09/19	**I-70 Bridges Rehabilitation, Ohio County, WV and Belmont County, OH -** Project involved the rehabilitation/replacement of 26 bridges along I-70 Bridge using cursory inspection information, discussions with the WVDOH and analysis to establish rehabilitation efforts in accordance with WVDOH/ODOT manuals and standards. Performed design and analysis in accordance with AASHTO LFD Standard Specifications for analysis of existing bridges and LRFD for new bridges and repairs of existing bridges. Tasks for this project included: I-70 (EB & WB) over Wheeling Creek: Responsible for using RC-Pier for the substructure analysis of two (2) bridges consisting of a 7-span steel plate girder superstructure supported by reinforced concrete abutments with steel piles, multi-column piers on spread footings with steel piles, multi-column piers on caissons and spread footings with concrete piles and multi-column piers with a crash wall on spread footings. Bearings were replaced at all expansion piers and the cap was built-up at the overhang to

	resolve existing shear issues. Current and proposed thermal loads were modeled to compare cap, column and footing deficiencies. I-70 (EB & WB) over Wheeling Creek: Bridge engineer responsible for using RC-Pier for the abutment analysis and checking the pier analysis of these two (2) bridges consisting of a 3-span steel plate girder superstructure supported by reinforced concrete abutments with steel piles and wall piers with spread footings. I-70 over Wheeling Creek (BEL-70): Bridge engineer responsible for using RC-Pier for the pier analysis of this bridge consisting of a 7-span steel beam superstructure supported by multi-column piers with some caissons (wider columns) on spread footings with steel piles. The superstructure changed from 13 to 10 beams and the bearings were replaced.
04/19-12/20	**South Carolina Department of Transportation, SCDOT Bridge Inspection and Evaluation Services** – Engineer-of-Record and load rater responsible for reviewing as-built plans, recent inspection reports and completing load capacity ratings and related tasks for 10 on- and off-system bridges consisting of prestressed concrete beam, reinforced concrete tee beam and steel plate girder superstructures. Load rating was performed using AASHTOWare BrR in accordance with the SCDOT Load Rating Guidance Document and AASHTO Manual for Bridge Evaluation (MBE) using the Load Resistance Factor Rating (LRFR) and Load Factor Rating (LFR) methods.
05/18-07/18	**West Virginia Department of Transportation-Division of Highways, Henrietta Bridge Renovations, Calhoun County, WV** - Bridge engineer responsible for reviewing the load rating of the 3-span superstructure replacement consisting of continuous steel beams superstructure on repaired substructure. Load rating was performed using MDX in accordance with the AASHTO Manual for Bridge Evaluation (MBE) using the Load Resistance Factor Rating (LRFR) method and the WVDOH Bridge Design Manual.
03/17-11/18	**West Virginia Department of Transportation-Division of Highways, Rock Creek Development, Boone County, WV** - Bridge engineer responsible for load rating this new 5-span prestressed concrete I-beam superstructure with concrete integral abutments on steel piles and concrete multi-column piers with drilled caissons. She developed detailed load rating sheets for the design plans as required by the WVDOH. The load rating was performed using AASHTOWare BrR in accordance with the AASHTO Manual for Bridge Evaluation (MBE) using the Load Resistance Factor Rating (LRFR) method and the WVDOH Bridge Design Manual.
04/16-06/19	**Contract No. 4400004920 (H.009859.5) On-system Complex Load Rating, Statewide, LA (DOTD) –** Bridge Engineer for the load rating of movable and complex truss bridges using AASHTOWare BrR in accordance with the AASHTO Manual for Bridge Evaluation (MBE), using the Load Resistance Factor Rating (LRFR) method, and the DOTD Policies and Guidelines for Bridge Rating and Evaluation. She load rated reinforced concrete slab approach spans and open steel grid deck along the portion of the main span, stringers and floorbeams in the main span, and reinforced concrete bent caps. She used AASHTOWare BrR, CONSYS software and Mathcad hand calculations to load rate the open steel grid deck, floorbeams, stringers, and concrete bent caps. Developed influence lines for existing and new girders and hammerhead bent cap using AASHTOWare BrR software. Load rated bridges include LA 670 over Bayou Teche (swing bridge), LA 47 over IWGO (tied arch, deck truss, steel & concrete girder, concrete slab), U.S. 90 Business (Riverbound Expressway) (deck truss and steel plate girder, floorbeams, stringers, gusset plates), I-220 over Russell Road (steel plate girders).
02/09-12/12	**Virginia Department of Transportation, Bridge Load Rating - Statewide, VA** - Bridge engineer assigned to perform the load rating of over 200 existing bridges using Virtis in accordance with the AASHTO Manual for Bridge Evaluation (MBE) using the Load Resistance Factor Rating (LRFR) and Load Factor Rating (LFR) methods as specified by VDOT Guides and Instructional and Informational Memoranda. The bridge types including steel rolled beam and girder, prestressed box and I-beam, prestressed slab, reinforced concrete slab and tee beam, and timber superstructures. Developed the Virtis Software training and load rating instruction, references, project setup and procedures for VDOT load rating.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**Paul Misch Jr., P.E.**	Years of experience with this employer	20
Title	Senior Bridge Engineer	Years of experience with other employer(s)	5
Degree(s) / Years / Specialization		M.S. / 1999 / Civil Engineering B.S. / 1996 / Civil Engineering	
Active registration number / state / expiration date		#PE.0034416 / LA / 09-30-2025	
Year registered	2009	Discipline	Civil Engineering **Other Pertinent Training / Certifications** FHWA / NHI #130055 - Safety Inspection of In-Service Bridges, 2005 FHWA / NHI #130053 – Bridge Inspection Refresher Training, 2015
Contract role(s) / brief description of responsibilities			**Bridge Design & Analysis** Mr. Misch offers more than 25 years of bridge design experience which has been gained through assignments in the states of West Virginia and Florida. His expertise encompasses the design and detailing of steel and concrete superstructures, as well as substructure design including integral and semi-integral abutments, hammerhead and rigid frame piers, steel piling, drilled caissons and spread footings. In addition, he designed temporary works for bridge contractors. Mr. Misch is proficient in the use of and application of a variety of bridge design software (SIMON, MDX, CONSPAN, RC PIER, FB PIER, PCA COLUMN and STAAD PRO).

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
03/21-Present	**West Virginia Department of Transportation – Division of Highways, Coalfields Expressway PIE Study, Wyoming County, WV -** Lead Bridge Engineer. Project involves the completion of a Preliminary Investigation Engineering (PIE) Study for completing the remaining 47 miles of the Coalfield Expressway Corridor from Welch in Wyoming County to the WV/VA State Line in McDowell County. The first phase of the project involved the development of a financial plan for the Corridor and an evaluation of Coal Synergy usage as a means to reduce overall project costs. The project is currently in the second phase which involves alignment development, preliminary design, and environmental re-evaluation for a 15-mile section of the Corridor from the WV 16 Interchange at Indian Creek to Mullens in Wyoming County. Mr. Misch led the generation of span arrangement reports, including 30% plan sheets, for 3 twin structures carrying 4 lanes of mainline traffic (Guyandotte River bridge, Indian Creek bridge, and Still Run bridge). Reports evaluated constructability, superstructure and substructure types, geotechnical recommendations, and structure cost in order to recommend a bridge layout and associated construction cost.
03/15-03/16	**West Virginia Department of Transportation - Division of Highways, US 35 Design-Build/P3 Project, US 35 over CR 29 Bridge – Putnam/Mason Counties, WV -** Responsible for the final design of twin, two-span (170'-210') steel plate girder bridges carrying US 35 over CR 29 and Little Sixteenmile Creek as part of the US 35 Widening Design-Build/P3 project. Tasks included his design of steel plate girders, crossframes, deck slab and elastomeric bearings. Additional tasks included determining finished deck slab elevations and quantities for the bridges. Also responsible for checking the Contractor's girder erection schemes/sequences including temporary towers, sizes of proposed cranes/spreader beams/beam clamps, and girder tie-down details.
03/15-03/16	**West Virginia Department of Transportation - Division of Highways, US 35 Design-Build/P3 Project, US 35 over CR 40 Bridge – Putnam/Mason Counties, WV -** Responsible for the final design of twin, curved, two span (195'-155') steel plate girder bridges carrying US 35 over CR 40 and Upper Ninemile Creek as part of the US 35 Widening Design-Build/P3 project. Tasks included designing steel plate girders, crossframe, deck slab and elastomeric bearings. Additional tasks included determining finished deck slab elevations and quantities for the bridges. Also responsible for checking the Contractor's girder erection schemes/sequences including temporary towers, sizes of proposed cranes/spreader beams/beam clamps, and girder tie-down details.
05/14-01/16	**West Virginia Department of Transportation - Division of Highways, Coalfields Expressway Design-Build/P3 Project, Mullens to CO 12/1 - Wyoming County, WV -** Responsible for the final design of an 1,175' long four-sided concrete box culvert with a 6.5' x 6.5' opening as part of this Design-Build/P3 project. Additional tasks included detailing the culvert installation sequence and the calculation of culvert invert elevations and quantities.

02/13-02/14	**West Virginia Department of Transportation - Division of Highways, WV Thomas Buford Pugh Memorial Bridge Replacement (WV Rt. 41 Over the New River), Fayette County, WV -** Responsible for the Superstructure Type, Size and Location Study for this three-span (217'-250'-190'), curved steel plate girder bridge. Tasks included framing plan development and preliminary design of steel girders with 125' radii and sharply skewed abutments.
06/11-08/14	**West Virginia Department of Transportation - Division of Highways, Bridge Street Bridge Replacement, Taylor County, WV-** Responsible for preliminary studies and the final design of this two-span (173'-130') steel plate girder bridge carrying Bridge Street over the Three Fork Creek and CSX Railroad in the City of Grafton, WV. Tasks included designing steel plate girders, deck slab, rigid frame concrete pier with drilled caissons, extensive MSE wall layouts, conceptual bridge demolition and erection schemes over several CSX rail lines. Also checked the design for the integral abutments founded on steel H-piles.
03/18-02/19	**West Virginia Department of Transportation - Division of Highways, I-70 Bridges, Rehabilitation of Greenwood Bridge WB & EB (I-70 WB & EB Over Wheeling Creek), Ohio County, WV -** Member of the design team that developed rehabilitation plans for these curved and skewed steel girder bridges having span lengths of 89'-137'-83'. Responsible for detailing modifications to the bridges for conversion to semi-integral abutments. Detailed demolition limits for the existing abutment backwalls and portions of the wingwalls. Developed plan details for new shear blocks and concrete end diaphragms to be built in phases for maintenance of traffic purposes. Also detailed modifications to existing steel end crossframes for embedment in the new concrete end diaphragms.
03/18-02/19	**West Virginia Department of Transportation - Division of Highways, I-70 Bridges, Rehabilitation of Elby's Bridge WB & EB (I-70 WB & EB Over Ramp B, Ramp C and Wheeling Creek) – Ohio County, WV -** Member of the design team that developed rehabilitation plans for the seven span, steel rolled beam bridges with span lengths ranging from 39' to 92'. Responsible for detailing modifications to the bridges for conversion to semi-integral abutments. Detailed demolition limits for the existing abutment backwalls, pedestals and portions of the wingwalls. Developed plan details for new shear blocks, pedestals, concrete end diaphragms and end zone regions of the deck slabs. Also detailed modifications to existing steel end crossframes for embedment in the new concrete end diaphragms.
06/13-04/15	**West Virginia Department of Transportation - Division of Highways, Phill G. McDonald Memorial Bridge Rehabilitation, I-64 Over Glade Creek, Raleigh County, WV** – Bridge Design Engineer responsible for developing the rehabilitation plans for this five-span (125'-560'-784'-560'-150') bridge consisting of a three-span continuous steel deck truss and two welded plate girder approach spans. The overall bridge length is 2,179' with a roadway width of 72'. Tasks included bearing replacements, strip seal deck joint replacements, neoprene trough replacement at finger joints, addition of gusset plate stiffening angles, miscellaneous bolt replacements, bird screen repairs, addition of chord member drain holes, spot painting, concrete patching/crack sealing on the deck and piers, and pier door replacements.
03/14-06/15	**West Virginia Department of Transportation - Division of Highways, Kanawha Falls Bridge Rehabilitation, County Route 13 over Kanawha River, Fayette County, WV** – Bridge Design Engineer responsible for developing rehabilitation plans for this historic (1928) four-span (265'-400'-265'-73') bridge which consists of three through trusses, a rolled beam approach span and a roadway width of 21.5'. Tasks included compiling quantities, designing a phone conduit system and an 8" diameter waterline connection to the floor system, checking of the span 4 deck slab design and coordinating the development of rehabilitation plans between four (4) design offices.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**Craig Jacob, P.E.**	Years of experience with this employer	2.5
Title	Bridge Engineer	Years of experience with other employer(s)	22
Degree(s) / Years / Specialization		B.S. / 1999 / Civil and Environmental Engineering	
Active registration number / state / expiration date		#PE.68866 / OH / 12-31-2025	
Year registered	2004	Discipline	Civil Engineering **Other Pertinent Training / Certifications** FHWA / NHI #130053 - Bridge Inspection Refresher Training, 2022 FHWA / NHI #130055 - Safety Inspection of In-Service Bridges, 2005 FHWA / NHI #130078 – Fracture Critical Inspection Techniques for Steel Bridges, 2017
Contract role(s) / brief description of responsibilities			**Bridge Analysis & Design, Bridge Inspection and Load Rating** Mr. Jacob possesses over 24 years of full-time experience in the analysis, design, inspection and load rating of state and local transportation infrastructure on highways, interstate routes, and county roads using AASHTO LRFD and LFD standards. His experience a number of uncommon bridge elements including complex framing geometries and structure alignments, dog-legged girders, welded steel box pier caps, and truss analyses.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
02/22-Present	**Ohio Department of Transportation – District 12, CUY-77-1121, Cuyahoga County, OH -** Lead Structural Engineer for this project which involves a realignment and shoulder widening for safety improvements along I-77 in the Cleveland urban corridor. Serving as lead structural engineer on the design and plan production for nine new retaining walls and the reconstruction of two underpass bridges within the project limits to facilitate realignment of the interstate.
06/22-Present	**Ohio Department of Transportation – District 11, HAS-151-0485 Design-Build, Harrison County, OH -** Structural Engineer for this Design-build contract involving a complete replacement of the bridge carrying SR 151 over the G&W Railroad. The overpass alignment is highly skewed to the railroad alignment. The proposed structure follows the existing alignment but constructs one straddle bent over the railroad, instead of the six straddle bents of the existing bridge. Responsibilities include design development, quality review, and plan production.
11/22 - 08/23	**ODOT PID 116592/TRC 491195 – Statewide Load Rating, OH –** Load rater performing LRFR and LFR ratings of steel beam and plate girder bridges. Reviewed completed ratings of bridges.
04/22 – 05/22	**US 50, Blennerhassett Island Bridge, Parkersburg, WV** – Bridge Inspector while using aerial access equipment to inspect the superstructure main span (tied arch) and approach spans (steel girder) components along with the bearings and piers.
09/21	**ODOT, HAM-71-0134 Lytle Tunnel NTIS Inspection –** Team Leader for a condition and element level inspection of the liner, headwalls, approach wingwalls, and structural components of facility chambers in the 855-foot long, 3-barrel tunnel of I-71 below Lytle Park in Cincinnati.
04/21 - 05/21	**GDOT, Cable Stay Bridge On-Call Services –** Project Engineer during the production of inspection procedure manuals for two cable stay bridges in the Georgia structure inventory. He assisted in authoring the inspection manuals for the Talmadge Memorial Bridge in Savannah and the Sidney Lanier Bridge in Brunswick.
02/21 - 03/21	**Indiana Department of Transportation, I-74 Emergency Bridge Repair - Crawfordsville District -** Engineer of Record for a damage inspection, repair design, and bridge details to correct vehicular impact on the steel beam superstructure of Wesley Station Road over I-74.

01/20-12/21	**KYTC, Ohio River Fracture Critical Bridge Inspection Services –** Project Manager and Inspection Lead for the fracture critical inspection of five long-span Ohio River bridges. The structures in the contract are the historic Roebling Suspension Bridge (Cincinnati, Ohio), the Irvin Cobb Bridge (Paducah, Kentucky), the Carroll Cropper Bridge (Lawrenceburg, Indiana), the Ben Williamson Bridge (12th Street Ashland, Kentucky), and the Simeon Willis Bridge (13th Street Ashland, Kentucky). He led the load rating evaluation of the Carroll Cropper Bridge, a complex tied arch thru truss with suspender cables, based on as-inspected condition while using AASHTOWare BrR, LRFR and other software. Also authored the capacity evaluation report. He managed the execution of the project, coordinated with railroads and a traffic control subconsultant, communicated with Cabinet and District engineers, directed inspection staff, and updated the condition and element level records in the state inventory database (BrM). He led or reviewed deliverable reports on noted structural conditions and maintenance recommendations, including documentation of fatigue cracks verified with NDT.
10/19-10/20	**South Carolina Department of Transportation, Bridge Load Ratings, SC -** Task Leader and Quality Control Reviewer for a team of analysts during the load rating of more than 200 bridges in two South Carolina districts using AASHTOWare BrR and LRFR method. Work included the production of load rating documentation as engineer-of-record for the state bridge management system.
04/13; 04/17	**KYTC, Ohio River Fracture Critical Bridge Inspection Services –** Team leader for a fracture critical inspection of the 5,340-foot-long Irvin Cobb Bridge (Paducah, Kentucky) which consists of ten main simple-span thru truss units with a maximum span length of 716 feet across the Ohio River.
06/12; 06/16	**KYTC, Ohio River Fracture Critical Bridge Inspection Services –** Team leader for a fracture critical inspection of the 5,746-foot-long Clark Memorial Bridge (Louisville, Kentucky). The bridge consists of two adjacent 3-span continuous thru truss superstructure units with a maximum span length of 820 feet across the Ohio River.
09/11-03/12	**Brown County Engineers Office, Truss Load Ratings - Brown County, OH -** Lead inspector and structural analyst for the condition evaluation and documentation of deterioration on 10 pony truss structures maintained by the County Engineer's Office. Assessments included field measurements to verify as-built configuration and current deterioration of steel gusset plates. He also processed the condition information to perform a capacity evaluation of the truss members and gusset plate connections.
08/11-10/11	**Ohio Department of Transportation, District 8, CLI-71-4.26, SR 380 over IR 71 Bridge Rehabilitation, Wilmington OH -** Lead Bridge Inspector, Designer, and Load Rating Analyst for a deck replacement on the existing steel plate girders of SR 380 over IR 71 with semi-integral and composite conversion.
07/11	**Kentucky Transportation Cabinet, Inspection of Ohio River Bridges -** Inspection Team Leader on the Simon Kenton Memorial Bridge (US 62/68) to assess fracture critical members, measure gusset plate deficiencies, and appraise the entire **suspension bridge** for condition rating and repair/maintenance recommendations.
03/10; 04/11; 02/12	**City of Middletown, Bridge Inspection and Analysis, Middletown, OH -** Lead Engineer for the structural inspection, scour inspection, and load rating of 20 off-system bridges and large culverts in the municipality. Reviewer of annual city bridge inspections.
11/07-04/08	**Ohio Department of Transportation, District 6, FRA-23-12.11, 4th Street Bridge over the NS Railroad and I-670, Columbus, OH** - Inspection Team Leader and load rater for the seven-span bridge which consists of dog-legged steel beams, varying substructure skews, left and right horizontal curves with super-elevation reversal, and cantilevered structural concrete beams on abutment wingwalls.
07/15-11/15 07/11-11/11 07/09 - 11/09	**ODOT District 8, Steel Pier Cap Inspections –** Team leader for the fracture critical inspection of 51 structural steel pier caps on 13 different bridges in Hamilton County. Inspections included an evaluation of fatigue prone details and section loss measurement for capacity evaluation. He also produced condition rating reports for the fracture critical components and performed load ratings on several of the bridge pier caps.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**Denny Dispennette, P.E.**	Years of experience with this employer	7
Title	Civil Engineer	Years of experience with other employer(s)	5

Degree(s) / Years / Specialization			M.S./ 2012 / Civil Engineering B.S. / 2010 / Civil Engineering
Active registration number / state / expiration date			#PE.0044141 / LA / 3-31-2026
Year registered	2019	Discipline	Civil Engineering **Other Pertinent Training / Certifications** FHWA/NHI 130055 - Safety Inspection of In-Service Bridges, 2014 FHWA/NHI 130053 - Bridge Inspection Refresher Training, 2021 FHWA/NHI 130078 - Fracture Critical Inspection Techniques for Steel Bridges, 2021 FHWA/NHI 130092 - LRFR for Bridge Superstructures, 2014
Contract role(s) / brief description of responsibilities			**Load Rating Engineer** Mr. Dispennette possesses 12 years of experience involving extensive bridge load rating work, performance of in-service bridge safety inspections, bridge design, hauling permit evaluation. He has provided load rating support statewide to bridge engineers, implemented load rating policies to comply with NBIS requirements, and analyzed various types of bridge materials including steel, concrete, and timber using different design philosophies: LFRD, LFD, and ASD. He has also evaluated simple bridges and complex bridges using Bentley LARS Bridge and MDX software. He is also experienced with the load rating provisions in the current AASHTO Manual for Bridge Evaluation and the DOTD Policies and Guidelines for Bridge Rating and Evaluation.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
10/22-07/23	**Trout Run Cutoff Bridges – Hardy County, WV (WVDOH) –** Designer and load rater for the twin bridges carrying US48 over a local road. He designed the two different (EB & WB) steel superstructures (girders and all associated details) and load rated each of these new bridges to be constructed next year.
04/22-07/22	**Blennerhassett Island Bridge – Parkersburg, WV (WVDOH) –** Project manager and team leader for the routine inspection of a tied arch bridge over the Kanawha River. He planned the inspection, safety, subcontractor coordination/contracting, and traffic control. He led 4 teams to include 185 ft. manlift, snooper, and boat access means. He wrote the inspection report, developed element level data, and updated the SI&A coding.
12/21-01/22	**Linden Street Bridge over Lackawanna River, Scranton, PA (PennDOT)** – Load rater for the superstructure (steel girder) and substructure load rating using LRFR.
12/21	**Contract No. 44-13321; H.09730.5 Retainer Contract for In-depth Bridge Inspections (On-System), Statewide (DOTD)** – Team Leader responsible for the routine and element level inspection of the I-10 over Calcasieu River truss bridge. He inspected the deck, steel superstructure (girders, floor beams, stringers, bearings), steel substructure (bent caps, columns, diagonal bracing, gusset plates) using aerial access equipment. He wrote the inspection report defect list and updated the drawings for the defects.
11/20-11/20	**General Engineering Services Contract, Franklin County Engineer's Office (FCEO), OH –** Team l-Leader responsible for 17 bridges. He led the field inspection and wrote the inspection reports in AssetWise in accordance with NBIS and ODOT standards.
10/20-02/21	**West Virginia Division of Highways, District 1, RHL Blvd. Bridge - Kanawha County, WV** - Load rater and bridge designer responsible for updating the steel girder design, cross-frame design, and load ratings.

12/19-12/20	**Contract No. H.012485.1 Off-system Load Rating, Statewide, LA (DOTD) –** Load rating engineer responsible for load rating of 300 off-system bridges (COSLAB, COPCSS, steel and concrete girders, culverts). He rated the concrete panel and slab superstructures using AASHTO BrR software and timber pile substructure units using Excel and STAAD. He was the responsible engineer for over 50 bridge load rating reports. The load ratings were performed using the current AASHTO *Manual for Bridge Evaluation* and DOTD *Policies and Guidelines for Bridge Rating and Evaluation.* He provided repair recommendations for bridges with 3 ton or closure ratings.
10/19-03/20	**Off-system Bridge Load Rating, South Carolina Department of Transportation, Statewide, SC -** Load rating engineer responsible for the load rating of several off-system bridges in South Carolina. He used AASHTO BrR for the concrete superstructures, load rated the substructure elements, issued posting recommendations, and updated NBI data.
04/18-12/19	**Contract No. 4400004920 (H.009859.5) Complex Load Rating and Inspection, Statewide, LA (DOTD) –** Load rating engineer performing the load ratings and inspections of complex bridges to include complex trusses and movable (vertical lift, bascule, swing) bridges. Services included: Plan and Document Retrieval and Review; Bridge Inspections; Structural Modeling and Analysis of; Load Rating of each assigned bridge based on present condition, capacity and loading using the load rating provisions in the Current AASHTO *Manual for Bridge Evaluation* and DOTD *Policies and Guidelines for Bridge Rating and Evaluation;* Peer Review Ratings.
10/18-12/18	**I-70 Bridge Rehabilitation – Ohio County, WV (WVDOH) –** Team leader for the rehabilitation bridge inspections of four steel multi-girder bridges carrying I-70 EB and WB. He ensured thorough condition documentation as well as geometric inventory measurements to provide information for the rehabilitation of the structures. He prepared the rehabilitation plans for the bridges.
11/18-12/18	**Kanawha Falls Bridge – Kanawha Falls, WV (WVDOH) –** Team leader for the emergency bridge inspection a 90-year-old, three-span, riveted through truss over the Kanawha River. He led and performed the inspection of the entire floor system to verify condition and to advise if additional emergency repairs were required. He led and performed the inspection of the truss lower chords and stringers looking for critical findings that might require immediate repair or preclude the bridge from reopening. A hands-on inspection of the lower chords and floor beam to lower chord connections was conducted and he developed and submitted an inspection report.
04/18-10/18	**Seabrook Nuclear Power Plant Bridge Replacement - Seabrook, NH** – Load rater and designer for replacement of an existing 3-span, 32-feet-long bridge in a nuclear power plant that spans high voltage transmission lines. The new bridge was a multi-steel girder with an aluminum deck.
10/17-02/18	**Office of State Aid and Construction, Bridge Inspection and Off-system Load Rating Contract, Statewide, MS** - Load rating engineer performing the load rating analyses on timber substructure elements for 160 off-system bridges in Lincoln, Pike, and Amite counties. He analyzed timber and concrete substructure components in compliance with the AASHTO MBE. This load rating effort was completed on an accelerated schedule.
10/12-09/17	**West Virginia Division of Highways, Charleston, WV –** Bridge engineer/load rater/bridge inspector employed by WVDOH. His responsibilities included the load rating of trusses, steel deck girders, steel box beams and simple span bridges, performed QA/QC on load ratings, developed the load rating policy for the State's load rating program, reviewing consultant load rating reports, and taught classes on load rating to State bridge engineers. He was a team member for several complex girder and truss bridges including multiple Ohio River crossings. Performed routine inspections of bridges throughout the state.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**Timothy Shoemaker, P.E.**	Years of experience with this employer	23
Title	Senior Project Engineer / Project Manager	Years of experience with other employer(s)	8
Degree(s) / Years / Specialization		B.S. / 1993 / Civil Engineering	
Active registration number / state / expiration date		#13636 / WV / 12-31-2024	
Year registered	1998	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		**Roadway Design** Mr. Shoemaker offers over 31 years of civil engineering experience that is focused on the development of solutions to a variety of transportation-related challenges. Projects to which he has been assigned have ranged from small rehabilitation and reconstruction projects, to complex interchanges and interstate improvement work pursued using Design-Build and P3 delivery methods.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
04/18-08/23	**West Virginia Department of Transportation - Division of Highways, I-64 Quality Assurance Management Services (QAM) for the I-64 Widening and Improvements Design-Build Project, Putnam County, WV -** TRC is serving as the Quality Assurance Manager (QAM) representing the WVDOH for the $225 million widening of Interstate 64 (I-64) from four to six lanes for approximately 3.8 miles. The project involves the reconfiguration of two interchanges; replacement of three interstate overpass bridges, two new interstate ramp bridges, and a county route overpass bridge; and replacement of the existing 1,400' long Kanawha River bridge with a new parallel river crossing. Mr. Shoemaker's responsibilities have involved various pre-procurement activities (writing the roadway and right-of-way portions, editing the entire design criteria for the project, participation in one-on-one meetings with project proposers to review and discuss their proposed designs), and review of roadway and right-of-way submittals from the successful proposer.
06/17-03/19	**West Virginia Department of Transportation - Division of Highways, US 35 Buffalo Interchange -** Project involved the addition of a diamond interchange to a project that was under construction. Mr. Shoemaker's responsibilities were to oversee and perform roadway design of the interchange (specifically roadway geometrics), interchange geometrics, utility relocation, grading design, drainage design, permitting, right-of-way design, maintenance of traffic design, quantity estimates, and construction cost estimates. Design-build construction plans, right-of-way acquisition plans, and right-of-way take descriptions were also developed.
03/15 - 11/16	**US Route 121 – Coalfields Expressway Design-Build/P3 Project, Wyoming County, WV** - Involved in the design of a 2.13-mile section of divided arterial as a member of the design-build team. This $45 million P3 project consisted of the design, construction, and financial services necessary for constructing a four-lane section of US Route 121 (also known as the Coalfields Expressway) on new location between East County Route 12/1 and Mullens, including the Mullens Connector road all in Wyoming County, West Virginia. The project consisted of grading and drainage. Responsibilities included QA/QC reviews, calculation checking, access road design, and right-of-way design.
09/16 - 04/19	**US 35 Widening Design-Build/P3 Project, Mason and Putnam Counties, WV** - This P3 project consisted of the design, construction and financial services necessary to construct a $196 million, four-lane section of US Route 35 on new location between WV 869 in Putnam County and Mason County Route 40. The project consists of grading, drainage and structures. Responsibilities include QA/QC reviews, calculation checking, access road design, and right-of-way design.
07/02 - 09/06; 01/14 - 08/16	**I-64 Widening Project, Putnam County, WV** - The project consisted of the study, design and preparation of a design report, NEPA documentation and preliminary contract plans for widening I-64 to six lanes for approximately 3.8 miles. Included the modification of two (2) Interstate Interchanges, widening of three (3) interstate overpass bridges, two (2) new interstate ramp bridges, a replacement of a County Route overpass bridge and a new bridge crossing of Kanawha River which is anticipated to be a cantilever truss. Mr. Shoemaker's responsibilities included all aspects of the design report, coordination of

	the NEPA documentation, and modification of the two interstate interchanges including the development of a diverging diamond interchange layout to evaluate as an additional option to the original study.
07/02 - 02/10	**Corridor "H", Scherr to Foreman, Grant County, WV** - Roadway design engineer responsible for a 2.13-mile section of divided arterial that included two large structures as well as a designated bike path along the entire project that was accomplished within the shoulder of the roadway typical. Responsibilities included the drainage design including culverts, storm sewers, erosion and sediment control, and ditch design. He also assisted with the performance of a Value Engineering Analysis regarding the elimination of a large bridge and replacing it with a box culvert and large fill over a native trout stream. The VE was approved by the client and resulted in a large cost savings.
04/01 - 08/08	**WV Route 10, Man to Rita, Logan County, WV -** Involved in the design of a 4.2-mile section of divided arterial that included two large structures and a designated bike path along the entire project that was accomplished within the shoulder of the roadway typical. Responsibilities included the drainage design including culverts, storm sewers, erosion and sediment control, and ditch design.
07/09 - 02/13	**RHL Boulevard Extension, Kanawha County, WV -** Roadway design engineer responsible for a 0.42 mile long project with a new 422' bridge. This project added new access to a congested shopping area and added left-hand turning lanes and a new traffic signal to the intersecting roadway (Jefferson Road). The proposed typical section for the boulevard extension will also accommodate bicyclists along the shoulder of the roadway. Responsibilities included urban roadway design to widen Jefferson Road from two to four lanes, urban roadway design along a new alignment, urban stormwater drainage design, sediment and erosion control, temporary traffic control, lighting design, signing and marking plans, and right-of-way plans.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**Robert Polcyn, P.E.**	Years of experience with this employer	17
Title	Senior Roadway Engineer	Years of experience with other employer(s)	13
Degree(s) / Years / Specialization		B.S. / 1994 / Civil Engineering	
Active registration number / state / expiration date		#014178 / WV / 12-31-2024	
Year registered	1999	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		**Roadway Design and Hydraulics** Mr. Polcyn has over 30 years of roadway design experience focused on the development of solutions to a variety of complex transportation-related project types in over 15 states. He has led the design of numerous roadway projects of varying scope and complexity including highway facilities on new alignment; reconstructed and rehabilitated highways and interchanges; urban roadway improvements; safety improvements; and roadway design studies. His related design experience includes roadway rehabilitation and repair, safety improvements, geometrics, maintenance of traffic, constructability, value engineering, right-of-way, drainage, pavement and signing	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
03/20-Present	**West Virginia Division of Highways, Coalfields Expressway PIE Study: WV16 to Mullens , Wyoming County, WV -** Responsible for developing the roadway geometry for the entire 15.4 miles of the project which focused on optimizing the horizontal and vertical alignment to minimize total excavation while balancing the earthwork. Mr. Polcyn was the lead roadway engineer for the development of preliminary plans for the priority section of the project from the Guyandotte River to Mullens which involved the preliminary design of 8.6 miles of four-lane and 3.8 miles of two-lane connector on new alignments. Preliminary plans included geometric design, major drainage design, NPDES permitting, erosion and sediment control, utility coordination and right-of-way. Also oversaw all associated roadway-related design tasks.
03/16-01/19	**West Virginia Division of Highways – US Route 35 (P3): WV 869 to Mason CR 40 Public-Private Partnership (P3) - Putnam/Mason County, WV -** Lead roadway engineer/manager for this Public-Private Partnership (P3) project which involved the design and construction of 14 miles of four-lane on new alignment. The project consisted of conceptual design to prepare the technical proposal/bid. Following award of the project, final design/plans were developed. Services included geometric design, drainage design, permitting, erosion and sediment control, and right-of-way. Mr. Polcyn was responsible for optimizing the horizontal and vertical alignment for the entire project to minimize total excavation while balancing the earthwork. Also oversaw all roadway-related design tasks. Low bid for the project was $178,000,000.
04/14-11/15	**West Virginia Division of Highways, Coalfields Expressway P3: Mullens to East CR 12/1, Wyoming County, WV -** Lead roadway engineer/manager for this Public-Private Partnership (P3) project which involved the design and construction of 1.7 miles of four-lane and 1 mile of two-lane connector on new alignment. The project consisted of conceptual design to prepare the technical proposal/bid. Following award of the project, final design/plans were developed. Services included geometric design, drainage design, permitting, erosion and sediment control, and right-of-way. Mr. Polcyn was responsible for optimizing the horizontal and vertical alignment for the entire project to minimize total excavation while balancing the earthwork. Also oversaw all roadway-related design tasks. Low bid for the project was $45,250,000.
11/13-11/14	**West Virginia Department of Transportation – Division of Highways, Coalfields Expressway (DB): East CR 12/1 to West Helen - Raleigh/Wyoming County, WV -** Lead roadway engineer/manager for this Design-Build project which involved the design and construction of 1.6 miles of four-lane highway on new alignment. The project consisted of conceptual design to prepare the technical proposal/bid. Following award of the project, final design/plans were developed. Services included geometric design, drainage design, permitting, and erosion and sediment control. Mr. Polcyn was responsible for optimizing the horizontal and vertical alignment for the entire project to minimize total excavation while balancing the earthwork. Also oversaw all roadway-related design tasks. Low bid for the project was $13,500,000.

01/12-06/14	**West Virginia Department of Transportation – Division of Highways, Jefferson Road Study, Kanawha County, WV -** Assigned as a Project Engineer responsible for the development and evaluation of six (6) alternative alignments for Jefferson Road (WV 601) between US 119 (Davis Creek Interchange) and US 60 (McCorkle Ave) as part of the Jefferson Road Corridor Improvement Study. The purpose of the study was to investigate means to alleviate the current and future traffic congestion associated with this 1.5 mile corridor. The project consisted of upgrading the existing 2-lane roadway to a 5-lane typical section with varying intersection improvements and side-road connections. The typical section for the mainline was developed to accommodate future bike lanes within the proposed shoulder of the roadway. Horizontal geometry, profiles, typical sections, right-of-way, earthwork, preliminary structural layouts, maintenance of traffic scenarios and cost estimates were developed for each alternative. Emphasis was placed on developing alternatives that could be phased to allow the WVDOH to construct parts of the project within the current funding constraints.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**Jon Lorincz, PE**	Years of experience with this employer	1.4
Title	Project Manager/Highway Design Lead	Years of experience with other employer(s)	31
Degree(s) / Years / Specialization		B.S. / 1992 / Civil Engineering	
Active registration number / state / expiration date		#PE.61714 / OH / 12-31-2025	
Year registered	1997	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		**Roadway Design** Mr. Lorincz has 32 years of experience as a design project engineer and manager while addressing a diverse group of transportation projects, including new and rehabilitation projects involving both rural and urban roadways/highways. He has considerable experience with geometric design, pavement and maintenance of traffic design, cost estimating, final plan preparation, development of alignments for new and reconstructed interchanges, road re-alignments and corridor/widening studies.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
06/23–02/24	**ODOT District 1, HAR-SR31/US 68 Feasibility Study, Kenton, OH -** Project Manager for this Feasibility Study (FS) aimed at studying alternatives to provide easier and safer travel through downtown Kenton by improving the connection from State Route 31 to United States (U.S.) Route 68. Five different alternatives (plus a No-Bid alternative) were developed to address traffic flow inefficiencies and congestion through an area in the vicinity of SR 31, U.S. 68, SR 53 and the Scioto River near Perry Street. Each alternative was evaluated in terms of traffic operations, horizontal alignments, right of way impacts, construction costs, utility impacts, structure impacts and environmental impacts. The feasible alternates (which included two roundabouts) were presented at a public meeting.
11/20–07/21	**Colorado River Constructors (CRC), Oak Hill Parkway Design-Build, Segment 3, Austin, TX -** Served as Roadway Lead for Segment 3 of the $670 million Oak Hill Parkway Project which involved the reconstruction of a multi-lane facility with at-grade intersections into an access-controlled divided roadway with grade separated interchanges.
03/12–10/14	**Ohio Department of Transportation - District 2, WOO-18-10.53 North Baltimore Connector, North Baltimore, OH -** Deputy PM and Design Engineer. Supervised plan production and developed and monitored the workflow diagram to ensure staff were effectively deployed in order to meet a highly compressed project delivery schedule. The project involved construction of a 2.25-mile bypass around the Village of North Baltimore and included a roundabout intersection.
06/08–12/09	**Ohio Department of Transportation – District 12, Opportunity Corridor, Cleveland, OH –** Roadway Engineer responsible for the development of alignments for the proposed boulevard and several interchange options at E. 55th Street for the $300 million Opportunity Corridor project in downtown Cleveland. The project was a component of ODOT's $1.3 billion Cleveland Innerbelt Corridor Reconstruction program.
01/07–06/08	**City of Brooklyn, I-480/Tiedeman Road Interchange Study, Brooklyn, OH –** Project Roadway Engineer responsible for development of the geometric layout for a Diverging Diamond Interchange at I-480 and Tiedeman Road in Brooklyn, Ohio. This effort included coordination with the FHWA to ensure that geometric elements were designed within acceptable norms for this innovative design.
01/07–06/08	**Fluor-Lane, LLC, Capital Beltway (I-495) HOT Lanes Project Design-Build, Fairfax, VA** - Roadway Design Lead responsible for the final design of a 1.4-mile section of this $1.2 billion project. Work tasks included final horizontal and vertical alignments, cross sections, construction limits, and drainage.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**Rajat Das, PE**	Years of experience with this employer	2.5
Title	Quality Director / Senior Project Manager	Years of experience with other employer(s)	21.5
Degree(s) / Years / Specialization	MBA / 2004 / International Business M.S. / 2001 / Environmental Engineering B.E. / 1999 / Civil Engineering		
Active registration number / state / expiration date	PE#062.070414 / IL / 11-30-2025		
Year registered: 2018	Discipline: Civil Engineering		
Contract role(s) / brief description of responsibilities	**Roadway Drainage and Hydraulics** Mr. Das has 21 years of experience and associated knowledge with the preparation of project scopes, delivery plans and budgets, construction plan set production, and feasibility studies for transportation drainage design and water resources development projects. He has managed and supervised hydrologic and hydraulic modeling, storm sewer systems, bridge and culvert replacement, scour analysis, channel restoration and stabilization projects for highway projects, railroads (UP, BNSF, CSX), and various government agencies. Experience includes several projects progressed using alternative delivery methods.		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
06/17–08/19	**Illinois Tollway, Tri-state Tollway (I-294) between 95th Street and LaGrange Road Phase II -** Drainage Design Lead for this project which involved Phase II engineering services and project related permits for a proposed reconstruction of the Tri-State Tollway (I-294) between 95th Street (M.P. 17.8) and LaGrange Road (M.P. 20.7). The section features challenging geometrics through the toll plazas, extensive coordination requirements, and multiple locations with recorded drainage issues. Responsibilities included coordinating with the Tollway and governmental permitting agencies and managing drainage design activities, providing guidance on hydrology computations and hydraulics modeling using SUDA, review of drainage design computations, and overseeing the submittal of design and construction documents.
02/14–09/17	**Illinois Department of Transportation, US 51 Environmental Impact Study -** Project involved the study, preparation, and submission of an EIS and Design Report for US 51 along a 70-mile corridor in central Illinois. The study included an evaluation of the feasibility of several alignments based on social, economic, environmental and engineering issues. The goal of the EIS was obtain a Record of Decision (ROD) that identified a Preferred Alternative for transportation improvements that would meet local and regional needs while improving safety and enhancing mobility. Mr. Das supervised and performed hydrologic computations and hydraulic modeling, along with the preparation of hydraulic reports for more than 36 cross-drainage structures which included structures located within a FEMA designated Floodway.
05/15–03/16	**Illinois Department of Transportation, Central Avenue/BRC Railroad Grade Separation Phase I Study, Chicago, IL** - As Senior Drainage Engineer, Mr. Das was part of a team to conduct a Phase I Study for the grade separation of Central Avenue and the Beltway Rail Company Railroad. The study was conducted using the principles of Context Sensitive Solutions (CSS) for stakeholder involvement while engaging a host of City of Chicago agencies. Also included the preparation of an EA and Combined Design Report. Mr. Das managed the preparation of the Location Drainage Study for the project location and supervised hydrology computations, hydraulics modeling and preliminary design.
02/14–12/15	**Clarkson Construction and Kiewit Infra J.V., Johnson County Gateway, Kansas City, MO -** Served as the Managing Senior Water Resources Engineer for the first ever design-build project for Kansas DOT. The scope of work included reconfiguring two system interchanges which included the design and construction of 27 bridges of varying complexity, 20 miles of state-owned multi-lane urban freeway, 3.5 miles of primary arterials street network and 14 ADA-compliant signalized intersections. Rajat supervised and performed the QA/QC reviews for hydraulic and hydrologic modeling of proposed storm sewer systems, major cross-drainage structures, and preparation of construction documents.

01/13–02/14	**RTD Eagle P3, Denver, CO -** Senior Drainage Engineer for the Eagle P3 Project which comprised elements of Design-Build, Finance, Operation and Maintenance (DBFOM) for approximately 33 miles from the Denver city center on three new lines of commuter rail to multiple suburban locations and the Denver International Airport. The overall design included 14 stations, 29 at-grade crossings, 36 bridges, and the relocation of 4 miles of BNSF mainline track. Mr. Das reviewed and managed design modifications during the construction of proposed storm sewer systems, coordinated with multiple reviewing and permitting governmental agencies, and supervised the preparation of construction documents.
03/18–06/19	**Northern Indiana Commuter Transportation District (NICTD), West Lake Corridor New Starts Project, Lake County, IL -** Drainage Design Manager for a nine-mile extension of the South Shore Line (SSL), known as the West Lake Corridor, to provide new passenger rail service to the municipalities of Hammond, Munster, and Dyer. The project provides new transit service between Dyer, Indiana and Metra's Millennium Station in Downtown Chicago which is a total distance of approximately 30 miles. He supervised hydraulic modeling of bridge crossings, along with the drainage infrastructure design for track embankment, new stations, a maintenance yard, and green infrastructure initiatives. Co-ordinated with multiple local, state and federal agencies, including the USACE's Chicago District, to determine acceptable design features for permitting requirements and mitigation of adverse impacts. Also served as the Drainage Lead during procurement services.
10/19–02/21	**80th Avenue Reconstruction Phase II Design, Will County, IL -** As Drainage Design Manager, Mr. Das supervised all aspects of the drainage design and construction document preparation associated with a $47 million reconstruction of 80th Avenue from 191st Street to 183rd Street within the Villages of Tinley Park and Mokena. The project involved widening of the roadway from a two-lane rural section to a four-lane urban section with auxiliary turn lanes added at cross streets. The widened roadway required a new storm sewer network design as well as significant detention storage and culvert replacements. Improvements also included the replacement of a bridge over the Union Drainage Ditch, rehabilitating a large culvert carrying the Tributary to the Union Drainage Ditch under 80th Avenue, and coordinating drainage improvements at the intersection of 80th Avenue and Interstate 80.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**Derek Spurlock, P.E.**	Years of experience with this employer	16
Title	Senior Project Engineer	Years of experience with other employer(s)	0
Degree(s) / Years / Specialization	M.S. / 2008 / Civil Engineering B.S. / 2005 / Civil Engineering		
Active registration number / state / expiration date	#19202 / WV / 12-31-2024		
Year registered: 2011	Discipline: Civil Engineering		
Contract role(s) / brief description of responsibilities	**Drainage and Hydraulics** Mr. Spurlock has 14 years of design experience serving in the role of design engineer. His duties have primarily focused on roadway design, development of right-of-way plans, roadway drainage, and performance of hydraulic backwater analysis and scour analysis for various bridge projects.		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
03/20-04/22	**West Virginia Division of Highways, Coalfields Expressway PIE Study: WV16 to Mullens, Wyoming County, WV -** Project involved the preliminary design of 8.6 miles of four-lane and 3.8 miles of two-lane connector on new alignments. Preliminary plans included geometric design, major drainage design, permitting, erosion and sediment control, utility coordination and right-of-way. Responsibilities included hydraulic analysis of 3 bridges and a large box culvert, acquisition of an NPDES permit for core drilling of the entire project, and geometric design of the 1500' Twin Falls Access.
02/19-01/21	**West Virginia Department of Transportation - Division of Highways, US 220 Tier II Design Study, Mineral County, WV & Allegany County, MD** - This project consisted of upgrades to US Route 220 from the US Route 50 intersection near Claysville, WV to its intersection with Placid Lane in Maryland. Mr. Spurlock was responsible for developing new alignment alternatives for approximately 11 miles of highway and performing the hydraulic analysis for proposed bridges that cross the North Branch Potomac River.
07/15-01/19	**West Virginia Department of Transportation - Division of Highways, US 35 Design-Build/P3 Project, Mason and Putnam Counties, WV -** As a Design Engineer, Mr. Spurlock was responsible for the drainage design associated with 14 miles of four-lane highway (ditch sizing and lining, culvert design, storm sewer design), overseeing the hydraulic analyses of two mainline bridges, and performing scour analyses for two mainline bridges.
03/17-10/17	**West Virginia Division of Highways, Wellsburg Bridge P3, Brooke County, WV -** Work consisted of performing a HEC-RAS analysis of the Ohio River for the proposed bridge crossing which included the use of an existing HEC-2 model of the Ohio River. Mr. Spurlock also performed scour analysis for the proposed bridge and coordinated with the local floodplain manager to gain approval of the proposed bridge.
09/14-12/17	**West Virginia Division of Highways, Jefferson Road Design Study, Kanawha County, WV -** This study consisted of developing preliminary plans to widen existing Jefferson Road from two lanes to five lanes and replacing an offset intersection at Kanawha Turnpike. Multiple alignments were developed. Mr. Spurlock's responsibilities on this project included the performance of a HEC-RAS analysis of the waterway opening for the proposed bridge crossings and incorporating bicycle facilities along Jefferson Road.
01/14-02/2015	**West Virginia Department of Transportation - Division of Highways, Coalfields Expressway P3. Wyoming Counties, WV -** Mr. Spurlock was responsible for the drainage design (ditch sizing and lining, culvert design, storm sewer design) and assisting with the Sediment and Erosion Control Plans (BMP layout, sizing sediment ponds, etc).
05/14-11/16	**West Virginia Department of Transportation - Division of Highways, I-64 Widening Crooked Creek Interchange to Nitro Interchange, Putnam County, WV** - This project consisted of preliminary engineering for widening Interstate 64 from four to six lanes between Scott Depot and Nitro. The 3.5-mile-long project will include two interchanges and multiple bridges, including a ¼-mile long bridge across the Kanawha River. Mr. Spurlock's responsibilities included geometric design that consisted of laying out the interstate widening, realignment of the Saint Albans interchange, and realigning the Bills Creek overpass; major drainage design; and hydraulic analysis of the proposed Kanawha River crossing.
0709-02/14	**West Virginia Division of Highways, Thomas Buford Pugh Bridge, Fayette County, WV -** This project consisted of the study and design of both a replacement bridge structure and a rehabilitation of the existing bridge structure crossing the New River. The river in the project area is a category one

	stream which has endangered mussels. The study for this project consisted of various alternatives to avoid impacts to the river and the stream habitat. Mr. Spurlock was responsible for performing a HEC-RAS analysis of the waterway opening for the bridge replacement alternatives, in addition to analysis for the use of temporary construction platforms and causeways for the rehabilitation alternatives. Mr. Spurlock also performed a Shear Stress analysis for each alternative in order to evaluate the impacts of the alternatives on the habitat within the project area during and after the construction of each, and developed scour countermeasures on the stream banks
03/09-02/12	**West Virginia Department of Transportation - Division of Highways, RHL Boulevard Extension, Kanawha County, WV -** This project consisted of an urban roadway design along a new alignment, drainage design, temporary traffic control, lighting design, signing and marking plans, and right-of-way plans. Mr. Spurlock assisted with the right-of-way plan development for the 0.42-mile long project. He performed the roadway drainage calculations and assisted with the drainage design. He also assisted with the design of the maintenance of traffic sequencing for the project. A new bridge crossing of Davis Creek was also included as part of this project which was situated in an area that is sensitive to past flooding. Mr. Spurlock was responsible for the HEC-RAS analysis of the bridge waterway opening for the new proposed bridge crossing of Davis Creek. He developed both a draft and final hydraulic report for the project. He also assisted with development of the erosion and sediment plans for the project.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**Staci Danna, P.E.**	Years of experience with this employer	6
Title	Area Manager / Project Manager	Years of experience with other employer(s)	24
Degree(s) / Years / Specialization		M.S. / 2003 / Business Administration B.S. / 1999 / Environmental Engineering	
Active registration number / state / expiration date		#PE.0031561 / LA / 03-31-2025	
Year registered	2004	Discipline	Environmental Engineering
Contract role(s) / brief description of responsibilities		**Environmental/Permitting Support**	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
06/21-07/23	**LADOTD, I-10 Lake Charles Calcasieu River Bridge P3 Project, Calcasieu Parish, LA -** Provided environmental support of the development of specific Technical Provisions (TPs) in support of the procurement of construction services for the replacement of the aging infrastructure of the existing bridge. These TPs included Environmental, Socioeconomics and Environmental Justice, Railroads, Demolition, and Traffic.
04/18-Present	**Commonwealth LNG LLC, LNG Export Terminal, Federal Energy Regulatory Commission (FERC) National Environmental Policy Act (NEPA) Environmental Report (ER) and Federal/State/Local Permitting, Louisiana -** Supporting the preparation of a FERC NEPA ER in support of Natural Gas Act (NGA) §3 Application, agency consultations, and applications for U.S. Army Corps of Engineers (USACE) §404/§10/§408 permit, Louisiana Department of Natural Resources (LDNR) Coastal Use Permit (CUP), Louisiana Department of Environmental Quality (LDEQ) Water Quality Certification (WQC), National Marine Fisheries Service (NMFS) and U.S. Fish & Wildlife Service (USFWS) Section 7 clearances, for this LNG export terminal. The Project will include siting, construction, and operation of a natural gas liquefaction and export facility and integrated NGA Section 3 natural gas pipeline in Cameron Parish, Louisiana (Docket No. PF17-8/CP19-502).
08/19-Present	**Trunkline LNG, Lake Charles LNG Export Terminal, FERC NEPA and Federal/State/Local Permitting, Louisiana -** Supporting post-submittal support of the FERC ER and §3/§7(c) Application and applications for USACE §404/§10/§408, LDNR CUP, LDEQ WQC, NMFS/USFWS Section 7 clearances, and other federal/state/local permits for this LNG export terminal (Docket Nos. CP14-119, CP14-120, and CP14-122).
8/22-9/23	**Kinder Morgan/Tennessee Gas Pipeline Company, L.L.C., 507K Supply Lateral Abandonment Project, FERC NEPA and Federal/State/Local Permitting, Louisiana -** Environmental support including biological (wetlands, protected-species habitat) and cultural resource field surveys, preparation of FERC NEPA Environmental Report (ER) for Section 7(b) Natural Gas Act (NGA) Application, agency consultations, and applications for federal/state permits for the abandonment-by-sale of approximately 33 miles of natural gas pipeline and modification of associated aboveground facilities, including within the Louisiana Coastal Zone.
06/19-10/21	**Southern Natural Gas Company/Kinder Morgan, Evangeline Pass Expansion Project, FERC NEPA ER and Federal/State/Local Permitting, Mississippi/Louisiana -** Supported preparation of FERC NEPA ER for §7(c) NGA Application, agency consultations, and applications for federal/state permits for a new compressor station (Rose Hill, MS) and modification of 17 aboveground facilities in Mississippi and Louisiana, including within the Louisiana coastal zone (Docket No. CP20-51-000).
01/18-11/23	**Marathon Petroleum Company, Garyville, LA -** Project Manager for the performance of environmental permitting services for multiple heavy haul transports over the Mississippi River Flood Protection Levee at the Garyville Refinery. Activities included obtaining a **Coastal Use Permit** from the Office of Coastal Management, a **Section 10/404 Permit** from the New Orleans District of the Corps of Engineers, Louisiana Department of Environmental Quality **401 Water Quality Certification**, and Pontchartrain Levee District Permit. Also assisted the client in responding to agency comments and requests for additional information.
09/21-5/22	**Nucor Steel Louisiana, LLC, Section 10/404 Permitting, Coastal Use Permitting and Pontchartrain Levee District Permitting, Convent, Louisiana -** Project Manager for environmental permitting services to support a project to install new mooring structures for the existing derrick barges

	used to unload ships and barges on the landside of the existing dock at the Nucor Steel facility near Convent, Louisiana. Activities included preparation of permit application documents in order to obtain USACE Section 10 Permit and LDNR OCM CUP as well as a Pontchartrain Levee District Permit (PLD) for installation of piles as part of the mooring structure.
02/20-02/21	**Louis Dreyfus Company, LLC, Port Allen, LA -** Project Manager for obtaining a U.S. Army Corps of Engineers **Section 10/404 Permit** and Atchafalaya Basin Levee District Permit, including Letters of No Objection from the Coastal Protection and Restoration Authority and the Completed Works Branch of the Army Corps of Engineers, for the installation of four (4) new guide piles in the Mississippi River for an existing barge unloading facility in Port Allen, Louisiana.
02/20 – 11/20	**Noranda Alumina LLC, Gramercy, LA -** Project Manager for environmental permitting services to modify/repair the bumper/guide assembly at Noranda's alumina loadout barge dock on the left descending bank of the Mississippi River near Gramercy, Louisiana. TRC obtained the **U.S. Army Corps of Engineers Section 10/404 Permit** and Louisiana Department of Natural Resources Office of Coastal Management Coastal Use Permit. TRC also prepared documents to obtain Letters of No Objection from the Coastal Protection and Restoration Authority and the Completed Works Branch of the US Army Corps of Engineers, as well as Pontchartrain Levee District approval.
09/15-12/19	**Blue Cube Operations LLC/The Dow Chemical Company, Grand Bayou Operations, Belle Rose, LA -** Project Manager for permitting support to install new brine wells at the Grand Bayou Operations facility. Each project included obtaining a **Coastal Use Permit** from the Office of Coastal Management and a **Section 10/404 Permit** from the New Orleans District of the Corps of Engineers; attending geologic review meetings; coordinating with the State Historic Preservation Officer; obtaining Louisiana Department of Environmental Quality **401 Water Quality Certification**; working with the agencies and mitigation banks on mitigation activities; coordinating with Parish governing bodies regarding potential impacts to floodplains; and coordinating with Louisiana Department of Wildlife & Fisheries and U.S. Fish & Wildlife Service on bald eagle activities.
02/18-Present	**Levee Board Permitting for Subsurface Activities within 1,500 feet of the Centerline of the Mississippi River Levee – Louisiana.** Managing the preparation of requests for letters of no objection to Agencies; prepared permit drawings; and coordinated with Levee District, the U.S. Army Corps of Engineers, and Coastal Protection and Restoration Authority on issuance of approvals for the following: • Blue Cube Operations LLC, Plaquemine, LA – Tank farm Excavations (multiple submittals) • Noranda Alumina, Gramercy, LA - Monitoring Well Installations & Light Pole Replacements • Louis Dreyfus Company LLC, Port Allen, LA - Excavations for Routine Maintenance Work; Installation of Helical Piles for Belt Conveyor Repairs. • Confidential Client, Plaquemines Parish, LA - Plaquemines Parish Permit for Test Piles

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**Jim LeBlanc**	Years of experience with this employer	6
Title	Sr. Environmental Scientist	Years of experience with other employer(s)	38
Degree(s) / Years / Specialization		B.S./1981/Marine Biology/Coastal Ecology	
Active registration number / state / expiration date		**Other Pertinent Training/Certification** USACE Wetlands Delineation & Management Training Program – Richard Chin 2005 U.S. Fish & Wildlife Wetlands Classification, 1984 U.S. Fish & Wildlife Habitat Evaluation Procedures, 1984	
Year registered		Discipline	
Contract role(s) / brief description of responsibilities		**Environmental & Permitting Support**	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
02/21-Present	**Louisiana Department of Transportation and Development (LADOTD), I-10 Lake Charles Calcasieu River Bridge P3 Project, Calcasieu Parish, LA -** Provided environmental support through the development of Environmental, Socioeconomics, and Environmental Justice Technical Provisions (TPs) in support of the procurement of construction services for the replacement of the aging infrastructure of the existing bridge.
11/23-Present	**Illinois Central Railroad, Corps Section 404 Permitting, Geismar, LA -** Permit Lead for the expansion of the existing Illinois Central Railroad Yard. Responsible for the preparation of the application and development of the location map, plan view and cross-section drawings for the placement of the fill, sub-ballast and surface ballast for new sidings and rail spur to allow marshalling of trains for movement to local and long-distance clients. Support of the purchase of bottomland hardwood credits for compensatory mitigation based on the Louisiana Rapid Assessment Methodology (LRAM).
08/17-06/18	**Noranda Alumina LLC, Section 10/404, Coastal Use Permit and Pontchartrain Levee District Permitting, Gramercy, LA -** Permit Lead for the acquisition of the General Permit -23 permit from the Corps of Engineers, Coastal Use Permit from the Office of Coastal Management and approval from the Pontchartrain Levee District for maintenance dredging activities in the Mississippi River at their alumina and bauxite docks in the Mississippi River. Permitting activities included the acquisition of Letters of No Objection (LONO) from the Completed Works Branch of the Corps and the Coastal Protection and Restoration Authority at the Louisiana Department of Natural Resources for the Pontchartrain Levee District permit.
02/18-09/18	**Nucor Steel Louisiana, Section 10/404, Coastal Use Permit and Pontchartrain Levee District Permitting, Convent, LA -** Permit Lead for the acquisition of the **Section 10/404 permit** from the Corps of Engineers, Coastal Use Permit from the Office of Coastal Management and approval from the **Pontchartrain Levee District** for maintenance dredging activities in the Mississippi River at their ship dock and barge loadout facility. His permitting activities included the acquisition of a 401 Water Quality Certification for LDEQ and Letters of No Objection (LONO) from the Completed Works Branch of the Corps and the Coastal Protection and Restoration Authority at the Louisiana Department of Natural Resources.
06/22-10/23	**Marathon Oil Company, Section 10/404/408 and Coastal Use Permitting, Garyville, LA -** Permitting Lead for the acquisition of a 10/404/408 permit from the Corps of Engineers New Orleans District, Coastal Use Permit from the Office of Coastal Management of the Louisiana Department of Natural Resources and a Levee Board approval from the Pontchartrain Levee District for the construction of a temporary modular bridge and ramp across the Mississippi River Flood Protection Levee for the purpose of unloading and transport of a 3.2 million pound U-215 Guard Bed Reactor vessel from ocean-going barges via self-propelled modular transports into the Garyville refinery.
06/18-Present	**Commonwealth LNG, Cameron LA -** Lead wetlands biologist for wetlands delineation on a 40-acre parcel of land located at the mouth of the Calcasieu Ship Channel at the Gulf of Mexico. The wetland determination and delineation were performed using the routine on-site determination methods described in the *Corps of Engineers Wetlands Delineation Manual* and the methods, guidelines, and indicators present in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region Version 2.0.* A Wetlands Data Report was prepared and submitted to the Corps of Engineers for a Jurisdictional Determination (JD). Assisting with Coastal Use and Section 10/404 permit applications, agency coordination and mitigation support.

07/21-Present	**Southern Natural Gas Company/Kinder Morgan, Evangeline Pass Expansion Project, Federal/State/Local Permitting, Mississippi/Louisiana -** Supported the preparation of applications for federal/state permits for a new compressor station (Rose Hill, MS) and modification of 17 aboveground facilities in Mississippi and Louisiana, including the Toca Compressor Station within the Louisiana coastal zone.
01/13-03/14	**Enbridge Pipeline, Lafourche and Plaquemine Parishes, LA -** Permit Lead for the acquisition of a 10/404 permit from the Corps of Engineers, Coastal Use Permit from the Office Coastal Management of the Louisiana Department of Natural Resources. Corps Section 10/404 and Coastal Use permitting assistance was needed for inspection of 10 anomalies identified after pipeline PIG run through marshes and open water in coastal Louisiana. The Enbridge 16-inch pipeline ran from the Gloria Platform in Barataria Bay to the Chevron Metering Station on the east bank of the Mississippi River. The investigations required excavations in the canal bottoms and surrounding marshes to clamp a mobile caisson around the pipeline for inspection and repair.
12/17-10/18	**Blue Cube Operations LLC/The Dow Olin Company, Grand Bayou Operations, Belle Rose, LA -** Permit Lead for development of the Joint Permit Application (JPA) needed for the construction of a new well pad and support infrastructure to install a new brine well at the Grand Bayou Operations facility. Permitting included a Section 404 permit and a Coastal Use Permit. Provided coordination for a geologic review meeting; Section 106 coordination with the State Historic Preservation Officer; obtaining a Louisiana Department of Environmental Quality 401 Water Quality Certification; coordinating with approved mitigation banks to satisfy permit requirements for compensatory mitigation; and coordinating with the U.S. Fish & Wildlife Service and Louisiana Department of Wildlife & Fisheries on inactive bald eagle nest and colonial wading bird colonies in the general vicinity.
07/18-08/19	**Hilcorp Energy Company, Cartwright Prospect, Terrebonne Parish, LA -** Permit Lead for the acquisition of Section 10/404 permit from the Corps of Engineers New Orleans District, Coastal Use Permit for the Office of Coastal Management and approval from the Terrebonne Parish Consolidated Government for construction of a new well pad to drill a production well. Permitting activities included coordinating compensatory mitigation for unavoidable impacts to intermediate marsh habitat and the purchase of mitigation credits from an approved mitigation bank and the acquisition of a **401** Water Quality Certification for LDEQ.
05/14-06/15	**Chevron Oronite, Section 10/404 Permit and Plaquemines Parish Permit for Mississippi River Levee Improvement Project, Belle Chasse, LA -** Lead Permit Scientist for the acquisition of the LDNR Coastal Use Permit, Corps Section 10/404 and Levee work authorization from the Plaquemines Parish Permits Office. Chevron was forced to raise its pipe bridges across the Mississippi River Flood Protect Levee due to the USACE' Levee Improvement Project to increase levee heights. Responsibilities included preparing the Joint Permit Application (JPA) for the Corps and Coastal Zone permitting. Additionally, a Plaquemines Parish Permit was obtained for work within 1,500-ft of the Mississippi River Flood Protection Levee including Letters of No Objection from the Corps and LA DOTD.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**Keith Suderman, PhD**	Years of relevant experience with this employer	10
Title	Project Manager	Years of relevant experience with other employer(s)	13
Degree(s) / Years / Specialization		PhD / 2001 / Biological Oceanography M.S. / 1997 / Biological Oceanography B.A. / 1989 / Chemistry	
Active registration number / state / expiration date		NA	
Year registered	N/A	Discipline	
Contract role(s) / brief description of responsibilities		**Permitting**	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
06/21-07/23	**I-10 Lake Charles Calcasieu River Bridge Project, Public-Private Partnership Support, Calcasieu Parish, LA (DOTD) -** Provided environmental support during development of specific Technical Provisions (TPs) associated with the procurement of construction services for a replacement of the existing aging bridge. TPs included Environmental, Socioeconomics and Environmental Justice, Railroads, Demolition, and Traffic.
03/14-Present	**Commonwealth LNG LLC, LNG Export Terminal, Federal Energy Regulatory Commission (FERC) National Environmental Policy Act (NEPA) Environmental Report (ER) and Federal/State/Local Permitting, Louisiana -** Managed early support (e.g., fatal-flaw analysis, regulatory review), field survey (wetlands, protected-species habitat, cultural resources), agency consultation, preparation of FERC ER in support of Natural Gas Act (NGA) §3 Application and applications for U.S. Army Corps of Engineers (USACE) §404/§10/§408 permit, Louisiana Department of Natural Resources (LDNR) Coastal Use Permit (CUP), Louisiana Department of Environmental Quality (LDEQ) Water Quality Certification (WQC), National Marine Fisheries Service (NMFS) and U.S. Fish & Wildlife Service (USFWS) Section 7 clearances, and other federal/state/local permits for this LNG export terminal (Docket No. PF17-8, CP19-502).
05/14-06/16; 01/19-Present	**Trunkline LNG, Lake Charles LNG Export Terminal, FERC NEPA ER and Federal/State/Local Permitting, Louisiana.** Managed post-submittal support of the FERC ER and §3/§7(c) Application and applications for USACE §404/§10/§408, LDNR CUP, LDEQ WQC, NMFS/USFWS Section 7 clearances, and other federal/state/local permits for this LNG export terminal (Docket Nos. CP14-119, CP14-120, and CP14-122). Completed implementation plan; received limited notice to proceed. Managed extension of federal/state/local permits and clearances. Louisiana Department of Wildlife and Fisheries (LDWF) Scenic River permit planned. Extensive wetlands in difficult environments (e.g., wetland mosaics) required close coordination with resource agencies.
05/160-03/19	**Driftwood LNG Project, FERC Third-Party NEPA Environmental Impact Statement (EIS), Louisiana.** As Project Manager, provided third-party support of the FERC in the preparation of an EIS (Docket No. PF16-6, CP17-117, 118) for a proposed LNG liquefaction and export facility and natural gas pipeline project on the Calcasieu Ship Channel. The proposed project would consist of a 27.6-MTPA LNG liquefaction facility, berths for three LNG carriers, a material offloading facility, and an approximately 96-mile-long, 48-, 42-, and 36-inch-diameter pipeline to transport natural gas from existing pipeline systems to the LNG terminal facilities. Construction began in 2022.
02/19-07/21	**Southern Natural Gas Company/Kinder Morgan, Evangeline Pass Expansion Project, FERC NEPA ER and Federal/State/Local Permitting, Mississippi/Louisiana.** Supported preparation of FERC NEPA ER for §7(c) NGA Application, agency consultations, and applications for federal/state permits for a new compressor station (Rose Hill, MS) and modification of 17 aboveground facilities in Mississippi and Louisiana, including within the Louisiana coastal zone (Docket No. CP20-51-000).
01/07-10/11	**Chevron Products Company, USACE/MDMR Wetlands Permitting, Pascagoula, Mississippi. Wetlands and dredging permitting** discipline lead for Chevron's $1.3B Pascagoula Base Oil Project. USACE §404 permit, Mississippi Department of Marine Resources (MDMR) CUP, and Mississippi Department of Environmental Quality (MDEQ)WQC were issued within 6 months. Prepared a Biological Assessment and received clearance for impacts to Gulf sturgeon critical habitat.

02/17-Present	**Energy World USA, Fourchon LNG Export Terminal, FERC NEPA ER and Federal/State/Local Permitting, Louisiana.** Managing FERC ER for project's NGA Section 3 Application. Supporting federal, state, and local permitting. Project is a unique, elevated platform design in Port Fourchon's industrial setting. Docket No. PF17-9-000.
02/14-07/16	**Spectra Energy, Loudon Expansion Project, FERC NEPA ER and Federal/State/Local Permitting, Tennessee.** Managed preparation of FERC ER for NGA §7(c) Application, agency consultations, and applications for Nationwide Permit No. 12 (NWP-12) and other federal/state/local permits for a 10-mile pipeline project (Docket No. CP15-91). Supported the preparation of an Environmental Assessment (EA) with the Tennessee Valley Authority (TVA) as a cooperating agency. Addressed protected bat species issues though agency consultation.
05/06-11/06	**Gulfstream Pipeline Company, LLC, FERC NEPA ER and Federal/State/Local Permitting, Tampa Bay, Florida.** Managed the preparation/submittal of a NEPA ER and applications for a Florida Department of Environmental Protection Environmental Resource Permit, Tampa Port Authority Standard Work Permit and Public Easement Permit, and Pinellas County permit, for an 18-mile offshore natural-gas pipeline in Tampa Bay, Florida.
02/06-03/09	**Southern Natural Gas, NEPA and Permitting Support, Coastal Georgia.** SNG's Cypress Pipeline Project is a 167-mile natural gas pipeline through pine flatwoods, herbaceous marsh, and estuarine environments of coastal Georgia. Assisted with wetland delineation and NEPA Environmental Report. Technical support of experimental design and analysis for post-construction wetland monitoring study that documented the efficacy of the natural-revegetation method (via topsoiling in wetlands vs. labor-intensive planting methods).
05/12-12/14	**USACE, Third-Party EIS for the Glades Reservoir. Hall County, Georgia.** Analysis of NEPA-required reasonable alternatives and USACE §404(b)(1) practicable alternatives for water-supply sources and reservoir sites. Coordination and organization of existing-conditions chapter of EIS, under direction of the USACE, Savannah District, to evaluate a pumped storage reservoir located near the Chattahoochee River and Lake Lanier. Scoping outreach included the States of Georgia, Alabama, and Florida.
01/04-05/05	**Southern Natural Gas, NEPA and Permitting support, North Georgia.** Prepared Resource Reports 2, Water Use and Quality; 3, Fish, Wildlife, and Vegetation; and 7, Soils, for FERC's NEPA Environmental Report. Conducted wetland and waterbody delineation and threatened-and-endangered species habitat surveys and prepared the Wetland/Waterbody Delineation Report for Southern Natural Gas' (SNG's) Triangle Pipeline-Looping Project in north Georgia.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**Alie Nicotera**	Years of experience with this employer	2
Title	Staff Scientist/Biologist	Years of experience with other employer(s)	13
Degree(s) / Years / Specialization		B.S. / 2010 / Natural Resource Ecology and Management: Wildlife Ecology	
Active registration number / state / expiration date		N/A	
Year registered	N/A	Discipline	N/A
Contract role(s) / brief description of responsibilities		**Environmental and Permitting**	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
06/11-08/22	**National Environmental Policy Act -** NEPA auditor on Community Development Block Grant (CDBG) and Federal Emergency Management Agency (FEMA) funded projects conducting the completion of Categorical Exclusions, Statutory Assessment level reviews, and Environmental Assessment level reviews of over 50 projects for the Louisiana Office of Community Development, the City of New Orleans, and the Puerto Rico Department of Housing, including roadway improvements, infrastructure improvements, greenspace improvements, institutional improvements, and historic property redevelopments.
03/13-12/17	**Site Selection Services for Fertilizer Company in Carville and Edgard, LA -** Conducted wetland determinations, consultation, and site selection assessments for multiple facilities along the Mississippi River Basin, including a 2,181-acre property in Carville, LA and a 956-acre property in Edgard, LA. Most assessments led to the development of U.S. Army Corps of Engineers (USACE) Permit Applications and Louisiana Department of Natural Resources (LDNR) Coastal Use Permitting, along with compensatory mitigation plans to offset wetland and levee board permitting.
01/17-11/18	**Boardwalk Louisiana Midstream, Pipeline Delineation and Permitting in Union, LA -** Conducted a wetland delineation and submitted 404/10 permit application for the installation and maintenance of an approximate 4.44-mile long 8-inch ethylene pipeline to provide an alternative ethylene source to the existing production facility. The permitting efforts included a 408 permit for an 8-inch pipeline installed via Horizontal Directional Drilling (HDD) underneath the Mississippi River, near river mile 166, near Union, Louisiana, within Saint James Parish.
01/17-12/20	**Louisiana Office of Community Development, National Disaster Resilience Program for Isles de Jean Charles Resettlement in Gray, LA -** Performed a number of studies and impact statements for the resettlement of an entire Indian village in south Louisiana. Specifically, conducting wetland delineation field work and the joint permitting with the USACE and LDNR for impacts at the 500-acre site.
06/18-08/22	**Storage Terminal, Pipeline Delineation, Permitting, and Mitigation Planning in Norco, LA** - Conducted wetland determination for 7-mile-long pipeline right-of-way in St. Charles Parish, LA. Created a mitigation replanting plan for temporary workspace along the pipeline and aided in other permitting tasks. Developed a mitigation/restoration plan to offset temporary wetland impacts from the installation of a pipeline. The company wanted to restore as much of the natural habitat as possible, so a plan was developed based on guidance provided by the LDNR. The plan included the replanting of saplings at on a grid with percentages of specific species represented to restore the area to a high functioning forested wetland. LDNR reviewed and approved the plan.
01/19-08/22	**Grain Terminal, Delineation and Permitting in Wallace, LA -** Conducted wetland delineation and Phase I ESA of agriculture land for the purpose of development as a grain terminal. Aided with Section 404/10 permitting of the facility and dock at the proposed location and aided with the public comment process throughout the permitting and aided with levee board permitting.
08/22-Present	**Confidential Client, Environmental Services in Pope County, AR** – Performed desktop environmental review, wetland delineation survey, threatened and endangered species habitat survey, preparation of wetland delineation and threatened and endangered species reports, request for a JD, and conducted meetings with the USACE Little Rock District in preparation of submittal of a permit application.

04/23-Present	**Confidential Client, Environmental Services, Various Parishes, LA -** Managed environmental services for multiple solar projects in Louisiana: • 2,465-acre site in Morehouse Parish, Louisiana • 1,477-acre site in Lafayette Parish, Louisiana • 3,268-acre site in Sabine Parish, Louisiana • 1,939-acre site in Webster Parish, Louisiana • 2,173-acre site in Natchitoches Parish, Louisiana The scope of work consisted of performing desktop wetland reviews, wetland delineation field surveys, and preparation of wetland delineation reports. Some projects included wetland delineations accompanied by a threatened and endangered species habitat assessment and report. Additional tasks include preparation of requests for JD, permit requests, desktop cultural resources reviews and memorandum, and permit matrices. Projects include coordination with multiple USACE Districts including as New Orleans, Vicksburg, and Forth Worth.
12/23-Present	**Chevron Products Company, Wetland Delineation Update for Future Permitting, Pascagoula, Mississippi.** In order to support future permitting, a wetland delineation of the full Chevron facility was conducted prior to a submittal of a JD.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**Michael Schrepfer**	Years of experience with this employer	18.5
Title	Inspection Team Leader / Practice Safety Leader	Years of experience with other employer(s)	15
Degree(s) / Years / Specialization		M.E. / 1998 / Coastal Engineering B.S. / 1990 / Ocean Engineering	
Active registration number / state / expiration date		N/A	
Year registered	N/A	Discipline	**Other Pertinent Training / Certifications** FHWA / NHI #130055 - Safety Inspection of In-Service Bridges, 1994 FHWA / NHI #130053 – Bridge Inspection Refresher Training, 2019 FHWA / NHI #130078 – Fracture Critical Inspection Techniques for Steel Bridges, 2009 FHWA / NHI #130092 – Fundamentals of LRFR for Bridge Superstructures, 2012 FHWA / NHI #130110 – Tunnel Safety Inspection, 2017 (Refresher 2021) LADOTD Movable Bridge Inspection Workshop, 2012 LADOTD Maintenance and Rehabilitation of Historic Bridges, 2016 ATSSA - Traffic Control Supervisor, 2020
Contract role(s) / brief description of responsibilities			**Bridge Inspection Task Leader** Mr. Schrepfer possesses 25 years of experience and progressive responsibility with the performance of a wide variety of above and underwater facility inspections throughout the United States and in overseas locations that have included waterfront structures, bridges and military facilities. The types of bridges he has inspected consist of concrete and masonry arches, simply supported and continuous concrete, steel and timber girder, steel trusses, fracture critical, and movable. Over the course of conducting his work, Michael has operated a wide range of equipment including digital photography and video, various sized watercraft, commercial diving equipment, non-destructive testing equipment, bucket trucks and Snoopers, and fathometers.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
11/21-01/22	**S.P. No. 44-17264; H.011965.5, LA 47 over IWGO, Bridge Rehabilitation, New Orleans, LA (DOTD) –** Senior team leader performing the bridge cleaning/washing inspection for the rehabilitation design of this tied arch/deck truss bridge. He led the cleaning operations and subs with use of manlift, platform truck, snooper truck, and safety boat. He supervised traffic control, safety operations, and wrote the inspection and cleaning reports.
02/16-12/19	**44-4920 (H.009859.5), Complex Load Rating and Inspection, Statewide, LA (DOTD) –** Senior team leader for the load rating inspections of **15 complex truss and moveable bridges** over major waterways. The bridges included the steel tied arch truss bridge LA 47 over IWGO, riveted plate girder and deck truss Riverbound Expressway (US 90B), and **5 movable bridges:** Intracoastal Waterway Bridge at Ellenders (vertical lift), LA 654 over Bayou LaFourche (vertical lift), LA 657 over Bayou LaFourche (vertical lift), LA 319 Intracoastal Canal Bridge (bascule), LA 83 over Patout Bayou (swing), Local Road over Bayou Terrebonne (swing), Bridge over Bayou Teche at Adeline (swing). He planned, coordinated with state and local agencies (DOTD, USCG, LSP) and managed traffic control, special aerial access, and rope access teams; developed the safety plans, and led the inspection teams. The inspections involved the use of special access equipment such as manlifts, snoopers, boats, confined space entry, as well as coordination for bridge openings with marine traffic during the inspections. He directed the document search and collection of as-built plans, bridge inspection reports, and other historical documents in hard copy and electronic format. He managed the project accounting and subcontractors. He performed **QA/QC** of the inspection reports.
03/16 - 12/21	**Contract Nos. 4400005960 and H.013321 Complex Bridge Inspections (DOTD) –** Senior team Leader for the in-depth inspections of complex bridges that included **trusses and movable bridges**. These bridges included: I-10 Mississippi River and I-10 Calcasieu River bridges (cantilever and deck truss), I-310 Luling (cable stayed/box girder) and US 90 over IHNC, Danziger Bridge (**vertical lift**), LA 1 over Company Canal (**vertical lift**), LA 23 over ICCW

	(**vertical lift**), LA 39 Claiborne over IHNC (**vertical lift through truss**). He led inspection teams during the inspections and operated various equipment including a bucket truck, manlifts, bucket boat and snooper. He wrote the inspection reports in DOTD AssetWise format, developed element level quantities and condition states, and SI&A data. He searched for bridge plans and inspection reports from the DOTD Plans and Microfilm Rooms, DOTD AssetWise system, and in person at DOTD Bridge Maintenance. He developed project safety plans and inspection schedules for multiple inspection teams. He coordinated and worked directly with 8th Coast Guard District to obtain permits and notice to mariners for multiple bridge inspection throughout southern Louisiana. Performed all traffic control coordination, reviewed and submitted traffic control plans, and worked directly with DOTD Districts to obtain permits and provide notice to the traveling public for bridge inspections under multiple task orders.
09/14-12/14; 01/15-03/15	**Movable Bridge Inspections, LaFourche Parish, LA –** Senior team leader for the special above and underwater inspections of two **pontoon bridges** to develop repair and maintenance plans and documents. He planned the logistics, scheduling, and inspection operations. He led the field inspections and performed the diving, inspection report writing and repair recommendations.
12/12-04/13	**S.P. No. 002562.5 – Bayou LaLoutre Bridge Rehabilitation, St. Bernard Parish, LA (DOTD)** – Senior Team Leader for the **special rehabilitation inspection** of this **vertical lift bridge**. He planned, coordinated with state and local agencies and subcontractors (including traffic control), and led the inspection team. The inspection involved the use of special access equipment such as manlifts and coordination for bridge openings with marine traffic during the inspection. He performed ultrasonic NDT of the primary steel members and thermal imaging of the concrete deck. He directed the search and collection of as-built plans, bridge inspection reports, and other historical documents in electronic format located at DOTD, Section 51 Bridge Maintenance office, and DOTD General Files. Performed coordination and worked directly with the 8th Coast Guard District to provide notice to mariners. Inspected and corrected traffic control patterns and operations daily during the inspections.
08/09-11/09	**44-0641 (700-99-0429) / H.005330.5 (701-65-1215) Little Caillou and Bayou LaCarpe Bridges, Houma, LA (DOTD) –** Senior Team Leader for the **special rehabilitation inspections of two vertical lift bridges**. He planned, coordinated with state and local agencies and subcontractors (including traffic control), and led the inspection teams and in-house traffic control operations. The inspection involved the use of special access equipment such as manlifts and coordination for bridge openings with marine traffic during the inspection. He managed the project safety, accounting and subcontracts. He performed all traffic control coordination, reviewed and submitted traffic control plans, and worked directly with DOTD Districts to provide notice to the traveling public. He inspected and corrected traffic control patterns and operations daily during the bridge inspection operations. He directed document searches and collection of as-built plans, inspection reports, historical documents on DOTD databases, Section 51 office, and General Files.
05/12-05/16	**Contract No. 4400002184, Bridge Preventative Maintenance Program (DOTD) -** Senior Inspection Team Leader for the special rehabilitation inspections of 26 highway bridges to develop maintenance repair plans. He planned and coordinated the inspections which included traffic control and special access equipment. He wrote the inspection reports and recommended bridge repairs. He directed the search and collection of as-built plans, bridge inspection reports, and other historical documents located on the DOTD database, Section 51 Bridge Maintenance office, and DOTD General Files. Performed all traffic control coordination, reviewed and submitted traffic control plans, and worked directly with DOTD Districts to obtain permits. Inspected and corrected traffic control patterns and operations daily during the bridge inspection operations.
06/11-06/12	**S.P. No. 700-24-0031, US 190 Mississippi River Bridge Rehabilitation (DOTD) –** Senior Team Leader for the special rehabilitation inspection of this 12,200 feet long bridge with five-span cantilever steel truss. He planned, coordinated with state and local agencies and subcontractors (including traffic control), and led the multiple inspection teams. The inspection involved the use of special access equipment such as manlifts and technical climbing. He coordinated and worked directly with the 8th Coast Guard District to obtain notice to mariners for this bridge inspection and rehabilitation project. He inspected and corrected traffic control patterns and operations daily during the bridge inspection operations.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**Lisa Brown**	Years of experience with this employer	2
Title	Bridge Engineer	Years of experience with other employer(s)	8
Degree(s) / Years / Specialization		M.S. / 2021 / Civil Engineering B.S. / 2019 / Civil Engineering	
Active registration number / state / expiration date		EIT 20-218-55	
Year registered	N/A	Discipline	**Other Pertinent Training / Certifications** FHWA / NHI - Safety Inspection of In-Service Bridges, 2022 SPRAT Rope Access Technician - Level III, 2023
Contract role(s) / brief description of responsibilities			**Bridge Inspection / Load Rating** Ms. Brown has over five years of bridge inspection experience, including Fracture Critical members. She is an expert climber and has served as an instructor for over 14 years in the techniques of rappelling, top-rope belaying, lead climbing, lead belaying, and anchor building.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
07/22-07/22	**Contract No. 44-13321; H.09730.5 Retainer Contract for In-depth Bridge Inspections (On-System), Statewide (DOTD)** – Bridge inspector responsible for the routine and element level inspection of the I-10 over Mississippi River (**truss bridge)**. She inspected the steel superstructure (girders, floor beams, stringers, bearings) using rope access climbing techniques.
04/22-05/22	**US 50, Blennerhassett Island Bridge, Parkersburg, WV** – Bridge Inspector while using aerial access equipment and rope access techniques to inspect the superstructure main span (tied arch) and approach span (steel girder) components, along with bearings and piers.
04/22	**Cardinal Operating Company, Barge Unloader Bridge Inspections** – Bridge inspector during the performance of in-depth inspections for two access bridges on the Cardinal Power Plant property. The Barge Unloader 1 is a two girder, single span rolled beam bridge with a steel grid deck. The Barge Unloader 2 is a 3-span rolled steel beam bridge with a concrete deck, stub abutments and pile bent piers. Both bridges extended to concrete filled piers on the Ohio River. Due to access limitations and the bridges being load posted, rope access was required for these inspections.
05/22-Present	**Ohio Department of Transportation - District 12, CUY-77-1121, Cuyahoga County, OH -** This approximately $70 million project involves the design of multiple retaining walls, two bridge replacements and widening of 7 miles of I-77 in an urban environment. Ms. Brown is responsible for the detailing and design of retaining walls and bridges.
05/17-08/17 05/18-08/18 05/19-08/19	Bridge Inspector while using rope access techniques to climb and inspect the following bridges: • Prescott and Yuma, Arizona – 15 structures including culverts, steel truss, steel beam, and concrete beam bridges. • Jacksonville, FL – Isaiah David Hart Bridge, US 1 Alt. and SR 228 • Westfield, MA – Westfield River Bridge, I-90 • Cincinnati, OH – I-71 at Reading Road • Oklahoma, statewide – 40 bridges including concrete beam, steel truss, and timber. • McKean, PA – Kinzua Bridge (steel truss rail bridge) Wrote inspection reports and developed sketches for each bridge. Also operated aerial access equipment (bucket truck and scissor lift).
05/14 – 01/22	**Rope Access Technician and Training/Staging Manager - Over The Edge Global -** Facilitated communication between a Non-Profit, building managers, and the Site Safety Supervisor; inspected gear kits while managing the opening and closing inventory; supervised the rig training area and assisted in main rappel rigging from a building roof; and geared and trained up to 90 rappelling participants a day.

05/23-06/23	**ODOT District 8, HAM-71-0000L & HAM-75-0022L, Hamilton County, OH -** Completed In-depth and fracture critical (MSTM) inspections on the bridges carrying I-75 and I-71 traffic in downtown Cincinnati. As a result of her confined space certification, she functioned as the entrant and inspector. The inspection included the interior of steel pier caps. She operated the bucket truck as well as the telescopic boom lift.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**Orien Butler, P.E.**	Years of experience with this employer	3
Title	Electrical Engineer	Years of experience with other employer(s)	14
Degree(s) / Years / Specialization		B.S. / 2003 / Electrical Engineering	
Active registration number / state / expiration date		#PE.0038553 / LA / 09-30-2025	
Year registered	2013	Discipline	Electrical and Computer Engineering
Contract role(s) / brief description of responsibilities		**Lighting Design** Mr. Butler brings over 17 years of experience related to power systems for transportation infrastructure, pump stations, security/access control systems, fire alarm/fire protection systems, and industrial and commercial lighting. Expertise includes feasibility studies, development of scope and master planning, interfacing with multiple parties through program and project management, submittal review and processing of requests for information, inspections and issuing of punch-lists during the construction phase of projects, and project closeout.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
07/21-02/22	**SP # H.011965, Contract No. 4400020156, LA 47: IWGO Bridge Rehabilitation (HBI), Orleans Parish, LA (DOTD) –** Project Electrical Engineer for the development of final electrical plans, specifications and special provisions, Engineer's Opinion of Probable Construction Cost (OPC), and engineering calculations for the replacement of navigation lighting system and the aerial beacon lighting on the existing bridge. Included all boxes (pull boxes, junction boxes, etc.), conduit, wiring, supports, expansion devices, navigational lights, etc. The navigation lights were replaced with LED lights. The existing Aerial obstruction lights were reconnected to the same power source as the navigational lighting system. Services included extending navigation lighting system access, platforms, ladders, etc.
04/18 – 12/19	**SP# H.001234, Retainer Contract for Bridge Preservation Contract No. 4400002791, Port Allen Canal Bridge -** LA 1 Over ICWW, West Baton Rouge Parish, LA - Launched a field investigation and designed the replacement LA-1/ICWW bridge area lighting, navigational lighting and power system. The design included the demolition of existing roadway, Interstate, boat launch area and navigational lighting (including Low Mast, High Mast and Secondary Power Controllers). Coordination with the power company, Corps of Engineers (boat launch traffic loop counter), Port of Baton Rouge (Center channel warning), Coast Guard (Navigational Lighting), FAA offices (to obtain FAA clearance report for the installation of the new High Mast Lighting), DOTD (for the Interstate lighting requirements and the existing CCTV camera tower), and West Baton Rouge Parish (for roadway and Interstate lighting construction phasing) was key to develop the appropriate design activities for the project. Later, the design packages had to be strategically divided into Phase 1 and 2 to facilitate scheduled funding**.**
01/19 – 02/19	**SP# H.011111, I-49 Maintenance & Aesthetic Lighting Installation Inspection Shreveport, LA –** Inspection and review of condition of electrical power system and all related components. Performed observation/oversight of preventive maintenance tests and generation of report with analysis and suggestions for remedy of any problems discovered during inspection.
10/18 – 5/20	**GLX Rail Car Extension Project (STV) –**The Project extended existing light rail transit service Green Line for Massachusetts Bay Transit Authority (MBTA), with associated infrastructure and support facilities. Oversaw Electrical/Telecom, FA Specification and Design aspects project-wide, QA/QC for a number of projects for STV electrical, and later oversaw electrical design for College Station (using Revit BIM software).
06/18 – 11/18	**SP# H.009730.5, LA 39 Judge Seeber Bridge Over Inner Harbor Canal Inspection New Orleans, LA –** Inspection and review of newly constructed bridge electrical system, navigational lighting and function of aesthetic lighting, controls and all related components. Observation/oversight of acceptance tests and generation of report with analysis and suggestions for remedy of any problems discovered during inspection.
08/16 - 05/18	**SP# H.012404, I-10 at LA-182 Interchange Ramp Improvements, Lafayette, LA –** Designed the ramp and interchange lighting system for a LADOTD interchange. Designed low mast lighting for modified ramp and interchange roadway to meet required illumination levels at the interchange.

11/16 - 05/18	**SP# H.012422, I-110 at Terrace Avenue, Baton Rouge, LA** - Designed the lighting system for a new $8.8 million ramp project connecting I-110 to Terrace Avenue at Baton Rouge. Designed low mast lighting to meet required illumination levels on the ramp and underpass lighting at the interchange.
01/17-05/18	**SP# H.012874, I-55/LA-22 Interchange, Tangipahoa Parish, LA** – Designed the lighting system for an interchange in Tangipahoa Parish, LA. Designed high mast and low mast LED lighting to meet required illumination levels at the interchange.
08/16-05/18	**SP# H.012424, I-110 at North to Plank Road, Baton Rouge, LA –** Designed low mast lighting to meet required illumination levels on the interstate. Included the performance of a photometric evaluation of HPS luminaires as well as an assessment of the compatibility for future LED luminaire installation.
01/13-05/15	**SP# 829-32-0010/H.008145, LA-1 Relocated, Golden Meadow to Port Fourchon, LA** - The LA 1 Relocated project provides an 18-mile, fully access controlled elevated highway on a new location between Golden Meadow (LA 3235) and Port Fourchon (LA 3090). Performed the lighting design for Phase 2A, B, and C which involved approximately 9 miles of two-lane, elevated highway from Leesville to Golden Meadow (LA 3235). The scope of work also included the design of electrical and controls infrastructure for ITS equipment and new toll booths along the route.
08/14-05/15	**H.010882, Harvey Canal Tunnel Renovation, Harvey, LA** – Responsible for the complete electrical rehabilitation of an existing DOTD bridge facility. Designed new lighting in the tunnel as well as interior equipment and personnel rooms, panels, switchboards and standby power systems (UPS and Generator), a new fire alarm and CCTV system.
12/06-11/13	**SP# 450-15-0103, Interstate Highway Lighting (DOTD) at the I-10, Causeway Blvd. Interchange, Jefferson Parish, LA** – Designed the lighting system for this $35.6 million project involving the addition of five dedicated ramps at the I-10/Causeway Boulevard interchange. Designed photocell cabinet controlled low mast and high mast lighting to meet required illumination levels, including new loop and ramp structures.
12/06-08/11	**SP# 450-15-0099/ H.003064, I-10 Widening, Veterans Blvd. to Clearview Parkway, Metairie, LA** – Designed the lighting system for a widening of I-10 from Veterans Boulevard to Clearview Parkway. Designed photocell cabinet controlled low mast and high mast lighting to meet required illumination levels, including new loop and ramp structures).
01/12-03/14	**SP# 700-99-0429, Bayou La Loutre Bridge Rehabilitation, Yscloskey, LA** – Responsible for the complete electrical rehabilitation of an existing DOTD movable bridge facility. Included the design of new lighting, panels, switchboards, and control system for the bridge system (including the wound rotor motor used for movable bridge operation). The design was expanded to include a new Operator House structure (2-story) which was requested by the DOTD.
12/06-06/08	**SP# 450-11-0048, I-10, LA 30 and LA 44 Interchanges, Gonzales, LA** – Designed the lighting system for two LADOTD interchanges in Gonzales, LA. Designed photocell cabinet controlled high mast lighting to meet required illumination levels for the I-10 on and off ramps at both LA 30 and LA 44.
08/07-02/09	**SP# 454-03-0069, I-12/Airport Road Interchange, Hammond, LA** – Designed the lighting system for a LADOTD interchange in Hammond, LA. Included the design of photocell cabinet controlled low mast lighting to meet required illumination levels at the I-12 on and off ramps at Airport Road.

16. Staff Experience:

Firm employed by	TRC Engineers, Inc.		
Name	**John Mekari, P.E.**	Years of experience with this employer	9
Title	Senior Electrical Engineer	Years of experience with other employer(s)	25
Degree(s) / Years / Specialization		B.S. / 1987 / Electrical Engineering	
Active registration number / state / expiration date		#PE.0025415 / LA / 09-30-2025	
Year registered	1993	Discipline	Electrical Engineering
Contract role(s) / brief description of responsibilities		**Lighting Design** Offering more than 34 years of experience in the electrical engineering field, Mr. Mekari's background includes responsibility for the preparation of project budgets and schedules, management of production to meet budget and schedules, management of quality control, and advisor to production staff. Responsibilities have included his preparation of capital cost estimates, conceptual designs, work scope definitions, and detailed design engineering complying with the latest federal and local laws and regulations including the Occupational Safety and Health Administration (OSHA), National Fire Protection Association (NFPA), National Electrical Code (NEC), National Electrical Safety Code (NESC), and Federal Aviation Administration (FAA), etc.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
07/21-02/22	**SP # H.011965, Contract No. 4400020156, LA 47: IWGO Bridge Rehabilitation (HBI), Orleans Parish, LA (DOTD)** – Electrical Task Manager for the development of final electrical plans, specifications and special provisions, Engineer's Opinion of Probable Construction Cost (OPC), and engineering calculations for the replacement of navigation lighting system and the aerial beacon lighting on the existing bridge. Included all boxes (pull boxes, junction boxes, etc.), conduit, wiring, supports, expansion devices, navigational lights, etc. The navigation lights were replaced with LED lights. The existing Aerial obstruction lights were reconnected to the same power source as the navigational lighting system. Services included extending navigation lighting system access, platforms, ladders, etc.
06/15-10/20	**SP#H.001234, Retainer Contract for Bridge Preservation Contract No. 4400002791, Port Allen Canal Bridge - LA 1 Over ICWW, West Baton Rouge Parish, LA (DOTD)** - Launched a field investigation and designed the replacement LA-1/ICWW bridge area lighting, navigational lighting and power system. The design included demolition of existing roadway, Interstate, boat launch area and **navigational lighting** (including low mast, high mast and secondary power controllers). Coordination with the power company, Corps of Engineers (boat launch traffic loop counter), Port of Baton Rouge (center channel warning), Coast Guard (navigational lighting), and FAA offices (to obtain FAA clearance report for the installation of the new high mast lighting), DOTD (for the Interstate lighting requirements and the existing CCTV camera tower), and West Baton Rouge Parish (for roadway and Interstate lighting construction phasing) was key to develop the appropriate design activities for the project.
06/17-08/17	**SP# H.009730.5, In-Depth Bridge Inspection LA 1 Lockport, Route LA 1, Lafourche Parish, LA (DOTD)** - Performed an In-Depth Electrical Inspection for the vertical lift Lockport Movable bridge in conformance with the AASHTO Manual for Bridge Evaluation (MBE), National Bridge Inspection Standards (NBIS), Bridge Inspectors Reference Manual (current edition), and Louisiana DOTD Maintenance Directives, and Pontis Inspection Manual, Part 3 Inspection of Movable Bridges, Chapter 8 Electrical Systems. This resulted in the issuance of a report and rehabilitation recommendations for the findings.
09/13-12/13; 01/18-12/18	**SP# H.003495 & H.011111, I-49 & I-220 Interchange (Phases 1 and 2), Caddo Parish, LA (DOTD) –** Assumed the role of QA Engineer for all lighting work associated with the project. Checked the electrical systems design serving maintenance and decorative lighting for five (5) bridges at two highway intersections. Maintenance lighting was provided within the girder's interior space at three bridges up to 3,000 ft. in span. Bridge exterior decorative lighting used color changing, digitally controlled RGB LED luminaries and programmable lighting controllers. Lighting systems were developed for 2 alternative girder designs: (1) segmental concrete and (2) steel framing. Electrical design included plans, elevations, lighting control schematics, conduit and circuit schedules, installation details, and cost estimate for both alternative bridge designs. Answered RFI questions and offered conflict resolutions to the field contractor during the construction phase.

12/05-11/13	**SP# 450-15-0103, Interstate Highway Lighting (DOTD) at the I-10, Causeway Blvd. Interchange in Jefferson Parish** - Project Engineer for a Subconsultant. This project was developed under multiple phases, one for each approach. Assisted in the design of power distribution, photometric design overlapping multiple elevations and coordination between City Ordinances and DOTD lighting requirements. Luminaires were selected accordingly and installed meeting the photometric requirements and phased properly throughout the life of the project. Installation details and plans, specification of equipment, and construction cost estimation were developed. Conducted periodic construction inspection throughout the various construction phases of the project.
01/12-10/13	**SP# 700-99-0429, Bridge Preservation Retainer Contract, Bayou LaLoutre in St. Bernard Parish** - Worked for the Prime Consultant. Conducted electrical inspections of the movable bridge facility and made recommendations for power and lighting system rehabilitation to include replacement of traffic gates**, navigational lights**, traffic signals, emergency power generation, the operator house, and a utility building. Construction cost estimation was provided.
03/10- 03/11	**SP# 700-99-0486, Operator House – Houma Navigation Canal Bridge, Terrebonne Parish, LA** – Performed an inspection of the existing facility and recommended/designed the needed rehabilitation involving the electrical power and HVAC system for the Operator House. Issued construction documents which included power and lighting plans, details, and equipment specification.
12/05-08/11	**SP# 700-99-0429, Interstate 10, Veterans Boulevard to Clearview Parkway, Metairie, LA** - Supervised and checked the design of the power and lighting for this segment of the road. This included photometric calculations, luminaire selection and spacing, power distribution, installation details and plans, specification of equipment, and construction cost estimation.
04/07-09/08	**SP# 700-92-0016, Florida Avenue Bridge over the Inner Harbor Navigational Canal (IHNC) in Orleans Parish** - Project Engineer for a Subconsultant. Supervised and checked the design of the power and lighting for this segment of the road. This included photometric calculations, luminaire selection and spacing, power distribution, installation details and plans, specification of equipment, and construction cost estimation.
01/05-12/06	**SP# 700-99-0372, Indefinite Delivery/Indefinite Quantity (ID/IQ)** – Task Order (TO) contract for the rehabilitation and upgrade of electrical infrastructure in buildings occupied by the DOTD. Among the buildings was the materials laboratory in Baton Rouge. Project Manager for the Prime Consultant. Assisted in developing the project scope by inspecting the facilities first. The following phase was to develop the plans and details to rehab this multiple story building facility electrically (power and lighting), and to replace the HVAC with a more up-to-date central system. The constructability of the system was also important since it was to remain occupied during the construction phases. Developed construction cost estimates, selected equipment, developed construction plans and details, and performed periodic construction inspection until the final stages.
12/05-11/06	**SP# 700-36-0180 / 700-52-0160, Interstate Highway Lighting (DOTD)** - Engineering and design of the Electric Power Distribution and Lighting for the 18-mile segment of Interstate I-10 elevated above the flood level of Lake Ponchartrain. Worked for a Subconsultant. This segment of the highway was damaged by Hurricane Katrina.

16. Staff Experience:

Firm employed by	**HDR Engineering, Inc.**		
Name	**Wesley D. Jacobs Sr., PE**	Years of experience with this employer	9
Title	Associate VP/Hydraulic Structures Program Mgr.	Years of experience with other employer(s)	17
Degree(s) / Years / Specialization		B.S. / 1998 / Civil Engineering	
Active registration number / state / expiration date		#PE.0030774 / LA / 09-30-2024	
Year registered	2003	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		**Senior Bridge Engineer - Satisfies MPR #11** Mr. Jacobs has over 25 years of experience in civil and structural design/inspection, including dams, bridges (high-level river crossings, movable, overpasses, rail bridges with common elements such as complex geometry, PPC girder, reinforced concrete, steel plate girder, curved steel plate girders, pier design, cofferdams, column and pile bent design), and sign structures.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
11/22-Present	**LADOTD, Statewide Bridge Preservation IDIQ, Statewide, LA -** Currently serving as the HDR Project Manager and Engineering Lead for this contract. Task orders have included the inspection, rehab design and load rating for the LA 577 precast concrete girder overpass in North Louisiana that was damaged by a dump truck collision. The scope included emergency services for inspection, load rating, and PS&E for demolition of the existing span and re-design of a new span.
11/19-Present	**LADOTD, Statewide In-Depth Complex Bridge Inspection IDIQ, Statewide, LA -** Serving as the HDR Project Manager and Engineering Lead (sub-consultant) for several task orders involving in-depth, complex bridge (movable and fixed) inspections for vertical lift spans (Jackson St Bridge Alexandria, Teche Bayou, and Loreauville) as well as leading several routine and fracture critical inspections of girder/truss swing spans (US 90 East Pear River, Bayou Liberty, Amite River Port Vincent, Amite River Maurepas, Tchefuncte River Madisonville, Bayou Bonfouca, and Bayou Lacombe) as well as 15 timber trestle and concrete slab span bridges.
02/09-12/10	**USACE/LADOTD, Comite River Diversion Project, LA 19 and CNRR Bridges Baton Rouge, LA -** Bridge Design Lead for Preliminary Design. Project involved the design of twin PPC girder/pile bent bridges for LA 19 and a railroad bridge spanning the channel for the Comite River Diversion. The project was taken through preliminary design and partially into final design before the USACE pulled the project back to complete in-house. Led the design of the LA 19 bridges (skewed 63 foot spans) comprised of AASHTO Type 3 PPC Girders and 30" PPC Pile Bents. Performed QC reviews of the preliminary design of the steel through girder railroad span and substructure.
08/03-07/05	**LADOTD, US 171 South, S.P. No. 025-05-0023, Mansfield, LA -** Engineer-of-Record for twin bridge structures (779 ft and 761 ft respectively) in concentric curves with bobtail and skewed spans crossing the KCS railroad main line for the TIMED program. The spans were comprised of PPC Type 4 and Type 3 girders and reinforced concrete pile bents.
05/10-07/11	**LADOTD, Chef Menteur Bridge Replacement EA, S.P. No. 700-36-0125, Orleans Parish, LA -** Structural Lead for the development of high level (75ft vertical clearance) fixed bridge alternatives for the replacement of a historical swing span bridge in Orleans Parish. The span arrangements were comprised of PPC AASHTO Type 3 (80 ft), BT 78 (130 ft) approach spans with steel composite girders for the main span (200 ft and 270 ft). Conceptual designs were developed for deep river concrete piers with water level footings supported by large diameter PPC cylinder piles.
02/04-04/05	**TXDOT Waco, IH-35 Southbound Frontage Road Connector, Waco, TX -** Engineer-of-Record responsible for the final design of a curved steel plate girder overpass in an urban setting. The bridge was comprised of two continuous steel plate girder units, 360 ft. and 420 ft. respectively. Concrete hammer-head bents founded on drilled shafts were used for the substructure and foundation.
02/10-12/11	**US 75 – Bridge Layouts - TxDOT – Dallas District – Collin County -** Lead Structural Engineer/Engineer of Record for the development of preliminary and final bridge layouts for 5 bridge structures north of Dallas, TX. Three bridges were highway underpasses of the main lanes for US 75 (six lane interstate type system), and two were overpass ramp structures. The bridge layouts were developed using the new Tx prestressed concrete girder shapes (Tx46, 54,

	and 62) supported by multi-column bents and drilled shaft foundations. Phased construction was utilized on one of the underpass bridges along with complex curved and skewed geometry for the ramp bridges
01/10 – 09/12 (Design) 07/13 – 11/15 (Construction)	**S.P. No. 021-01-0004, TxDOT/LADOTD, US 84, Logansport, Sabine River Bridge Replacement, Logansport, LA -** Lead Structural Engineer/Engineer of Record for development of the final design, plans and specifications for two bridge structures (eastbound and westbound) spanning the Sabine River in Logansport, LA using AASHTO-LRFD specifications. The bridges are comprised of the new TX PPC girder shapes (Tx62's and Tx70's) that are similar to Florida Bulb Tee girders. The span lengths range from 120 ft to 160 ft. The substructure is comprised of multi-column reinforced concrete bents with strutted columns at the main channel locations. The bents are supported by drilled shaft foundations.
05/10-10/11	**I-10 Baton Rouge to Lafayette – LADOTD – Design/Build - Intelligent Transp. Systems (ITS)/Traffic Incident Management (TIM) – DMS Sign Structures – Baton Rouge, LA -** Structural lead and engineer of record for the design and analysis of free standing DMS sign pedestals and existing bridge cap extensions for service platforms and access ladders. The Baton Rouge to Lafayette corridor of I-10 has several miles of existing bridge structure. This made mounting walkways and controllers to the existing structure necessary. The concrete caps were extended using drilled and epoxied rebar connections to support galvanized steel service platforms for DMS controller cabinets. The free standing DMS signs were supported by a single steel column founded on single drilled shaft foundations. Construction support was also part of the scope of services as this was a design/build project.
09/10-11/13	**LPV 145 – Bayou Bienvenue Movable Swing Span Bridge - Steel Swing Span - USACE New Orleans District, New Orleans, LA -** Project manager and engineering lead for the development of the preliminary design, final design, plans, and specifications for a 135 ft unequal arm steel swing span structure. The swing span is supported by a reinforced concrete pivot pier with prestressed concrete pile foundations. The approach spans were comprised of reinforced concrete slab spans that tied into an existing limestone access road. The bridge was designed to provide vehicular access to LPV 145 which is a 6 mile isolated levee reach in Chalmette, LA. The bridge was designed and constructed on the protected side of the existing sector gate structure on an offset alignment. The timber guidewall/fender system for the new bridge was designed to tie into the existing system at the sector gate. The bridge was designed LADOTD Bridge Design Manual and AASHTO-LRFD specifications.
06/08-11/09	**Calton Road – Union Pacific RR Overpass - City of Laredo, Laredo, TX. -** Engineer of record for the development of the final designs, plans and specifications for this railroad overpass project using AASHTO-LRFD specifications. The bridge spans Union Pacific RR main lines and spur tracks. The bridge is comprised of steel welded-composite plate girders for a total length of 866 ft, reinforced concrete column bents and drilled shafts and provides the necessary horizontal and vertical clearance required by UPRR
03/02-07/03	**LADOTD, State Route US 165 in Columbia, Ouachita River Bridge, Main Span, Columbia, LA -** Project Engineer supporting the structural design for this $40 million project over the Ouachita River. Designed the main spans, three-span - 630 ft (center span of 250 ft) welded-composite steel plate girders, and deep river concrete pier design for barge impact (aesthetically tapered cap and columns, monolithic shaft wall, pipe pile foundation, cofferdam, and tremie seal).

16. Staff Experience:

Firm employed by	**HDR Engineering, Inc.**		
Name	**Garrick Rose, AICP**	Years of experience with this employer	1
Title	Senior Environmental Project Manager	Years of experience with other employer(s)	25
Degree(s) / Years / Specialization		B.S. / 1991 / Louisiana School for Math, Science, and Art M.A. / 1999 / Urban, Regional and Transportation Planning	
Active registration number / state / expiration date		N/A	
Year registered	Discipline	N/A **Other Pertinent Training / Certifications** DOTD/LTRC - NHI Course No. 142005 - NEPA and Transportation Decision-Making for Project Managers American Institute of Certified Planners	
Contract role(s) / brief description of responsibilities		**Environmental Task Leader – Satisfies MPR#4** Mr. Rose has over 25 years of experience preparing NEPA documentation for transportation projects and is an AICP certified planner. Garrick has authored numerous NEPA studies, prepared purpose and need statements, developed alternatives, identified potential impacts and proposed mitigation, and conducted public involvement activities and interagency coordination and documentation. Garrick has taken the on DOTD projects involving NEPA.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
05/24-Present	**LADOTD, Baton Rouge to New Orleans Inter-City Passenger Rail, LA – NEPA Lead** for a project to develop an approximate 80-mile intercity passenger rail corridor between Baton Rouge and New Orleans. Tasks include FRA and DOTD coordination, research, preparation of class of action (COA) technical memoranda and worksheets, purpose and need statement, scope and statement of work, and environmental documentation for the passenger rail corridor and stations.
05/24-Present	**CSXT, Gulf Coast Shore Hardening Project, Orleans Parish, LA –** Senior Environmental Project Manager. The task included technical writing and cartography for the preparation of a DOTD CRISI grant application for hardening and stabilization of a rail embankment located in New Orleans east. A grant application was prepared including the project narrative, benefit-cost estimate (BCA), and an FRA required draft Categorical Exclusion (CE) worksheet for the future environmental COA determination.
05/22-03/24	**LADOTD, Jefferson Highway Crossing Environmental Assessment (EA), Jefferson Parish, LA -** Senior Environmental Project Manager. Managed the Environmental Assessment (EA) process and tasks required for the Jefferson Highway Crossing project. Garrick used conceptual engineering drawings to identify parcels within the apparent or required ROW, cross reference the parcels with tax assessor identification to determine owner contact information and mailing address required for Right-of-Entry (ROE) notices to conduct environmental studies.
05/22-03/24	**Northwest Louisiana Council of Government (NLCOG), LA 3132 Environmental Assessment (EA), Caddo Parish, LA -** Senior Environmental Project Manager. The project considered a proposed extension of LA 3132 from its existing terminus south to a proposed future Red River bridge crossing and potential tie-in with future Interstate 69. A locally preferred alternative (LPA) was selected to carry forward for additional engineering and land survey/acquisition. Garrick prepared the Finding of No Significant Impact (FONSI) documentation with coordination and input from FHWA, DOTD, and the Northwestern Louisiana Council of Government using the FHWA approved EA document. The FONSI was signed in 2024 and future project elements programmed into NLCOG's Transportation Improvement Program (TIP).
05/22-03/24	**Coast Transit Authority (CTA), East West Corridor Study Tier I/II EIS, Harrison County, MS** – Senior Environmental Project Manager**.** The corridor study included a Tiered EIS that examined a 15-mile corridor for future roadway improvements and transit and passenger rail. The Popp's Ferry Road extension to the Veterans Avenue segment advanced for an environmental assessment and refinement of alternatives within the segment including at-grade

	and bridge options for crossing CSX rail. Garrick prepared the purpose and need statement, project study area maps for the segment, and revised EA scope, schedule, and budget.
05/22-03/24	**LADOTD, Rural Bridges I & II, Various Locations, LA –** Senior Environmental Project Manager. Garrick was responsible for DOTD Stage 1 NEPA efforts including review of Stage 0 Feasibility documents, preliminary scope and budget, and environmental checklist to determine an appropriate class of action (COA) for environmental review and prepare a solicitation of views (SOV) letter. Garrick used the anticipated COA to make schedule revisions for the environmental review process. The rural bridge replacements included on-site and off-site detours.
05/22-03/24	**LADOTD/City of Gretna, 5th Street Improvements, Gretna, LA –** Senior Environmental Professional. Prepared **NEPA** / PCE documents for the project while working closely with DOTD and NOGC Rail. The project consists of a complete street's application on 5th Street and drainage improvements in historic Gretna and included a new pedestrian crossing of NOGC rail. Garrick used the project background and kickoff meeting guidance to advance the project through as a documented PCE that addressed environmental concerns.
02/15-04/16	**FTA/City of Baton Rouge, Nicholson Drive High-Capacity Transit, Baton Rouge, LA -** Senior Transportation Planner. Participated in public meetings, conducted a GIS analysis, and authored technical studies as memoranda reports. He also facilitated public engagement and stakeholder meetings for the proposed 3-mile tram system connecting downtown Baton Rouge with LSU.
06/06-12/07	**FRA/NORPC, New Orleans Union Passenger Terminal (UPT) Master Plan Update, New Orleans, LA –** Transportation Planner responsible for an update to the UPT Master Plan including ADA platform accessibility and height. UPT accommodates train sets with differing boarding platform heights.
06/07-12/09	**FRA/NORPC, New Orleans Union Passenger Infrastructure Improvements, New Orleans, LA –** Transportation Planner responsible for an update to the UPT rail yard, yard functionality such as cleaning and maintenance, and storage of train sets.
05/99-07/08	**LADOTD, I-49 South, Raceland to Westbank Expressway, LA -** Transportation Planner. Responsibilities included technical writing and cartography for preparation of an Environmental Impact Statement (EIS) for proposed upgrades to existing US 90 to Interstate standards. The financially constrained mega-project required a USDOT/FHWA compliant Project Management Plan (PMP) required for megaprojects over $100 million.
05/99-07/08	**LADOTD, I-49 South, Berwick to Wax Lake Outlet, LA -** Transportation Planner. Responsibilities included technical writing and cartography for preparation of Environmental Impact Statement (EIS) documentation for the proposed upgrades to existing US 90 to Interstate standards. The financially constrained mega-project required a USDOT/FHWA compliant Project Management Plan (PMP).
01/99-06/01	**NORPC, Harvey Blvd Extension EA, Jefferson Parish, LA** – Transportation Planner. Responsibilities included public involvement activities and technical writing of an EA document, including purpose and need, and alternatives analysis and environmental screening for a proposed extension of Harvey Boulevard in Jefferson Parish.
01/99-06/01	**New Orleans Regional Transit Authority (NORTA), Canal Streetcar EIS, Orleans Parish, LA –** Transportation Planner. Conducted GIS data collection and technical writing of environmental sections of the EIS. The project analyzed a terminus and spur with significant Section 106 cultural and historic resources and section 4(f) recreational resources. The EIS and the project proceeded into final design and construction.
01/99-06/01	**NORTA, Desire Corridor EIS, Orleans Parish, LA** – Transportation Planner. Developed text and maps for purpose and need statements and conducted environmental studies for the EIS. Although the LPA for this project did not move forward into final design and construction, many elements of the project – including the portion along Rampart St., were carried forward to final design and construction of the Rampart & Loyola Streetcar project connecting the Union Passenger Terminal (UPT) and the RTA streetcar network.
01/03-05/05	**Metropolitan Atlanta Regional Transit Authority (MARTA), Atlanta Beltline Tier I EIS.** Transportation Planner for a Tier 1 EIS is an environmental document to identify existing conditions of the study area are and evaluates potential effects of the proposed project. Specific, detailed future planned actions would be studied in greater detail in a later Tier II document.

16. Staff Experience:

Firm employed by	**HDR Engineering, Inc.**		
Name	**Lisa D. Wadsworth, PE**	Years of experience with this employer	20
Title	Senior Project Manager	Years of experience with other employer(s)	6
Degree(s) / Years / Specialization		MBA / 2004 / Management and Information Systems Management B.S. / 1996 / Environmental Engineering	
Active registration number / state / expiration date		#PE.0031504 / LA / 03-31-2025	
Year registered	2004	Discipline	Environmental
Contract role(s) / brief description of responsibilities		**Environmental Support – Satisfies MPR# 4** Ms. Wadsworth brings to the team over 20 years of planning, project management, and permitting experience. She has experience in a range of project types including multi-disciplinary water resources planning and transportation planning for highway, railroad and navigation projects. She has prepared and reviewed National Environmental Policy Act (NEPA) documents including categorical exclusions, environmental assessments (EA) and environmental impact statements (EIS). For the 9 years following Hurricane Katrina, Ms. Wadsworth worked closely with the U.S. Army Corps of Engineers (USACE) while providing full-time project management and planning assistance to the New Orleans District on several hurricane risk reduction and coastal restoration feasibility studies and NEPA documents.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
01/18-04/24	**Sabine-Neches Navigation District (SNND), Stephenson Tract, Rose City, Orange County, TX -** Environmental Engineer. Prepared a permit application requesting authorization under Section 404 of the Clean Water Act to re-establish a former sand and gravel mining site back to upland grade and into a privatized Dredged Material Placement Area (DMPA). Evaluated potential threatened and endangered species and cultural resources, completed a consistency form for the Texas Coastal Management Program, and coordinated development of permit drawings, and prepared the permit application. Responded to agency comments. Project was put on hold between September 2020 and September 2022. A Nationwide Permit was recently approved.
04/23-Present	**LADOTD, Baton Rouge to New Orleans Inter-City Passenger Rail, LA** – QA/QC Manager. The project consists of the development of an approximately 80-mile intercity passenger rail corridor between Baton Rouge and New Orleans. HDR's services include agency and stakeholder coordination, preliminary engineering design, and development of environmental documentation to support the **NEPA process** required by the Federal Rail Administration. As QA/QC Manager, she supports the project manager with ensuring adherence to the Quality Management Plan.
06/22-01/24	**Sempra, Port Arthur LNG** – Sr. Environmental Engineer. Prepared and reviewed portions of an environmental assessment **NEPA document** for the Federal Energy Regulatory Commission (FERC) to assess the potential environmental impacts of implementing the PALNG Amendment, proposed by Port Arthur LNG, LLC and Port Arthur LNG Common Facilities Company, LLC (collectively PALNG). Evaluated the impacts of increasing workforce and the needed for additional Park & Ride sites. Updated the cumulative impacts analysis. Reviewed environmental justice analyses, text, and figures. Prepared and reviewed responses to FERC data requests.
06/23-09/23	**Sempra LNG – Port Arthur Pipeline, LLC, Louisiana Connector Amendment, Jefferson & Orange Counties, TX, Cameron, Calcasieu, Allen, & Beauregard Parishes, LA** – Sr. Environmental Engineer. FERC issued an Order authorizing the Port Arthur Pipeline, LLC's (PAPL) proposal to construct, operate, and maintain certain natural gas pipeline facilities for the Louisiana Connector Pipeline Project. Drafted sections of the environmental assessment **NEPA document** to address changes in the pipeline alignment since completion of the FEIS, including noise impacts from Horizontal Directional Drill (HDD) activities. Performed QC reviews of other sections of the environmental assessment, including threatened and endangered species impacts and environmental justice analyses, text, and figures.
12/16 -09/18	**LADOTD, Retainer Contract for Strategic Advisory Services Related to LTA Participation in P3s, Statewide, LA -** Environmental Engineer with the role of project coordination, technical editing, and QA/QC of deliverables. HDR performed a statewide Stage 0 feasibility study on the feasibility of

	tolling and a local option motor fuel taxes. Deliverables included various reports on a conceptual-level assessment of the feasibility of tolling highways and bridges, the feasibility of tolling six of the megaprojects included in the Louisiana Statewide Transportation Plan, and the feasibility of implementing local option motor fuel taxes.
09/17-12/18	**New Orleans Regional Transit Authority (RTA), Project Development Services for Rampart/St. Claude Streetcar Extensions, Orleans Parish, LA** - Public Involvement Lead for a Categorical Exclusion (CE) **NEPA document** and preliminary engineering (PE) for the proposed extension of streetcar service along St. Claude Ave. and Elysian Fields Ave. Prepared a Solicitation of Views package sent to agencies and other stakeholders; evaluated project impacts and prepared the Federal Transit Authority Region 6 CE; coordinated stakeholder outreach, prepared outreach materials, and participated in stakeholder outreach which included two public meetings and stakeholder meetings.
07/18-12/18	**LADOTD, Louisiana Amtrak Station Assessment, LA -** Project Engineer/Editor responsible for assisting with the development of a conceptual Louisiana Passenger Rail Station Assessment. The purpose was to initiate the development of guidance towards the state's intercity passenger rail transportation planning activities. Compiled and edited the report which included field investigation reports for six existing passenger rail stations at Lake Charles, Lafayette, New Iberia, Schriever, Hammond, and Slidell.
08/15-10/17	**Mississippi Department of Transportation, Port Bienville Environmental Impact Statement (EIS), Hancock and Pearl River Counties, MS -** Environmental Engineer responsible for preparing sections of the Draft EIS for a new north-south Class I railroad connecting the Port Bienville Railroad. Prepared EIS sections in the NEPA document that included socioeconomics, water quality, floodplains, coastal zone management, permitting, energy consumption, utilities, construction impacts, and cumulative effects. Assisted with project management and QA/QC of other EIS sections which included wetlands, threatened and endangered species, air quality, noise and vibration, transportation, public safety, hazardous waste, and cultural resources.
09/14-09/19	**New Orleans Regional Planning Commission, LA 23 New Orleans Gulf Coast (NOGC) Railway Relocation Preliminary Engineering and Environmental Assessment (EA), Jefferson and Plaquemines Parishes, LA -** Environmental Engineer responsible for assisting with the preparation of an EA and Finding of No Significant Impact (FONSI) **NEPA documentation** to relocate the NOGC Railway from its current alignment along LA 18 and LA 23 to an industrial corridor adjacent to the Harvey Canal. Responsible for compiling the EA and drafting various sections, including the Tier 1 alternatives analysis, summary of impacts, permits required, commitments and mitigation measures, water quality, water bodies and waterways, floodplains and flood zones, wetlands, coastal zones, threatened and endangered species, utilities, flood control projects, energy resources, visual resources, and construction impacts.
08/17-08/21	**Brownville Navigation District, Federal Easement Tract Releases, Brownsville, TX -** Project Manager/Environmental Engineer that prepared several categorical exclusion **NEPA documents** for the USACE Galveston District's easement disposal report. Provided oversight of Phase 1 Environmental Site Assessment and cultural resources tasks. The categorical exclusion describes how USACE will comply with applicable Federal and state laws, such as the Endangered Species Act, the Fish and Wildlife Coordination Act, the National Historic Preservation Act, the Clean Water Act, etc., for release of several easement (over 3,000 acres) from USACE to the Port of Brownsville (Brownsville Navigation District).

16. Staff Experience:

Firm employed by	**HDR Engineering, Inc.**		
Name	**Michael P. Meroney, PE**	Years of experience with this employer	10
Title	Principal Project Manager	Years of experience with other employer(s)	23
Degree(s) / Years / Specialization		M.S. / 1989 / Civil Engineering/Structures Option B.S. / 1986 / Civil Engineering	
Active registration number / state / expiration date		#P.E.0034489 / LA / 09-30-2025	
Year registered	2009	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		**Roadway Design and Review of ATCs - Satisfies MPR 10** Mr. Meroney's experience includes project management for TxDOT and municipal roadway projects, including freeway widenings and urban widenings. Drawing upon his varied background as a highway and structural engineer, his responsibilities have included the preparation of final plans, specifications and estimates; pavement design; hydraulic studies; scour reports; utility coordination; and shop drawing review. Leveraging such experience he has served as PM for several HDR Design-Build projects.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
03/19-Present	**TxDOT, North Houston Highway Improvement Project Segment 3 Design-Build (DB) Procurement, TX -** Program Manager responsible for developing procurement documents, finalizing right-of-way acquisitions and evaluating developer proposal bids for this DB project. This project consists of the reconstruction of 12.3 miles of IH-45, IH-10 and IH-69 around the thru downtown Houston. The total construction cost is estimated to be approximately $3B, with a $3.6B total DB contract cost
05/08-12/11	**METRO, US 90A Corridor Light Rail Transit (LRT) General Planning Consultant (GPC), Houston, TX -** Project Manager. This DB project was an extension of Houston's Red Line LRT. Provided oversight for three teams responsible for DB procurement documents, identification of ROW acquisitions, and preliminary engineering including track alignment, street modifications, utility relocation, traffic control, SWPPP, and park-and-ride plans. He was responsible for coordination with the City of Houston, UPRR, and other third parties.
02/08-07/09	**METRO Houston, North Corridor LRT GPC DB Project, Houston, TX -** Deputy PM. This DB project consisted of 5.3 miles of LRT and reconstruction of Main Street, 7 rail stations, and numerous side streets and bridges. Led staff responsible for procurement planning, scheduling, and coordinating environmental and public involvement teams, engineering, design development, surveying, and ROW development through final acceptance.
03/11-10/12	**TxDOT Houston District, IH 45/IH 610 Direct Connector, Houston, TX -** Project Engineer that prepared PS&E documents for Interstate 45 (IH 45) south to IH 610 east direct connector, SH 35 south connector, IH45 bridge widening at Woodridge, IH 610 bridge widening at Telephone and IH 610 bridge widening at Broad, and IH610 widening for approximately 2.5 miles.
02/14-Present	**TxDOT El Paso District (formerly SPD), Border West Expressway DB GEC, El Paso, TX -** Project Manager and Design Oversight Manager. This $650M DB project consists of a new, 9 mile, 4-lane controlled-access facility around downtown El Paso. Mr. Meroney has been co-located with TxDOT for the last four years. This complex project is predominately segmental structure design due to the limited ROW and environmentally sensitive areas, including UPRR and BNSF rail yards. He also served as the design oversight manager for TxDOT and led a team of approximately 10 staff members who reviewed all design plans. The project parallels the Texas Mexico border with columns located on the Mexico side that require interagency and bi-national coordination. Mr. Meroney is leading a team that is confirming the Developer is in compliance with TxDOT/FHWA guidelines. He is transitioning the project to maintenance oversight.
12/12-05/17	**AGL Constructors, IH 35E Managed Lane Improvements, Dallas, TX -** Corridor Manager. This project consisted of 28 miles of freeway widening and reconstruction from IH 635 north to US 380 (Developer bid - $1.1B). As a subconsultant to the DB Contractor, Mr. Meroney led a team responsible for specifications, standards, details and design activities including RFIs, design waivers, exceptions and deviations.

05/11-07/13	**TxDOT Houston District (formerly SPD), Grand Parkway Segments F-1, F-2 & G, DB GEC, Houston, TX -** Design Oversight Manager. This DB project consisted of 38 miles of Tollway, including 5 multi-level interchanges (Developer bid - $2.1B). Mr. Meroney was co-located with TxDOT for three years and led a 35-person team that reviewed all design plans, reports, and packages for TxDOT conformance. He was responsible for design subconsultants, change orders, schedule and draw request reviews. He participated in Developer and local entity issues, field change issues, and standard RFI requests.

16. Staff Experience:

Firm employed by	**HDR Engineering, Inc.**		
Name	**James Truong, PE, DBAI**	Years of experience with this employer	14
Title	National Procurement Director	Years of experience with other employer(s)	10
Degree(s) / Years / Specialization		B.S. / 1999 / Civil Engineering	
Active registration number / state / expiration date		#48285 / CA / 09-30-2026	
Year registered	2008	Discipline	Civil Engineer
Contract role(s) / brief description of responsibilities		**Alternative Delivery Procurement** Mr. Truong has more than 24 years of experience as a roadway drainage, transportation, and procurement engineer. He currently serves as the Transportation Infrastructure Procurement Director, leading the efforts in the development of alternative delivery concepts for project delivery of transportation projects on both the local and national level. He has participated and/or has led the various phases of the procurement process, from the identification of project risk and creation of risk mitigation measures used to establish the foundation for the procurement process to the creation of the RFQ and RFP documentation as well as submittal evaluation criteria used for shortlisting and contract award. He has been responsible for the management and/or design of drainage, sewer, roadway, and highway improvements, along with the preparation of the associated technical reports. His experience includes delivery of complex projects through traditional means as well as alternative delivery. **Other Certifications:** *Designated Design-Build Professional* (#No. D-3562, Exp 12/31/2025)	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
06/17-Present	**ALDOT, I-10 Mobile River Bridge, Mobile, AL -** Procurement Document Manager. Mr. Truong was responsible for preparation of the Public/Private Partnership (P3) procurement documents, including the Technical Provisions. HDR is a major partner in an engineering consortium performing as the owner's advisor and engineer for the Alabama Department of Transportation. The new $2B I-10 Mobile River Bridge will be the highest and one of the largest cable-stayed bridges in the U.S. The 10-mile I-10 Mobile River Bridge and Bayway Widening project features a new state-of-the-art six-lane, 1,380-foot-long cable stayed bridge crossing of the river that will provide 215 feet of vertical and 800 feet of horizontal clearance to the navigational traffic within the busy port.
08/14-07/16	**ADOT, South Mountain Freeway General Engineering Consultant, Phoenix, AZ -** Procurement Document Manager. Mr. Truong was responsible for the preparation of the Design-Build-Maintain procurement documents including the Technical Provisions. As the Office of P3 Initiations program manager, HDR is assisting ADOT in initiating its P3 goals, procedures, and processes. As the first major P3 highway project in Arizona, HDR is assisting ADOT with the procurement of the South Mountain Freeway. The new $2B Project will complete the Loop 202 from I-10 (Maricopa Freeway) to I 10 (Papago Freeway), a distance of approximately 22 miles, in the southwestern quadrant of the Phoenix metropolitan area.
09/12-04/13	**Los Angeles County Metropolitan Transportation Authority, Accelerated Regional Transportation Improvements, Los Angeles, CA -** Procurement Support Manager. Responsible for the preparation of the Design-Build procurement documents including the Technical Provisions, Modified Standard Specifications and Reference Materials, and assisting in preparation of the Request for Qualifications (RFQ) and Instructions to Proposers (ITP) documents.
04/14-06/14	**Massachusetts Bay Transportation Authority, Rehabilitation of Merrimack River Bridge Piers Project, Boston, MA -** Procurement Document Manager. Responsible for preparation of the Design-Build procurement documents including the Instructions to Proposers (ITP), Technical Provisions, and Reference Information Documents while working closely with the Massachusetts Bay Transportation Authority (MBTA). The MBTA's Merrimack River and Washington Street Bridges, located in Haverhill, MA, have served as vital rail infrastructure for the movement of countless passengers and untold tons of freight for over 85 years.
08/10-02/13	**Riverside County Transportation Commission (RCTC), SR 91 Design-Build Program Management, Corona, CA -** Procurement Manager. Mr. Truong assisted in the preparation of the Design-Build procurement documents which included the Request for Qualifications (RFQ), Instructions to

	Proposers (ITP), Technical Provisions, Modified Standard Specifications, and Reference Materials. Worked directly with RCTC, Caltrans District 8, and Caltrans OSFP. Assisted the RCTC with the evaluation process which included a RFQ and one-on-one meetings with the proposers. HDR provided Design-Build Program/Construction Management (PCM) for the SR 91 Corridor Improvement Project that focused on increasing capacity and reducing congestion for an existing 14-mile stretch of SR 91 and a three-mile stretch along the I-15.

16. Staff Experience:

Firm employed by	**HDR Engineering, Inc.**		
Name	**Mathew J. Reid, PE**	Years of experience with this employer	13
Title	Sr. Procurement Project Manager	Years of experience with other employer(s)	7
Degree(s) / Years / Specialization		B.S. / 1998 / Civil Engineering MBA / 2009 / Business Administration	
Active registration number / state / expiration date		#42404 / MN / 06-30-2026	
Year registered	2003	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		**DB Procurement** Mr. Reid brings 20 years of experience to our team experience in preliminary and final highway design for projects which have ranged from small to mega projects using either design-bid-build and Design-Build delivery methods. He has held leadership roles on the final design squads for both the TH 52 and TH 212 design-build projects for MNDOT.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
07/19-09/19	**NDOT, US 275 Scribner to West Point Design-Build, Owner's Representative Services, NE -** Responsible for Proposer Evaluation Training and Process Leadership for the Design-Build Procurement. Developed training materials for reviewers and created evaluation/selection criteria to help guide the procurement process for a Design-Build contractor.
08/15 -12/15	**Texas Department of Transportation (TxDOT), El Paso Border West Expressway Project, TX -** The Border West Expressway project is located west of downtown El Paso, south of I-10 and extends approximately 7.4 miles from Racetrack Drive near Doniphan Road and New Mexico 273 East to US 54 east of downtown El Paso. Participated in the development of CPM Schedule/Project Controls for the $450 million project.
01/19-07/19	**Minnesota Department of Transportation (MnDOT), Highway 14 Expansion Design-Build Project, Owatonna, MN -** Responsible for producing the procurement Request for Proposal (RFP) documents for this Design-Build procurement. With a construction value of over $100 million, the documents were required to conform to typical MnDOT Design-Build procurement documents and incorporate a simultaneous ROW acquisition process as well as preliminary changes to the design layout.
06/18-07/19	**Minnesota Department of Transportation (MnDOT), ROW Acquisition: Highway 14 Expansion Design-Build Project, Owatonna, MN -** Led the effort to acquire right of way for 9 miles of realignment for Highway 14 in Dodge County for the Highway 14 expansion from 2 to 4 lanes. This project was selected to receive funding through the Corridors of Commerce Program.
03/18-07/19	**Minnesota Department of Transportation (MnDOT), I-94, Phase 2, Minneapolis to St. Paul, MN -** Assistant Project Manager responsible for heading up the overall project scope, schedule and budget, as well as geometric design.
02/18-05/18	**Minnesota Department of Transportation (MnDOT), District 1 and 3 Project Manager: Corridors of Commerce Scoping Effort, MN -** Mr. Reid was responsible for MnDOT District 1 and 3 project efforts.

16. Staff Experience:

Firm employed by	**HDR Engineering, Inc.**		
Name	**Keith M. Quernemoen, PE**	Years of experience with this employer	19
Title	Transportation Business Group Manager	Years of experience with other employer(s)	0
Degree(s) / Years / Specialization		B.S. / 2000 / Civil Engineering	
Active registration number / state / expiration date		#43528 / MN / 6-30-2024	
Year registered	2008	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		**CMAR or CM/GC Procurement / Construction Support** Mr. Quernemoen specializes in program management and project controls for large transportation projects. During his 19 years in the transportation industry, he has managed projects in several delivery methods including CMGC, design-build, and design-bid-build. His experience in various delivery methods provides perspective into the benefits of each and applicability to projects while his background in project controls brings scheduling, estimating, cost control, and risk management expertise to a project or program.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
01/19-Present	**MnDOT, Willmar Wye Design Build Verification Consultant, Willmar, MN -** Project Manager. The Willmar Wye project involves the realignment of US 12, construction of 2 bridges over the future BNSF railway on US 12 and MN 40, reconstruction of CSAH 55, reconstruction of 45th Street and 1st Ave W, and reconstruction of CSAH 5. As the project manager, Keith provides the team and resources for providing design reviews, schedule reviews, and field quality activities. In addition, he supports the District in managing the overall project.
08/13-07/18	**Iowa Department of Transportation, Council Bluffs Interstate System (CBIS) Program Management/General Engineering Consultant, Council Bluffs, IA -** Project Manager. The Council Bluffs Interstate System (CBIS) is a $1.3 billion program to reconstruct the I-80, I-29, and I-480 interchanges in Council Bluffs to modernize the highway system and improve safety and mobility in the area. HDR is providing program management, project controls, design coordination, and construction support for nearly $900 million in construction projects. Served as the project manager and focused on support of construction and project controls including risk management, change management, scheduling, and estimating. He also facilitated informal executive level partnering meetings with the contractor and owner leadership to be proactive in dispute and conflict resolution.
12/09-01/13	**UDOT Mountain View Corridor Program Management, UT -** Project Controls Manager. During the pre-construction phase of this CMGC project, Keith worked on procurement and the development of a program-level schedule, including the contractor's construction schedule, to establish contract limitations for ROW and utilities within the specifications. During the construction phase, Keith supported UDOT field crews and the program management team. This included cost control, schedule control, linear scheduling, materials control, and risk management. He led a group that reviewed baseline and updated CPM schedules for construction contracts, evaluated the retirement of contingency funds allocated to risks, and provided general project controls reporting to management.
08/07-12/09	**Utah Department of Transportation, Access Utah County (AUC) Design-Build Program Management, UT -** Design-Build Procurement Engineer. AUC included five distinct design-build projects designed to improve traffic mobility in Utah County. HDR provided program management, project controls, design and construction oversight, and audit oversight services for all five design-build projects at a total construction value of $600 million. Keith prepared the design-build procurement documents and evaluation manuals, and administered the design-build procurement process for all five projects.
09/05-08/07	**Utah Department of Transportation, Legacy Parkway Program Management, UT -** Project Controls Manager. The Legacy Parkway is a controlled access, 14-mile transportation corridor bordered by a 14-mile, multi-use, trail system and the 2,098-acre Legacy Nature Preserve. As the program manager, HDR facilitated the final design, cost estimating, and Cost Estimate Validation Process (CEVP) to procure the D-B-B contractors for all three projects. During the D-B-B phase, Keith developed and implemented the project field management data collection system. He also led the development of scheduling specification and schedule review procedures for use on the project.

04/02-09/05	**MnDOT, Trunk Highway 52 Design-Build Construction Oversight, Rochester, MN -** Construction/Project Controls Engineer. The project consisted of 11 miles of mainline highway widening and reconstruction, including 24 bridges and retaining and noise walls throughout the corridor. Keith provided project controls which included analysis and monitoring of the CPM schedule; managing the construction critical path; implementing project document control and program management systems; providing claims defense and mitigation on multiple, potential change orders; and verifying, negotiating, and processing contract change orders. He also provided general project controls reporting to MnDOT and the project management staff. During the RFP phase, Keith assisted the HDR project manager and MnDOT management in the administration of the RFP and proposal evaluation process for the selection of a D-B team for this $232M construction project.

16. Staff Experience:

Firm employed by	**HDR Engineering, Inc.**		
Name	**Patrick P. Hickox, PE**	Years of experience with this employer	7
Title	Bridge and Structures Director	Years of experience with other employer(s)	22
Degree(s) / Years / Specialization		B.S. / 1990 / Civil Engineering	
Active registration number / state / expiration date		#PE.0030405 / LA / 03-31-2025	
Year registered	2002	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		**Alternative Delivery Advisor for P3's and Design-Build Projects** Mr. Hickox has extensive experience in bridge design, innovative procurement and P3 projects throughout the US. His experience highlights include design, construction, engineering, and inspection and/or maintenance/repair of 10 built cable-stayed bridges with span lengths up to a 1,583 feet; design of multiple segmental bridges using span-by-span and balanced cantilever construction; and alternative project delivery experience (Design-Build, Private and Public-Private Partnership) on several mega-projects worth more than $10 billion in construction.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
02/98-12/03	**Airtrain JFK, New York, NY -** Design Manager. One of the first mega design/build/operate/maintain for transportation the US. This light rail project was built for the Port Authority of New York and New Jersey to serve the JFK Airport using an 8.7-mile dual-track automated system using linear induction motor (LIM) propulsion. Mr. Hickox was responsible for the quality of the overall superstructure design, design of contractor erection equipment, and on-site technical support services.
12/03-12/06	**Penobscot Narrows Bridge and Observatory, Bucksport, ME -** This new 2,120' cable-stayed bridge has a 1,160' main span along with a three level observatory platform in the western pylon. The bridge was opened to traffic on December 30, 2006 - in just 42 months - through an innovative owner-facilitated design/build process called Special Experimental Project No. 14 (SEP 14) for the use of innovative contracting processes. Mr. Hickox assisted with the preliminary design concepts for the cable stay bridge, assisted MDOT with procurement of the selected contractor, developed project specifications, conducted public involvement, and established erection concepts while working closely with the Contractor.
01/09-08/12	**New South Norfolk Jordan Bridge, City of Chesapeake, VA -** This new 5,375' bridge features two 12' wide traffic lanes, two 8' wide shoulders and an 8' wide pedestrian sidewalk. Funding for the new bridge used no local, state or federal money and used an innovative privately developed delivery method. Mr. Hickox assisted with the development of procurement documents and construction contracts, permitting, project specifications, contract administration and development of the preliminary design, full construction estimate, construction schemes and QC Manual.
09/15-Present	**Alabama DOT I-10 Mobile River Bridge (ALDOT), Mobile, AL -** Project Manager responsible for the preliminary design, permitting, public involvement and bridge type studies. The 10-mile I-10 Mobile River Bridge and Bayway Widening Project features a new six lane, 1,250-ft long cable stay bridge crossing of the river that will provide 215 feet of vertical and 800 feet of horizontal clearance to the navigational traffic within the busy port. In Sept. 2017, ALDOT changed the delivery method to P3. Mr. Hickox's responsibilities included developing ALDOT's first P3 procurement including program management, procurement documents, technical provisions, design-build specifications, reference plans/documents, leading the technical team for the owner, reviewing and coordinating ATCs, and conducting one-on-one meetings with Concessionaire teams.
04/12–09/16	**Eagle P3 Project, Denver, CO -** Bridge and Structures Director responsible for providing overall management and technical support of the bridge design for this $1.65 billion project. This project comprised elements of design-build-finance-operation-maintenance for the East Corridor, Gold Line, Northwest Electrified Segment, and Commuter Rail Maintenance Facility. The Eagle P3 project extends commuter rail from the city center of Denver on two new lines to suburban locations – most of it on existing freight railroad right-of-way (ROW) and the remaining alignment extending to Denver International Airport on the Airport ROW. HDR was the designer to the Denver Transit Partner team led by Fluor/Macquarie which included 37 miles of commuter rail track and the relocation of four miles of BNSF mainline tracks.

02/14-Present	**Florida DOT, Ultimate I-4 PPP Design Build, Orlando, FL -** Bridge and Structures Director providing overall management and technical support for bridge design. The I-4 Mobility Partners team (Skanska, Granite, Lane, HDR, Jacobs and ICA) was selected to design, build, finance, operate and maintain the project known as I-4 Ultimate through a 40-year public-private partnership concession agreement at a total design and construction cost of $2.32 billion, $860 million less than the highest proposal received by Florida DOT. The project includes the reconstruction of 21 miles of I-4.
04/018-05/11	**LADOTD, John James Audubon Bridge Project, Baton Rouge, LA -** This $450M design-build project across the Mississippi River between Natchez, MS and Baton Rouge, LA features the longest cable stayed center span of 1,583 feet in North America. The entire DB project included 12 miles of two-lane roadway approaches and eight bridges to connect LA 1 to US 61 and replace a ferry system. After the first year of construction, Mr. Hickox was brought onto the project by the LADOTD to provide overall management of QC services (design and construction) as well as to perform independent design QC audits for the project.
08/12-08/17	**Minnesota DOT, St. Croix Crossing, MN and WI -** Design Lead. Longstanding congestion and safety concerns required replacement of the existing 80-year-old lift bridge with a five tower 3,360 feet continuous concrete segmental extradosed bridge and 1,700 feet concrete segmental approach with ramps connecting Oak Park Heights Minnesota and St. Joseph, Wisconsin. Following a national competition, the HDR lead design team was selected for this unique hybrid design which allowed for reduced tower heights and longer spans up to 600 feet (a US record) for improved aesthetics and minimal environmental impact. Structural continuity was maintained through the use of concrete segmental design for the approach viaduct leading up to the river crossing. The bridge is the second of its kind in the US and the fourth in North America. As Director of Bridges for HDR, Mr. Hickox was responsible for the overall delivery of design services as well as performing an independent design review of the precast concrete segmental extradosed and approach units.

16. Staff Experience:

Firm employed by	**HDR Engineering, Inc.**		
Name	**Brian Blanchard, PE**	Years of experience with this employer	44
Title	Highway and Roads Market Sector Lead SE	Years of experience with other employer(s)	5
Degree(s) / Years / Specialization		B.S. / 1982 / Civil Engineering	
Active registration number / state / expiration date		#39029 / FL / 02-01-2025	
Year registered	1986	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		**Independent Peer Review Leadership** Mr. Blanchard's executive leadership helped build Florida DOT's work program and manage district operations while working with transportation agencies throughout the U.S. through participation in AASHTO. Prior to joining HDR, Brian spent 8 years as the FDOT Assistant Secretary, three (3) years as Chief Engineer, and many other positions at the Central Office and District level. He helped influence the direction of the agency and helped to lead FDOT with a work program budget of over $10 billion in one of the fastest growing states. Mr. Blanchard has experience leading an agency to be innovative, engaging employees and consultants, addressing workforce challenges, and aggressively pursuing alternative contracting techniques and emerging technologies.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
10/20-Present	**FDOT Central Office Structures Review Contract, Statewide, FL -** Principal in Charge. Mr. Blanchard is responsible for technical project deliver for HDR who is serving as the Owner's Representative for Independent Design Reviews on design build projects. This is a 5-year contract (2020-2025) to provide support services for the Department's Structures Design Office with expertise in the design and review of rail bridges, segmental concrete bridges, steel box or steel I-girder superstructures, and other Category 2 bridges, and bridge substructures. This includes the effects from ship impact and scour, projects using innovative products or materials, and bridges with unique geotechnical conditions.
10/19-12/22	**Florida's Turnpike Enterprise, Northern Turnpike Corridor Owner's Representative, Marion, Sumter, Citrus and Levy Counties, FL -** Program Manager. Mr. Blanchard was responsible for technical project delivery for HDR who is serving as Owner's Representative to Florida's Turnpike Enterprise for the Northern Turnpike Corridor (NTC) which is part of the Multi-use Corridors of Regional Economic Significance (M-CORES) Program. The NTC will extend Florida's Turnpike (SR 91) from its current terminus at Wildwood in Sumter County to the Suncoast Parkway, approximately 40 miles. As Owner's Rep, HDR is performing program management, task force support, public involvement, planning and corridor analysis, PD&E consultant management, data collection and analysis, and GIS services
04/19-Present	**ALDOT, I-10 Mobile River Bridge Project, Mobile, AL -** Principal in Charge. Mr. Blanchard is responsible for technical delivery and oversight for HDR who is serving as the Owner's Representative for design submittal reviews for ALDOT on this progressive design-build project. The new I-10 Mobile River Bridge will be one of the largest bridge projects in the U.S. featuring a new 6-lane, 1,320 ft. cable-stayed main span crossing of the river with 215 feet of vertical and 800 feet of horizontal clearance for the navigational traffic within the busy port.
10/20-Present	**FDOT Central Office Structures Review Contract, Statewide, FL -** Principal in Charge. Mr. Blanchard is responsible for technical project delivery for HDR who is serving as the Owner's Representative for Independent Design Reviews on design-build projects. This is a 5-year contract (2020-2025) to provide support services for the Department's Structures Design Office with expertise in the design and review of rail bridges, segmental concrete bridges, steel box or steel I-girder superstructures, and other Category 2 bridges, and bridge substructures. This includes the effects from ship impact and scour, projects using innovative products or materials, and bridges with unique geotechnical conditions.

16. Staff Experience:

Firm employed by	**HDR Engineering, Inc.**		
Name	**Douglas Jackson**	Years of experience with this employer	24
Title	Director of Project Management	Years of experience with other employer(s)	6
Degree(s) / Years / Specialization		B.S. / 1994 / Civil Engineering	
Active registration number / state / expiration date		#42065 / MN / 06-30-2024	
Year registered	1999	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		**CMAR Procurement** With more than 24 years of transportation industry experience, Mr. Jackson is a senior project manager and program manager that has led multi-disciplined teams in the successful delivery of large infrastructure projects. His expertise in program and project development, contract procurement, alternative delivery and construction management has allowed him to work on various infrastructure projects including, rail, highways, and pipelines. Additionally, Mr. Jackson is an Instructor and Subject Matter Expert for the FHWA Every Day Counts CMGC Training for state DOT's and cooperating public agencies since 2014.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
05/17 – Present	**Minnesota Department of Transportation (MnDOT), TH53 CMGC Bridge Rehab Project, St. Paul, MN -** Senior Technical Advisor. The Minnesota Department of Transportation is replacing the bridge deck of an 11-span continuous steel and post-tensioned, tied steel arch bridge that carries TH 149 (Smith Avenue) over the Mississippi River in downtown St. Paul. In addition to re-decking the bridge, the project includes roadway work, bituminous mill & overlay, curb and gutter, sidewalk replacement, drainage upgrades between TH 5/ West 7th Street and George St. MnDOT is using the CMGC project delivery method to complete this complicated bridge rehab project.
10/15 – 07/18	**MnDOT TH53 CMGC Relocation Project, Virginia, MN -** Senior Technical Advisor. Mr. Jackson served as a technical advisor during the pre-construction phase and was involved with project planning, scheduling, and cost estimating. The highway 53 relocation includes an 1100' bridge that rises 200' above the water, and extensive rock excavation in an area with challenging geotechnical conditions. The project also required an accelerated schedule.
12/12 – 7/16	**UPRR Hearne Yard CMGC Project, Hearne, TX -** Senior Technical Advisor. Mr. Jackson led the CMGC procurement effort for the UPRR, developed CMGC procurement documents, and developed the preconstruction strategy to design and estimate the project. He served as a technical advisor to the UPRR's Project Manager and a CMGC project delivery expert. Hearne Yard was the first new major classification yard facility undertaken by any railroad in decades. The project was built on a green field site and is strategically located at the crossroads of several important UP operational subdivisions.
05/09 – 04/18	**Mountain View Corridor Program, Salt Lake City, UT -** Program Manager. Mr. Jackson led a staff of 50 during the project. Services included CMGC procurement, program scheduling and estimating, budget tracking and reporting, preliminary and final design, right-of-way acquisition, public outreach, and construction management. The Mountain View Corridor (MVC) is a planned freeway, transit and trail system in western Salt Lake and northwestern Utah counties that serves 13 municipalities in the project area. The program will utilize a phased implementation strategy by building infrastructure for initial needs and gradually expanding systems over time. Initial construction included building two lanes in each direction with signalized intersections where future interchanges will be located. Currently, 15 miles of the 35 mile corridor are completed. Multiple delivery methods are being used to deliver projects in the corridor, including traditional design-bid-build, CMGC, and design-build.
8/13 – 7/17	**Council Bluffs Interstate System Improvement Program, Council, Bluffs, IA -** Program Manager. Mr. Jackson led a staff of 25 in the delivery of this program. Key services included overall program management, construction management, project controls, cost estimating, traffic management, permitting, public information, and design. It also included extensive contract administration of multiple construction contractors working simultaneously in a constrained project footprint. The CBIS program was the single largest project in the Iowa Department of Transportation (Iowa DOT)'s five-Year Transportation Improvement Program (STIP). The program was undertaken to improve the condition of the roadways, reduce traffic congestion and crashes, and add capacity. It includes upgrading approximately 18 miles of mainline interstate, 14 interchanges and 32 bridges.

16. Staff Experience:

Firm employed by	**HDR Engineering, Inc.**		
Name	**Eric Rouse**	Years of experience with this employer	13
Title	Senior Project Manager - Finance	Years of experience with other employer(s)	11
Degree(s) / Years / Specialization		M.S. / 1995 / Regional Planning B.S. / 1992 / Political Science	
Active registration number / state / expiration date		N/A	
Year registered		Discipline	N/A
Contract role(s) / brief description of responsibilities		**Project Delivery Analysis** A Principal Consultant within HDR's Economics and Finance Market Sector, Mr. Rouse specializes in the financial, operational and institutional analysis of existing and planned transportation systems, the planning and evaluation of major capital improvement projects, and preparation of NEPA documents. He has been instrumental in the evaluation of potential revenue sources and the development of traditional and innovative funding and financing strategies for major infrastructure projects across the country.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
11/14-06/16	**Arizona DOT Public Private Partnership (P3) Program Management, Phoenix, AZ -** Provided advisory services to ADOT's P3 Program for the South Mountain Freeway Project, and Phoenix District LED Lighting Upgrade and Storm Water Pump Replacement Projects. For the South Mountain Freeway Project, he prepared the Initial Major Project Financial Plan. Following FHWA Guidance for Major Projects, the financial plan documents the project's capital cost and revenue cash flow, summarizes ADOT's evaluations of P3 financing options, and summarizes the results of the risk assessment, including potential mitigation measures. For the Phoenix District LED Lighting Upgrade and Storm Water Pump Replacement Projects, he prepared the value for money (VfM) analysis comparing multiple alternative delivery options to the traditional design-bid-build delivery approach.
11/14-03/17	**Colorado Department of Transportation (CDOT) Office of Major Project Development, Denver, CO -** Key member of the team that worked with CDOT staff to establish the Office of Major Project Development (OMPD). The mission of the OMPD is to support CDOT's Regional offices in evaluating potential alternative delivery/P3 projects and providing technical support through procurement and construction. He worked with OMPD staff to develop the guidelines for the Office related to the identification and selection of potential alternative / P3 delivery, and the preparation of Business Cases, Financial Plans and Public Interest Finding Reports to support procurement decisions.
07/15-05/16	**Intermountain Infrastructure Exchange (IMX), University of Colorado-Denver, CO -** Technical advisor who supported the creation of the IMX which was intended to be a Regional Infrastructure Accelerator for the states of Colorado, Arizona, and Utah. Worked with the Advisory Board to develop the IMX Strategic Plan which will assist the states and local governments in the intermountain region with developing a process to evaluate and choose the most appropriate implementation method to accelerate the delivery of infrastructure projects, particularly those that may have significant implementation challenges using traditional delivery methods and funding sources. A key component of the IMX, with input from and participation by the private sector, will be education and outreach to the state and local governments, legislators, and industry to encourage and support consideration of alternative project delivery options, including performance based infrastructure (PBI), in the delivery method evaluation and decision-making process.
07/18-Present	**Texas Department of Transportation, (TxDOT) RE-Image I-10, El Paso, TX -** Leading a study to evaluate potential non-toll based funding sources to support improvement to the 55-mile corridor between the Texas / New Mexico Border and Turnillo, Texas. The analysis includes consideration of a downtown transportation infrastructure district to support a deck park / lid over the interstate, potential value that could be generated from unused ROW acquisitions, and freight user fees.
05/09-07/14	**Los Angeles County Metropolitan Transportation Authority, P3 Advisory Services, Los Angeles County, CA -** Served as an advisor on the LA Metro consultant team evaluating opportunities to leverage public funding with private equity and debt financing to accelerate delivery of high-priority transit and highway projects by leveraging funding from Los Angeles' Measure R sales tax and other public funding sources. Assisted in the screening of candidate

	projects to identify projects with higher potential for P3 delivery. Also assisted in the development of business plans that evaluated the investment potential for public-private partnerships and the modeling of innovative financing structures that would blend the use of TIFIA, RRIF, and Private Activity Bonds (PABs) as part of a cost-effective strategy to deliver infrastructure projects.
07/11-05/12	**Metropolitan Transportation Authority Eastside Access Project, New York, NY -** Key member of the consultant team that evaluated the potential financial impact of contracting out certain elements of the maintenance and operations associated with the East Side Access (ESA) extension of the Long Island Rail Road. The opportunities to engage private parties in the long-term operation and maintenance of facilities and systems of the ESA Project traditionally performed by LIRR employees elsewhere on the railroad was limited to those elements that were not interdependent on the overall LIRR system, were not integral to existing work structures and labor agreements, and could be separately assessed for compliance with performance standards. Using reasonable and market-tested assumptions about productivity improvements and labor cost reductions derived from private operations, the value for money analysis concluded that savings in the range of 10 to 25 percent of the in-house labor cost could be achieved for the ESA maintenance and operating elements evaluated in the study.

16. Staff Experience:

Firm employed by	**HDR Engineering, Inc.**		
Name	**Paul M. Alsina, PE**	Years of experience with this employer	24
Title	Transportation Program Manager	Years of experience with other employer(s)	0
Degree(s) / Years / Specialization		B.S. / 1995 / Civil Engineering MBA / 2000 / Business Administration	
Active registration number / state / expiration date		#86853 / TX / 06-30-2025	
Year registered	2000	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		**D-B Pre-Procurement and Procurement Support / PM Support** Mr. Alsina is a Vice President and Professional Associate with 24 years of experience in engineering design, project management, program management, and alternative delivery procurements. Working on behalf of the owner, he has 18 years of progressive experience in the design, construction, program management and procurement of large, multi-disciplined design-build programs. As an owner's representative, Mr. Alsina gained significant program, project and financial management experience on mega-programs while working on the Texas Department of Transportation's (TxDOT) SH 130 project in Austin, TX - one of the largest transportation contracts in U.S. history; the Loop 375 Border West Expressway project in El Paso, Texas; the North Texas Tollway Authority's (NTTA) President George Bush Turnpike – Western Extension (SH 161) project in Dallas, Texas (NTTA's first design-build project and largest construction contract to-date); and the Scribner – West Point Owner's Representative Program in Lincoln, NE (Nebraska DOT's first design-build project).	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
01/17-05/21	**NDOT, US 275 Scribner to West Point Owner's Representative Services, NE -** As the Project Manager for development of NDOT's first design-build project, Mr. Alsina leads a multidiscipline team through Procurement, Preliminary Engineering, Environmental Permitting, ROW Acquisition and Public Involvement for this important project for the State of Nebraska. As this was NDOT's first design-build project, the procurement team developed the contract and technical provision documents from scratch and Mr. Alsina spent a significant portion of his efforts leading and educating the NDOT staff through the design-build process. Scribner-West Point is a 20-mile $110 million program that was completed in 2021.
07/14-02/17	**Border West Expressway, El Paso, TX -** Under an Independent Engineer (IE) Contract with the TxDOT-Strategic Projects Division, HDR was tasked with performing Program Management, Design Oversight, and Owner Verification Testing and Inspection (OVTI). The BWE Project is a $447 million Comprehensive Development Agreement Design-Build Project that will add capacity to the greater El Paso region by providing a new four-lane, controlled access facility from Racetrack Drive west of downtown El Paso to approximately one mile east of Park Street in El Paso County – a project length of approximately 9 miles. As Project Manager of the IE Team, Mr. Alsina was responsible for managing the approximately $20M budget which included the monitoring of staffing levels, oversight of the design review teams and construction oversight team, as well as the OVTI team. On behalf of TxDOT, and under Paul's supervision and direction, the IE Team monitored the project's budget and schedule, verified that the design and construction met the contract requirements, and performed validation of the Developer's material test results.
05/18-05/15	**NTTA President George Bush Turnpike, Western Extension (PGBT-WE) -** Mr. Alsina was selected by the NTTA to be the Corridor Manager and lead the Program Management of the 5-year design and construction of the $546 million President George Bush Turnpike - Western Extension program. Mr. Alsina led the project delivery team through the Project Agreement and Toll Equity Loan negotiations between TxDOT and NTTA. Mr. Alsina assisted the financial team in successfully securing a Transportation Investment Generating Economic Recovery (TIGER) Grant, and a Transportation Infrastructure Finance and Innovation Act (TIFIA) loan. He also led the procurement team in the development of the design-build procurement documents and led the NTTA through the selection of the best-value proposer. This culminated in NTTA executing their largest construction contract to-date, which also happened to be their first ever design-build contract. During the design phase of the corridor, Mr. Alsina's team oversaw all aspects of the design and worked in

	conjunction with the design-builder to resolve design comments and overcome technical issues. He was responsible for overseeing the construction management team as well as the owner verification, testing and inspection teams. Mr. Alsina provided assistance to the NTTA in their annual update to the Major Project Financial Plan for FHWA, as well as their Engineering Reports.
06/01-06/08	**Texas Department of Transportation (TxDOT), State Highway 130 Project Segments 1-4, TX -** Mr. Alsina served two (2) years as the Design Manager for the State Highway 130 Project. Working as an extension of TxDOT staff, the six individuals in Mr. Alsina's Design Group were responsible for all aspects of the review and oversight of design packages. Prior to this role, Mr. Alsina served for 4 years as a member of this Design Group in the role of Segment 4 Design Manager. Daily interaction with members of the TTA, TxDOT - Austin District, and the developer was conducted to verify that contractual requirements were met and issues were rapidly resolved. In addition to leading the design oversight effort for Segments 1-4, Mr. Alsina also managed the railroad and drainage efforts for the project. Mr. Alsina has highly notable experience in the development of the Central Texas Turnpike Project 2002 Project Financial Plan and was responsible for the annual update of the plan for FHWA approval, in accordance with the TIFIA Loan Agreement for the Project. State Highway 130 (Segments 1-4) was a $1.3 billion, fast-track, exclusive development agreement (a contracting method similar to design-build) project, encompassing 49 miles of new-location controlled access turnpike.

16. Staff Experience:

Firm employed by	**HDR Engineering, Inc.**		
Name	**Alejandro Solis, PhD**	Years of experience with this employer	14
Title	Transportation Economics & Statistics Director	Years of experience with other employer(s)	18
Degree(s) / Years / Specialization	PhD / 2006 / Economics M.A. / 2002 / Economics B.A./ 1997 / Economics		
Active registration number / state / expiration date	N/A		
Year registered	Discipline	N/A	
Contract role(s) / brief description of responsibilities	**Valuation and Revenue Analysis / Cost-Benefit Analysis** Mr. Solis is an applied economist with in-depth experience in the analysis of transportation infrastructure projects across North America. He has supported numerous clients through the development of data-driven decision support tools. His areas of specialization include monetization of social benefits and costs, estimation of economic impacts, identification of business opportunities, project prioritization and handling of risk and uncertainty in infrastructure projects		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
11/17-07/18	**Alabama DOT (ALDOT), I-10 Mobile River Bridge, AL -** Principal Economist that supervised the development of INFRA and BUILD grant applications for this project. The work involved developing a Cost-Benefit Analysis of the proposed infrastructure and a high-level identification of funding sources.
06/2018 - 03/2019	**LADOTD, Retainer Contract for Strategic Advisory Services Related to LTA Participation in P3s, Statewide, LA -** Principal Economist that developed revenue projections for the Stage 0 Feasibility Study of the I-10 Calcasieu Bridge, the LA1-LA30 Connector, the LA-23 Bridge and the LA-511 Bridge.
10/17-12/17	**New York City Department of Transportation (NYCDOT), NY Congestion Pricing, NY -** Principal Economics who oversaw the economic analysis of the study, including the forecast of future demand for for-hire vehicles under different scenarios and the impact that the introduction of proposed policies would have on fares and ridership for this transportation market.
05/10-10/10	**Arizona DOT Public Private Partnership (P3) Program Management, Phoenix, AZ -** Economist that developed selection criteria and provided strategic support for modeling to create a framework for ADOT to identify and pursue opportunities for innovative financing of transportation infrastructure projects in the state. Focused primarily on public-private partnership opportunities.
08/16 -01/18	**Virginia Department of Rail and Public Transportation (DRPT), VA -** Principal Economist that led the analysis of a detailed cost-benefit analysis as part of the evaluation of Cost Effectiveness section of the Atlantic Gateway FASTLANE Grant Application. The cost-benefit analysis monetized benefits and costs of three sets of improvements: improvements to the highway network, improvements to freight rail, and improvements to passenger rail infrastructure. The project was awarded $165 million in federal funds, the largest award of the first round of FASTLANE grants.
01/13-07/14	**Panama Canal Authority (ACP) Program Management Advisory -** Senior Economist that led a team of multidisciplinary experts in the development of a study to validate the financial and operational feasibility for the construction of a new container port in Panama. The study included the following components: update of existing demand estimations for the new container terminal, identification of additional characteristics that affect design of the new terminal, assessment of compatibility with future Canal operations, update of the costs of building the required infrastructure, estimation of value generated by the port, assessment of different business models to operate the terminal, update of economic and environmental impacts generated by the new terminal, and update of available financial feasibility studies.
05/13-04/18	**South Florida Regional Transportation Authority (SFRTA) Fort Lauderdale (WAVE) Streetcar, Fort Lauderdale, FL -** Senior Economist that conducted a Cost-Benefit Analysis in support of a TIGER IV Application for the Fort Lauderdale (WAVE) Streetcar project. Main benefit categories included economic development opportunities, travel time savings, and environmental sustainability.

02/12-05/12	**Virginia Department of Rail and Public Transport (VDRPT) Rail Enhancement Fund (REF) Program, VA -** Senior Economist that conducted high-level Cost-Benefit Analysis on a series of proposed rail projects to be funded under the Rail Enhancement Fund (REF) Program. A standardized model used by VRDPT was updated and both passenger vehicle and freight social benefits were monetized as part of this analysis.

16. Staff Experience:

Firm employed by	**HDR Engineering, Inc.**		
Name	**Raphael Costa, PE**	Years of experience with this employer	10
Title	Movable Bridge Program Leader	Years of experience with other employer(s)	13
Degree(s) / Years / Specialization		B.S. / 2001 /Electrical Engineering M.S. / 2004 / Electrical Engineering MBA / 2009	
Active registration number / state / expiration date		#PE.0043993 / LA / 03-31-2026	
Year registered	2019	Discipline	Electrical Engineer
Contract role(s) / brief description of responsibilities		**Roadway Aesthetic Lighting Design Lead** Serves as HDR's National Movable Bridge Program Leader. In addition to his responsibilities as the program's leader, Raphael leads the design, specification, inspection, maintenance, construction inspection, and construction support for projects involving movable bridges, other heavy movable structures, and electrical systems for other types of structures and facilities.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
05/19-Present	**Archer Western Contractors, I-395 Signature Bridge, Miami, FL -** Signature multi-concrete arched structures in north Miami Downtown. Lead electrical engineer responsible for the lightning protection system and electrical power distribution supporting roadway and architectural lighting, structural health monitoring system and miscellaneous electrical systems.
02/17-06/19	**VTrans, North Hero–Grand Isle Drawbridge, Lake Champlain, VT -** In-line replacement of a historic twin leaf bascule bridge and the only vehicular movable bridge in the State of Vermont with a new twin leaf bascule spans. The project was contracted following the Construction Manager / General Contractor (CMGC) process. Project included the installation of a temporary drawbridge prior to replacing the existing drawbridge so that impacts to vehicular traffic were minimized. Senior Electrical Engineer responsible for the Quality Control reviews of the Electrical and Control Systems design including roadway lighting design.
09/16-04/20	**PCL Constructors, Bonner Bridge Replacement, Nags Head, NC -** Part of a design-build team working for the North Carolina Department of Transportation (NCDOT) on the replacement of the Herbert C. Bonner Bridge in Dare County, a $246 million project. HDR was the lead design firm for PCL Civil Constructors. Served as the lead electrical engineer responsible for post design services related to the bridge's electrical systems.
01/05-08/11	**NYCDOT, Willis Avenue Swing Bridge over the Harlem River, New York, NY -** $620M off-line replacement of a major 345-foot-long, swing bridge and 3,000 feet of highway approaches. Lead Electrical Engineer responsible for electrical design of new swing span bridge, preparation of Electrical Contract Plans, roadway and bridge lighting, calculations, specifications and engineer cost estimates, and construction support services. Roadway lighting design included several temporary lighting systems to maintain temporary access and ramps lighted throughout the project's complex construction phasing.
05/19-Present	**Archer Western Contractors, I-395 Signature Bridge, Miami, FL -** Signature multi concrete arched structures in north Miami Downtown. Lead electrical engineer responsible for the lightning protection system and electrical power distribution supporting roadway and architectural lighting, structural health monitoring system and miscellaneous electrical systems.

16. Staff Experience:

Firm employed by	**HDR Engineering, Inc.**		
Name	**Amber Robinson, PWS**	Years of experience with this employer	11
Title	Environmental Practice Lead	Years of experience with other employer(s)	0
Degree(s) / Years / Specialization	B.S. / 2012 / Environmental & Sustainable Resources B.S. / 2008 / Business Management		
Active registration number / state / expiration date	US #3286 / Professional Wetland Scientist / 10-22-2025		
Year registered: 2020	Discipline: Environmental & Wetland Scientist		
Contract role(s) / brief description of responsibilities	**Environmental Permitting** Ms. Robinson possesses over 11 years of environmental experience with an emphasis on wetland delineations and permit coordination. Her technical areas of expertise include the delineation of waters of the U.S., US Corps of Engineers Section 10/404 permit coordination, state coastal use permit coordination, US Coast Guard bridge advance approvals and exemptions, preparation of NEPA documents for the USACE and FERC, T&E species habitat evaluations, wetland ecology assessments, and compliance monitoring.		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
04/23-Present	**LADOTD, Baton Rouge to New Orleans Inter-City Passenger Rail, LA -** Deputy Project Manager. The project consists of the development of an approximately 80-mile intercity passenger rail corridor between Baton Rouge and New Orleans. Services included agency and stakeholder coordination, preliminary engineering design, and development of environmental documentation to support the National Environmental Policy Act process required by the Federal Rail Administration. As Deputy PM, she supports the project manager with managing the budget, scope, schedule and project team.
02/22-Present	**CSXT, Gulf Coast Shore Hardening Project, Orleans Parish, LA -** Environmental Lead. The project consists of the stabilization of an approximately 20-mile long rail embankment in southeast Louisiana. In 2022, she led a small team that developed a request for emergency use for the most vulnerable 2 miles from the USACE New Orleans District and the Louisiana Department of Natural Resources Office of Coastal Management. The emergency use authorizations were received within five days from application submittal. She is currently coordinating with the agencies to close out the permitting process while the project is currently under construction. She leads environmental staff who have completed field investigations for both phases of the project including a wetland delineation, cultural resources Phase I investigation, and habitat assessment. Permitting services for both phases included the preparation and submittal of a joint permit application for impacts to coastal land in Louisiana and Section 404 waters regulated by the USACE, including coordination associated with the purchase of mitigation bank credits. Additionally included the preparation of a draft Stormwater Pollution Prevention Plan, development of Notice of Intent, coordination with the Louisiana Department of Environmental Quality under Section 402, and environmental compliance monitoring services during construction. She also supported the development of a PROTECT grant application and a CRISI grant application in 2023 and 2024 for the project.
03/21-Present	**Illinois Central Railroad, Baton Rouge Subdivision MP 431 Reconstruction Permitting, Norco, LA -** Environmental Scientist/Project Manager. The project consists of an 8,000-foot-long railroad bridge replacement project that spans the USACE's Bonnet Carré Spillway. Led the development and submission of a joint permit application, request for Section 408 review, request for USCG advance approval and lighting exemption, and draft Stormwater Pollution Prevention Plan. She additionally led the team that received authorization under Section 106 for an unmarked civil war era burial ground without the need for a costly excavation investigation. These authorizations were accomplished within 11 months from the time of the original joint permit application submittal. Currently, she leads a small team who assists the ICRR with as-needed compliance monitoring during the construction phase of the project.
05/16-01/24	**Illinois Central Railroad, Bonnet Carre Spillway Bridge Replacement Project, St. Charles Parish, LA -** Environmental Scientist/Project Manager. The project consisted of the replacement of an approximately 2.3-mile long railroad bridge that crosses the Bonnet Carre Spillway and a portion of Lake Pontchartrain in St. Charles Parish. Ms. Robinson provided field lead support during early planning of the project, including delineation waters of the U.S.

	delineation and habitat assessments in support of two proposed alternatives, including the preparation of a Preliminary Wetland Delineation and Proposed Jurisdictional Determination Memorandum. During the permitting phase, Ms. Robinson assisted with State and Federal Agency coordination, including Louisiana Office of Coastal Management (OCM) and U.S. Army Corps of Engineers (USACE) to complete the purchase of mitigation bank credits and finalize the Coastal Use Permitting process. She also assisted with the preparation of baseline and impact sections for an Environmental Assessment co-led by USACE and U.S. Coast Guard, and preparation of meeting minutes for weekly team meetings. During construction, Ms. Robinson served as the Project Manager and Technical Lead of environmental compliance monitoring services, including management of a subconsultant who conducted monitoring site visits. She also conducted annual vegetation assessments and prepared a permit modification, at the client's request. Ms. Robinson closed out all permits with USACE and OCM following one full growing season. No additional compensatory mitigation was required at close out.
04/15-07/17	**Port Bienville Railroad Project, *Hancock County, MS* –** Environmental Scientist. Ms. Robinson assisted with a wetland delineation and identification of Waters of the U.S. and a Threatened and Endangered Species Field Evaluation in support of the preparation of an Environmental Impact Statement and a delineation and proposed jurisdictional determination report for the proposed construction of a new railroad.
06/13-08/15	**Louisiana Marine Fisheries Enhancement, Research, & Science Center, Calcasieu and Plaquemines Parish, LA** – Environmental Scientist**.** The Center would include development of two sites in Louisiana - one in Calcasieu Parish and one in Plaquemines Parish - that would support the State of Louisiana's ongoing management of saltwater fishery. The Calcasieu Parish facility would serve as the primary production location for the Center, and its main function would be for restoration research on, production of, and education about marine sport fish species. The Plaquemines Parish facility would serve as a secondary location for the Center, and its primary function would be for marine baitfish research. Ms. Robinson conducted delineations of waters of the U.S., including wetlands at both sites as well as the preparation of jurisdictional determination requests. Ms. Robinson also coordinated with the U.S. Army Corps of Engineers (USACE) regarding the jurisdictional determination requests in order to expedite future permit processing under Section 404 of the Clean Water Act. Additionally, Ms. Robinson assisted in the development of a baseline and impact assessment report which was included in the Draft and Final Programmatic and Phase III Early Restoration Plan and Early Restoration Programmatic Environmental Impact Statement.

16. Staff Experience:

Firm employed by	**HDR Engineering, Inc.**		
Name	**Ricky Wilson, PWS**	Years of experience with this employer	18
Title	Environmental Tech Advisor/QC Reviewer	Years of experience with other employer(s)	2
Degree(s) / Years / Specialization		M.A. / 2006 / Rangeland Ecology & Management (Focus on Stream Restoration) B.S. / 2004 / Wildlife and Fisheries Sciences	
Active registration number / state / expiration date		US, No. 2703 / Professional Wetland Scientist / 05-13-2027	
Year registered	2016	Discipline	N/A
Contract role(s) / brief description of responsibilities		**Environmental Technical Advisor/QC Reviewer** Mr. Wilson has over 20 years of professional experience with an emphasis on wetland delineations and Clean Water Act Section 404 permit coordination. His technical areas of expertise include delineation of waters of the U.S., U.S, Army Corps of Engineers Section 10/404 permit coordination, state water quality certifications, wetland and stream conditional/functional assessments, wetland/stream mitigation planning and restoration.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
01/12-Present	**Oklahoma Department of Transportation (ODOT), Statewide Section 404 Permitting and Mitigation, OK -** Environmental Scientist/Project Manager. HDR has provided Section 404 permitting and mitigation services to ODOT for roadway improvement and bridge replacement projects throughout the state of Oklahoma. He has been the primary person responsible for coordinating with ODOT and the USACE as well as leading the HDR team to complete these services for linear transportation projects. HDR has obtained 34 Section 404 Permits from the USACE Tulsa District, including 5 individual permits. HDR has also helped ODOT plan, implement, and monitor 11 compensatory mitigation projects for streams and wetlands as well as the planning for 4 proposed off-site mitigation areas. Under this contract, re has led the successful completion of permitting and mitigation task orders under ODOT contracts EC1332D, EC1449C, EC1660C, and EC1924C, as well as managed HDR's past and current Statewide Wetland and Stream mitigation contracts for ODOT (CI-2140-C, CI-2349B and CI-2549C) to complete Section 404 permitting and mitigation by providing technical guidance to the HDR team.
04/18-07/19	**Union Pacific RR (UPRR), Livonia Yard Improvements Permitting, Livonia, LA -** Environmental Scientist/Project Manager. The project consists of additional tracks and drainage improvements at the existing UPRR Livonia Yard. Led a team that conducted a delineation of waters of the U.S., including wetlands, and prepared a Section 404 individual permit application that was coordinated with the USACE, New Orleans District for authorization of the project. The USACE coordination included an evaluation of potential wetland and drainage channel jurisdiction, as well as proposed compensatory mitigation for unavoidable wetland impacts. The individual permit was received within 10 months from submittal of the application.
02/24-Present	**Texas Department of Transportation (TxDOT), Dallas District Section 404 Permitting, Multiple Counties in TX -** Permitting Technical Advisor/QC Reviewer. HDR is assisting TxDOT's Dallas District with Section 404 permitting for over 20 roadway improvement projects in north Texas, including the preparation of permit applications / pre-construction notifications for authorization by Nationwide Permit (NWP) 14. He is assisting the HDR team with providing technical advice on preparing the applications, advising TxDOT on the minimization of impacts to avoid an individual permit, and the evaluation of compensatory mitigation bank credits required for the projects. Provided a QC review for the first permit application that was submitted to the USACE, and the NWP 14 was received in about 2 months for a critical project on Interstate Highway 35.

16. Staff Experience:

Firm employed by	**HDR Engineering, Inc.**		
Name	**Jason L. Abendroth, PE**	Years of experience with this employer	7
Title	Senior Bridge Design Engineer	Years of experience with other employer(s)	9
Degree(s) / Years / Specialization		B.S. / 2008 / Civil Engineering	
Active registration number / state / expiration date		#PE.0038198 / LA / 03-31-2026	
Year registered	2013	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		**Senior Bridge Engineer** Mr. Abendroth has experience with the engineering and design of structures ranging consisting of flood control (sector, lift, sluice, and vehicular gates; pump stations; T-Walls; L-Walls; I-walls), bridges (concrete, steel, movable), and municipal sewage lift stations. Experience in other engineering disciplines includes geotechnical analysis and design for earthen levees and retaining walls.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
11/19-Present	**Statewide In-Depth Complex Bridge Inspection IDIQ - LADOTD, Statewide, LA -** Serving as HDR Inspection Lead (sub-consultant) for several task orders involving in-depth, complex bridge (movable and fixed) inspections for vertical lift spans, as well as leading several routine and fracture critical inspections of girder/truss swing spans (US 90 East Pear River, Bayou Liberty, Amite River Port Vincent, Amite River Maurepas, Tchefuncte River Madisonville, Bayou Bonfouca, and Bayou Lacombe) as well as 15 timber trestle and concrete slab span bridges.
01/11-05/14	**USACE New Orleans District | LPV 145 – Bayou Bienvenue Movable Swing Span Bridge - Steel Swing Span, New Orleans, LA -** Structural Engineer for the development of preliminary design, final design, plans, specifications and construction services for a 135 ft. unequal arm steel swing span structure. Specifically designed the swing span, reinforced concrete pivot pier (designed with timber fender protection), and prestressed concrete pile foundations. The approach spans were comprised of concrete slab spans that tied into an existing limestone access road. The bridge was designed to provide vehicular access to LPV 145 which is a 6-mile isolated levee reach in Chalmette, LA. The timber fender system for the new bridge was designed to tie into the existing system at the sector gate. The bridge was designed using LADOTD Bridge Design Manual and AASHTO-LRFD specifications.
02/10-10/12	**S.P. No. 021-01-0004, TxDOT/LADOTD, US 84, Logansport – Sabine River Bridge Replacement, Logansport, LA -** *Structural Engineer.* Assisted in the development of the final design, plans and specifications for two bridge structures (EB and WB) spanning the Sabine River using AASHTO-LRFD specifications. Designed the new TX PPC girder shapes (Tx62's and Tx70's). The span lengths range from 120 ft. to 160 ft. The substructure is comprised of multi-column reinforced concrete bents with strutted columns at the main channel locations. The bents are supported by drilled shaft foundations.
05/10-07/11	**LADOTD, Chef Menteur Bridge Replacement EA S.P. No. 700-36-0125, Orleans Parish, LA -** Structural Engineer for the development of high level (75 ft vertical clearance) fixed bridge alternatives for the replacement of a historical swing span bridge in Orleans Parish. Specifically developed the preliminary girder and pier designs. The span arrangements were comprised of PPC AASHTO Type 3 (80 ft), BT 78 (130 ft) approach spans with steel composite girders for the main span (200 ft and 270 ft). Conceptual designs were developed for deep river concrete piers with water level footings supported by large diameter PPC cylinder piles. Also developed alternatives for approach spans for a mid-level new steel bascule option. The feasibility-level designs were developed in support of an Environmental Assessment document.
08/11-09/12	**Valero Port Arthur Refinery, Taylor Bayou (Joint Outfall Canal) Movable Bridge , Steel Swing Span, Port Arthur, TX -** Served as a Bridge Engineer responsible for the development of the preliminary designs (thru 60%), plans of an unequal arm steel swing span bridge (129 ft) supported by a pivot pier on steel pipe pile foundations with prestressed concrete girder approach spans. Due to close similarities to recent projects in Louisiana, the project was designed using LADOTD design criteria and specifications.

16. Staff Experience:

Firm employed by	**HDR Engineering, Inc.**		
Name	**Garland P. Pennison, PE**	Years of experience with this employer	6
Title	Senior Project Engineer / Professional Associate	Years of experience with other employer(s)	33
Degree(s) / Years / Specialization		B.S. / 1979 / Civil Engineering M.S. / 1993 / Environmental and Water Resources Engineering	
Active registration number / state / expiration date		#PE.0020931 / LA / 09-30-2024	
Year registered	1983	Discipline	Civil Engineer, Environmental Engineer
Contract role(s) / brief description of responsibilities		**Drainage/Hydraulics** Mr. Pennison is a senior water resources engineer and professional associate at HDR with extensive project experience in Louisiana and nationwide. His skills include hydrologic and hydraulic modeling/engineering ranging from off-system bridges to diverse complex projects. Mr. Pennison has well over 5-years of responsible charge design experience with HEC products including HMS, RAS 1-D, 2-D (3 years) and SSP.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
04/13-10/14	**Louisiana CPRA, Mid-Barataria Sediment Diversion, Plaquemines Parish, LA -** Served as the civil design task lead and associate project engineer for 30% design of the proposed sediment diversion in Plaquemines Parish. Responsibilities included leading the civil effort, data acquisition and gap analysis, and preparation of design deliverables. Responsibilities also included coordinating hydraulic modeling for an integrated design. Numerical models included RAS 1-D, 2-D, HEC-6T, and Flow-3-D.
06/18-02/19	**Confidential Client, Old River Control Complex (ORCC) Sedimentation Revie, Vidalia, LA -** Led a sediment diversion assessment for ORCC. HDR provided consultation to a hydroelectric station operator by evaluating flow and sediment diversion efficiencies through the structure. Consultation included coordinating with the USACE Vicksburg Coastal Hydraulics Laboratory and New Orleans District relative to identifying and ranking potential options for increasing sediment transport from the Mississippi River to the Atchafalaya River. Included extensive data studies and model research.
01/15-05/17	**Pennsylvania Department of Transportation (PennDOT), Rapid Bridge Replacement Project, Statewide, PA -** Led a design team providing hydrologic and hydraulic analysis and design support for this fast track design-build program with 550+ bridge replacements. Models included RAS 1-D.
11/16-09/17	**New Jersey Department of Environmental Protection (NJDEP), New Meadowlands Rebuild by Design, Hackensack, NJ -** Provided QC reviews related to design concepts, hydrology, and hydraulic models for subbasins within the Meadowlands area of New Jersey. Models included HMS, RAS 1-D, and 2-D. Prepared technical memo on boundary conditions.
05/14-Present	**Florida DOT, Ultimate I-4 PPP Design Build, Orlando, FL -** The I-4 Mobility Partners team (Skanska, Granite, Lane, HDR, Jacobs and ICA) was selected to design, build, finance, operate and maintain the project known as the I-4 Ultimate through a 40-year public-private partnership concession agreement at a total design and construction cost of $2.32 billion, $860 million less than the highest proposal received by Florida DOT. The project includes the reconstruction of 21 miles of I-4.
07/15-02/17	**Bayou Lafourche Freshwater District, Union Pacific Railroad Bridge, Donaldsonville, LA -** Mr. Pennison managed the replacement of existing culvert crossings with a new railroad bridge in a fast-track project to remove existing flow restriction and increase freshwater supply capacity from the Mississippi River to Bayou Lafourche. Completed data acquisition, engineering report and RAS 1-D analysis for alternative bridge designs.
07/16-04/17	**Confidential Client, Sweetland Hydrological Assessment, Houma, LA -** Led a confidential hydrologic study to assess the hydrological feasibility of converting a large agricultural property into a wetlands mitigation bank. Modeling included hydrologic budget analysis and HMS.
04/15-04/19	**Union Pacific Railroad (UPRR), Program Bridge Replacement Projects, Statewide, AR and LA -** Provided hydrologic analysis QC reviews for programmed bridge replacements associated with UPRR rail bridges in the states of Louisiana, Arkansas, and Texas.
06/16-12/16	**North Carolina Department of Transportation, Fayetteville Outer Loop, Fayetteville, NC -** Provided design analysis and modeling for two complex major design-build bridge crossings over Bones and Little Rockfish Creek. Project included FIS data analysis and RAS 1-D and 2-D modeling.

09/02-06/04	**St. Landry Soil & Water Conservation District, Irrigation Water Supply Feasibility Study for Bayou Boeuf, Rapides, Avoyelles and St. Landry Parishes, LA -** Technical Lead. Completed a feasibility study to assess the Red River's capability to provide irrigation flow to Bayou Boeuf. Included data discovery, hydrologic assessment, RAS 1-D hydraulic modeling, impact and cost/benefit analysis, for this critical waterway in Central Louisiana

16. Staff Experience:

Firm employed by	**HDR Engineering, Inc.**		
Name	**Erin E. O'Malley, PE (SPRAT 3)**	Years of experience with this employer	13.5
Title	Senior Bridge Engineer	Years of experience with other employer(s)	2
Degree(s) / Years / Specialization	M.S. / 2010 / Structural Engineering B.S. / 2008 / Architectural Engineering		
Active registration number / state / expiration date	#PE.0043899 / LA / 03-31-2026		
Year registered: 2019	Discipline: Civil Engineering		
Other Pertinent Training / Certifications	FHWA/NHI #130055 - Safety Inspection of In-Service Bridges FHWA/NHI #130053 - Bridge Inspection Refresher Training (2020) FHWA/NHI #130078 - Fracture Critical Inspection Techniques for Steel Bridges SPRAT Rope Access Technician – Level III		
Contract role(s) / brief description of responsibilities	**Bridge Inspection**		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
02/20-01/21	**Louisiana Department of Transportation and Development (LADOTD), Statewide In-Depth Complex Bridge Inspection, Statewide LA -** Bridge Inspection/Rope Access Site Supervisor. Ms. O'Malley performed rope access inspections of lifting towers and lift span floor systems where other methods of access were not practical for the Red River and Teche Bayou lift bridges. As the rope access site supervisor, she created the work plan and safety plan for the SPRAT-certified inspectors and rigged the rope access system. The structural inspections were coordinated with the mechanical and electrical inspections and accommodated lifts as needed for boat traffic. She wrote and reviewed the structural sections of the report.
10/20–11/20	**Texas Department of Transportation (TxDOT), Movable Bridges Asset Maintenance, Rio Hondo, TX -** Bridge Inspection/Rope Access Site Supervisor. Ms. O'Malley supervised the rope access inspection of the Rio Hondo lift bridge towers above deck that were beyond the reach of the bucket truck, including the side faces over water and the majority of the lift-span and approach-span faces. The scope included a general inspection to access the condition of the bridge since its rehabilitation in 2017 and a detailed inspection of elements needing potential repairs and maintenance. She created the work plan and safety plan for two SPRAT Level 1 inspectors and rigged the rope access system. The structural inspection was performed separately from the mechanical and electrical inspections, but still required coordination with operations for boat traffic. She wrote the tower sections of the report.
05/12-09/21	**Texas Department of Transportation (TxDOT), Fracture Critical Bridge Inspection, Statewide TX -** Bridge Inspector. Ms. O'Malley has worked on five cycles of this contract since 2012, working her way up from Assistant to Team Leader to Rope Access Leader for the state. Structure types included plate girders, plate caps, tub girders, box caps, floorbeams, trusses, rail car bridges, and signature tower and cable structures. Ms. O'Malley coordinated each aspect of the inspections from planning to mobilization to reporting. Additionally, this contract included her performance of load ratings for small rural structures, steel I-beams and plate girders, through trusses, deck trusses, floorbeams and gusset plates. She also led two inspections of the Corpus Christi Harbor Bridge (2017 and 2019) for which she performed inspections from a snooper and on rope.
11/17-04/24	**Golden Gate Highway and Transportation District, Fracture Critical Bridge Inspection of the Golden Gate Bridge, San Francisco, CA -** Bridge Inspector. Ms. O'Malley was a reoccurring member of the national team providing inspection services on portions of the bridge that were not accessible from catwalks and inspection travelers. She participated in a special inspection of the towers in 2018. Due to ongoing construction that impacts the inspection travelers, the 2021 scope was greatly increased from the usual work. HDR mobilized eight times from April 2021 to November 2021 with teams of 10 to 12 rope access inspectors and 10 to 12 rigging specialists. Additionally, Ms. O'Malley participated in seven of the eight mobilizations. She was also a lead report writer for this contract and performed QC reviews of reports written by other team members.
06/21-08/21	**Virginia Department of Transportation, Fracture Critical Bridge Inspection of the Berkley Bridge, Norfolk, VA -** Bridge Inspection/Rope Access Site Supervisor. Ms. O'Malley supervised the inspection of girders and floorbeams at the ends of the spans that were inaccessible to the snooper. She

	created the work plan and safety plan for two SPRAT Level 1 inspectors and rigged the rope access system in the anchorage house and around the lifting machinery. The work required coordination with boat traffic as the twin double bascule spans open approximately twice a day.
05/16-07/16	**Alabama Department of Transportation, In-depth Inspection of Cochrane-Africatown USA Bridge, Mobile, AL -** Bridge Inspector. Ms. O'Malley was one of 12 rope access technicians charged with inspecting stay-cables and portions of the concrete towers using rope access techniques. Her inspection covered the stay-cables and upper concrete surfaces that were beyond the reach of the manlift, exterior concrete surfaces on the towers and cross beams below deck, and the interiors of the tower legs below deck.

16. Staff Experience:

Firm employed by	**HDR Engineering, Inc.**		
Name	**Matthew J. Bruno, PE (SPRAT 3)**	Years of experience with this employer	16
Title	Senior Bridge Engineer / Inspector	Years of experience with other employer(s)	0
Degree(s) / Years / Specialization		B.S. / 2008 / Civil Engineering	
Active registration number / state / expiration date		#PE.51856 / CO / 10-31-2025	
Year registered	2013	Discipline	Civil Engineering **Other Pertinent Training / Certifications** NHI/FHWA #130055 - Safety Inspection of In-Service Bridges (2010) FHWA/NHI #130053 – Bridge Inspection Refresher Training (2023) FHWA/NHI #130078 – Fracture Critical Inspection Techniques for Steel Bridges (2018) SPRAT Rope Access Technician – Level III (2015) FHWA/NHI #130087 - Inspection of Ancillary Highway Structures (2024)
Contract role(s) / brief description of responsibilities		**Bridge Inspection** Mr. Bruno has supported many bridge projects in the areas of inspection, analysis, design, and rating. He has specialized training and certification in the application of rope access and advanced climbing techniques, and has hands-on experience with in-depth/fracture critical bridge inspections for which he has verified SI&A information, determined Condition Ratings, and coded PONTIS ratings for CoRe elements.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
01/09-12/22	**Texas Department of Transportation (TxDOT) Bridge Division, Fracture Critical In-Depth Inspection, Corpus Christi, TX -** Bridge Inspection Team Leader. Provided in-depth and fracture critical inspections of multiple off system trusses throughout the State along with signature structures including the Corpus Christi Harbor Bridge, Margaret Hunt Hill Bridge, and Fred Hartman Bridge which used both conventional and industrial rope access techniques. Mr. Bruno served as the rope access supervisor providing rigging and safety support for the inspection as the SPRAT Level 3 on-site.
08/08- 08/21	**Oregon Department of Transportation, Statewide Bridge Inspection On-Call Services, Statewide, OR -** Bridge Inspection Team Leader and Assistant Team Lead. Provided in-depth fracture critical, fatigue prone and routine inspections of the Steel Bridge (vertical lift), Morrison Bridge (bascule), St. John's Bridge, Ross Island Bridge, Fremont Bridge and East/West interchange structures, East/West Marquam interchange structures and Banfield interchange structures. Mr. Bruno helped develop the field notes; compile in-depth fracture critical, fatigue prone and routine inspection reports; compile bridge inspection (PONTIS) reports; and develop photo logs. Used conventional access and industrial rope access techniques throughout all inspections.
04/15-Present	**Golden Gate Bridge Highway and Transportation District, Golden Gate Bridge Inspection, San Francisco, CA -** Bridge Inspection Team Leader. Performed fracture critical inspections on the Golden Gate Bridge on the South Approach Viaduct, Fort Point Arch, Main Span, and North Approach Viaduct in 2015, 2017, and 2019. In 2021 and 2023, previous elements of the bridge were inspected again with the addition of inspection of 200+ floorbeams in the Main Suspension Spans. Inspection of the floorbeams and truss members was completed using industrial rope access only. HDR performed close-up inspections on the Golden Gate Bridge Towers in 2018 which was completed using industrial rope access only.
04/12-Present	**Alaska Department of Transportation and Public Facilities (AKDOT&PF), Fracture Critical Bridge Inspections and Special Bridge Inspections, Statewide, AK -** Bridge Inspection Team Leader and Assistant Team Leader. HDR has performed fracture critical and routine inspections for AKDOT&PF since 2012. Structures were comprised of steel, timber and/or concrete. Mr. Bruno participated and/or led multiple fracture critical inspections of marine facilities and trusses which used ground and industrial rope access techniques to complete the inspections. He also completed load rating of many marine structures of varying complexity and assisted the AKDOT&PF in writing their Bridge Load Rating manual.

16. Staff Experience:

Firm employed by	**HDR Engineering, Inc.**		
Name	**Peter J. Harrison, PE (SPRAT 1)**	Years of experience with this employer	10
Title	Bridge Inspection Section Lead	Years of experience with other employer(s)	19
Degree(s) / Years / Specialization		B.S. / 1998 / Civil Engineering	
Active registration number / state / expiration date		#PE.0039771 / LA / 09-30-2025	
Year registered	2015	Discipline	Civil Engineering **Other Pertinent Training / Certifications** FHWA/NHI #130055 - Safety Inspection of In-Service Bridges (2008) FHWA/NHI #130053 - Bridge Inspection Refresher Training (2022) FHWA/NHI #130078 - Fracture Critical Inspection Techniques for Steel Bridges (2003) FHWA/NHI #130110 – Tunnel Safety Inspection (2016) FHWA/NHI #130124 - Tunnel Safety Inspection Refresher (2021) SPRAT Rope Access Technician – Level I
Contract role(s) / brief description of responsibilities			**Bridge Inspection** Mr. Harison has over 29 years in bridge design, inspection and project management. He has experience with inspection and repair using such construction materials as steel, concrete and timber and has worked on a diverse group of structure types including segmental concrete, truss, cable stayed, tied arch and movable bridges.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
1/2014-10/22	**Texas Department of Transportation (TxDOT), Fracture Critical Bridge Inspection, Statewide, TX –** Project Manager/Team Leader. Managed and led the field inspection and report preparation. This contract has inspected a total of 1,560 bridges to date comprising 6,248 fracture critical components.
8/2015 - Present	**Texas Department of Transportation (TxDOT), Routine Bridge Inspection, Statewide TX –** Project Manager. Peter managed and led the field inspection and report preparation. Coordinated each of the routine inspection assignments. This contract has inspected a total of 10,428 bridges to date. Peter was the onsite team leader for approximately 20 percent of the bridges.
02/14-08/15	**Louisiana Department of Transportation and Development (LADOTD), LA 12 Sabine River Bridge Stage 0 Bridge Evaluation, Calcasieu, LA -** QA/QC Reviewer. Project involved the rehabilitation and/or replacement of a historic swing-span bridge on the Texas-Louisiana border. The 327-ft five-span bridge contains four concrete approach spans and one steel girder movable span which has been immobilized. Provided QA/QC for the bridge inspection, load rating calculations and report which summarized the inspection, load rating and alternatives analysis.
06/09-12/09	**Nebraska Department of Roads (NDOR), Fracture Critical Inspection and Rating, Statewide NE -** Inspection Team Leader. Mr. Harrison led the inspection and load rating of 108 fracture critical bridges throughout the state of Nebraska. Load ratings were performed to determine inventory and operating loads in accordance with NDOR standards using LARS rating software. Most bridges were pony trusses of varying length.
07/11 - 09/11	**Alabama State Port Authority, Alabama State Docks Inspection and Rating, Mobile, AL -** Bridge Inspector. Inspected and load rated the Alabama State Docks Bascule Bridge over Three Mile Creek. This railroad structure consisted of four steel spans, including a 135'-9" bascule main span.
11/17 - 4/24	**Golden Gate Bridge Highway and Transportation District, Golden Gate Bridge Fracture Critical Bridge Inspection, San Francisco, CA -** Bridge Inspector. Inspected fracture critical members that are difficult to access which were performed within "arm's length" using industrial rope access. The inspection of 179 truss members, 168 floorbeams, 3 girder spans and portions of the main cables were completed within three weeks using a team of up to seven inspectors and seven rigging technicians.

16. Staff Experience:

Firm employed by	**HDR Engineering, Inc.**		
Name	**Riley T. Boone, PE (SPRAT 1)**	Years of experience with this employer	8
Title	Bridge Engineer	Years of experience with other employer(s)	0
Degree(s) / Years / Specialization		B.S. / 2013 / Civil Engineering	
Active registration number / state / expiration date		#131800 / TX / 06-30-2024	
Year registered	2018	Discipline	Civil/Structural Engineering **Other Pertinent Training / Certifications** FHWA-NHI-130055: Safety Inspection of In-Service Bridges (2019) FHWA-NHI-130053: Safety Inspection of In-Service Bridges – Refresher (2024) SPRAT Rope Access Technician – Level I
Contract role(s) / brief description of responsibilities			**Bridge Inspection** Mr. Boone has been involved in the design and inspection of bridges and maritime related structures. Since 2019 his primary focus has been on the inspection of a wide variety of bridges and types of inspections including routine, fracture critical, condition assessment and inspections following a natural disaster.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
07/17-Present	**Texas Department of Transportation (TxDOT – Bridge Division), Fracture Critical In-depth Bridge Inspections, Statewide TX.** *Assistant Bridge Inspector.* Has performed inspections on a wide variety fracture critical bridges throughout the state of Texas including, but not limited to, large and small steel truss bridges, extradosed bridges, two girder superstructures, steel plate caps and steel box caps. Access methods have included rope access, ladders, under bridges inspection vehicles, bucket trucks and manlifts.
09/21-Present	**Montana Department of Transportation, Fracture Critical Bridge Inspections, Statewide, MT.** *Assistant Bridge Inspector.* Has performed several inspections on small truss bridges and plate caps throughout the state of Texas. Access methods have included rope access and ladders.
02/17-09/19	**Texas Department of Transportation (TxDOT), Routine Bridge Inspections, Statewide, TX.** *Assistant Bridge Inspector.* Inspected 300+ bridges and culverts throughout the state of Texas. His responsibilities included photo documentation, field observations/documentation, repair recommendations and report preparation.
09/19-Present	**Texas Department of Transportation (TxDOT), Routine Bridge Inspections, Statewide, TX.** *Bridge Inspector.* Lead inspector on 800+ bridges and culverts throughout the state of Texas.
10/17-11/3019	**Texas Department of Transportation (TxDOT), On-System Condition Assessments, Statewide, TX.** *Bridge Inspector.* Performed several condition assessment inspections.
05/19-10/19	**Texas Department of Transportation (TxDOT), Scour Evaluations, Dallas District, TX.** *Technical Lead/Evaluator.* Led a team of engineers to evaluate 400+ bridges in the Dallas District to determine the current and future vulnerability to scour of each bridge and provide repair and preventative recommendations to protect the bridge from further scour.

16. Staff Experience:

Firm employed by	**HDR Engineering, Inc.**		
Name	**Andrew E. Cadmus, PE**	Years of experience with this employer	3
Title	Tolling Consultant and Deputy Program Manager	Years of experience with other employer(s)	12
Degree(s) / Years / Specialization		B.S. / 2004 / Civil Engineering - Transportation MBA / 2009 / General	
Active registration number / state / expiration date		#38279 / MD / 01-06-2026	
Year registered	2010	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		**Tolling Analysis** Mr. Cadmus is an engineer, project manager, and consultant with over 15 years of experience in the public and private sectors of the transit, highway, and tolling industries. He has led multi-disciplinary teams in the development and delivery of complex projects ranging from strategic consulting services, financial modeling, IT projects, and dashboards. His projects have often included external and internal communication with stakeholders requiring consensus building and developing trusted relationships. Andrew specializes in providing consulting services to public agencies in the areas of transportation economics, data analysis, cost-benefit evaluation, process improvements, capital cash flow management, and tolling operations.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
04/18-10/18	**LADOTD, Retainer Contract for Strategic Advisory Services Related to LTA Participation in P3s, Statewide, LA -** Toll Operations Consultant. HDR was the P3 Advisor to LADOTD responsible for re-evaluating the potential for using tolling as a source of funding for Louisiana's transportation improvement program. The process involved qualitative screening of all projects on the five-year improvement program. Six projects were recommended from the screening and the HDR team prepared capital cost estimates, revenue forecasts and O&M estimates to test the feasibility of the most viable project. The project with the highest potential was selected by LADOTD and is now being implemented as a P3 project.
01/19-Present	**Triborough Bridge and Tunnel Authority, Congestion Tolling Program, New York, NY -** Deputy Project Manager. HDR is the program manager and lead for infrastructure on the Central Business District Tolling Program. Congestion Tolling has only been implemented in a few major cities worldwide, and this is the first project of its kind in the United States. The project includes the procurement of a design-build-operate-maintain contractor to install infrastructure and a roadside toll collection system. The result will be a cordoned tolling zone around the Central Business District of Manhattan, inclusive of 60th Street and south, tolling vehicles entering the zone. As one of two Deputy Project Managers, Mr. Cadmus is responsible coordinating various aspects of the project including the back office systems and toll collection systems. He is also responsible for developing tolling policies, providing guidance on draft legislation, and developing components of the request for proposal. Additionally, Mr. Cadmus is responsible for coordinating the cost estimates.
06/17-08/19	**Alabama DOT I-10 Mobile River Bridge (ALDOT), Mobile, AL -** Toll Operations Consultant. Mr. Cadmus was the tolling operations expert providing ALDOT with advisory services for the Mobile River Bridge Public Private Partnership project. These services included the development of policies and revised draft legislation for the new tolling agency within the Alabama Toll Road, Bridge and Tunnel Authority. He then used these policies and legislation as the foundation to develop a Concept of Operations for the proposed facility. He continued supporting the project by adapting the Concept of Operations into procurement documents for a 50-year Design Finance Build Operate and Maintain (DFBOM) concession. These procurement documents included Technical Provisions for the procurement of a concessionaire, contributing to the concessionaire agreement (contract), development of key performance indicators, and other advisory services.

01/17-Present	**Golden Gate, Highway, and Transportation District, Data and Reporting Gap Analysis, San Francisco, CA -** Mr. Cadmus is serving as Project Manager responsible for supporting the district with a Data and Reporting Gap Analysis for this Replacement Toll Collection System Project. This project evaluates the existing tolling system for the District to identify where transactions and revenue are not reconciling between the lane, lane host, and CSC. It has clarified for the District what reports and data are needed to track and reconcile transactions with revenue. The project included reviewing existing reports and processes, database schema, data dictionaries, interface control documents, transaction and financial data, and other information to trace transactions and revenue through the system, resulting in a comprehensive assessment of the tolling system. The final report recommended short, medium and long-term solutions to improve accuracy and reporting to support operations. ($70K)

16. Staff Experience:

Firm employed by	**GeoEngineers, Inc.**		
Name	**Larry D. Sant, PE**	Years of experience with this employer	23
Title	Associate Geotechnical Engineer	Years of experience with other employer(s)	2
Degree(s) / Years / Specialization	M.S., 2001, Civil Engineering B.S., 2001, Civil Engineering		
Active registration number / state / expiration date	#PE.0035625 / LA / 09-30-2024		
Year registered: 2010	Discipline: Civil Engineering		
Contract role(s) / brief description of responsibilities	**Geotechnical Task Manager – Satisfies MPR#9** Mr. Sant is a senior geotechnical engineer with more than two decades of experience managing geotechnical engineering projects. His experience includes project planning and technical direction during exploration, laboratory testing, engineering design analyses, report preparation and construction monitoring. Having been involved with numerous bridge and roadway projects the LA DOTD, **including Design-Build assignments**, he is very familiar with LADOTD policies, procedures and specifications for geotechnical work and is accustomed to delivering geotechnical services in compliance with an **accelerated schedule**.		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
01/19-Present	**S.P. H.011670: LADOTD, I-10/Loyola Interchange Design-Build, Kenner, LA –** Geotechnical Project Manager during GeoEngineers' completion of geotechnical exploration, testing and engineering for this high-profile project in Kenner that will ultimately improve the Loyola Drive interchange to increase operational efficiency and traffic capacity.
05/18-Present	**S.P. H.003370: LADOTD, I-20/I-220 (Barksdale AFB) Design-Build, OV/QA, Bossier Parish, LA -** Project Manager for GeoEngineers' OV/QA role in this Design-Build project which involves interchange improvements that will increase access to the Barksdale Air Force Base in Bossier Parish.
08/17-11/20	**S.P. H.009250: LADOTD, I-10 Widening (Highland to LA-73) Design-Build, OV/QA, Baton Rouge, LA -** Project Manager for GeoEngineers' OV/QA role in this highly-anticipated I-10 project that involved widening a 6.5-mile segment of I-10 from four lanes to six lanes between Highland Road and LA-73.
04/15-11/17	**S.P. H.004932: LADOTD, US 90/LA 318 Interchange Design-Build, St. Mary Parish, LA –** Geotechnical Project Manager during this Design-Build project in support of the proposed Interchange on US 90 at LA 318. He led the geotechnical design including drilling, log review, test assignments, pile design, settlement analysis, embankment monitoring, and embankment design. Services also included extensive settlement modeling to demonstrate that the aggressive schedule for this project could be met along with the modeling of pile driving using Wave Equation Analyses (WEAP). During construction, he oversaw PDA/CAPWAP testing to keep the schedule progressing.
02/13-04/13	**S.P. H.010620: LADOTD, I-49/US 90 Widening over LA 182 and BNSF Railroad, Lafayette, LA -**Widening project that was completed in preparation for upgrading US 90 to I-49 from Albertson Road to Ambassador Caffery. Mr. Sant served as the Geotechnical Project Manager for bridge and roadway borings, and laboratory tests in support of the design of this Design-Build project located just south of Lafayette. GeoEngineers completed 119 borings for the project on a fast-track schedule using multiple drill rigs to meet the deadline.
08/12-07/15	**S.P. H.010151: LADOTD, I-210 at Cove Lane Interchange, Lake Charles, LA** - Geotechnical Project Manager during this fast-track design and construction project in support of the proposed Interchange on I-210 at Cove Lane. GeoEngineers completed engineering analyses and provided recommendations for the design and construction of about 8,000 driven pile foundations which included the modeling of pile driving using Wave Equation Analyses (WEAP), MSE walls, and wick-drain/surcharge design to reduce post-construction embankment settlement in accordance with AASHTO LRFD specifications for highway bridges. In addition, the GeoEngineers team monitored MSE wall construction, provided PDA/CAPWAP evaluation of the piles during installation, and installed liquid settlement sensors to monitor embankment settlement.

01/10-12/11	**S.P. 454-02-0071: LA DOTD, I-12 Widening (Amite River to Juban Road) Design-Build, Denham Springs, LA** - Geotechnical Project Manager during this Design-Build project. GeoEngineers completed engineering analyses and provided recommendations for the design and construction of driven pile foundations for four bridge structures in accordance with AASHTO LRFD specifications for highway bridges. Work also included PDA/CAPWAP monitoring**.**
09/09-07/11	**S.P. 424-04-0032: LA DOTD, US 90 at LA 85 Interchange Design-Build, Iberia Parish, LA –** Geotechnical Project Manager during this Design-Build project in support of the proposed Interchange on US 90 at LA 85. GeoEngineers completed engineering analyses and provided recommendations for the design and construction of driven pile foundations in accordance with AASHTO LRFD specifications for highway bridges and PDA/CAPWAP monitoring. In addition, the GeoEngineers team analyzed embankment settlement and provided design recommendations for wick drains and surcharge loading to reduce post construction settlement and prevent downdrag loads on the proposed adjacent bridge foundations.

16. Staff Experience:

Firm employed by	**GeoEngineers, Inc.**		
Name	**James M. Aronstein, Jr., PE, PS**	Years of experience with this employer	54
Title	Senior Geotechnical Advisor	Years of experience with other employer(s)	5
Degree(s) / Years / Specialization		B.S. / 1965 / Civil Engineering	
Active registration number / state / expiration date		#PE.0011794 / LA / 03-31-2025 #PS.00458 / LA / 03-31-2025	
Year registered	1969	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		**Geotechnical Technical Advisor** Mr. Aronstein has provided geotechnical services on private, industrial and public facilities since 1969, with extensive, significant expertise in the transportation industry. He has served as the Engineer-of Record for the majority of GeoEngineers' Louisiana road and bridge projects over the past 30 years, including LADOTD statewide retainer contracts for geotechnical investigations and project-specific programs, **including Design-Build procurements**. His projects include the I-210 at Cove Lane Interchange; I-49/US90 Widening over LA182 and BNSF Railroad Design-Build; 37-mile extension of I-49 North through Louisiana, I-220 to the Arkansas state line; Rigolets Pass Bridge on US 90; numerous off-system bridge sites for LADOTD through local consultants; and work on the East Baton Rouge Parish Green Light roads and streets improvement plan. His role has involved managing and executing engineering analyses and reports, field exploration, site access, drilling technology evaluation, exploration conduct, laboratory test assignments, and quality control of the generated work product.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
01/19-Present	**S.P. H.011670: LA DOTD, I-10/Loyola Interchange Design-Build, Kenner, LA -** GeoEngineers is completing the geotechnical exploration, testing and engineering for this high-profile project in Kenner that will ultimately improve the Loyola Drive interchange to increase operational efficiency and traffic capacity. Mr. Aronstein is serving as Principal-in-Charge.
05/18-Present	**S.P. H.003370: LA DOTD, I-20/I-220 (Barksdale AFB) Design Build, OV/QA, Bossier Parish, LA -** Principal-in-Charge for GeoEngineers' OV/QA role in this design-build project which involves interchange improvements that will increase access to the Barksdale Air Force Base in Bossier Parish.
08/17-11/20	**S.P. H.009250: LA DOTD, I-10 Widening (Highland to LA-73) Design-Build, OV/QA, Baton Rouge, LA -** Principal-in-Charge for GeoEngineers' OV/QA role in this highly-anticipated I-10 project that involved widening a 6.5-mile segment of I-10 from four lanes to six lanes between Highland Road and LA-73.
04/15-11/17	**S.P. H.004932: LA DOTD, US-90/LA-318 Interchange Design Build, St. Mary Parish, LA -** Principal-in-charge during this Design-Build project in support of the proposed Interchange on US 90 at LA318. GeoEngineers performed the geotechnical design including drilling, log review, test assignments, pile design, settlement analysis, embankment monitoring, and embankment design. Additional services included extensive settlement modeling to demonstrate that the aggressive schedule for this project could be met, along with the modeling of pile driving operations using wave equation analyses (WEAP). During construction, PDA/CAPWAP testing was performed to keep the schedule progressing.
02/13-04/13	**S.P. H.010620: LA DOTD, I-49/US90 Widening over LA182 and BNSF Railroad, Lafayette, LA -** Widening project that was completed in preparation for upgrading US 90 to I-49 from Albertson Road to Ambassador Caffery for which Mr. Aronstein served as principal-in-charge of conducting bridge and roadway borings as well as laboratory tests in support of the design. Completed 119 borings for the project on a **fast-track schedule** using multiple drill rigs to meet the deadline.
08/12-04/15	**S.P. H.010151: LA DOTD, I-210 at Cove Lane Interchange, Lake Charles, LA -** Principal-in-charge during this **fast-track design and construction project** in support of the proposed Interchange on I-210 at Cove Lane. GeoEngineers completed engineering analyses and provided recommendations for

	the design and construction of approximately 8,000 driven pile foundations and MSE walls. Wick-drain/surcharge design was used to reduce post-construction embankment settlement in accordance with AASHTO LRFD specifications for highway bridges. In addition, the GeoEngineers team monitored MSE wall construction, provided PDA evaluation of the piles during installation, and installed liquid settlement sensors to monitor embankment settlement.
09/09-07/11	**S.P. 424-04-0032: LA DOTD, US90 at LA85 Interchange Design-Build, Iberia Parish, LA -** Principal-in-charge during this Design-Build project in support of the proposed Interchange on US 90 at LA85. Services included engineering analyses and recommendations for the design and construction of driven pile foundations in accordance with AASHTO LRFD specifications for highway bridges and PDA/CAPWAP monitoring. In addition, the GeoEngineers team analyzed embankment settlement and provided design recommendations for wick drains and surcharge loading to reduce post construction settlement and prevent downdrag loads on the proposed adjacent bridge foundations.
04/07-04/09	**S.P. 700-09-0165: LA DOTD, I-49 North, Caddo Parish, LA -** A Louisiana DOTD Priority 1 Mega Project for which Mr. Aronstein led GeoEngineers' team in conducting bridge and roadway borings and laboratory tests before bridges were constructed and pavement was laid on the 36-mile northward extension in Louisiana. GeoEngineers completed 166 borings for the project. At some sites, the team had to overcome the challenge of drilling exploratory borings at the same time LADOTD was clearing the area for construction and disturbing the site where samples were taken.

16. Staff Experience:

Firm employed by	**GeoEngineers, Inc.**		
Name	**David P. Sauls, PE**	Years of experience with this employer	30
Title	Senior Principal Geotechnical Engineer	Years of experience with other employer(s)	10
Degree(s) / Years / Specialization		M.S. / 1984 / Civil Engineering B.S. / 1982 / Civil Engineering	
Active registration number / state / expiration date		#PE.0023270 / LA / 03-31-2025	
Year registered	1989	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		**Geotechnical QA/QC** Mr. Sauls has more than 30 years of experience on transportation-related projects which includes extensive experience working with the LADOTD, including **Design-Build projects**. He has been the Engineer-of-Record during the production of many LADOTD profile and laboratory data programs which required his performance of supervision and QA during the generation of field data as well as laboratory testing assignments. He is an active member with many technical and professional societies, both locally and statewide, and has served as an author/ co-author of seven technical papers regarding the soil behavior and deformation characteristics.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
07/19-Present	**S.P. H.004932: LADOTD, I-10/Loyola Interchange Design-Build, Kenner, LA –** Managing the geotechnical quality assurance efforts for this Design-Build project that will increase traffic capacity and alleviate congestion on Loyola Drive at the I-10 interchange in the New Orleans area.
06/18-07/19	**Plank Road Relocation; City-Parish of East Baton Rouge, Baton Rouge, LA -** Performed geotechnical exploration and laboratory testing for the City of Baton Rouge. A new runways at the Baton Rouge Metropolitan Airport necessitated the relocation of Plank Road. Mr. Sauls provided bridge and piling design as well as pavement design recommendations based on geotechnical investigation results.
04/15-11/17	**S.P. H.004932: LADOTD, US 90/LA 318 Interchange Design-Build, Baton Rouge, LA –** Led the geotechnical quality assurance program during this Design-Build project in support of the proposed Interchange on US 90 at LA 318. GeoEngineers completed the geotechnical services which included drilling, log review, test assignments, pile design, settlement analysis, embankment monitoring, and embankment design. They also conducted extensive settlement modeling to demonstrate that the aggressive schedule for this project could be met along with the modeling of pile driving using Wave Equation Analyses (WEAP). During construction, GeoEngineers conducted PDA/CAPWAP testing to keep the schedule progressing.
09/12-04/15	**S.P. H.010151: LADOTD, I-210 at Cove Lane Interchange, Lake Charles, LA -** Led the geotechnical QA program during this fast-track design and construction project in support of the proposed Interchange on I-210 at Cove Lane. GeoEngineers completed engineering analyses and provided recommendations for the design and construction of about 8,000 driven pile foundations and MSE walls. Wick-drain/surcharge design was performed to reduce post-construction embankment settlement in accordance with AASHTO LRFD specifications for highway bridges. The GeoEngineers team also monitored MSE wall construction, provided PDA evaluation of piles during installation, and installed liquid settlement sensors to monitor embankment settlement.
09/09-07/11	**S.P. 424-04-0032: LADOTD I-49/US 90, LA 85 Overpass; LADOTD and Design-Build Team, Patoutville, Iberia Parish, LA –** Served as the Managing Principal for geotechnical engineering design support for this approximately $25 million, 1,900-foot interstate level overpass of two, two-lane bridges. The design included wick drains and surcharge to accelerate the settlement of the 14-foot earthen approach embankment. Provided design recommendations for precast concrete piles to support the bridge bent foundation.

16. Staff Experience:

Firm employed by	**GeoEngineers, Inc.**		
Name	**Firouz Rosti, PhD, PE**	Years of experience with this employer	1
Title	Senior Geotechnical Engineer	Years of experience with other employer(s)	6
Degree(s) / Years / Specialization	Ph.D. / 2016 / Civil Engineering – Geotechnical M.S. / 2005 / Civil Engineering – Geotechnical B.S. / 2001 / Civil Engineering		
Active registration number / state / expiration date	#P.E.0043718 / LA / 09-30-2024		
Year registered: 2021	Discipline: Civil Engineering		
Contract role(s) / brief description of responsibilities	**Geotechnical Project Engineer** Dr. Rosti is a senior geotechnical engineer with over six years of experience in the design, analysis, and management of geotechnical engineering projects. His expertise includes project planning, supporting field exploration and laboratory testing, conducting engineering design analyses, preparing technical reports, and performing third-party project evaluations. His project involvement includes road design, shallow and deep foundation analysis and construction, embankment design, foundation settlement analysis, seepage analysis, earth dam construction, marsh creation, and soil stabilization for various industrial and private projects.		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
09/23-Present	**LADOTD, S.P. H.011670, I-10/Loyola Interchange Design-Build, Kenner, LA -** GeoEngineers is completing the geotechnical exploration, testing and engineering for this high-profile project in Kenner that will ultimately improve the Loyola Drive interchange to increase operational efficiency and traffic capacity. Dr. Rosti provided deep foundation analysis support.
01/24-Present	**LADOTD, H.001970, LA 561 Boeuf River Bridge near Hebert Phase 2 Columbia, LA –** Dr. Rosti is the project manager for this subsurface exploration project. The scope involves the completion of eight deep geotechnical borings, including three in the Boeuf River, with supporting laboratory testing and boring log creation to design the replacement bridge.
02/24-Present	**LADOTD, I-20 at Nutland Slope Repair, Monroe, LA –** Dr. Rosti is the project manager for GeoEngineers on this slope project that involves an analysis of failed slopes and recommendations for repair of roadway embankment.
01/24-Present	**BTR Airport - Plank Rd Realignment, Phase II and Runway 13/31 Safety Area/RPZ Improvements, Baton Rouge, LA –** Dr. Rosti is the project manager for GeoEngineers on this roadway and bridge design project. He was involved in the project after field exploration and handled the drafting of boring logs, engineering analysis, and compilation of engineering reports.
01/24-Present	**Lafayette Consolidated Government, Verot School Road Bridge Repair Project, Lafayette, LA –** Dr. Rosti is the project manager for this soil nail design and road embankment slope analysis. He has managed the project from field exploration to lab testing, through technical analysis and report prepartion.

16. Staff Experience:

Firm employed by	**GeoEngineers, Inc.**		
Name	**Anthony (Chien-An) Ju, EI**	Years of experience with this employer	4
Title	Staff Geotechnical Engineer	Years of experience with other employer(s)	0
Degree(s) / Years / Specialization		M.S. / 2020 / Civil Engineering	
Active registration number / state / expiration date		B.S. / 2018 / Civil Engineering	
Year registered	2021	Discipline	EI #34836 / LA / 09-30-2025
Contract role(s) / brief description of responsibilities		**Staff Geotechnical Engineer** Mr. Ju is a staff engineer who has been actively involved in many of GeoEngineers' geotechnical explorations and evaluations since joining the firm in 2021. In addition to typical geotechnical analysis, he has worked in the field during construction to perform PDA testing, as well as performed wick drain/surcharge settlement analyses and CAPWAP analysis for pile capacity.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
02/21-11/21	**LADOTD, I-10/Loyola Interchange Design-Build, Kenner, LA** - Provided field monitoring of driven piles, including use of a Pile Driver Analyzer (PDA) and CAPWAP analysis for capacity. GeoEngineers is completing the geotechnical exploration, testing and engineering for this high-profile project in Kenner that will ultimately improve the Loyola Drive interchange to increase operational efficiency and traffic capacity.
11/17-12/21	**Belle Chasse Bridge and Tunnel Replacement P3 -** Provided engineering support for wick drain/surcharge settlement analyses. GeoEngineers is providing geotechnical design and construction services along with subsurface exploration borings and laboratory testing for the P3 Bridge and Tunnel Replacement project in Plaquemines Parish, Louisiana. This unique project involves replacing the southbound tunnel and northbound elevating bridge with one replacement bridge over the Gulf Intracoastal Waterway (GIWW).
04/15-2/16	**Phoenix Marsh Creation Project - East Increment (BS-0042) and West Increment (BS-0044), Plaquemines Parish, LA** - Served as a staff geotechnical engineer providing support with engineering analyses. The objective of the East Increment is to create and nourish approximately 392 acres of marsh and the objective of the West Increment is to create and nourish approximately 411 acres of marsh. His role included organizing and managing the field exploration efforts for the marsh creation areas and the borrow area in the Mississippi River. In addition, Anthony was instrumental in the engineering analyses for the marsh creation areas including stability of earthen containment dikes and marsh settlement.
11/21-Present	**Lake Borgne Marsh Creation (PO-180); St. Bernard Parish, LA** - Served as a staff geotechnical engineer providing assistance with the field construction monitoring which included setting up vibrating wire piezometers and earth pressure cells, getting all equipment reading correctly, and training the client on how to download the data. This project is expected to create approximately 1,548 acres of marsh using sediment dredged from Lake Borgne. This is the first of a large-scale restoration strategy to re-establish the degraded bay rim and intertidal marsh habitat for the shoreline.
01/19-Present	**Cameron Meadows Marsh Creation and Terracing (CS-66); Cameron Parish, LA** - Served as a staff geotechnical engineer supporting the construction monitoring collecting sediment samples of the placed marsh fill for further analysis for this multi-faceted project that included marsh creation, terraces, a water control culvert structure, and an underground highway crossing for a hydraulic fill pump line.
07/18-Present	**East Orleans Landbridge Restoration (PO-191), Orleans Parish, LA** - served as a staff geotechnical engineer supporting the engineering analyses by review of field and laboratory data and selection of design soil parameters. This Project will create approximately 1,563 acres of marsh which will be created and nourished by hydraulically dredging material from two potential locations – Lake Pontchartrain and Lake St. Catherine. The fill areas will be formed by constructing earthen containment dikes around the boundaries of each marsh creation area (MCA). GeoEngineers has performed field investigations and geotechnical analyses along with laboratory testing and reporting.

16. Staff Experience:

Firm employed by	**KPMG, LLP**		
Name	**Guy Wilkinson**	Years of experience with this employer	28
Title	Principal	Years of experience with other employer(s)	0
Degree(s) / Years / Specialization		B.A. (Hons) / History	
Active registration number / state / expiration date		N/A	
Year registered		Discipline	N/A **Other Pertinent Training / Certifications** FINRA Licenses: Series 24, 7, 63 and 79
Contract role(s) / brief description of responsibilities			**Financial / Funding Advisor** Mr. Wilkinson is a Principal within KPMG's Infrastructure Practice with over 20 years' experience advising on project finance and P3 transactions in the transportation sector. He served as a financial advisor on LADOTD's Belle Chasse P3 and will serve in the same role as part of this contract to serve the financial needs of the LADOTD.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
11/18-06/20	**Louisiana Department of Transportation and Development, Belle Chasse P3 Project** – Mr. Wilkinson advised the Louisiana Department of Transportation on the development of the toll concession Belle Chasse Project. He oversaw the financial evaluations for the project and led KPMG's project team in commercial negotiations with the preferred bidder.
02/11-Present	**National Railroad Passenger Corporation (Amtrak)** – Mr. Wilkinson serves as KPMG's lead advisory partner for the firm's account with Amtrak which has included the following engagements: Amtrak Northeast Corridor Business Plan: Led a multi-disciplinary team responsible for providing strategic and commercial advice on the expansion and redevelopment of the Northeast Corridor. KPMG developed a business and financial plan as well as a delivery options assessment and analysis plan for the project implementation. The work enabled the project to progress toward environmental analysis and prioritization of phasing, including the Gateway Program. Terminal Development Initiative: Led an advisory team to Amtrak on a broad range of real estate and investment consultancy services that were required to assist in analyzing and developing actionable alternatives to improve the performance of a subset of its terminals and portfolio of real estate assets, foster private investment, generate new revenue streams, and identify opportunities to maximize and leverage value through development and other means. 30th Street Station: Served as a client service partner on the redevelopment of Philadelphia's iconic 30th Street Station. Guided the client from initial market sounding and feasibility through evaluation of bids and selection of a preferred bidder. In 2021, Amtrak reached commercial and financial close with Plenary to redevelop the headhouse and passenger concourse. Performance Improvement: Served as a client service partner on a major strategic organizational and performance improvement initiative to achieve multi-million dollar savings across the organization. Worked across multiple functions of the organization including: marketing; Information Technology; and Finance.
06/18- Present	**Massachusetts Bay Transportation Authority (MBTA) -** Mr. Wilkinson is KPMG's lead advisory partner on the MBTA account providing consulting on a wide range of initiatives that are aimed at generating new revenue, decreasing costs, and procuring capital projects. Work includes advising on the new Automated Fare Card payment system implemented by Cubic and John Laing; advising on transit-orientated developments; commuter rail advisement on the commercialization of fiber optics along the rail network and Keolis inventory management; and process improvement, organization and change management advice for functions within the agency.
04/21-Present	**New Jersey Transit** - Currently advising NJ Transit on its Gateway Program which includes the Portal North Bridge project and expansion of electric ready bus vehicle maintenance/storage facilities. Work has included analysis of the financial plan for Gateway and options analysis for the development and expansion of bus facilities. The Gateway work has included advisement on the CIG application process and the development of MOUs between the various stakeholders, including New York, New Jersey and Amtrak.

02/09-02/11	**Los Angeles County Metropolitan Transportation Authority (LA Metro)** - Coordinated KPMG's financial advice to LA Metro as part of a team of advisors that acted to assist the Authority in structuring and ultimately delivering a range of highway and transit projects. Tasks included the development and execution of screening methodology, development of feasibility financial analysis, and preliminary business case development.
03/17-12/18	**LYNX Bus Service, SR 436** - Advised LYNX with regard to a transit corridor study on SR 436, also known as Semoran Boulevard or Altamonte Drive. The focus of the study was the segment of SR 436 between SR 434 in Altamonte Springs and Orlando International Airport's South Terminal to identify alternatives to improve mobility and access to transit along the corridor.
01/20-01/21	**FDOT, M-CORES (Multi-use Corridors of Regional Economic Significance) Program** - Led an engagement working with Central Office, FTE and FDOT Districts 1, 2 and 5 on analyzing key considerations on governance, strategy, process and organization associated with the MCORES program. The first phase of the work included a diagnostic assessment of the current state of the capital program and the development of a roadmap to address areas of capability and required support throughout the program's lifecycle.
05/08-Present	**FDOT, I-4 Ultimate Project** - Advises FDOT on project structuring for a 21-mile, $2.3 billion reversible managed lanes project. Leading the efforts to develop financial feasibility analyses, provide financial analysis in support of procurement activities, and support FDOT in its negotiations with key investors, TIFIA and ratings agencies. He also oversaw the development of applications for the Transportation Infrastructure Finance Innovation Act (TIFIA) and Private Activity Bonds (PABs) allocation for the project.
07/08-07/10	**Caltrans, Presidio Parkway Concession, San Francisco, CA** - Advised on the. This project involved replacing some of the existing Doyle Drive with a new six-lane parkway and a southbound auxiliary lane. The project also includes the construction and installation of various electrical and mechanical technologies, the Girard Road undercrossing and Low Viaduct, the Northbound High Viaduct, the Northern Park Presidio Interchange, the northbound roadway to Merchant Road, demolition of the existing High Viaduct, and finally landscaping.
01/08-/12/10	**TXDOT, Trans Texas Corridor-35 -** Provided advice on the CDA program for TTC-35. This work involved updating the master development plan, assessing the merit of projects ready for development, and evaluating proposals put forward by TTC35 partner Cintra Zachry.
07/17-12/19	**ALDOT, I-10 Mobile River Bridge Crossing P3** – Provided advisement to ALDOT on the procurement of their first P3. At the RFP shortlisting stage, he advised ALDOT on its INFRA grant and TIFIA applications, as well as provided strategic advice on development of the RFP and the concession agreement.

16. Staff Experience:

Firm employed by	**KPMG, LLP**		
Name	**Justin Clarke**	Years of experience with this employer	19
Title	Director	Years of experience with other employer(s)	6
Degree(s) / Years / Specialization		MBA / University of Florida BBA / Finance and Economics	
Active registration number / state / expiration date		N/A	
Year registered		Discipline	N/A **Other Pertinent Training / Certifications** FINRA Licenses: Series 7, 63 and 79 Licenses
Contract role(s) / brief description of responsibilities		**Financial Modeling and Commercial/Financial Analysis** Mr. Clarke is a Director within KPMG's Infrastructure Practice with over 25 years of financial and infrastructure advisory experience with a focus on innovative infrastructure investments, P3 and portfolio development. He served as the day-to-day contact for their work on the LADOTD's Belle Chasse P3 and will leverage that experience to consult on the financial and commercial needs of the LADOTD under this IDIQ contract.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
03/09-10/20	**LADOTD, Belle Chasse Bridge and Tunnel P3 Project, Orleans Parish, LA** – Served as KPMG's overall day-to-day manager for financial advisory services on the LADOTD's first P3 project which was a toll concession DBFOM near New Orleans. Mr. Clarke was a lead advisor responsible for assisting the DOTD with a financial analysis, financial commercial term development, negotiations, and development and evaluation of the financial components of the procurement documents (RFQ and RFP). In 2021, the project was commended as the Bridge and Road Transaction of the Year by P3 Bulletin.
01/05-Present	**TxDOT Statewide CDA Screening and Market Valuation Program** – Managed the initiation, development and structuring of a statewide CDA screening program at P3 program inception. Developed a trailblazing analytical framework to assist the development of CDA project prioritization, project delivery method selection, and financial and preliminary project delivery considerations. He also built preliminary shadow bid valuation models to assist with the selection and prioritization of potential P3 transactions. Managed a detailed P3 screening and feasibility analyses using a robust financial and risk analysis framework for over 110 candidate P3 Projects worth approximately $70 billion in construction value. Of these projects, he led the analysis, shaping and statewide strategy for 45 managed lane projects that represented $15 billion of transportation investments. Key transactions involved over $2 billion of TIFIA financing support. Projects included the IH 635 Managed Lanes Transaction which was one of the first managed lanes P3 transactions in the U.S. and the largest managed toll lane and Design-Build Finance Operate Maintain toll concession project ($4 billion total value) ever developed in the U.S.. Other projects included the Border Highway Toll Lanes ($800 million) - DBOM; Loop 1604 ($150 million) - Design-Build; US 77 ($80 million) - Design-Build; 35E ($1.5 billion) - DBM; SH 99 - Grand Parkway ($6 billion) - 2 DBOM procurements over 4 years; SH 161 toll road ($600 million) - Concession; SH 360 toll road ($700 million); Border Highway Toll Lanes ($800 million) - DBOM; US 77 ($80 million) - DB; SH 249 toll road ($400 million) - DBM; Dallas Horseshoe ($900 million) - DBM; and SH 71 Toll Road ($140 million) - DBM.
06/17-Present	**Arizona Department of Transportation** - Currently leading the financial and commercial evaluation of the Arizona statewide NEVI program P3 awards. For the I-17 Flexible Managed Lane DBOM, he led the financial analysis and procurement strategy, and assisted negotiations with developers for this $400 million, I-17 flexible lane expansion project from north of Phoenix. For the Transportation Operations Center Project, he led the financial analysis, and commercial and market analysis to establish a business case development for the private-sector management of the Arizona state-wide operations center.
10/19-Present	**State of Arkansas Partnership for Public Facilities and Infrastructure** - Acting as lead day-to-day advisor to the State of Arkansas in the development of its P3 program that is tailored to drive infrastructure investments in vertical, social and technology infrastructure in the State. He has authored the various program manuals to support the statewide identification, selection, procurement and award of infrastructure partnerships in Arkansas.

09/13-Present	**Florida Department of Transportation, I-4 Ultimate Project** – Led the $2.3 billion I-4 Ultimate DBFOM Managed Lane Toll concession financial plan and pass/fail analysis for the RFQ submission. Also evaluated toll project feasibilities and completed reviews of alternatives.
01/12-12/12	**North Carolina Department of Transportation, I-77 DBFOM** – Led the $655 million, I-77 DBFOM Managed Lane Toll concession financial and pass/fail analysis for the RFQ submission. Served as Pass/Fail subcommittee chair.
04/08-11/11	**Los Angeles County Metropolitan Transportation Authority (LA Metro)** - PPP Project Screening Program: Actively managed the development of LA Metro's P3 program with screening and innovative delivery strategies by using a transparent, rational, and unbiased process for P3 project recommendations of 33 high priority transit and 53 highway transportation projects in Los Angeles County. P3 Program Development: Conducted strategic studies and business plans for six new P3 projects identified by the KPMG screening process. The selected projects included three highways valued at $15.5 billion and three transit rail projects valued at over $7 billion.
09/11-12/15	**Governor of Michigan and Michigan Department of Transportation** - Led the financial analysis, procurement strategy and business case development for several MDOT projects which included the statewide bridge program, rest areas, rail, statewide pumping station program and other key transportation infrastructure developments in the Detroit Metropolitan region. For the Blue Water Bridge Project, he led the financial analysis and commercial and governance business case development for a multi-billion dollar international bridge crossing and trade zone.
06/08-06/09	**Nevada Department of Transportation** – Responsible for P3 program development and the programmatic P3 commercial framework.
01/07-12/07	**Utah Department of Transportation** - Authored a P3 program handbook to help establish statewide P3 program rules and evaluation criteria.
09/21-Present	**Vancouver Fraser River Port Authority (VFPA) Roberts Bank Terminal 2 Capital Strategy and DBF -** Actively advising Canada's largest port authority as a financial, commercial structuring and procurement advisor on the CA $3.5 billion Roberts Bank Terminal 2 (RBT2) container terminal project in Vancouver, BC. The scope of RBT2 includes the Design-Build-Finance construction of a 265-acre landmass and the follow-on development of a three-berth, world-class and semi-automated marine container terminal Concession with a capacity of 2.4 million TEUs. Ongoing work includes structuring a bankable deal with private financing, the Canadian Infrastructure Bank and VFPA equity. Currently helping the port evaluate optimal delivery model for the project, development of a business case for the use of that delivery model, market sounding and engagement (including with railways), financing and funding structure(s), governance and program design, along with a full suite of procurement support and commercial services.
04/16-04/19	**New Orleans Public Belt Valuation, P3 and Sale** - Managed the comprehensive valuation efforts of the New Orleans Public Belt (NOPB) in an effort to determine the value to sell the NOPB enterprise and assets (including the Huey P. Long Bridge) which would benefit the City of New Orleans. Led the competitive transaction to for a long-term concessionaire to operate and develop commercial and industrial activity on the NOPB rail line which connects to 6 Class I rail roads and Port of New Orleans. The railroad was sold to the Port of New Orleans.
02/18-09/20	**NCDOT, Carolina Connector Inland Port P3, Rocky Mount, NC** - Led a team to advise the NCDOT with the structuring and negotiations for a $150 million greenfield intermodal/multimodal logistics park in Rocky Mount, NC with co-investments made by CSX.
09/14-Present	**Oklahoma DOT (Sale of Multiple Freight Rail Lines)** - Led a team that advised the Oklahoma DOT on the divestiture of multiple state-owned rail lines which included the valuation, negotiation and competitive sale process. Watco purchased the Sooner Sub Line in exchange for significant upfront value and capital investments. Justin is currently leading the evaluation of all state-owned rail assets

16. Staff Experience:

Firm employed by	**KPMG, LLP**		
Name	**Pierre Vilain, PhD**	Years of experience with this employer	4
Title	Managing Director	Years of experience with other employer(s)	27
Degree(s) / Years / Specialization	PhD / 2000 / Regional Science M.A. / 1986 / Economics B.A. / 1982 / Political Science and Economics		
Active registration number / state / expiration date	N/A		
Year registered: N/A	Discipline: N/A		
Contract role(s) / brief description of responsibilities	**Economic and Financial Advisor** Dr. Vilain is an economist who applies urban and transportation economics and econometrics to a wide array of advisory services. He has expertise in demand forecasting, project and program evaluation, urban transportation policy analysis, statistical modeling and econometrics, as well as regional growth modeling. He applies his skills to a number of infrastructure development initiatives (including public-private partnerships (P3s)) and has led several transit development initiatives that have been implemented. Dr. Vilain has provided demand and revenue analysis and forecasting to most of the existing P3s in North America and has published widely on topics of transportation economics, including the development of modeling approaches and techniques for toll roads, transit and inter-city rail.		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
01/23-09/23	**Chicago Skyway Owners Advisory** - Recently led the development of demand and revenue models and forecasts to support a major debt refinancing. The investment-grade work was provided by the Skyway to rating agencies and potential lenders.
02/22-10/22	**Chicago Skyway Bidders Advisory** - Led the development of long-range forecasts used by the successful bidder for a majority stake in the Chicago Skyway. Services included his development of traffic and revenue forecasting models, as well as the development of extensive reviews and independent forecasts for the regional economy of Chicago's metropolitan region.
03/21-11/21	**APRR Toll System Forecasts** - Led the development of demand and revenue forecasts for the APRR system which connects all major cities in Eastern France to Paris. The analysis was completed for a confidential client and included an extensive analysis of European freight trends as heavy vehicles comprise the fastest-growing segment of system revenues.
01/24-04/24	**Ohio State University Parking System** - Led the development of demand and revenue forecasting and pricing models for a bidder proposing to purchase the Ohio State University (OSU) parking system concession. One of the nation's largest, the OSU system serves the University primarily through a series of permits available to faculty, staff and students as well as the availability of transient parking in various parking garages and lots.
01/18-12/18	**Dulles Greenway** - For a confidential client, he developed traffic and revenue models geared to developing toll scenarios. Models were based on choice models estimated from GPS-based travel data and econometric demand models of the facility.
01/18-10/18	**Autoroute 25** - Developed "hybrid" models that merged econometric and network models for a major toll road facility in Montreal. Developed regional growth forecasts as well as long-term traffic and revenue forecasts.
01/17-10/17	**407 ETR** - For a confidential client, he developed a comprehensive model to forecast traffic and revenue for the 407 ETR in Toronto. Modeling was based on a panel model econometrics combined with a regional network model.
03/17-09/17	**Chesapeake Bay Bridge-Tunnel** - Developed econometric and network hybrid models to forecast traffic and revenue for the facility for a series of debt refinancing.

01/17-12/17	**PR-22/PR-5** - Developed a series of forecasting models for the toll facilities in Puerto Rico. Developed a time series model to estimate the response to various shocks (including Hurricane Maria) to assess the recovery trajectory for the facility.
02/12-08/12	**New York State Thruway** - For a major debt refinancing, developed a series of econometric forecasting models for the nation's longest tolled facility.
01/18-12/18	**Hillsborough County, FL** - Led the ridership, revenue and fare strategy for the proposed Tampa Bay passenger ferry service linking South Hillsborough County (from one of three sites) and MacDill Air Force Base. Included development of the stated preference survey and mode choice model for the service. Modeling led to the selection of the preferred location for the ferry service.
02/13-09/16	**SH 288 Toll Lanes Project** - For the concession, developed forecasts of regional economic and demographic growth and developed forecasts of aggregate vehicle miles travelled for autos and trucks in the wider Harris County network.
05/14-12/14	**Kitsap Transit** - Led the development of ridership, revenue and financial requirements for the passenger-only service ferry service between several locations in Kitsap County, WA. Worked with the client team to define the proposed service, including service levels, fares and route configuration. As part of the work an extensive economic analysis of the proposed service was completed which included the impacts on safety, travel time, vehicle emissions and real estate values. Work also included the development of a financing plan, including an application for discretionary funding under the TIGER grant program.
04/13-08/18	**Puerto Rico P3 Authority** - Led an economic analysis for the now-implemented privatized ferry service serving the islands of Culebra and Vieques as well as the San Juan ferry service. The services included the development of a ridership and revenue model for the various services, as well as an operating cost model. Extensive fare and service analysis was carried out to develop a revamped service that would reduce an unsustainable subsidy burden posed by the various services. An analysis of the social impact of the proposed changes was also completed to ensure that the fare changes would not affect lower-income groups disproportionately.
01/10-04/10	**Estimate of Federal Fuel Tax Evasion** - On behalf of Federal Highways Administration, developed a series of research studies to estimate prevalence, magnitude and likely mechanisms for Federal fuel tax evasion. Based on statistical modeling, he established evidence of fuel tax evasion by the State which included the evasion of aviation fuel.
01/18-12/18	**Miami-Dade Citizens' Independent Transport Trust (CITT) -** Led a comprehensive analysis of Miami-Dade's transit fare structure and developed recommended fare policies to address declining revenues and ridership. The study recommended distance-based pricing as well as differentiated peak/off-peak fares.

16. Staff Experience:

Firm employed by	**NTB Associates, Inc.**		
Name	**Paul Rossini, PLS**	Years of experience with this employer	37
Title	CEO/ Principal	Years of experience with other employer(s)	7
Degree(s) / Years / Specialization		High School Diploma, 1980	
Active registration number / state / expiration date		#PLS.0004731 / LA / 09-30-2024	
Year registered	1994	Discipline	Surveyor
Contract role(s) / brief description of responsibilities		**Survey Task Manager – Satisfies MPRs #6 and #7** Mr. Rossini will serve as NTBA Contract Administrator/ Principal-in-Charge during this contract. He will sign all contracts and assist in staffing, logistics, and QA/QC for all LaDOTD services.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
01/22-06/24	H.**001779, Jimmie Davis Bridge (LA 511) Design-Build, Bossier & Caddo Parishes, LA** - Principal-in-Charge of contract administration, fee negotiations, scope of work, staffing, coordination, and QA/QC for Static GPS Control surveys, **topographic surveys**, **property surveys**, title take-offs, legal description preparation, preliminary and final **right-of-way mapping**, QL A, B, C, & D utility designating/locating, and utility coordination services for the design-build project to replace the Jimmy Davis Bridge across the Red River.
09/20-06/24	**4400019715, IDIQ Contract for Hydrographic Surveying Services, Statewide, LA** - Principal-in-Charge of contract administration, fee negotiations, scope of work, staffing, coordination, and QA/QC for single beam and multibeam hydrographic surveying services for multiple bridges at scheduled intervals upstream and downstream for 289 sites to date throughout southern districts.
05/15-06/24	**City of Bossier, Walter O. Bigby Carriageway (N. Pkwy Ext.) Bossier Parish, LA** - Principal-in-Charge of contract administration, fee negotiations, scope of work, staffing, coordination, and QA/QC for Static GPS Control surveys, **topographic surveys**, **property surveys**, hydrographic surveying services, QL A, B, C, and D subsurface utility designation/locating for a parkway facility design featuring new roads, additional lanes, roundabouts, and a bridge. Currently, in the construction management support phase and addressing RFI's as needed.
09/20-06/24	**4400019337, Rural Bridge Replacement Initiative, Phase II, Districts 05, 08, & 58** - Principal-in-Charge of contract administration, staffing, coordination, and QA/QC for Static GPS Control surveys, **topographic surveys**, **property surveys**, title take-offs, legal description preparation, preliminary and final **right-of-way mapping**, and QL C & D subsurface utility services for 34 bridge and culvert replacements as a sub-consultant to BKI.
09/20-06/24	**4400019338, Rural Bridge Replacement Initiative Phase II, Districts 02, 03, 07, 61, & 62** - Principal-in-Charge of contract administration, staffing, logistics, and QA/QC for Static GPS Control surveys, **topographic surveys**, **property surveys**, title take-offs, legal description preparation, preliminary and final **right-of-way mapping**, and QL C & D subsurface utility services for 21 bridge and culvert replacements as a sub-consultant to Sigma/ Waggoner.
07/23-06/24	**4400025041, IIJA Off-System Bridge Program, District 62** - Principal-in-Charge of contract administration, staffing, logistics, and QA/QC for Static GPS control surveys, **topographic surveys**, property surveys, title take-offs, legal description preparation, and preliminary and final right-of-way mapping in support of bridge replacements.
04/22-04/23	**4400017713, Monkhouse to I-49, Caddo Parish, LA** - Principal-in-Charge of contract administration, staffing, coordination, and QA/QC for Static GPS Control, **topographic surveys**, QL C & D subsurface utility services, drainage map preparation, and Mobile Laser Scanning for interstate rehabilitation.
08/18-11/21	**4400012669, IDIQ Contract for Hydrographic Surveying Services, Statewide, LA** - Principal-in-Charge of staffing, logistics, training, and QA/QC for single beam and multibeam hydrographic surveys for multiple bridges at scheduled intervals upstream and downstream for 320 sites throughout southern districts.
02/16-08/18	**4400006381 & H.008768, Retainer Contract for Hydrographic Monitoring of Existing Bridges, Statewide, LA -** Principal-in-Charge of staffing, logistics, training, and QA/QC for single beam hydrographic surveys for multiple bridges at scheduled intervals upstream and downstream for 225 sites throughout the state including tasks for emergency surveys for historical floods.
04/15-02/16	**4400005532 & H.011319.5, I-20 (Airline Drive to I-220) Route I-20, Bossier Parish, LA -** Principal-in-Charge of contract administration, staffing, coordination, and QA/QC for **topographic surveying** services and surveys in support of QL B, C, and D subsurface utility designating**.**

04/15-09/15	**4400001798 & H.011094.5, LA 3094: Hearne Ave. Bridge Rehab, Route LA 3094, Caddo Parish, LA -** Principal-in-Charge of fee negotiations, scope of work, staffing, logistics, and QC/QA for **topographic surveying** services, HDS 3D Terrestrial Laser Scanning, drainage map preparation, and QL B subsurface utility designating for bridge rehabilitation.
03/08-05/15	**H.003849 & 700-08-0123, Bossier Parish Police Jury, Hamilton Road Improvements (I-20 to Benton Road) Bossier Parish, LA -** Principal-in-Charge of fee negotiations, scope of work, staffing, logistics, and QC/QA for **topographic surveys**, **property surveys**, and final **right-of-way mapping** for roadway rehabilitation.
01/11-08/12	**737-25-0003-A & H.006511, Local Road Safety Program, Sight Distance Improvements for Grigsby Road at Ranger Road in Jackson Parish, LA -** Principal-in-Charge of contract administration, fee negotiations, scope of work, staffing, logistics, and QA/QC for Static GPS Control surveys, **topographic surveys**, **property surveys**, title take-offs, and **right-of-way mapping**.
07/09-08/12	**737-31-0003-A & 700-99-0444, Local Road Safety Program, Linear Street – Rough Edge Road in Lincoln Parish, LA -** Principal-in-Charge of contract administration, fee negotiations, scope of work, staffing, logistics, and QA/QC for **topographic and property surveys**, property base maps, and final **right-of-way maps**.
01/07-07/12	**BPPJ 2010-277, Bossier Parish Police Jury, Bellevue Road Improvements (US 80 to Winfield Road) Bossier Parish, LA** - Principal-in-Charge of contract administration, staffing, coordination, and QA/QC for **topographic surveys**, **property surveys**, and **right-of-way mapping** including preliminary/ final plans for the widening and possible realignment of Bellevue Road.
07/09-05/11	**4400000665 & 700-99-0483, Retainer Contract for Professional Surveying Services, Statewide, LA -** Principal-in-Charge of contract administration, staffing, logistics, and QA/QC for single beam hydrographic surveys for multiple bridges at scheduled intervals upstream and downstream for 187 sites throughout the State.
03/08-11/10	**701-65-0997 & 283-09-0114, MacArthur Avenue Interchange Completion (Phase I) Route US 90, Jefferson Parish, LA -** Principal-in-Charge of contract administration, fee negotiations, scope of work, staffing, logistics, and QA/QC for **property surveying** and **right-of-way acquisition map preparation** on approx. 0.5-mile segment of a new construction project to add turning lane and subsurface drainage.
10/01-08/10	**700-09-01380, I-49 North (LA 1 to LA 173) Route I-49, Caddo Parish, LA -** Principal-in-Charge of fee negotiations, scope of work, staffing, logistics, and QC/QA for **topographic surveys, property surveys**, and base and final **right-of-way maps** for a new route covering 7.21 miles and over 50 parcels.

16. Staff Experience:

Firm employed by	**NTB Associates, Inc.**		
Name	**Bryan T. Bunch, PLS**	Years of experience with this employer	15.5
Title	Executive Vice President	Years of experience with other employer(s)	15
Degree(s) / Years / Specialization		B.S. / 1988 / Survey and Land Information Systems	
Active registration number / state / expiration date		#PLS.0005014 / LA / 03-31-2026	
Year registered	2009	Discipline	Surveyor
Contract role(s) / brief description of responsibilities		**Topographic Survey Task Manager – Satisfies MPR #6** Mr. Bunch will serve as NTBA's Project Manager for topographic surveys during this contract. He will manage survey crews, processing, drafting, and submittals for topographic surveying services. He will also assist in the management of property surveys, right-of-way mapping, and title take-offs.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
01/22-06/24	**H.001779, Jimmie Davis Bridge (LA 511) Design-Build, Bossier & Caddo Parishes, LA -** Survey Project Manager directing field crews, file processing, drafting, and submittals for Static GPS Control surveys, topographic surveys, property surveys, surveys in support of QL A, B, C, & D utility designating/locating, title take-offs, description preparations, and preliminary and final right-of-way mapping for the design-build project to replace the Jimmy Davis Bridge across the Red River.
09/20-06/24	**4400019337, Rural Bridge Replacement Initiative Phase II, Districts 05, 08 & 58 - Survey Project Manager** directing field crews, file processing, drafting, and submittals for Static GPS Control surveys, **topographic surveys, property surveys, surveys in support of QL C & D subsurface utility services**, **title take-offs, description preparations, and preliminary and final right-of-way mapping** for 34 bridge and culvert replacements as a sub-consultant.
09/20-06/24	**4400019338, Rural Bridge Replacement Initiative Phase II, Districts 02, 03, 07, 61 & 62 -** Survey Project Manager directing field crews, file processing, drafting, and submittals for Static GPS Control surveys, topographic surveys, property surveys, surveys in support of QL C & D subsurface utility services, title take-offs, description preparations, preliminary and final right-of-way mapping for 21 bridge and culvert replacements as a sub-consultant.
07/23-06/24	**4400025041, IIJA Off-System Bridge Program, District 62 -** Quality Control Surveyor assisting in staffing, coordination, and QA/QC for Static GPS control surveys, topographic surveys, property surveys, title take-offs, legal description preparation, and preliminary and final right-of-way mapping in support of bridge replacements.
12/17-06/24	**H.004100.5, I-10: LA 415 to Essen Lane on I-10 and I-12, West & East Baton Rouge Parishes, LA -** Survey Project Manager directing field crews, file processing, drafting, and submittals for topographic surveys, QL B, C, and D subsurface utility designating, and surveys in support of QL B, C, and D subsurface utility designating for approximately 13 miles of roadway. Task Orders continue to be assigned in additional areas as needed in conjunction with the on-going design-build contract.
04/22-04/23	**4400017713, Monkhouse to I-49, Caddo Parish, LA - Survey Project Manager** directing field crews, file processing, drafting, and submittals for Static GPS Control, topographic surveys, surveys in support of QL C & D subsurface utility services, drainage map preparation, and Mobile Laser Scanning for interstate rehabilitation.
12/20-03/22	**4400017713, LA 47 IWGO Bridge Rehabilitation, Historic Bridge Improvement (HBI), Orleans Parish, LA -** Survey Project Manager directed field crews, file processing, drafting, and submittals for topographic and hydrographic surveys and surveys in support of QL C & D subsurface utility services for bridge repair/ rehabilitation.
03/21-03/22	**City-Parish Ward Creek at Siegen Lane, East Baton Rouge Parish, LA (22-DR-US-0013) -** Survey Project Manager managed field crews and technicians for control, topographic, and property surveys along with QL B, C, and D subsurface utility designating for approximately 1,500 feet of Ward Creek.

05/15-12/20	**City of Bossier, Walter O. Bigby Carriageway (N. Pkwy Ext.) Bossier Parish, LA -** Quality Control Surveyor supervised south LA field crews and technicians for Static GPS Control surveys, topographic, property, and hydrographic surveying services, and QL A, B, C, and D subsurface utility designation/locating for a parkway facility design featuring new roads, additional lanes, roundabouts, and a bridge.
12/18-01/20	**H.013643, LA 951: Roadway Washout Repairs, East Feliciana Parish, LA -** Survey Project Manager directed field crews, file processing, drafting, and submittals for topographic surveys, QL A, B, C, and D subsurface utility designating/locating, and surveys in support of QL A, B, C, and D subsurface utility designating/locating for approximately 2,600 feet.
11/15-05/17	**DEC 15-11-03, Bossier Parish Police Jury, Winfield Road Extension, East/West (LA 3 to Airline Highway) Bossier Parish, LA -** Quality Control Surveyor assisted in staffing, coordination, and QA/QC for control surveys, topographic surveys, property surveys, right-of-way mapping, QL D subsurface utility services, and drainage map preparation as a sub to Denmon (Volkert).
10/15-07/16	**4400005142 & H.011309.5, MacArthur Interchange Completion Phase II, Route US 90-Z, Jefferson Parish, LA -** Survey Project Manager directed field crews, file processing, drafting, and submittals for topographic surveying services for a new roadway connection as a sub-consultant to SDR Engineering.
05/13-10/15	**Bossier Parish Police Jury, Kingston Road Improvements and Development, Bossier Parish, LA -** Quality Control Surveyor assisted in staffing, coordination, and QA/QC for topographic surveys, property surveys, final right-of-way mapping, and drainage map preparation for the use in engineering plan and specifications.
04/15-09/15	**4400001798 & H.011094.5, LA 3094: Hearne Ave. Bridge Rehab, Route LA 3094, Caddo Parish, LA - Quality Control Surveyor** assisted in staffing, coordination, and QA/QC for **topographic surveying services, drainage map preparation, and QL B subsurface utility designating** for bridge rehabilitation.
02/14-03/15	**H.004367.5, Earhart Expressway Extension to US 61, Route LA 3139, Jefferson Parish, LA -** Project Manager directed survey crews, file processing, drafting, and submittals for topographic surveying services and surveys in support of QL A, B, C, and D subsurface utility designating/locating for an overpass connection, relocation of existing lanes, and construction of additional lanes.
07/12-01/14	**H.003074.5 & H.009087.5, I-10 Loyola Ave. to Williams Blvd., Jefferson Parish, LA -** Project Manager directed survey crews, file processing, drafting, and submittals for topographic surveying services and surveys in support of QL A, B, C, and D subsurface utility designating/locating for interstate rehabilitation as a sub-consultant to GEC, Inc.
07/10-10/12	**700-03-0125 & 701-65-1538, LA 42 Widening and Improvements District 61, Ascension Parish, LA -** Project Surveyor directed topographic and property surveys and title work to locate all existing structures within 50 feet of proposed right-of-way. Bryan also managed the preparation of right-of-way acquisition maps for 165 parcels.
01/12-04/12	**4400001798 & H.009836.5, I-12 Walker to Satsuma, Livingston Parish, LA -** Project Surveyor assisted in the supervision of survey crews, file processing, drafting, and submittals for topographic surveying services and surveys in support of QL B, C, and D subsurface utility designating for interstate rehabilitation.
05/11-11/11	**4400000681 & H.002230, Goose Bayou Bridge Replacement, Route LA 45, Jefferson Parish, LA -** Project Surveyor directed property surveys, title research, and the preparation of base and final right-of-way mapping.
02/11-08/11	**H.003860.5 & 700-99-0525, I-20 Rehabilitation Westerfield Avenue to Industrial Drive, District 04, Bossier Parish, LA -** Project Surveyor assisted in the supervision of south LA survey crews, file processing, drafting, and submittals for topographic surveying services and surveys in support of QL B, C, and D subsurface utility designating for interstate rehabilitation.

16. Staff Experience:

Firm employed by	**NTB Associates, Inc.**		
Name	**Patrick Staiano, PLS**	Years of experience with this employer	4
Title	Staff Surveyor	Years of experience with other employer(s)	10
Degree(s) / Years / Specialization		B.S. / 2008 / Construction Management	
Active registration number / state / expiration date		#PLS.0005130 / LA / 09-30-2025	
Year registered	2015	Discipline	Professional Surveyor **Other Pertinent Training / Certifications** Traffic Control Supervisor Refresher-LA State Specific (exp. 4/29/26)
Contract role(s) / brief description of responsibilities			**Property Survey and ROW Mapping Task Manager – Satisfies MPR #7** Mr. Staiano will serve as NTBA Project Manager for property surveying services, right-of-way mapping, and title take-offs during this contract. He will manage field crews, data processing, drafting, review and certification of maps and surveys, and submittals.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
01/22-06/24	**H.001779, Jimmie Davis Bridge (LA 511) Design-Build, Bossier & Caddo Parishes, LA -** Assistant Project Manager assisting in the management of field crews and technicians for Static GPS control surveys, topographic surveys, **property surveys**, title take-offs, legal description preparation, preliminary and final **right-of-way mapping**, and surveys in support of QL A, B, C, & D utility designating/locating for the design-build project to replace the Jimmy Davis Bridge across the Red River.
07/23-06/24	**4400025041, IIJA Off-System Bridge Program, District 62 -** Project Manager managing field crews and technicians for Static GPS control surveys, topographic surveys, **property surveys**, title take-offs, legal description preparation, and preliminary and final **right-of-way mapping** in support of bridge replacements.
09/22-06/24	**4400019337, Rural Bridge Replacement Initiative Phase II, Districts 05, 08 & 58 -** Assistant Project Manager assisting in the management of field crews and technicians for Static GPS control surveys, topographic surveys, **property surveys**, surveys in support of QL C & D subsurface utility services, title take-offs, legal description preparations, and preliminary and final **right-of-way mapping** for 34 bridge and culvert replacements including surveying all sub-surface drainage structures as a sub-consultant.
09/22-06/24	**4400019338, Rural Bridge Replacement Initiative Phase II, Districts 02, 03, 07, 61 & 62 -** Assistant Project Manager assisting in the management of field crews and technicians for Static GPS control surveys, topographic surveys, **property surveys**, surveys in support of QL C & D subsurface utility services, title take-offs, legal description preparations, and preliminary and final **right-of-way mapping** for 21 bridge and culvert replacements including surveying all sub-surface drainage structures as a sub-consultant.
03/21-08/22	**MOVEBR Jefferson Hwy. at Bluebonnet Intersection Improvements, LA (City Parish No. 20-CP-HC-0046) -** Project Manager managed field crews and technicians for topographic surveys, **property surveys**, and **right-of-way mapping**.
03/18-10/18	**Rogillio Resubdivision, East Baton Rouge & East Feliciana Parishes, LA -** Assistant Project Manager performed title take-offs, **boundary**, and right-of-way calculations, and reviewing CADD drawings and plats for resubdivision services for 93 acres.
04/17-03/18	**H.008118, LA 653 Bayou Dumar Bridge Replacement, Lafourche Parish, LA -** Under the supervision of Robert H. Brooks, III, PLS and Max O. Usrey, III, PLS, Patrick performed **property surveys**, prepared title work info, and **right-of-way maps** for a +/-0.5 mile project.
01/17-03/18	**LaDOTD LA 450 Stoney Point Bridge Replacement, Washington Parish, LA -** Under the supervision of Robert H. Brooks, III, PLS and Max O. Usrey, III, PLS, Patrick performed **property surveys** and prepared title work info and **right-of-way maps** for a +/-0.25 mile project.
09/17-01/18	**H.011824, LA 1026: Roundabout at Buddy Ellis Rd., Livingston Parish, LA -** Under the supervision of Robert H. Brooks, III, PLS and Max O. Usrey, III, PLS, Patrick performed property surveys, prepared title work info, and **right-of-way maps** for a +/-0.3 mile project.

10/17-12/17	**H.011260, US 190B Jefferson Ave. Roundabout Covington, St. Tammany Parish, LA -** Under the supervision of Robert H. Brooks, III, PLS and Max O. Usrey, III, PLS, Patrick performed **property surveys**, prepared title work info, and **right-of-way maps** for a +/-0.1 mile project.
06/17-10/17	**H.011314, LA 22: Near I-10 Geometric Improvements, Ascension Parish, LA -** Under the supervision of Robert H. Brooks, III, PLS and Max O. Usrey, III, PLS, Patrick performed **property surveys**, prepared title work info, and **right-of-way maps** for a +/-0.75 mile project.
05/17-09/17	**H.011030, LA 59: Roundabout @ Lonesome Rd., Tangipahoa Parish, LA -** Under the supervision of Robert H. Brooks, III, PLS and Max O. Usrey, III, PLS, Patrick performed **property surveys**, prepared title work info, and **right-of-way maps** for a +/-0.5 mile project.
03/16-08/17	**H.010184, LA 59: Curve Realign and Tunnel at Trace, St. Tammany Parish, LA -** Under the supervision of Robert H. Brooks, III, PLS and Max O. Usrey, III, PLS, Patrick performed **property surveys**, prepared title work info, and **right-of-way maps** for a +/-0.75 mile project.
03/17-07/17	**H.008312, LA 1042: Bridges Near Greensburg, St. Helena Parish, LA -** Under the supervision of Robert H. Brooks, III, PLS and Max O. Usrey, III, PLS, Patrick performed **property surveys**, prepared title work info, and **right-of-way maps** for a +/- 2 mile project.
03/16-02/17	**LaDOTD LA 22 Roundabout @ Dunson Rd., Tangipahoa Parish, LA -** Under the supervision of Robert H. Brooks, III, PLS and Max O. Usrey, III, PLS, Patrick performed **property surveys**, prepared title work info, and **right-of-way maps** for a +/-0.25 mile project.
03/16-01/17	**LaDOTD LA 1024 Near Friendship, Livingston Parish, LA -** Under the supervision of Robert H. Brooks, III, PLS and Max O. Usrey, III, PLS, Patrick performed **property surveys**, prepared title work info, and **right-of-way maps** for a +/-0.5 mile project.
03/16-06/16	**LaDOTD LA 44 Intersections, Ascension Parish, LA -** Under the supervision of Robert H. Brooks, III, PLS and Max O. Usrey, III, PLS, Patrick performed **property surveys**, prepared title work info, and **right-of-way maps** for a +/-0.5 mile project.

16. Staff Experience:

Firm employed by	**NTB Associates, Inc.**		
Name	**Amy K. Schulze, PE, CFM**	Years of experience with this employer	6
Title	Project Engineer	Years of experience with other employer(s)	20
Degree(s) / Years / Specialization		B.S. / 1998 / Civil Engineering	
Active registration number / state / expiration date		#PE.0030295 / LA / 03-31-2025	
Year registered	2002	Discipline	Civil Engineering **Other Pertinent Training / Certifications** CFM National Certification (#US-16-08839 Electro-Magnetic Locating Instruments Certified Certificate of Locating Competency (#WA2028 - Staking University)
Contract role(s) / brief description of responsibilities			**Subsurface Utility Engineering Task Manager – Satisfies MPR #8** Ms. Schulze will serve as NTBA SUE Project Engineer /Manager during this contract and supervise and manage all subsurface utility engineering services.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
01/22-06/24	**H.001779, Jimmie Davis Bridge (LA 511) Design-Build, Bossier & Caddo Parishes, LA - SUE Project Manager** for surveys in support of SUE, QL A, B, C, & D utility designating/locating, and utility coordination services for the design-build project to replace the Jimmy Davis Bridge across the Red River.
04/21-06/24	**4400019338, Rural Bridge Replacement Initiative Phase II, Districts 02, 03, 07, 61 & 62 - SUE Project Manager** for QL C & D subsurface utility services for 21 bridge and culvert replacements as a sub-consultant.
08/21-06/24	**4400019337, Rural Bridge Replacement Initiative Phase II, Districts 05, 08 & 58 - SUE Project Manager** for QL C & D subsurface utility services for 34 bridge and culvert replacements as a sub-consultant.
04/18-06/24	**H.004100.5, I-10: LA 415 to Essen Lane, West & East Baton Rouge Parishes, LA - SUE Project Manager** for QL B, C, and D subsurface utility designating and surveys in support of QL B, C, and D subsurface utility designating for approximately 13 miles of roadway. Task Orders continue to be assigned in additional areas as needed in conjunction with the on-going design-build contract.
11/23-06/24	**UPRR 470000845, UPRR Englewood Yard, Phase III, Houston, TX - SUE Project Manager** for QL A, B, C, and D subsurface utility designating and locating throughout the approximately 1.0 mile of the UPRR ROW in urban area of Houston, TX.
06/22-04/23	**4400017713, Monkhouse to I-49, Caddo Parish, LA - SUE Project Manager** for QL C & D subsurface utility services for interstate rehabilitation.
02/20-05/22	**19-CP-HC-0034, City of Baton Rouge/East Baton Rouge Parish, MOVEBR Bluebonnet Blvd. (Perkins – Picardy), East Baton Rouge Parish, LA - SUE Project Manager** for QL A, B, C, and D subsurface utility designating/locating throughout the approximately 1.5 miles of the project corridor.
03/21-03/22	**22-DR-US-0013, City-Parish Ward Creek at Siegen Lane, East Baton Rouge Parish, LA - SUE Project Manager** for QL B, C, and D subsurface utility designating for approximately 1,500 feet of Ward Creek.
07/21-12/21	**BPPJ 2021-126, Bossier Parish Police Jury, Linton Road Cutoff Intersection Redesign, Bossier Parish, LA -** Project Engineer evaluated options to improve the intersection including QL C subsurface utility services to produce a preliminary layout for a new intersection design.
08/21-08/21	**4400017713, LA 47 IWGO Bridge Rehabilitation, Historic Bridge Improvement (HBI), Orleans Parish, LA - SUE Project Manager** for QL C & D subsurface utility services for bridge repair/rehabilitation.
12/20-03/21	**4400017713 & H.013821.5, LA 6: Youngs Bayou Bridge Rehab, Natchitoches Parish, LA - SUE Project Manager.** Assisted in the review of survey and utility data for topographic surveying services for bridge rehabilitation.

04/18-12/20	**City Proj. No. 8-15, City of Bossier, Walter O. Bigby Carriageway (N. Pkwy Ext.), Bossier Parish, LA - SUE Project Manager** for QL A, B, C, and D subsurface utility designating/locating services in support of surveys and right-of-way mapping for a parkway facility design featuring new roads, additional lanes, roundabouts, and a bridge.
07/19-02/20	**H.011670, I-10: Loyola Interchange, Kenner, Jefferson Parish, LA - SUE Project Manager** for QL B, C, and D subsurface utility designating services and surveys in support of QL B, C, and D subsurface utility designating for approximately 5 miles.
12/18-01/20	**H.013643, LA 951: Roadway Washout Repairs, East Feliciana Parish, LA - SUE Project Manager** for QL A, B, C, and D subsurface utility designating/locating and surveys in support of QL A, B, C, and D subsurface utility designating/locating for approximately 2,600 feet of roadway.
12/18-03/19	**City of New Orleans, West End Subdivision, Phase B125, New Orleans, LA - SUE Project Manager** for QL B, C, and D subsurface utility designating along with surveys in support of QL B, C, and D subsurface utility designating for preliminary and final design services for FEMA-eligible street repairs.
06/18-10/18	**H.003074.5 & H.009087.5, I-10: Williams Blvd. to Veterans Blvd., Jefferson Parish, LA - SUE Project Manager** for QL B, C, and D subsurface utility designating and surveys in support of QL A, B, C, and D subsurface utility designating/locating for approximately 2 miles.
09/15-04/18	**City of Zachary, Zachary, LA -** City Planner/Floodplain Manager. Provided **QL C and D subsurface utility services** for various development projects within the city limits. Coordinated utility relocation services.
08/04-08/15	**City of Baton Rouge/Parish of East Baton Rouge, Baton Rouge, LA -** Chief of Wastewater Operations and Maintenance. Provided **QL C and D subsurface utility services** in conjunction with several Sanitary Sewer Overflow (SSO) projects. Coordinated QL B services when necessary. Coordinated utility relocation services and prepared utility relocation agreements.
10/02-06/04	**Baton Rouge Metropolitan Airport North Perimeter Road Project, Baton Rouge, LA -** Project Engineer. Provided **QL C and D subsurface utility services** within the airport perimeter fence in conjunction with the design of a new roadway inside the north perimeter fence of the airfield.
10/02-04/04	**LADOTD Off-System Bridge Project, Rapides Parish, LA -** Project Engineer. Provided **QL C and D subsurface utility services** in conjunction with the design of seven bridge locations. Coordinated utility relocation services.
10/00-09/02	**LADOTD LA 165 Utility Relocation, Grayson to Columbia, LA -** Project Engineer. Provided utility relocation services including the preparation of relocation plans and agreements with the various utility companies.

16. Staff Experience:

Firm employed by	**NTB Associates, Inc.**		
Name	**Mike King, PLS**	Years of experience with this employer	17.5
Title	Vice President	Years of experience with other employer(s)	2
Degree(s) / Years / Specialization		B.S. / 2012 / Construction Management	
Active registration number / state / expiration date		#PLS.0005127 / LA / 09-30-2025	
Year registered	2015	Discipline	Professional Surveyor
Contract role(s) / brief description of responsibilities		**Assistant PM for Topographic Surveys PM for Bathymetric Surveys** Mr. King will oversee survey crews and assist in the management of staff to ensure the achievement of quality standards and that specifications are met.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
09/20-Ongoing	**LADOTD IDIQ Contract for Hydrographic Surveying Services, Statewide, LA (4400019715) -** Assistant Project Manager assisting with the management of field crews, file processing, drafting, and submittal preparation for single beam and multibeam hydrographic surveying services for multiple bridges at scheduled intervals upstream and downstream for 289 sites to-date throughout southern districts.
01/22-Ongoing	**LADOTD Jimmie Davis Bridge (LA 511) Design-Build, Bossier & Caddo Parishes, LA (H.001779)** - Assistant Project Manager assisting in the management of field crews and technicians for Static GPS Control surveys, topographic surveys, property surveys, title take-offs, description preparations, preliminary and final right-of-way mapping, and surveys in support of QL A, B, C, & D utility designating/locating for this design-build project.
08/21-Ongoing	**LADOTD Rural Bridge Replacement Initiative Phase II, Districts 05, 08, & 58 (4400019337) -** Assistant Project Manager assisting in the management of field crews and technicians for Static GPS Control surveys, topographic surveys, property surveys, surveys in support of QL C & D subsurface utility services, title take-offs, description preparations, and preliminary and final right-of-way mapping for 34 bridge and culvert replacements as a sub-consultant.
04/21-Ongoing	**LADOTD Rural Bridge Replacement Initiative Phase II, Districts 02, 03, 07, 61, & 62 (4400019338) -** Assistant Project Manager assisting in the management of field crews and technicians for Static GPS Control surveys, topographic surveys, property surveys, surveys in support of QL C & D subsurface utility services, title take-offs, description preparations, and preliminary and final right-of-**way mapping** for 21 bridge and culvert replacements as a sub-consultant.
12/17-Ongoing	**LADOTD I-10: LA 415 to Essen Lane on I-10 and I-12, West & East Baton Rouge Parishes, LA (H.004100.5) -** Assistant Project Manager assisting in the management of field crews and technicians for topographic surveys, QL B, C, and D subsurface utility designating, and surveys in support of QL B, C, and D subsurface utility designating for approximately 13 miles of roadway. Task Orders continue to be assigned in additional areas as needed in conjunction with the ongoing design-build contract.
08/22-Ongoing	**CenterPoint Surveying Services, Various Parishes, LA (Various Agency Proj. Nos.) -** Quality Control Surveyor assisting in staffing, coordination, and QA/QC for topographic surveys, property surveys, title takeoffs, boundary and right-of-way calculations, CADD drawings, and plats for maintenance and construction projects.
04/22-04/23	**LADOTD Monkhouse to I-49, Caddo Parish, LA (4400017713)** - Assistant Project Manager assisting in the management of field crews and technicians for Static GPS Control, topographic surveys, surveys in support of QL C & D subsurface utility services, drainage map preparation, and Mobile Laser Scanning for interstate rehabilitation.
03/21-03/22	**City-Parish Ward Creek at Siegen Lane, East Baton Rouge Parish, LA (22-DR-US-0013) -** Quality Control Surveyor reviewed and processed data for control, topographic and property surveys along with surveys in support of QL B, C, and D subsurface utility designating services for approximately 1,500 feet of Ward Creek.
12/20-03/22	**LADOTD LA 47 IWGO Bridge Rehabilitation, Historic Bridge Improvement (HBI), Orleans Parish, LA (4400017713) -** Assistant Survey Project Manager for the management of field crews and technicians for topographic surveys, surveys in support of QL C & D subsurface utility services, and a multibeam hydrographic survey of the bridge structure piers to determine scour impact for bridge repair/ rehabilitation.

07/20-11/21	**LADOTD IDIQ Contract for Hydrographic Surveying Services Statewide, LA (4400012669) -** Assistant Project Manager for the management of field crews, file processing, drafting, and submittal preparation for single beam and multibeam hydrographic surveying services for multiple bridges at scheduled intervals upstream and downstream for 320 sites throughout southern districts.
05/15-12/20	**City of Bossier, Walter O. Bigby Carriageway (N. Pkwy Ext.) Bossier Parish, LA (City Proj. No. 8-15) -** Quality Control Surveyor for the review of data and drafting for Static GPS Control surveys; topographic, property, and hydrographic surveying services; and surveys in support of QL A, B, C, and D subsurface utility designation/locating for a parkway facility design featuring new roads, additional lanes, roundabouts, and a bridge.
04/15-02/16	**LADOTD I-20 (Airline Drive to I-220) Bossier Parish, LA (4400005532 & H.011319.5) -** Quality Control Surveyor responsible for the review of data and drafting for topographic surveying services associated with an interstate rehabilitation.
10/15-12/15	**LADOTD Caddo Lake Bridge, Route LA 1 Caddo Parish, LA (H.01166.5) -** Quality Control Surveyor for the review of data and drafting for topographic surveys performed along a portion of the existing route of LA Hwy. 1 for a proposed bridge replacement at the intersection of Caddo Lake and LA Hwy. 1 in Caddo Parish east of Mooringsport.
05/13-10/15	**Bossier Parish Police Jury, Kingston Road Improvements and Development, Bossier Parish, LA (Proj. No. Unknown) -** Sr. Party Chief/ Technician. Ran a field crew and downloaded data for topographic surveys, property surveys, final right-of-way mapping, and drainage map preparation for use in engineering plan and specifications.
04/15-09/15	**LADOTD LA 3094: Hearne Ave. Bridge Rehab, Route LA 3094, Caddo Parish, LA (4400001798 & H.011094.5) -** Quality Control Surveyor. Reviewed data and drafting for topographic surveying services and surveys in support of QL B subsurface utility designating for bridge rehabilitation.
07/14-02/15	**LADOTD LA 16 Amite Drainage Improvements, Route LA 16, Tangipahoa Parish, LA (4400001798 & H.009425.5) -** Survey Party Chief/ Technician. Ran a field crew and downloaded/processed data for topographic and single beam hydrographic surveying services for drainage improvements.
07/12-01/14	**LADOTD I-10 Loyola Ave. to Williams Blvd., Jefferson Parish, LA (H.003074.5 & H.009087.5) -** Sr. Survey Party Chief/Tech. Managed a survey crew and processed data for topographic surveying services and surveys in support of QL A, B, C, and D subsurface utility designating/locating for an interstate rehabilitation.
04/13-09/13	**LADOTD LA 506 Castor Relief Bridges, Route LA 506, Caldwell Parish, LA (345-03-0029, 400001798, & H.002650.5) -** Survey Party Chief/ Technician. Ran a field crew and downloaded/processed data for topographic and single beam hydrographic surveying services for use as basis for engineering design for the replacement or rehabilitation of 7 bridges.
07/10-10/12	**LADOTD LA 42 Widening and Improvements, District 61, Ascension Parish, LA (700-03-0125 & 701-65-1538) -** Survey Party Chief/ Technician. Ran a field crew and processed data for topographic and property surveys in support of base and final right-of-way mapping, and title work.
02/11-08/11	**LADOTD I-20 Rehabilitation Westerfield Avenue to Industrial Drive, District 04, Bossier Parish, LA (H.003860.5 & 700-99-0525) -** Survey Party Chief/Tech. Managed a survey crew and processed data for topographic surveying services and surveys in support of QL B, C, and D subsurface utility designating for an interstate rehabilitation.
09/09 – 03/10	**LADOTD Lawrence, Bogalusa, and Coburn Creek Bridges, Route LA 10, Washington Parish, LA (700-99-0484 & 701-65-1347) -** Survey Party Chief/ Technician. Ran a field crew and processed data for topographic and property surveys in support of title work, title updates, title take-offs, and right-of-way map preparation.
02/07 – 02/09	**Brightside Lane Improvements – River Road (LA 327) to Nicholson Drive (LA 30) Baton Rouge, LA (EBR Proj. No. 25041.00) -** Survey Crew Member/ Technician. Ran a field crew and processed data for topographic and property surveying services in support of the preparation of right-of-way maps.

16. Staff Experience:

Firm employed by	**NTB Associates, Inc.**				
Name	**Will Wales**		Years of experience with this employer	11	
Title	Party Chief		Years of experience with other employer(s)	20	
Degree(s) / Years / Specialization			High School Diploma / 1987		
Active registration number / state / expiration date			N/A		
Year registered	N/A	Discipline	N/A **Other Pertinent Training / Certifications** Traffic Control Supervisor Refresher-LA State Specific (exp. 2/8/27)		
Contract role(s) / brief description of responsibilities			**Survey Party Chief** Mr. Wales will serve as NTBA Field Operations Manager/ Survey Party Chief during this contract and supervise field operations, lead a field crew, and download data for topographic surveys, property surveys, and hydrographic surveys.		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
11/21-06/24	**4400019715, LADOTD IDIQ Contract for Hydrographic Surveying Services, Statewide, LA -** Survey Party Chief running a field crew, downloading/processing data, and performing other office tasks for single beam and multibeam hydrographic surveying services for multiple bridges at scheduled intervals upstream and downstream for 289 sites to date throughout southern districts.
01/23-06/24	**H.001779, LDOTD Jimmie Davis Bridge (LA 511) Design-Build, Bossier & Caddo Parishes, LA -** Field Operations Manager/ Survey Party Chief supervising field operations, running a field crew, and downloading data for Static GPS Control surveys, topographic surveys, and property surveys in support title take-offs, legal description preparation, preliminary and final right-of-way mapping, and QL A, B, C, & D utility designating/locating for the design-build project to replace the Jimmy Davis Bridge across the Red River.
08/21-06/24	**4400019337, LADOTD Rural Bridge Replacement Initiative Phase II, Districts 05, 08 & 58 -** Field Operations Manager/ Survey Party Chief supervising field operations, running a field crew, and downloading data for Static GPS Control surveys, topographic surveys, property surveys in support of title take-offs, legal description preparation, preliminary and final right-of-way mapping, and QL C & D subsurface utility designating for 34 bridge and culvert replacements as a sub.
04/22-06/24	**CenterPoint Surveying Services, Various Parishes, LA (Various Agency Proj. Nos.) -** Field Operations Manager/Survey Party Chief supervising field operations, running a field crew, and downloading data for topographic surveys and property surveying services in support of title take-offs and right-of-way mapping for maintenance and construction projects.
04/22-04/23	**4400017713, LADOTD Monkhouse to I-49, Caddo Parish, LA -** Survey Party Chief. Ran a field crew and downloaded data for topographic surveys, surveys in support of QL C & D subsurface utility designating, and drainage map preparation for interstate rehabilitation.
12/20-03/22	**4400017713, LaDOTD LA 47 IWGO Bridge Rehabilitation, Historic Bridge Improvement (HBI), Orleans Parish, LA -** Survey Party Chief. Ran a field crew and downloaded data for topographic surveys, surveys in support of QL C & D subsurface utility designating, and a multibeam hydrographic survey of the bridge structure piers to determine scour impact for bridge repair/ rehabilitation.
07/20-11/21	**4400012669, LaDOTD IDIQ Contract for Hydrographic Surveying Services Statewide, LA -** Survey Party Chief running a field crew, downloading/processing data, and performing other office tasks for single beam and multibeam hydrographic surveying services at scheduled intervals upstream and downstream for 320 sites throughout southern districts.

12/18-01/20	**H.013643, LADOTD LA 951: Roadway Washout Repairs, East Feliciana Parish, LA -** Survey Party Chief. Ran a field crew and downloaded data for topographic surveys, surveys in support of QL A, B, C, and D subsurface utility designating/locating, and QL A, B, C, and D subsurface utility designating/locating for road rehabilitation and bridge replacement.
04/15-09/15	**4400001798 & H.011094.5, LADOTD LA 3094: Hearne Ave. Bridge Rehab, Route LA 3094, Caddo Parish, LA -** Survey Party Chief. Ran a field crew and downloaded data for topographic surveying services and surveys in support of QL B subsurface utility designating for bridge rehabilitation.
07/14-02/15	**4400001798 & H.009425.5, LADOTD LA 16 Amite Drainage Improvements, Route LA 16, Tangipahoa Parish, LA -** Survey Party Chief. Ran a field crew and downloaded/processed data for topographic and single beam hydrographic surveying services for drainage improvements.

16. Staff Experience:

Firm employed by	**NTB Associates, Inc.**		
Name	**Cameron Higginbotham**	Years of experience with this employer	8
Title	Party Chief	Years of experience with other employer(s)	3
Degree(s) / Years / Specialization		High School Diploma	
Active registration number / state / expiration date		N/A	
Year registered		Discipline	N/A **Other Pertinent Training / Certifications** U.T.A. Certified Professional Utility Locator ATSSA Flagger (expires 2/9/2027)
Contract role(s) / brief description of responsibilities			**SUE/Survey Party Chief** Mr. Cameron Higginbotham will manage a field crew for topographic surveys, property surveys, surveys in support of subsurface utility designating/locating, and subsurface utility designating/locating.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
01/23-06/24	**H.001779, LADOTD Jimmie Davis Bridge (LA 511) Design-Build, Bossier & Caddo Parishes, LA -** SUE/ Survey Party Chief running a field crew and downloading data for Static GPS Control surveys, topographic surveys, and property surveys in support of title take-offs, title research, preliminary and final right-of-way mapping, and QL A, B, C, & D utility designating/locating for the design-build project to replace the Jimmy Davis Bridge
08/22-06/24	**CenterPoint Energy SUE Services, LA (CP 104334113, 101783539, 104364770) -** SUE/ Survey Party Chief running a field crew for QL B subsurface utility designating and surveys in support of SUE in Shreveport, DeRidder, and Sulphur, Louisiana as a CenterPoint representative.
08/21-06/24	**4400019337- LADOTD Rural Bridge Replacement Initiative Phase II, Districts 05, 08 & 58 -** SUE/Survey Party Chief running a field crew for topographic surveys, property surveys, and surveys in support of QL C & D subsurface utility designating for 34 bridge and culvert replacements.
12/17-06/24	**H.004100.5, LADOTD I-10: LA 415 to Essen Lane on I-10 and I-12, West & East Baton Rouge Parishes, LA -** SUE/ Survey Party Chief running a field crew for topographic surveys, QL B, C, and D subsurface utility designating, and surveys in support of QL B, C, and D subsurface utility designating for approximately 13 miles of roadway. Task Orders continue to be assigned in areas as needed in conjunction with the on-going design-build contract.
03/22-05/22	**City of Baton Rouge/East Baton Rouge Parish, MOVEBR Bluebonnet Blvd. (Perkins – Picardy) East Baton Rouge Parish, LA (19-CP-HC-0034) -** SUE/ Survey Party Chief ran a field crew for topographic surveys and QL A, B, C, and D utility designating/locating throughout the approximately 1.5 miles of the project corridor.
09/21-04/22	**4400017713, LADOTD LA 47 IWGO Bridge Rehabilitation, Historic Bridge Improvement (HBI), Orleans Parish, LA** - SUE/ Survey Party Chief ran a field crew for topographic surveys and surveys in support of QL C & D subsurface utility services for bridge repair/rehabilitation.
07/19-02/20	**H.011670, LADOTD I-10: Loyola Interchange, Kenner, Jefferson Parish, LA -** SUE/ Survey Party Chief ran a field crew for QL B, C, and D subsurface utility designating, topographic surveys, surveys in support of QL A, B, C, and D subsurface utility designating/ locating for approximately 5 miles.
12/18-01/20	**H.013643, LADOTD LA 951: Roadway Washout Repairs, East Feliciana Parish, LA -** SUE/ Survey Party Chief ran a field crew for topographic surveys, surveys in support of QL A, B, C, and D subsurface utility designating/locating, and QL A, B, C, and D subsurface utility designating/locating for approximately 2,600 feet.
06/16-06/18	**4400002562 & 4400006814, LaDOTD LA 675 & LA 87 Improvements in New Iberia, Iberia Parish, LA -** SUE/ Survey Rodman performed on a field crew for topographic surveys and surveys in support of QL A, B, C, and D subsurface utility designating/locating for 10 city blocks.

16. Staff Experience:

Firm employed by	**NTB Associates, Inc.**		
Name	**Belton Davis, Jr.**	Years of experience with this employer	6
Title	Party Chief	Years of experience with other employer(s)	2
Degree(s) / Years / Specialization		High School Diploma	
Active registration number / state / expiration date		N/A	
Year registered		Discipline	N/A **Other Pertinent Training / Certifications** U.T.A. Certified Professional Utility Locator ATSSA Traffic Control Technician-LA State Specific (exp. 2/7/27)
Contract role(s) / brief description of responsibilities			**SUE/Survey Party Chief** Mr. Davis will serve as NTBA SUE/Survey Party Chief responsible for managing a field crew for surveys in support of subsurface utility designating and locating, and subsurface utility designating and locating.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
01/23 – 05/24	**H.001779, LADOTD Jimmie Davis Bridge (LA 511) Design-Build, Bossier & Caddo Parishes, LA -** SUE/ Survey Party Chief running a field crew and downloading data for Static GPS Control surveys, topographic surveys, and property surveys in support of title take-offs, title research, preliminary and final right-of-way mapping, and QL A, B, C, & D utility designating/locating for the design-build project to replace the Jimmy Davis Bridge across the Red River.
08/22 – 04/24	**CenterPoint Energy, SUE Services, LA (CP 104334113, 101783539, 104364770) -** SUE/ Survey Party Chief running a field crew for QL B subsurface utility designating and surveys in support of SUE in Shreveport, DeRidder, and Sulphur, Louisiana as a CenterPoint representative.
08/21 – 04/24	**4400019337, LADOTD Rural Bridge Replacement Initiative Phase II, Districts 05, 08 & 58 -** SUE/ Survey Party Chief running a field crew for control, topographic surveys, property surveys, and surveys in support of QL C & D subsurface utility designating for 34 bridge and culvert replacements as a sub-consultant.
02/21 – 02/24	**4400014660, LADOTD IDIQ Contract for SUE Services, Route I-10, East Baton Rouge, LA -** SUE Party Chief. Ran a field crew for QL B subsurface utility designating for several additional areas around the I-10 corridor in conjunction with the on-going design-build contract.
06/18 – 06/24	**H.004100.5, LADOTD I-10: LA 415 to Essen Lane on I-10 and I-12, West & East Baton Rouge Parishes, LA -** SUE/ Survey Party Chief responsible for running a field crew for topographic surveys, QL B, C, and D subsurface utility designating, and surveys in support of QL B, C, and D subsurface utility designating for approximately 13 miles of roadway. Task Orders continue to be assigned in additional areas as needed in conjunction with the on-going design-build contract.
03/22 – 05/22	**City of Baton Rouge/East Baton Rouge Parish, MOVEBR Bluebonnet Blvd. (Perkins – Picardy) East Baton Rouge Parish, LA (19-CP-HC-0034) -** SUE/ Survey Instrument Man performing on a field crew for topographic surveys and QL A, B, C, and D utility designating/locating throughout the approximately 1.5 miles of the project corridor.
09/21 – 02/22	**4400017713, LDOTD LA 47 IWGO Bridge Rehabilitation, Historic Bridge Improvement (HBI), Orleans Parish, LA -** SUE/ Survey Instrument Man performing on a field crew for topographic surveys and surveys in support of QL C & D subsurface utility designating for bridge repair/rehabilitation.
02/21 – 04/21	**H.014416.5, LADOTD LA 3125 @ LA 3274 Roundabout, St. James Parish, LA -** SUE/ Survey Rodman performing on a field crew for topographic surveys and surveys in support of QL B, C, & D subsurface utility designating.
07/19 – 02/20	**H.011670, LADOTD I-10: Loyola Interchange, Kenner, Jefferson Parish, LA -** SUE/ Survey Rodman performing on a field crew for QL B, C, and D subsurface utility designating, topographic surveys, surveys in support of QL A, B, C, and D subsurface utility designating/ locating for approximately 5 miles.

12/18 – 01/20	**H.013643, LaDOTD LA 951: Roadway Washout Repairs, East Feliciana Parish, LA -** SUE/ Survey Rodman performing on a field crew for topographic surveys, surveys in support of QL A, B, C, and D subsurface utility designating/locating, and QL A, B, C, and D subsurface utility designating/locating for approximately 2,600 feet.

16. Staff Experience:

Firm employed by	**NTB Associates, Inc.**		
Name	**Iniko Jack**	Years of experience with this employer	18
Title	Party Chief	Years of experience with other employer(s)	9
Degree(s) / Years / Specialization		High School Diploma / 1994 /	
Active registration number / state / expiration date		N/A	
Year registered		Discipline	N/A **Other Pertinent Training / Certifications** Traffic Control Supervisor Refresher-LA State Specific (exp. 2/8/27) Electro-Magnetic Locating Instruments Certified Certificate of Locating Competency (#P3642 -Staking University)
Contract role(s) / brief description of responsibilities			**Survey Technician** Mr. Jack will serve as an NTBA Technician during this contract. He will process data, perform calculations, and draft files for topographic and property surveys, and perform surveys in support of subsurface utility designating/locating and right-of-way maps. He has been trained in Bentley InRoads, AutoCAD, and MicroStation Software to produce maps.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
01/23-06/24	**H.001779, Jimmie Davis Bridge (LA 511) Design-Build, Bossier & Caddo Parishes, LA -** Technician supervising field staff, processing data, performing calculations, and drafting files for Static GPS Control surveys, topographic surveys, property surveys, title take-offs, legal descriptions, preliminary and final right-of-way mapping, surveys in support QL A, B, C, & D utility designating/locating, and QL A, B, C, & D utility designating/locating for the design-build project to replace the Jimmy Davis Bridge across the Red River.
08/23-06/24	**4400025041, LADOTD IIJA Off-System Bridge Program, District 62 -** Technician supervising field staff, processing data, performing calculations, and drafting files for Static GPS control surveys, topographic surveys, property surveys, title take-offs, legal descriptions, and preliminary and final right-of-way mapping in support of bridge replacements.
08/21-06/24	**4400019337, LADOTD Rural Bridge Replacement Initiative Phase II, Districts 05, 08 & 58 -** Field Operations Manager/ Technician supervising field staff, processing data, performing calculations, and drafting files for Static GPS Control surveys, topographic surveys, property surveys, title take-offs, legal descriptions, and preliminary and final right-of-way mapping, and QL C & D subsurface utility designating for 34 bridge and culvert replacements as a sub.
04/21-06/24	**4400019338, LADOTD Rural Bridge Replacement Initiative, Phase II, Districts 02, 03, 07, 61 & 62 -** Field Operations Manager/ Technician supervising field staff, processing data, performing calculations, and drafting files for Static GPS Control surveys, topographic surveys, property surveys, title take-offs, legal descriptions, and preliminary and final right-of-way mapping, and QL C & D subsurface utility designating for 21 bridge and culvert replacements as a sub.
12/17-06/24	**H.004100.5, LADOTD I-10: LA 415 to Essen Lane on I-10 and I-12, West & East Baton Rouge Parishes, LA -** Field Operations Manager/ Technician supervising field staff, processing data, performing calculations, and drafting files for topographic surveys, QL B, C, and D subsurface utility designating, and surveys in support of QL B, C, and D subsurface utility designating for approximately 13 miles of roadway. Task Orders continue to be assigned in additional areas as needed in conjunction with the on-going design-build contract.
04/22-04/23	**4400017713, LADOTD Monkhouse to I-49, Caddo Parish, LA -** Field Operations Manager/ Technician supervised field staff, processed data, performed calculations, and drafted files for topographic surveys, surveys in support of QL C & D subsurface utility designating, and drainage map preparation for interstate rehabilitation.

03/21-03/22	**22-DR-US-0013, City-Parish Ward Creek at Siegen Lane, East Baton Rouge Parish, LA -** Field Operations Manager/ Technician supervised field staff, processed data, and performed calculations for control, topographic, and property surveys along with QL B, C, and D subsurface utility designating for approximately 1,500 feet of Ward Creek.
05/15-12/20	**City Proj. No. 8-15, City of Bossier, Walter O. Bigby Carriageway (N. Pkwy Ext.) Bossier Parish, LA -** Field Operations Manager/ Technician supervised field staff, downloaded/ processed data, and performed calculations for topographic and property surveys, QL A, B, C, and D subsurface utility designating/locating, and surveys in support of subsurface utility designating/locating.
04/20-10/20	**Ligon Law Browning Estate Surveying Services, East Feliciana Parish, LA -** Field Operations Manager/ Technician supervised field staff, downloaded/ processed data, and performed calculations for property surveying services in support of partition property determination services for three tracts covering 165 acres.
01/20-03/21	**UPRR Big Sandy Siding Survey, Upshur and Wood Counties, TX -** Field Operations Manager supervised field staff and downloaded/ processed data for property surveying services for 15 parcels along railroad consisting of approximately 3.24 miles of track to establish the existing railroad right-of-way. Prepared 8 ALTA Surveys along with the privately owned parcels for acquisition, 0.25-acre acquisition parcel in the right-of-way, and an overall right-of-way strip map.
03/18-05/18	**Rogillio Resubdivision, East Baton Rouge & East Feliciana Parishes, LA -** Field Operations Manager supervised field staff and downloaded/ processed data for property surveying services and right-of-way acquisition maps for resubdivision services covering 93 acres.
04/15-09/15	**4400001798 & H.011094.5, LADOTD LA 3094: Hearne Ave. Bridge Rehab, Route LA 3094, Caddo Parish, LA** - Field Operations Manager supervised field staff and downloaded/ processed data for topographic surveying services, drainage map preparation, and QL B subsurface utility designating for bridge rehabilitation.
07/10-10/12	**700-03-0125 & 701-65-1538, LADOTD LA 42 Widening and Improvements District 61, Ascension Parish, LA -** Field Operations Manager supervised field staff and downloaded/ processed data for topographic and property surveys to locate all existing structures within 50 feet of proposed right-of-way in support of right-of-way acquisition map preparation for 165 parcels.
05/11-11/11	**4400000681 & H.002230, LADOTD Goose Bayou Bridge Replacement, Route LA 45, Jefferson Parish, LA -** Field Operations Manager supervised field staff and downloaded/ processed data for property surveying services in support of the preparation of base and final right-of-way mapping.
01/09-06/10	**Perkins Road Improvements (Essen Lane to Siegen Lane) Route LA 427, East Baton Rouge Parish, LA -** Survey Party Chief ran a field crew to set 97 right-of-way monuments to produce monumentation maps for filing as a sub consultant to James Construction Group.

16. Staff Experience:

Firm employed by	**Vectura Consulting Services, LLC**		
Name	**Laurence Lucius Lambert, II, PE, PTOE, PTP**	Years of experience with this employer	8
Title	Supervising Engineer	Years of experience with other employer(s)	18
Degree(s) / Years / Specialization	M.B.A. / 2010 M.S. / 2006 / Civil Engineering (Transportation focus) B.S. /1997 /Civil Engineering		
Active registration number / state / expiration date	#PE.0029901 / LA / 03-31-2026		
Year registered: 2002	Discipline: Civil Engineering		
Other Pertinent Training / Certifications	LTRC Traffic Engineering Analysis Process and Report Course – Modules 1, 2 and 3 (2018) Professional Traffic Operations Engineer (exp. 2/3/2025) Traffic Control Supervisor Refresher-LA State Specific (exp. 4/29/26)		
Contract role(s) / brief description of responsibilities	**Traffic Engineering Task Manager – Satisfies MPR #5** Mr. Lambert brings 26 years of experience with the performance of traffic services ranging from transit facility location studies to corridor studies that focus on complete street improvements. He has also performed intersection / corridor studies for some of the most complicated corridors in the state of Louisiana using HCM and microsimulation tools to tackle these projects. Has also developed TMPs, IMRs and IJRs for several projects.		

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
01/23-02/24	**H.011504, Alexandria ITS Phase 2, Alexandria, LA -** Project Manager for a System Engineering Analysis Report, Engineering Opinion of Probably Construction Cost, and Level 2 Transportation Management Plan for the Alexandria area.
10/21-03/22	**H.013256.5, I-10 ITS Scott to Lake Charles** - Lead Traffic Engineer for a Level 2 Traffic Management Plan (TMP) associated with the construction of ITS equipment along I-10. The plan included a safety strategy that included a CAT Scan, LOS determination using Citrix data, lane closure recommendations based on a queue analysis, and public information strategies.
01/23-02/24	**H.011504, Alexandria ITS Phase 2, Alexandria, LA -** Project Manager for a System Engineering Analysis Report, Engineering Opinion of Probably Construction Cost, and Level 2 Transportation Management Plan for the Alexandria area.
04/18-12/21	**H.010960.5, LA 30 Roundabouts at Tanger & I-10 Gonzales, Ascension, LA –** Performed a Quality Control review of the temporary construction and sequence of construction plans. Also provided Quality Control review of signing and striping plans at the 30% and 60% plan sets to ensure the roundabouts conformed to the Pavement Markings Details Sheet PM-09 and MUTCD details on roundabouts.
02/20-09/21	**College Drive Corridor Enhancement from Perkins Road to I-10, Baton Rouge, LA -** Project manager for the development of Chapter 1 (Data Collection), Appendix A (Initial Data Collection), and Appendix B (Final Data Collection) for proposed improvements to College Drive. Since the I-10 interchange was included in the study, approval from DOTD was required. Vectura collected turning movement counts, 85% speed data, travel time runs, queue measurements, field observations, verification of Traffic Signal Inventories, and bicycle / pedestrian / transit observations.
09/18-02/19	**H.013261.1, I-110 ITS Deployment Systems Engineering Analysis** - As a sub-consultant, Laurence was the task leader for the Constraints & Alternatives Analysis as well as the Projects & Procurement Strategy portion of the project. The goal of the project was to deploy Close Circuit Television (CCTV) cameras and one Dynamic Message Sign (DMS) along the I-110 corridor from US 190 to US 61. To communicate with the field devices from the Traffic Management Centers (TMCs), the installation of fiber optics along the I-110 corridor was recommended. The fiber optics also allowed communication to the traffic signals at the interchange ramps along I-110 to the TMC.

09/16-04/17	**H.004957.5, I-12 to Bush - LA 3241 (I-12 – LA 36) Corridor Study, St. Tammany Parish, LA** - Lead Traffic Engineer for a DOTD traffic study for the new LA 3241 alignment with the purpose of obtaining both existing and projected future traffic variables in accordance with standard operating procedures typically performed in these types of analyses. Worked closely with the NORPC and District 62 to develop design year volumes using data the TransCAD model. The traffic study examined concepts that improved the safety and efficiency of the roadway consistent with the latest DOTD policies related to access management. Collected 7-day, 24-hour counts w/ classification on mainlines, turning movement counts for morning and evening peak periods and speed data for mainlines. He also developed a VISSIM traffic simulation model of the preferred alternative.
07/11 – 07/15	**H.4400001465 Retainer Contract for ITS Traffic Incident Management (TIM) Program Transportation Management Centers (TMC's) Operations Staffing Support and Systems Engineering (SE) Statewide** - Overall project manager of this multi-year, $15,000,000 contract that included providing staffing support, developing SOP Manuals, TIM program support, ramp meter feasibility and design, TMC Concept of Operations, ITS system requirement documentation, and Systems Engineering Analysis and Documentation. Coordinated with the DOTD and TMC staff at the following TMC locations: DOTD Headquarters Annex Building, Baton Roue TMC on Harding, New Orleans, Shreveport, and Houma.
01/13-06/13	**I-10 / Essen Lane Interchange Modification Study (Stage 0), Baton Rouge, LA -** Conducted a Stage 0 Interchange Modification Request for a Diverging Diamond Interchange (DDI) at I-10 and Essen Lane, between College Drive and Bluebonnet Boulevard. The study addressed the need for the interchange based on current and future traffic volumes, analyzed the interchange to determine lane geometry and level of service, and analyzed adjacent intersections to determine the impact of the additional interchange both before and after. Laurence performed all HCS analysis as well as developing a micro-simulation model in VISSIM.
06/12-12/12	**Ramp Metering Study of I-10 Segment, East Baton Rouge and Ascension Parishes, LA –** Project Manager for a feasibility study to deploy ramp meters along the Interstate 10 (I-10) Corridor in Baton Rouge between Dalrymple Drive and LA 73. The study consisted of analyzing 17 on-ramps under differing design conditions, which include the following: 2010 Existing, 2012 Without Ramp Meter, 2012 Ramp Meter, and 2012 Ramp Meter with Recommendations. Laurence's role in this project as project manager was to oversee all QA/QC measures and interpret the results from the model. Laurence coordinated with the local agencies to obtain all current proposed projects in the area, which included DOTD I-10 Widening Project Phases 1 and 2, the Green Light Plan (GLP) Essen Lane Widening Project, and the GLP Highland Road Widening Project.
03/10-11/11	**S.P. No. 700-09-0171 Stage 0 and 1 Study I-49 Inner City Connector, Shreveport, LA -** This 3.5-mile route will connect the existing I-49 / I-20 interchange to the proposed I-49 / I-220 interchange. After completing the Stage 0, Mr. Lambert served as Project Manager for the traffic analyses for the EA phase. The total traffic analyses effort included over 30 TransCAD Models, 20 interchanges and 70 intersections. Analyses included signalized and unsignalized intersections, basic freeway segments, freeway merge / diverge segments and freeway weaving segments at the studied intersections and interchanges. This project included performing both Interchange Modifications Reports (IMRs) and Interchange Justification Reports (IJRs).
01/07–08/07	**I-12 Ramp Metering Study, Baton Rouge, LA** - Provided analysis and evaluations of potential ramp metering at six interchanges along the I-12 corridor. The scope also included an analysis of existing traffic conditions, evaluation of proposed solutions, and creation of micro-simulation models of existing and proposed conditions. An existing micro-simulation model was obtained from DOTD to analyze and visually represent the existing traffic conditions. The existing conditions model was calibrated and used as a base to develop models of ramp metering. Presented the findings to DOTD, including an overview map of the interchange area, a schematic of existing volumes, a Micro-simulation of the existing conditions, a summary table of LOS for existing conditions, micro-simulations of proposed solutions, and a summary table of LOS for each solution. He also submitted a formal report of the findings.
04/04-09/06	**Stage 0, I-10 at Pecue Lane Interchange Justification Study, Baton Rouge, LA -** Lead Traffic Engineer for a Stage 0 traffic study analyzing the proposed interchange at I-10 and Pecue Lane. Developed current and future traffic volumes based on the CRPC TransCAD model growth rates. Using HCS, Mr. Lambert analyzed signalized and unsignalized intersections, basic freeway segments, freeway merge / diverge segments and freeway weaving segments. He also developed a micro-simulation model in both VISSIM and TSIS.

16. Staff Experience:

Firm employed by	**Vectura Consulting Services, LLC**		
Name	**Sheelagh Brin Ferlito, PE, PTOE**	Years of experience with this employer	8
Title	Engineering Supervisor	Years of experience with other employer(s)	27
Degree(s) / Years / Specialization		B.S. / 1988 / Civil Engineering	
Active registration number / state / expiration date		#PE.0025383 / LA / 09-30-2025	
Year registered	1993	Discipline	Civil Engineering **Other Pertinent Training / Certifications** LTRC Traffic Engineering Analysis Process and Report Course – Modules 1, 2 and 3 (2018) Professional Traffic Operations Engineer (exp. 9/9/2024) Traffic Control Supervisor Refresher-LA State Specific (exp. 4/29/26)
Contract role(s) / brief description of responsibilities			**Traffic Signal Design, Stage 0 Studies, and Peer Reviews** Ms. Ferlito has focused her 25-year career on traffic and transportation engineering which includes the development of regional planning studies, intersection and corridor improvement studies, traffic impact studies, traffic/pedestrian signal equipment design, ITS design and CE&I services for construction projects. She is intimately familiar with Federal Highway Administration (FHWA) and Louisiana Department of Transportation and Development (LA DOTD) traffic guidelines, policies and procedures having been involved with projects throughout Louisiana for both private companies and public agencies, including those delivered using alternate delivery methods.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
07/19-Present	**H.004791, DOTD Belle Chasse Bridge & Tunnel Replacement P3, Belle Chasse, LA -** Project Manager for the temporary and permanent traffic signal plans for the intersections of LA 23 at Burmaster St and at Engineers Rd. She based her traffic signal plans on design year volumes that were developed using growth rates from the New Orleans Regional Planning Commission Travel Demand Model. This project represents the **first ever Public-Private-Partnership performed by DOTD**.
07/21-Present	**H.007160 - EBR Computerized Traffic Signal, Phase VB (Baton Rouge, LA) -** Task Leader for Construction Engineering and Inspection of 24 traffic signals. Oversaw the review of signal mast arm shop drawings to assist the City-Parish of Baton Rouge with accepting the manufactured poles. Along with the DOTD, City-Parish and Contractor, conducted field visits to confirm pole foundation locations.
07/19-Present	**MOVEBR New Capacity Projects Program Management, Baton Rouge, LA -** Lead Traffic engineer for the New Capacity Projects program management team. In this capacity, she reviews all traffic engineering scopes of services, traffic / speed data collection, traffic design studies, safety studies, and traffic signal design plans. She is in constant communication with the traffic engineering staff at DOTD and the EBR Traffic Engineering Department.
09/20-12/21	**H.010960.5, LA 30 Roundabouts at Tanger I-10, Ascension Parish, LA -** Project Manager for the design of temporary traffic signal plans that will be implemented during the roundabout construction along LA 30 in Gonzales, LA. The project involves replacing three existing signalized intersections with multi-lane roundabouts along LA 30 at I-10 Interchange ramps and at Tanger Boulevard. Vectura also developed signal timing plans for each phase of the construction to maintain progression along LA 30.
07/18-04/19	**LA 1 Pedestrian Crosswalk Study and Traffic/Pedestrian Signal Design, West Baton Rouge Parish, Addis, LA** - Developed a Pedestrian Crosswalk Study and Traffic Signal Construction Plans for the intersection of LA 1 at LA 990. The study was based on DOTD Traffic Engineering Manual Crosswalk Guidelines followed by traffic signal design plans based on DOTD requirements. The study included traffic and pedestrian traffic data collection, a speed study, crash analyses, intersection analyses and progression analyses. The signal plans included pedestrian signal equipment, signal timing parameter calculations, crosswalk striping, signs, DOTD pay items, estimated quantities, and construction cost. She also assisted the Parish with the DOTD Permit Request for Intersection Control Devices on a State Right of Way.

09/17-04/18	**US 11 at US 190 Business (Fremaux Ave.) Pedestrian Crosswalk Study and Traffic/Pedestrian Signal Equipment Design, Slidell, LA -** Developed a formal traffic study for a proposed crosswalk with pedestrian traffic signal equipment and pedestrian clearance timings based on DOTD requirements. She assisted with vehicle and pedestrian data collection, a spot speed study, analysis of 3-year intersection crash data and developed signal timing for pedestrians to cross the street. From the design study, a set of Traffic Signal Modification Plans were developed to implement the recommended alternative.
08/15-05/17	**Nuclear Regulatory Commission, Enhancing Guidance for Evacuation Time Estimate Studies, Rockville, MD** - Conducted an applied research study of U.S. Nuclear Regulatory Commission guidance for developing evacuation time estimate studies and produced a technical basis for revision of NUREG/CR-7002 "Criteria for Development of Evacuation Time Estimate Studies" in support of the 2020 update of ETEs. Specifically, She was the lead VISSIM modeler for the "large" population models which consisted of a 20-mile radius model. The VISSIM model input included traffic volumes distributed over 8 hours, highway and intersection lane geometry using links and connectors, conflict areas, traffic signal and stop control and speed. She also developed Dynamic Traffic Assignment code to simulate that fastest route out of the evacuated zone.
04/14-12/14	**H.002301 Signal Design for N. Sherwood Forest Dr. Widening Project, Baton Rouge, LA -** Project Engineer in responsible charge for data collection and design for three signalized intersections as part of a road widening project as per EBR DPW and DOTD requirements. Ms. Ferlito developed the traffic signal equipment, signal timing and communication construction plans, special provision specifications, quantities, and cost estimate. She also performed tasks to develop the striping plans and sequence of construction plans which included temporary signal equipment placement.
07/12-03/14	**EBR 03-TS-CI-0026 CE&I for EBR Traffic Signal Systems Jefferson Highway Construction, Baton Rouge, LA -** Project Resident Engineer on behalf of East Baton Rouge Parish (EBR) for performing CE&I services for the construction of 11 traffic signals. She maintained records of the contractor's daily operations, coordinated significant events that affected construction progress including utility issues, reviewed shop drawings, conducted monthly progress meetings, recorded daily installed quantities, and developed change orders and monthly contractor pay estimates. She also coordinated with the DOTD's ITS division for fiber splicing into the interstate I-12 fiber backbone and ATM / EOC building. She processed all monthly tasks in EBR formats as well as well as all items on the EBR project closeout checklist.
07/08-09/09	**SPN 013-05-0043 CE&I for EBR Traffic Signal Systems Phase IV Construction, Baton Rouge, LA** - Project Resident Engineer for DOTD and EBR to perform CE&I services for the construction of 21 traffic signals. She developed the project Sample Plan, maintained records of the contractor's daily operations, coordinated significant events that affected construction progress including utility issues, reviewed shop drawings, conducted monthly progress meetings, recorded daily installed quantities, coordinated concrete sampling for the DOTD Materials Lab, and developed change orders and monthly contractor pay estimates. She also coordinated with the DOTD's ITS division for fiber splicing into Airline Highway fiber backbone and ATM / EOC building. She processed all monthly tasks electronically in the DOTD's Site Manager program and EBR required formats, as well as all items on the DOTD's Project Closeout Checklist including the 2059 Report.
09/13-04/14	**S.P. 700-99-0477 Jefferson Hwy. Signal Design, Baton Rouge, LA** - Ms. Ferlito designed traffic signal plans for 11 intersections along Jefferson Highway between College Drive and the I-12 On Ramp in Baton Rouge. Designs included traffic data collection, traffic signal layout, fiber interconnect layout, fiber splicing diagrams, pedestrian crosswalk layout, and sign layout. Designs also included traffic signal synchronization signal timing and pedestrian signal timing. She prepared estimated quantities, preliminary and final signal construction plans, and specifications.
03/05-11/05	**Airline Hwy. Widening SPN 700-99-0332, Baton Rouge, LA -** Designed 8 traffic signals as part of the Airline Hwy. widening project in Baton Rouge. Her designs included traffic data collection, traffic signal equipment, signal synchronization timing, fiber communication, storage length calculations based on queues analyses, special provision specifications, quantities, and cost estimate. This project included fiber design to be the first Baton Rouge project to connect video surveillance images and traffic controller information to the ATM / EOC.

16. Staff Experience:

Firm employed by	**Vectura Consulting Services, LLC**		
Name	**Kristen (Gahagan) Farrington, PE, PTOE, RSP1**	Years of experience with this employer	2
Title	Traffic Engineer	Years of experience with other employer(s)	7
Degree(s) / Years / Specialization		B.S. / 2013 / Civil Engineering	
Active registration number / state / expiration date		#PE.0042074 / LA / 03-31-2025	
Year registered	2018	Discipline	Civil Engineering **Other Pertinent Training / Certifications** LTRC Traffic Engineering Analysis Process and Report Course – Modules 1, 2 and 3 (2018) Professional Traffic Operations Engineer (exp. 3/26/2026) Traffic Control Supervisor Refresher-LA State Specific (exp. 4/5/25)
Contract role(s) / brief description of responsibilities			**Traffic Signals and Traffic Analysis** Ms. Farrington has performed numerous Stage 0 and other traffic design studies for the LADOTD. As a result, she fully understands the National Environmental Policy Act (NEPA) process as it relates to transportation engineering studies and can deliver traffic studies for federal and state approval. She is also an expert at MicroStation as well other traffic analysis software. Ms. Farrington took formal Geographic Information Systems (GIS) training and can use GIS software to present crash data and other environmental information.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
04/21-Present	**CP No. 16 CI-US-0032 Bus Rapid Transit (BRT) Improvement Project, Baton Rouge, LA -** Project Engineer for a traffic design study and traffic signal design of 19 signals along three corridors: Plank Road, 22nd Street and US 190 (Florida Street). Assisted the prime consultant with the safety analysis as well.
08/21-04/22	**H.013267, Downtown to Scotlandville Parkway Trail Safety Enhancement Study, Baton Rouge, LA** - Project Engineer for a design study to evaluate the recommended street crossing treatments of the trail at eight locations. The project consisted of collecting vehicular speed and volume data at the proposed trail crossings. Geometric field checks were also performed to determine if any hazards to pedestrians or cyclists existed. Once the field data was collected and analyzed, appropriate crossing treatments using the *FHWA STEP Guide for Improving Pedestrian Safety at Unsignalized Locations* were developed that included Rectangular Rapid-Flashing Beacons (RRFB) and Pedestrian Hybrid Beacons (PHB's).
02/20-09/21	**MOVEBR College Drive Enhancement Project, Baton Rouge, LA -** Assisted with the data collection task for the College Drive project limits. Tasks included in the data collection were 7-day tube counts, intersection turning movement counts, approach tube counts, unmet demand observations, driveway counts, travel time runs, pedestrian / bicycle counts, and weaving counts.
6/19-2/21	**H.013459, US 167 Improvements Stage 0, Elsie Street to Gilbert Street, St. Landry Parish, LA** - Project Manager for a Stage 0 study to evaluate the addition of a third lane to US 167 from Elsie Street south to a point past Gilbert Drive. Environmental impacts and cost estimates were prepared, as well as a benefit-cost analysis of all improvements considered. Civil Engineer responsible for safety analysis including crash rate number method, over-representation, CATScan quality assurance, HSM existing safety analysis, and No-Build Analysis. Designed high-level concept exhibits and comparison matrix to determine best preliminary alternatives moving forward to meet the purpose and need of the project. Compiled meeting agenda and minutes.
6/19-2/21	**H.013460, US 167 Improvements Stage 0, Enola Street to Ross Road, Evangeline Parish, LA** – Project Manager for the Stage 0 study of a two-lane road to remove a curvilinear section of US 167 from Enola Street near LA 748, southeast for approximately 1.2 miles. The study compared connecting existing property owners to a new roadway with driveways or intersection of old roadway. Environmental impacts and cost estimates were prepared. Civil Engineer responsible for safety analysis including crash rate number method, over-representation, CATScan quality assurance, HSM existing safety analysis, and No-Build Analysis, as well as a benefit-cost analysis. Designed high-level concept exhibits and a comparison matrix to determine best preliminary alternatives moving forward to meet the purpose and need of the project. Compiled meeting agenda materials and minutes.

04/19-06/21	**H.013817.1, LA 117 Improvements Stage 0, Vernon and Natchitoches Parishes, LA -** Project Engineer responsible for the Stage 0 study for 18 miles of two-lane LA 117 from LA 8 to LA 118. The study evaluated the impacts of correcting deficient vertical and horizontal geometry along the corridor, widening for the addition of shoulders, and adding passing lanes and turn lanes at strategic locations along the corridor. Performed a safety analysis including crash rate number method, over-representation, CAT Scan quality assurance, HSM existing safety analysis, and No-Build Analysis. She designed high-level concept exhibits, evaluated environmental impacts, and prepared high level cost estimates and comparison matrices to determine which preliminary alternatives best meet the purpose and need of the project. Compiled all findings in the Stage 0 report and coordinated with stakeholders and local agencies to ensure the purpose and need of project is met.
03/19-11/19	**H.012311, LA 429 Connector Stage 0, Ascension Parish, LA -** Task Leader for the preparation of a Stage 0 study to evaluate alignments for a limited-access corridor (LA 429) near I-10, between LA 30, LA 73, and US 61. Two alternatives for the widening and reconstruction of LA 429 were evaluated. The scope consisted of stakeholder and public meetings, site visits and data collection, phasing of alternative development for the corridor, scope and budget checklists, and an opinion of probable cost to prepare the Stage 0 Report. Also served as a civil engineer responsible for designing high level concept exhibits and comparison matrix to determine the best preliminary alternatives moving forward to meet the purpose and need of the project. Compiled meeting agenda materials and minutes, coordinated with interchange study consultants for a cohesive project, and wrote report.
11/18-03/21	**H.013322, LA 3040 Feasibility / Safety Study Stage 0, Houma, LA –** Served as a Project Engineer for a study to identify safety and operational issues along 2.5 miles of Martin Luther King Boulevard (LA 3040) to evaluate reasonable alternatives to address any deficiencies discovered. Responsible for compiling a data collection plan for submittal to DOTD, including count locations, determining peak periods, and peak hours. She also performed peak period observations in the field and geometric field checks, as well as unmet demand observations and calculations. Ms. Farrington prepared TMC figures, as well as performed existing analysis in Vistro. Compiled all data collected into Appendices A and B per the DOTD Traffic Process and Report and wrote Chapter 1 of report. Presented the project at stakeholder meetings to discuss project status.
04/18-04/19	**H.011243.1, I-49 at US 190 and LA 31 Interchange Improvements Stage 0, St. Landry Parish, LA -** Project Engineer responsible for crash and safety analysis, report writing, planning, and designing for this Stage 0 Study to evaluate alternatives to improve traffic operations and safety at the I-49 interchanges with US 190 and LA 31. Crash and safety analysis was performed using the LADOTD CAT Scan tool and IHSDM, and line and grade was prepared to DOTD Design Standards for various corridors, including arterial collectors and freeway ramps. Close coordination with traffic engineer ensured maximum improvement of safety and operations given limited right-of-way and utility conflicts along the corridors.
09/17-09/18	**H.011160, LA 73 Corridor Study Stage 0, LA 74 to LA 621, Ascension Parish, LA -** Designer responsible for concept development, report writing, and impact analysis for a Stage 0 study. The purpose of the study was to evaluate conceptual alternatives to improve capacity and operations along the LA 73 corridor and its connecting transportation network. The scope included the evaluation of three interchange configurations for the interchange of I-10 at LA 73 in conjunction with two corridor alternatives for LA 73, resulting in six different alternatives for which line and grade, impacts, and high-level cost estimates were prepared.
11/16-07/17	**H.001271, Cane River Bridge Church Street Route LA 1-X Environmental Assessment -** Project Engineer responsible for assisting with the site visits, data organization, analysis of permanent alternatives and traffic control alternatives, and traffic report to aid in the delivery of an environmental assessment for the Cane River Bridge Replacement

16. Staff Experience:

Firm employed by	**Vectura Consulting Services, LLC**		
Name	**Bridget Scheyd Robicheaux, PE, PTOE**	Years of experience with this employer	6
Title	Traffic Engineer	Years of experience with other employer(s)	9
Degree(s) / Years / Specialization		M.S. /2014 / Civil Engineering (Transportation focus) B.S. /2007 / Civil Engineering	
Active registration number / state / expiration date		#PE.0041272 / LA / 03-31-2025	
Year registered	2016	Discipline	Civil Engineering **Other Pertinent Training / Certifications** LTRC Traffic Engineering Analysis Process and Report Course – Modules 1, 2 and 3 (2018) Professional Traffic Operations Engineer (exp. 3/26/2026) Traffic Control Supervisor-LA State Specific (exp. 6/22/26)
Contract role(s) / brief description of responsibilities			**Traffic Control Design, Traffic Analysis and TMP** Ms. Robicheaux obtained her master's degree in Civil Engineering at LSU with her research focused on transportation and highway safety. Her professional experience includes work in both the private and public sector where she worked for Louisiana Department of Transportation and Development Traffic Engineering Section. She has developed numerous traffic and safety studies and is well-versed in the latest traffic engineering software packages and standards of practice for transportation and traffic studies.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
04/20-07/20	**H.004791, DOTD Belle Chasse Bridge & Tunnel Replacement Public-Private Partnership Project, Belle Chasse, LA -**Assisted the project engineer who designed the temporary traffic signal for the intersection of LA 23 at Engineers Rd. by pulling crash data along LA 23, reviewing and summarizing crash reports, and performing CATScan analysis.
07/21-Present	**H.007160, EBR Computerized Traffic Signal, Phase VB, Baton Rouge, LA** - Reviewed the signal mast arm shop drawings to assist the City-Parish of Baton Rouge in accepting the manufactured poles. She also reviewed the traffic signal supports and documented all of her comments in a quality control tracker spreadsheet.
06/21-06/21	**CP No. 16 CI-US-0032, Bus Rapid Transit (BRT) Improvement Project, Baton Rouge, LA -** Assisted with the traffic signal design of 13 signals along three corridors: Plank Road, 22nd Street and US 190 (Florida Street).
03/21-07/22	**H.007160, EBR Computerized Traffic Signal, Phase VB, Baton Rouge, LA -** Member of the team responsible for Construction Engineering and Inspection. Bridget reviewed the signal mast arm shop drawings (checking pole quantities and markups) to assist the City-Parish of Baton Rouge in accepting the manufactured poles.
04/19-01/20	**Traffic Studies for Broussard Middle School and Billeaud Elementary School, Lafayette Parish, LA -** Project Engineer for developing a Traffic Study for two school entrances in Broussard, LA. Her project tasks included traffic data collection, forecasting traffic volume development, and existing traffic analyses and future traffic analyses using HCM software. She performed turn lane warrants based on NCHRP Report Number 457 as well as storage lengths based on queues and DOTD requirements.
07/19-Present	**MOVEBR New Capacity Projects Program Management, Baton Rouge, LA -** Performed multiple reviews of traffic studies and traffic signal designs. This includes reviewing raw data, unmet demand, volume maps, existing and build analyses, and safety analyses for accuracy and consistency throughout the report. She provides comments in a spreadsheet known as the Comment Tracker. All comments are posted in the Comment Tracker so all parties are aware. Many of these projects are located on state routes and require approval by the Traffic Engineering staff of DOTD and EBR Traffic Engineering Department. She understands the current requirements for all aspects of traffic engineering projects. Using methods outlined in NCHRP 765, she helped

	to develop design year volumes for the Jones Creek (Airline to Jefferson) MOVEBR project. She has developed Turn Lane tech memos for the MOVEBR Old Hammond Highway Segments 1A and two projects and for the MOVEBR Highland at Siegen project.
07/18-04/19	**LA 1 Pedestrian Crosswalk Study and Traffic / Pedestrian Signal Design West Baton Rouge Parish, Addis, LA** - Assisted with the crosswalk study by pulling and formatting the crash data. She also assisted Brin with the crash analysis and formatting the findings.
10/17-07/18	**Travel Demand Model Update: Southeast Louisiana Travel Model, New Orleans, LA** - Developed base year traffic volumes to calibrate and test of the regional travel demand as part of updating the New Orleans Regional Planning Commission Travel Demand Model in TransCAD. Specifically, She obtained and reviewed the over 4,000 traffic counts (cars / trucks) that were used in the validation of the SELATRAM model to check for consistency, reasonableness, and completeness. Results were tabulated in a spreadsheet that was included in a technical memorandum.
09/17-11/17	**US 11 (Front St.) at US 190 Bus. (Fremaux Ave.) Traffic Study, St. Tammany Parish, LA -** Participated in the development of a Crosswalk Traffic Engineering Study for the City of Slidell as part of improvements to the intersection of US 11 (Front St.) at US 190 Bus. (Fremaux Ave.). Processed raw traffic videos and developed AM and PM peak period turning movement vehicle count figures. She also assisted Brin with a PTV Vistro model for the AM and PM Peaks for the five intersections for capacity analyses as well as progression analyses. She also developed portions of the report.
02/17-10/17	**Judge Tanner Boulevard at N. Causeway Roundabout Study, St. Tammany Parish, LA** - Participated in the development of a Stage 0 Feasibility Study for roundabouts at four intersections in St. Tammany Parish. The scope was developed based on EDSMs VI.1.1.1 / VI.1.1.5 and DOTD Traffic Engineering Manual Section 20.2. She developed traffic turning movement counts for morning and evening peak periods including peak hour factor and heavy vehicle percentages. Growth rates for design year volumes were also developed based on information provided from the **TransCAD model**. She also performed portions of the Sidra unsignalized, signalized and roundabout analyses for implementation and design years and report development.
06/16-09/17	**H.004490, Stage 0 Roundabout Studies, Lafayette Parish, LA** - Assisted with developing a Stage 0 Feasibility Study for roundabouts at seven intersections in the Lafayette area. The scope was developed based on EDSMs VI.1.1.1 / VI.1.1.5 and DOTD Traffic Engineering Manual Section 20.2. She developed traffic turning movement counts diagrams for peak periods including peak hour factor and heavy vehicle percentages. She also developed the speed data analyses; assisted with performing Sidra unsignalized, signalized and roundabout analyses for implementation and design years; and developed several figures that were included in the report.

16. Staff Experience:

Firm employed by	**Vectura Consulting Services, LLC**		
Name	**Reece Rodrigue, PE, PTOE, RSP1**	Years of experience with this employer	4
Title	Traffic Engineer	Years of experience with other employer(s)	7
Degree(s) / Years / Specialization		B.S. / 2013 / Civil Engineering	
Active registration number / state / expiration date		#PE.0042074 / LA / 03-31-2026	
Year registered	2017	Discipline	Civil Engineering **Other Pertinent Training / Certifications** Traffic Engineering Analysis Process & Report, Modules 1, 2 and 3 (2018) Professional Traffic Operations Engineer (exp. 7/17/2025)
Contract role(s) / brief description of responsibilities			**Traffic Impact Analysis, TMP, Traffic Signals and ITS Design** Mr. Rodrigue is an experienced transportation engineer who has performed traffic data collection, traffic signal warrants, traffic studies, safety studies, temporary traffic control design and modifications. He is proficient in the use of the latest traffic engineering software tools to aid in the completion of these projects. He also has an appreciation for pedestrian signalization crosswalks, and maintaining ADA compliance. He is familiar with local, state, and federal traffic engineering guidelines and policies.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
04/20-Present	**H.004791 DOTD Belle Chasse Bridge & Tunnel Replacement Public-Private Partnership Project (Belle Chasse, LA) -** Responsible for designing the temporary traffic signal for the intersection of LA 23 at Engineers Rd. for eight phases of construction per the anticipated sequence of construction. Temporary pole locations and heights were recommended for placement for use during all construction phases. Vehicle clearance interval calculations were conducted for each phase in accordance with DOTD and ITE guidance. Responsible for producing the traffic impact analysis portion of the **Traffic Management Plan** that was also used in planning for the permanent and temporary signal timing plans. He was also responsible for producing the permanent signal plans for the LA 23 intersections at Engineers Road and at Burmaster Street. He evaluated stop bar locations, calculated vehicle and pedestrian clearance intervals, designed the railroad preemption sequence for both at-grade crossings, designed the wiring layout, and developed the interconnect plan. In addition, Mr. Rodrigue was responsible for reviewing and approving shop drawings that were submitted by the contractor for use in construction.
04/21-Present	**MOVEBR Direct Select for Traffic Signal Design, Baton Rouge, LA -** Project Engineer for the design of traffic signal upgrades at 10 intersections. This projected included a traffic design report, preliminary and final plans for traffic signals that included traffic signal layout, fiber interconnect layout, fiber splicing diagrams, pedestrian crosswalk layout, and sign layout. The design also included traffic signal synchronization, signal timing and pedestrian signal timing.
06/23-Present	**H.011507.1, Monroe Phase 3 SEA** - Visited the project site to document the controller type and detection needs at each signalized intersection within the right-of-way.
07/21-Present	**H.007160, EBR Computerized Traffic Signal, Phase VB, Baton Rouge, LA** – Member of the team responsible for Construction Engineering and Inspection. Reece has reviewed the signal mast arm shop drawings to assist the City-Parish of Baton Rouge with accepting the manufactured poles. Along with the DOTD, City-Parish and Contractor, he conducted field visits to confirm pole foundation locations.
01/23-02/24	**H.011504, Alexandria ITS, Phase 2, Alexandria, LA -** Project Engineer for a site visit, System Engineering Analysis Report, Engineering Opinion of Probably Construction Cost, and Level 2 Transportation Management Plan.
01/21-05/21	**H.013256, I-10 ITS Scott to Lake Charles: Lafayette, Acadia and Jefferson Davis Parishes, LA** - Member of the team tasked with reviewing the ITS plans for 15 sites along I-10 where CCTV cameras were being installed. Mr. Rodrigue was responsible for measuring anticipated construction quantities and producing a cost estimate for said quantities by using DOTD's Bid Tabulation and Cost Estimating Tool.

09/20-12/21	**H.011909.5-4 Roundabout: US 171 at Boone Street, Vernon Parish, LA –** As a Design Engineer, he assisted in the production of a temporary signal design associated with the sequence of construction for the roundabout at US 171 and Boone St. He conducted a thorough analysis of the US 171 corridor's existing allowable movements and identified the movements that would be restricted during the proposed construction process and how it would impact the typical traffic patterns.
09/20-12/21	**H.010960.5 LA 30 Roundabouts at Tanger I-10, Ascension Parish, LA** - Assigned as a Design Engineer who assisted in the production of a temporary signal design associated with the sequence of construction for roundabouts on LA 30 in Gonzales, LA. This project consisted of eight proposed construction phases. He assisted in calculating the temporary pole heights, determining the placement location for the temporary poles for each phase, and measuring and calculating clearance intervals. He also conducted a thorough analysis of the LA 30 corridor's existing allowable movements and identified the movements that would be restricted during the proposed construction process and how it would impact the typical traffic patterns.
11/21-12/21	**Emergency Street Light and Traffic Sign Assessment, New Orleans, LA -** In response to the damage caused by Hurricane Ida, Mr. Rodrigue inspected streetlights and street signs to report damage using the City's ArcGIS Online Organization and ArcGIS Field Maps app. The assessment area was approximately 2.5 miles by 2 miles area in the City of New Orleans.
02/20-09/21	**College Drive Corridor Enhancement from Perkins Road to I-10, Baton Rouge, LA -** Task Leader for organizing and formatting the data collection of the College Drive project limits. Tasks included in data collection were 7-day tube counts, intersection turning movement counts, approach tube counts, unmet demand observations, driveway counts, travel time runs, pedestrian / bicycle counts, and weaving counts.
07/19-12/19	**Burgess Avenue at Duff Road Traffic Signal Design, Walker, LA -** Responsible for the design of a fully actuated signalized intersection. The traffic signal was determined to meet signal warrants upon completion of the Foxglove subdivision in Livingston Parish, LA. Plans included road widening, signal face indication schedule, signal sequence chart, sign schedule, detector schedule, controller timing, wiring diagram, and free operation phasing diagram. Met with city officials to discuss the feasibility of constructing a traffic signal as opposed to other alternative measures for improving the intersection.
02/16-12/16	**H.005733.5 US 190 Superstreet Task Order (St. Tammany Parish)** - Team member responsible for layouts of the US 190 Superstreet signal designs. He created the preliminary plans using CAD software program in MicroStation V8i. He aided in the technical design of each intersection. He conducted field inspections to verify the locations of existing equipment as well as observing the area for feasible proposed utility locations. He attended project team meetings to discuss the project details as well as the plan-in-hand walk-through.
01/16-11/17	**Ochsner Main Campus Traffic Signals, Jefferson Parish, LA** - Served as a design engineer for the traffic signal plans associated with two Ochsner Main Campus access traffic signals with US 90 (Jefferson Hwy). The goal of the design was to implement updated pedestrian timings as well as optimize progression through the US 90 corridor. He reviewed traffic data and assigned time of day coordination timing parameters for the two intersections so they may be included in the coordinated system west of the intersections. He used TruTraffic determine the appropriate offset parameters so that vehicles may progress efficiently through the coordinated system. Plans for the two intersections were drafted in the form of DOTD's latest version of the TSI format. He was responsible for estimating construction quantities using DOTD's 2016 Spec Item list.
10/16-05/17	**Loyola Interchange Modification Request, Kenner, LA** - Assigned as a team member in the production of an Interchange Modification Report (IMR) for the I-10 at Loyola Dr. Interchange. He was an active member in collecting vehicle travel time data and processing the data. He also aided in collecting vehicle queues at the study intersections and assisted in the Vissim model calibration.
02/15-12/15	**H.011646 Retainer Contract for DOTD District 02 Traffic Signal Inventories - Nola 3 –** Served as Lead engineer for the production of a traffic study for the District 02 Traffic Signal Inventories. The objective was to effectively correct the progression of traffic through the US 90 (Broad St) corridor. He reviewed vehicle crash data at all intersections in the study scope, conducted travel time runs, and created a model with existing traffic signal timing information using Synchro 8 Software. He recommended traffic signal pedestrian clearance times and yellow and red clearance times for each intersection. Used MicroStation V8i when designing traffic signal plans in the DOTD's TSI format.

16. Staff Experience:

Firm employed by	**Intelligent Transportation Systems, LLC**		
Name	**Jonathan Fox, PE, PTOE, PMP**	Years of experience with this employer	8
Title	Principal	Years of experience with other employer(s)	14
Degree(s) / Years / Specialization		B.S. / 2003 / Civil Engineering	
Active registration number / state / expiration date		#PE.0033277 / LA / 09-30-2025	
Year registered	2007	Discipline	Civil Engineering **Other Pertinent Training / Certifications** Professional Traffic Operations Engineer (#2329, exp. 11/07/2025) Project Management Professional (#MP1812148, exp. 04/27/2024)
Contract role(s) / brief description of responsibilities			**ITS Task Manager** Mr. Fox has over 20 years of experience in traffic engineering that includes traffic studies and assessments, traffic signal design, and ITS systems engineering and architecture. His ITS-related experience includes system diagnostics and troubleshooting, system testing, management and operations, and systems maintenance. He led the design and implementation of the first adaptive traffic signal system in Louisiana and continues to be a leader in this specialty.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
12/14-Present	**LADOTD ITS Maintenance (44-2500, 44-7102. 44-16811), Statewide –** Serving as principal and supervising engineer under an ITS Maintenance Retainer contract for the past 10 years. Roles have included project management support, quality control checks and site reviews, as well as investigating options and developing concepts to improve sites. His knowledge of ITS from planning through operations has made him a highly valuable asset to the ITS Maintenance team especially with respect to his knowledge of the ITS system as it was designed and operated.
08/15-07/19	**SASOL Lake Charles Chemical Project, Adaptive Traffic Signal Systems (Westlake) –** Served as the Lead Traffic Engineer for new traffic signal designs, upgrades, communication design, and integration. He oversaw the development of traffic signal plans, simulation models, communication layouts, network design, surveillance, travel time management, and permit applications. Six of these intersection upgrades were integrated by his team as the **first Adaptive Traffic Signal System deployed in the state of Louisiana** (System A). He has also overseen the design, implementation and integration of the Sasol System B (LA 108 signal corridor) and the LA 27 (Beglis Rd.) at LA 379 (Houston Rive Rd.) system. These were each constructed with adaptive functionality turned on in July of 2019. These intersection designs used stop bar and setback radar detection as well as wireless and cellular communications. The efforts for Sasol also included design and construction support for a temporary traffic signal on Old Spanish Trail at Prater Road.
06/18-07/19	**US 90 Adaptive Corridor, Westlake, LA** – Served as the Project Manager and overall design lead for the US 90 adaptive traffic signal corridor in Westlake, LA. Designs included preparing updated traffic signal inventory (TSI) forms as well as communications in support of two isolated traffic signals. Equipment included in the design consisted of new radar detection and unlicensed wireless communications. Jonathan oversaw the integration of the intersections into the adaptive system in Lake Charles.
01/07-01/10	**I-12 Ramp Metering Design and Implementation, East Baton Rouge Parish, LA -** Provided signal layout design support, quality control and fiber optic communications design for 16 ramp meters in the Baton Rouge area, including plan layouts, fiber allocations, and technical specification. He also handled construction administration, fiber inspection, fiber test review, and integration coordination. This was the **first implementation of ramp metering in the state**.

12/12-12/14	**Baton Rouge ITS, Phase 3, Baton Rouge, LA –** Oversaw the System Engineering Analysis (SEA) document for the project in compliance with the FHWA Rule (23 CFR Part 940.11) to determine project scope and analyze implementation constraints, including minimizing the impact of construction on the traveling public and using existing fiber optic communications. Several ITS deployment projects were solely focused on the core urban area leaving gaps. The solution to meet LADOTD's goal of the Baton Rouge ITS Phase 3 Project was to supplement the area with 16 additional closed circuit television video cameras, five dynamic message sign sites, one HUB site, 30 Bluetooth detection sites, one travel time message sign (first in the state), and eight ramp meters that cover five parishes over 50 miles to help with blind areas. He led the development of the plan set from conception to final plans.
11/12-12/14	**H.010138, Sunshine Bridge ITS Deployment, Sorrento, LA –** Project Manager responsible for delivering all required tasks from system engineering through deployment of the final design package. He oversaw development of the project level SEA for the deployment of a closed-circuit television camera system along LA 22 and LA 70, including the Sunshine Mississippi River Bridge. He overcame a number of project challenges that included determining how permitted fiber communications assets would be used, use of structure-mounted conduit systems, and the impact of ongoing bridge painting construction. He developed a conceptual design to have the camera support mounted directly to the bridge pier cap instead of the bridge's steel members to reduce maintenance. He also oversaw the analysis report, developed plans and specifications, and provided cost estimates.
04/16-07/18	**Alabama Department of Transportation (ALDOT), ITS Specifications, Statewide AL –** Design Lead for ALDOT's desire to upgrade their special provisions into a standard specification to bring consistency throughout the state on ITS equipment. The specifications that were developed included material and construction for fiber optic communications infrastructure, network switches and wireless radios, CCTV cameras, dynamic message signs, vehicle detection systems, ITS cabinets, environmental sensors, and an assortment of other related ITS items. This required his assessment of multiple manufacturers and models for each device type. He additionally oversaw and supported the development of material lab test provisions for the equipment as well as acceptance testing provisions.

16. Staff Experience:

Firm employed by	**Intelligent Transportation Systems, LLC**		
Name	**Kimberly McDaniel, PE, PTOE, PTP**	Years of experience with this employer	2
Title	Principal	Years of experience with other employer(s)	19
Degree(s) / Years / Specialization		M.S. / 2005 / Civil Engineering B.S. / 2003 / Civil Engineering	
Active registration number / state / expiration date		#PE.0032973 / LA / 09-30-2025	
Year registered	2007	Discipline	Civil Engineering **Other Pertinent Training / Certifications** Professional Traffic Operations Engineer (#2072, exp. 10/02/2025) Professional Transportation Planner (#802, exp. 03/14/2025)
Contract role(s) / brief description of responsibilities			**ITS Design** Currently serves as Principal and Chief Executive Officer for Intelligent Transportation Systems LLC (ITS LLC). While most of her 20+ year career has been spent in the private industry as an engineering consultant, she served six years in public service at the Louisiana Department of Transportation and Development. While at LADOTD, Kimberly played a lead role in the development of state laws (Revised Statutes), policies, and programs related to Access Management, Traffic Impacts, and Complete Streets. Kimberly's experience includes performing a variety of traffic impact studies, capacity analyses, safety analyses, corridor studies, access management evaluations, environmental assessments, and pedestrian studies. She also has experience in roadway design including the design of facilities for bicyclists and pedestrians and the development of traffic control plans. Kimberly is an experienced project manager with a proven record of delivering projects on time and on budget.

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).
07/22-Present	**LADOTD Task Order - Connected & Autonomous Vehicles (C/AV) Team and Working Group Support, Louisiana Statewide** - Assisting with the policy development components of the Connected & Autonomous Vehicles Team. The goal of this task order is to bring various practitioners together to assess Louisiana's current climate for the implementation of connected and autonomous vehicles (C/AV), begin developing projects to make the state's infrastructure and regulations ready for C/AV deployment, create public information programs, determine infrastructure needs, propose laws and regulations statutes, and determine other mechanisms necessary to prepare the State of Louisiana for the integration of connected and autonomous vehicles on the state's highways and roadways.
05/22-Present	**LADOTD ITS Maintenance (44-7102, 44-16811), Statewide Louisiana - S**erves as a firm Principal for the existing ITS Maintenance Retainer. Her role includes overseeing the management of the contract to ensure that project tasks are completed on time and within budget. She works with the project team on managing resources, providing required trainings and certifications, and allocating equipment.
12/22-Present	**Ascension Parish Traffic Impact Studies IDIQ Contract - S**erves as the Principal and Project Manager for this IDIQ Contract. As a direct-contract consultant, ITS LLC performs traffic impact studies for proposed commercial and residential developments throughout the Parish. The scope of work includes performing traffic impact studies (TISs) for a variety of commercial and residential developments that may include subdivisions, multi-family developments (apartment homes), strip retail centers, big box stores, restaurants, office complexes, industrial facilities, and more. Each proposed development is unique and has differing requirements for the studies.

07/22-Present	**Contract No. 4400021887 – Contract for Replacement of 15 Bridges, LADOTD District 08 -** Serves as the Principal for this contract. The firm's work includes the development of temporary traffic control plans and a Traffic Management Plan (Levels I-IV, varies) for the replacement of 15 different isolated rural bridges located within the boundaries of LADOTD District 08. The detour plans for each location are unique but collectively include the design and operation of temporary traffic signals, temporary detour roadways, and temporary bypasses using existing state routes.
10/08-08/14	**LADOTD Access Management Program, Louisiana Statewide -** Developed and managed the LADOTD Access Management Program. In this role, she performed extensive research of access management policies and best practices throughout the US. Kimberly led multiple focus groups and policy development teams consisting of LADOTD employees, consulting engineers, commercial developers, residential developers, real estate agents, attorneys, municipal employees, and elected officials from around the state to develop a policy for LADOTD which would regulate the granting of access to state highways. The policy was adopted as Louisiana Administrative Code Title 70, Part I, Chapter 15. She authored the Access Connections Policy, a document expanding the criteria of the code; developed training courses for DOTD employees, consultants, contractors, real estate professionals, and elected officials; and conducted trainings throughout the state of Louisiana. Once implemented, she chaired and managed the Access Management & Traffic Impacts Appeals Board and coordinated appeals submitted by landowner/developer applicants whose requests for access were denied by the District. Ms. McDanial served as the LADOTD's Subject Matter Expert on Access Management throughout this time.
06/12-08/14	**LADOTD Traffic Impacts Policy & Program, Louisiana Statewide -** Assisted with the development of a revised Traffic Impacts Policy to be used throughout the state for studies related to commercial or large-scale residential development. The program was integral to the success of the Access Management Program as it sought to outline the requirements to study the potential traffic impacts of proposed developments and determine effective mitigation strategies for the additional traffic. Denials of these studies at the District level were also appealed to the Access Management & Traffic Impacts Appeals Board which she chaired. Ms. McDaniel coordinated traffic impact reviews with LADOTD District and Headquarters staff.

17. Firm Experience:

Firm name	TRC Engineers, Inc.	Past Performance Evaluation Discipline(s)	Bridge
Project name	**I-10 Lake Charles Calcasieu River Bridge P3 Project Support**	Firm responsibility (prime or sub?)	Sub
Project number	H.03931	Owner's name	Louisiana Department of Transportation and Development
Project location	Calcasieu Parish, LA	Owner's Project Manager	Peggy Paine
Owner's address, phone, email	1201 Capital Access Rd, Baton Rouge, LA 70802 | (225) 379-1065 | Peggy.Paine@la.gov		
Services commenced by this firm (mm/yy)	08/20	Total consultant contract cost ($1,000's)	
Services completed by this firm (mm/yy)	06/23	Cost of consultant services provided by this firm ($1,000's)	$310

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

Project Relevance:
- Design-Build / P3 Project
- Pre-procurement Services

TRC performed engineering and environmental services associated with procurement of the Calcasieu River Bridge P3 project. The project consists of improvements to a 5.5-mile corridor stretching from near Ryan Street in Lake Charles to the I-210/I-10 interchange in Westlake. Along with the new bridge and approaches, the project includes interstate roadways and ramps, I-10 service roads, and interchanges at PPG Drive, Sampson Street, and North Lakeshore/Ryan Street that connect the interstate to state roads and local streets. Sampson Street will be elevated over the railroad tracks to eliminate blockages from trains. Services completed by TRC under this project included:

Data Review - Review of available documents for the purpose of building a full knowledge of the Project's development history to-date, gaining an understanding of its challenges and major risks, and identifying missing, inconsistent or unresolved information.

Capital Construction Cost Estimation and Schedule - Assisted with development of the conceptual base capital cost estimate in accordance with good industry practice based on available information as identified in the Environmental Document, historic plans and information within the Project area, traffic and revenue forecasts, and Client standards and specifications.

Request for Proposal (RFP) Phase – Assisted with development of the technical inputs to the RFP that supported delivery of the Draft RFP. TRC provided RFP phase preliminary support that included reviews of the draft RFP package documents that consisted of Instructions to Proposers (ITP), development of the Technical Proposal Requirements, drafting of preliminary Technical Provisions and Performance Specifications, and reviewing KPIs and LDs.

Technical Provisions (TP) and Performance Specifications - Development of the Project TP, including performance-based specifications for design, construction, operations, and maintenance. Services were provided to develop technical provisions for the following:

- Environmental (Storm Water Management, Noise, Wetlands and Water Quality, Protected Species, and Cultural Resources)
- Railroad
- Demolition
- Bridge, Miscellaneous Structures, Sign Structures and Support
- Signing and Pavement Markings
- Maintenance of Traffic
- Traffic

RFP Evaluation – TRC assisted with the RFP evaluations which included RFP review and comment on evaluation and selection framework, evaluation factors and sub-factors, and weights and methodology for arriving at the recommended apparent Best Value Selection.

STAFF TO BE USED IN THIS PROPOSAL: D. Krone, D. Clayton, M. Paul, K. Suderman, S. Danna

17. Firm Experience:

Firm name	TRC Engineers, Inc.	Past Performance Evaluation Discipline(s)	Roadway
Project name	**LA1 / LA 415 Connector CMAR**	Firm responsibility (prime or sub?)	Prime
Project number	H.005121	Owner's name	Louisiana Department of Transportation and Development
Project location	West Baton Rouge Parish, LA	Owner's Project Manager	Corey Landry, PE
Owner's address, phone, email	1201 Capital Access Road, Baton Rouge, LA 70802-4438 | (225) 379-1889 | corey.landry@la.gov		
Services commenced by this firm (mm/yy)	03/20	Total consultant contract cost ($1,000's)	$1,061*
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$920*

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

Project Relevance:
- Stage 0: Feasibility Study
- Railroad Coordination
- CMAR Delivery Method

The project involves the study and design of a new connector between LA 1 near LA 988 (Beaulieu Lane) and I-10 at the LA 415 interchange. The project, which is approximately 2.7 miles in length, includes a new four-lane roadway and bridge(s) over the Gulf Intracoastal Waterway, with modifications to the LA 1 southbound turning movement and modifications of the I-10 ramps at LA 415. Elevated structures will be required for much of the project, including an elevated ramp from Northbound LA 1 to the new connector and an elevated ramp from the new connector to LA1 Southbound.

A Stage 0 Feasibility Study was conducted and included the development of a comprehensive schedule and geometric layout of the project that accounts for previously developed plans. Multiple layouts were evaluated for the connections to LA 415 at the I-10 Interchange as well as the Connector connection to LA 1 where there is a crossing of the Union Pacific Railroad. During our evaluation of the geometric layout and coordination with other agencies, it was discovered that the Port of Greater Baton Rouge was developing the Inland Rivers Chambering Yard which includes a railroad storage yard and access road. Multiple alignments were developed and were discussed with multiple stakeholders. A comprehensive Traffic Study was also be conducted by a subconsultant to TRC. As part of an environmental re-evaluation, TRC developed exhibits and renderings of the corridor and attend a public meeting with LA DOTD.

Initiated as a Design-Bid-Build procurement, the **LADOTD transitioned the project's delivery method at the end of preliminary engineering to a Construction Manager at Risk (CMAR)** where TRC is the Lead Designer working hand-in-hand with the LADOTD and a CMAR contractor to deliver this project under an **accelerated schedule**. As part of the transition, TRC developed recommendations to establish segmented work packages to potentially facilitate an early project kick-off. A study was also completed to modify the half diamond interchange at LA 1 to a full diamond interchange to avoid the need for a reconstruction in the future to meet traffic demands. The current construction cost is approximately $290 million.

* Supplement pending for CMAR work.

STAFF TO BE USED IN THIS PROPOSAL: D. Krone, M. Paul, D. Clayton, J. Crouse

17. Firm Experience:

Firm name	TRC Engineers, Inc.	Past Performance Evaluation Discipline(s)	Planning
Project name	**I-64 Widening Design-Build Quality Assurance Management**	Firm responsibility (prime or sub?)	Prime
Project number	N/A	Owner's name	West Virginia Division of Highways
Project location	Putnam County, WV	Owner's Project Manager	Deidra Begley, P.E.
Owner's address, phone, email	1900 Kanawha Boulevard East, Charleston, WV 25311 | (304) 558-9684 | Dee.L.Begley@wv.gov		
Services commenced by this firm (mm/yy)	06/17	Total consultant contract cost ($1,000's)	$7,499
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$5,374

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

Project Relevance:

- Design-Build Critical Project
- Design Reviews
- Pre-procurement Services
- Construction Quality Assurance
- Subconsultant HDR is designing the Kanawha River Replacement Bridge for the DB contractor

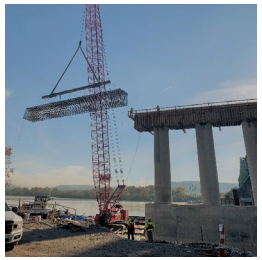
TRC is presently under contract to the West Virginia Department of Transportation, Division of Highways (WVDOH) to provide Quality Assurance Management (QAM) services associated with design and construction of the $225 million I-64 Widening and Improvements project that is being developed as a Design-Build procurement.

I-64 is a heavily-traveled interstate that crosses West Virginia and links its population from west to east. The section of I-64 that comprises this project has the highest average daily traffic (ADT) of any road in West Virginia at over 100,000 vehicles per day. This project will expand the interstate from four lanes to six lanes and entails several structures, including a major Nitro-St. Albans Kanawha River crossing bridge. The project involves widening I-64 from four lanes to six lanes from east of the US 35 Interchange at Crooked Creek to east of the Nitro Interchange near 40th Street. The entire project length is approximately 3.79 miles and will include three twin structures carrying I-64 over other roadways, two existing roadways crossing over I-64, separate flyover ramps for the Saint Albans Interchange, and a 1,400' Kanawha River crossing between Saint Albans and Nitro.

As the WVDOH's QAM consultant, TRC is responsible for performing all quality assurance duties normally performed by the State. This has included the development of various project criteria, RFQ/RFP development, development, and review of project estimated costs, assisting with the development and review of all project amendments, review of proposer ATC's, attendance, and participation in the Proposer One-on-One Meetings, and participating in the review of each Proposer's Technical Proposals.

Upon commencement of the project TRC's staff have been participating in design reviews, pre-award meetings, preliminary design reviews for right-of-way, roadway, and bridge; final design reviews for right-of-way, roadway and bridge plans; calculation reviews for both roadway and bridge designs; erosion control plan review; preliminary and final hydraulic report review; hazardous waste disposal criteria review; and geotechnical report reviews.

TRC is also responsible for all construction QA duties (not included in the contract $ above) including approval of contractor payments, verifying progress estimates, reviewing CPM Schedules, serving as liaison with WVDOH, overseeing all roadway and bridge operations, scheduling QC Inspectors, reviewing QC Inspector reports, managing all documentation and materials, providing QA Materials acceptance testing, and reviewing the contractor's testing.



STAFF TO BE USED IN THIS PROPOSAL: D. Clevenger, C. Wood, D. Verno, T. Shoemaker, P. Misch

17. Firm Experience:

Firm name	TRC Engineers, Inc.	Past Performance Evaluation Discipline(s)	Bridge
Project name	**I-49 North (I-220 to MLK Jr. Drive)**	Firm responsibility (prime or sub?)	Prime
Project number	H.003886.5	Owner's name	Louisiana Department of Transportation and Development
Project location	Shreveport, Caddo Parish, LA	Owner's Project Manager	Paul Vaught, III, PE
Owner's address, phone, email	1201 Capital Access Road, Baton Rouge, LA 70802-4438 | (225) 379-1816 Paul.VaughtIII@LA.gov		
Services commenced by this firm (mm/yy)	06/06	Total consultant contract cost ($1,000's)	$7,294
Services completed by this firm (mm/yy)	09/19	Cost of consultant services provided by this firm ($1,000's)	$3,428

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

Project Relevance:

- Stage 3: Bridge and Roadway Design Plans
- Stage 5: Construction Services
- Load Rating
- Accelerated Schedule

TRC was selected by the LADOTD to provide all engineering services associated with the provision of Stage 3 Preliminary and Final Bridge Plans and Load Ratings for a fully-controlled interstate class roadway (I-49) on new alignment. Also included was a roadway alignment evaluation using InRoads software. The construction cost of the project was $171 million.

The project begins at its proposed interchange with I-220, and proceeds in a northerly direction for approximately one mile to a proposed interchange with Martin Luther King, Jr. Drive (LA 3194). The project included the design of a portion of the I-49/I-220 interchange, and a partial cloverleaf interchange at Martin Luther King, Jr. Drive. Only connections from I-220 to I-49, to the north of I-220, from Martin Luther King, Jr. Drive to I-49, and to the south of Martin Luther King, Jr. Drive were included in the construction plans.

The project included the design and load rating for a total of seven new (7) structures. The Ramp EN (3,070'), SE (3,300') and WN (700') bridges consisted of dual designs with precast concrete segmental post-tensioned box girder and trapezoidal steel box girder superstructure alternates. The I-49 over MLK Dr. bridges (462' each) consist of BT-72 precast prestressed concrete bulb-T girder superstructures, while the I-220 over Russell Rd. bridges (322.5' each) consist of widening the existing steel plate girder bridges. To accommodate construction of the I-49 Bridge over MLK Jr. Drive, a detailed construction sequence was developed to accommodate the depression of MLK Jr. Drive under the I-49 bridges. A bridge architect was included on the TRC team to incorporate context-sensitive aesthetic concepts within the bridge design that included the incorporation of decorative lighting, decorative panels, rustications, and alternative coating system colors.

The resounding success of this project was recognized by the ACEC of Louisiana as the **Grand Award Category Winner** for Category C: Structural Systems
(*TRC's Mike Paul and Durk Krone shown pictured left to right*)

STAFF TO BE USED IN THIS PROPOSAL: D. Krone, M. Paul, X. Liu, D. Clayton, J. Crouse

17. Firm Experience:

Firm name	TRC Engineers, Inc.	Past Performance Evaluation Discipline(s)	Roadway
Project name	**US 35 Widening P3: WV 869 to Mason County 40**	Firm responsibility (prime or sub?)	Prime
Project number	N/A	Owner's name	West Virginia Division of Highways
Project location	Putnam County, WV	Owner's Project Manager	Deidra Begley, P.E.
Owner's address, phone, email	1900 Kanawha Boulevard East, Charleston, WV 25311 | (304) 558-9684 | Dee.L.Begley@wv.gov		
Services commenced by this firm (mm/yy)	6/2015	Total consultant contract cost ($1,000's)	$21,198
Services completed by this firm (mm/yy)	03/2020	Cost of consultant services provided by this firm ($1,000's)	$17,625

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

Project Relevance:

- Design-Build / P3 Project
- Accelerated Schedule
- Pre-procurement Services
- Construction Quality Assurance
- Roadway and Bridge Design
- Environmental Permitting
- Drainage and Hydraulic Analysis

Representing the second **Public Private Partnership** project to be undertaken in the State of West Virginia and the **largest construction contract ever let by the state**, this project represented a new $257 million four-lane section of U.S. Route 35 that extended 14.6 miles (13.8 miles of actual construction) from WV 869 in Putnam County to north of County Route 40 in Mason County. The 14.6 miles in Putnam and Mason counties was the last stretch of the 412-mile U.S. Route 35 from Michigan City, Indiana to Scott Depot, WV not to be four-lanes. TRC was the **Lead Designer for the Design-Build team that was selected by the DOH for award of the project.**

As part of the project, a total of four (4) bridges, six (6) access roads and over 50 culverts were designed. Bridges included twin US 35 bridges over CR9 (Plantation Road), CR 29 (Little Sixteen Mile Creek), CR 42 (Pond Branch) and relocated CR 40 (Upper Nine Mile Creek). The bridges over CR 42 and relocated CR 40 were designed by TRC. Each of these bridges are a two-span structure with lengths of 380' (170'-210') and 350' (195'-155'), respectively, and consist of steel plate girders with integral abutments on steel H-piles and two-column and cap piers. Extensive cuts and fill were also required to construct the new roadway due to the mountainous terrain through which the alignment travels. Centerline cut depths along the mainline range up to approximately 145 feet in rock, while fill embankment heights are in excess of 200 feet.

TRC's responsibilities on the project involved overall responsibility for the design of the project, including roadway alignment design, drainage design, hydraulic analysis, NPDES permitting, bridge structure design, overall management of the geotechnical design, and the management of all design-related subconsultants. TRC additionally provided the quality control and inspection for the project once construction activities commenced.

Prior to the advertisement of the project, TRC was requested by the West Virginia Division of Highways to participate in reviewing the draft RFQ in order to assist the Department with minimizing any conflicts in the contract language and the potential number of addendums that might have to be issued for the project during the procurement phase.

STAFF TO BE USED IN THIS PROPOSAL: D. Clevenger, D. Verno, T. Shoemaker, P. Misch

17. Firm Experience:

Firm name	**HDR Engineering, Inc.**		Past Performance Evaluation Discipline(s)	Planning	
Project name	**Retainer Contract for Strategic Advisory Services Related to LTA Participation in P3s**		Firm responsibility (prime or sub?)	Prime	
Project number	H.012806.1 & H.0047951.5	Owner's name	Louisiana Department of Transportation and Development		
Project location	Louisiana		Owner's Project Manager	Connie Porter	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 78704 | (225) 379-1297 | connie.porter@la.gov				
Services commenced by this firm (mm/yy)	12/16	Total consultant contract cost ($1,000's)	$1,265		
Services completed by this firm (mm/yy)	07/18	Cost of consultant services provided by this firm ($1,000's)	$966		

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

Project Relevance:

- Travel Demand Modeling/Traffic Forecasts
- Cost estimating (construction and operations)
- Toll Revenue Forecasts
- Financial Analysis
- Value for Money Analysis
- Alternative Project Delivery (including P3 Procurement)
- MPO Coordination

Under a statewide IDIQ Contract (Contract No. 4400006552), HDR completed a Stage 0 Study on the feasibility of tolling and the feasibility of implementing local option motor fuel taxes as sources of potential funding for future transportation improvements. LADOTD's 2015 Louisiana Statewide Transportation Plan (STP) includes 113 large infrastructure projects (Megaprojects) that are prioritized to address mobility, capacity and economic development opportunities throughout the state; 39 are ranked Priority A or B.

Task 1 - Conceptual-Level Assessment of the Feasibility of Tolling: HDR evaluated and reported on the feasibility of tolling highways and bridges in Louisiana including a summary of lessons learned and best practices nationwide. HDR also performed a qualitative, conceptual-level screening of programmed transportation projects (Priority A and Priority B Megaprojects) for their potential to use tolling as a funding source and how the tolls could be implemented, i.e., via public-private partnership (P3) delivery. Key study components included:

- Review of prior Louisiana toll studies
- Review of prior toll operations in LA
- Review of Best practices in other states
- Developed screening criterion/screening of Priority A and B Megaprojects

Task 2 - Toll Feasibility 6 Megaprojects: HDR conducted traffic and revenue forecasts to assess the potential net toll revenue and the resultant additional funding from toll revenue bonds that could be available to the LADOTD to potentially fund six select Megaprojects. For each Megaproject, sketch-level demand analysis, feasibility assessments, and financial assessments were conducted. The project assessed as most feasible in the HDR toll feasibility study was selected for implementation by the LADOTD and is now in procurement for P3 delivery. Projects included: **A-26:** I-10 Calcasieu River Bridge, Lake Charles; **A-44:** LA 23 Bridge and Tunnel Replacement, Belle Chasse; **B-50:** LA 511 Jimmie Davis Bridge, Shreveport-Bossier Metro Area; **B-60:** I-49 Inner City Connector, Shreveport; **B- 99:** Loyola Drive/I-10 Interchange, New Orleans Metro Area; and **B-101:** Mississippi River Bridge LA 1 to LA 30, Baton Rouge Metro Area.

Task 3 - Local Option Motor Fuel Tax Assessment: This study assessed the overall feasibility of implementing local option motor fuel taxes by combining initial research findings with motor fuel tax revenue forecasts on the state and parish level. The study provided considerations for implementing local option motor fuel taxes in Louisiana. Key study components of this assessment included: current state-of-the-practice; comprehensive literature review; overview of states that have authorized local option motor fuel taxes; agency interviews to identify best practices, lessons learned, success factors, and pitfalls to avoid; and revenue forecasts.

KEY STAFF USED IN PROPOSAL: L. Wadsworth, G. Pennison, A. Solis, A. Cadmus

17. Firm Experience:

Firm name	**HDR Engineering, Inc.**		Past Performance Evaluation Discipline(s)	Bridge	
Project name	**I-10 Mobile River Bridge P3 Project**		Firm responsibility (prime or sub?)	Prime	
Project number	N/A	Owner's name	Alabama Department of Transportation		
Project location	Mobile, AL		Owner's Project Manager	Edwin L. Perry III, PE	
Owner's address, phone, email	1701 West I-65 Service Road N., Mobile, AL 36618 | (251) 470-8243 | perrye@dot.state.al.us				
Services commenced by this firm (mm/yy)	05/17		Total consultant contract cost ($1,000's)	$12,000	
Services completed by this firm (mm/yy)	Ongoing		Cost of consultant services provided by this firm ($1,000's)	$4,770	

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

When completed, the new I-10 Mobile River Bridge will be one of the largest bridge projects in the U.S. featuring a new 6-lane, 1,320 ft. cable-stayed main span crossing of the river with 215 feet of vertical and 800 feet of horizontal clearance for the navigational traffic within the busy port. HDR was a major partner in an engineering consortium that is charged with performing environmental studies, project design, and procurement for the Alabama Department of Transportation.

In support of the NEPA process, a bridge alternatives analysis was used to reach a preferred alternative that would support regional capacity, maximize ALDOT's return on investment and create a world-class bridge that fits. To achieve these goals, HDR assembled and led a team of experts that included bridge design, tolling, geotechnical design, bridge architecture, wind engineering, and cost estimating.

Due to limited state funding, the selected delivery method is a **progressive Design-Build** to attract private infrastructure investment and innovation. Under progressive Design-Build, revenue from the tolls will be used to repay bonds with the remaining funding from previously selected and future federal grants selections. This will allow the project to be completed with a lower taxpayer investment and shorter time for construction.

Project Relevance:

- Progressive Design-Build
- Pre-procurement Services
- Risk Assessment
- Financial Analysis
- Tolling Concepts and Advisory Services
- Grant Application (INFRA)

HDR is currently serving as the Owner's Design Manager for ALDOT for this project. Overall project responsibilities include:

- Program/project management
- Preliminary design of the cable stayed bridge and high level approaches
- Development of RFP/RFQ documents
- Review of all project-related designs and grant applications
- Risk assessment
- Financial analysis
- Tolling concepts and advisory services
- 2019 INFRA Grant application

KEY STAFF USED IN PROPOSAL: P. Hickox, J. Truong, A. Cadmus, A. Solis

17. Firm Experience:

Firm name	**HDR Engineering, Inc.**	Past Performance Evaluation Discipline(s)	Planning
Project name	**South Mountain Freeway General Engineering Consultant**	Firm responsibility (prime or sub?)	Prime
Project number	H882701C	Owner's name	Arizona Department of Transportation
Project location	Phoenix, AZ	Owner's Project Manager	Carmelo Acevedo, PE JD
Owner's address, phone, email	1611 W Jackson St. MD EM 01, Phoenix, AZ 85007-3217 | (480) 356-3535 | cacevedo@azdot.gov		
Services commenced by this firm (mm/yy)	8/2015	Total consultant contract cost ($1,000's)	$46,000
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$28,000

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

Project Relevance:

- First Highway Project Procured Under Arizona's P3 Statute
- Owner's Advisor and Engineer
- Preliminary Engineering and Environmental Studies
- Assisted AZDOT With Development of a Risk-based Delivery Approach
- Assisted in Procurement of a Private DBM Partner

This $2 billion project is the first highway project procured under Arizona's public private partnership (P3) statute and ADOT's first design-build-maintain (DBM) project. It completes the Loop 202 Freeway system approved by voters in the 1985 Maricopa Association of Governments' (MAG) Regional Freeway System. The Freeway will improve regional mobility by adding three general-purpose lanes and one HOV or carpool lane in each direction. This 23-mile new freeway will allow traffic on Interstate 10 to bypass downtown Phoenix.

HDR worked with ADOT in the project planning stage to combine nine planned design-build (DB) projects into one large design-build-maintain (DBM) project. HDR and its team of subconsultants supported ADOT through the planning and P3 procurement process, and are providing oversight during the design and construction period in the technical areas of environmental, design, right-of-way, utilities and maintenance. HDR is also supplementing ADOT's construction inspection and administrative staff, and providing oversight of scheduling, change management, construction quality and labor compliance.

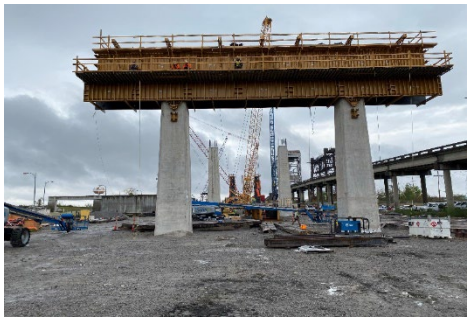
Through the P3 process, HDR is assisting in the procurement of a private partner to design-build-and maintain the project for 30 years. As part of this work, HDR has helped ADOT develop a risk-based delivery approach that opened the innovation valve by instituting performance-based specifications that are not reliant upon status quo or personal preferences. This approach saved ADOT over $200 million in construction cost and accelerated project delivery by three years over the original plan.

KEY STAFF USED IN PROPOSAL: E. Rouse, J. Truong

17. Firm Experience:

Firm name	**GeoEngineers, Inc.**	Past Performance Evaluation Discipline(s)	Geotech
Project name	**Belle Chasse Bridge and Tunnel Replacement P3**	Firm responsibility (prime or sub?)	Sub
Project number	H.004791	Owner's name	Louisiana Department of Transportation and Development
Project location	Plaquemines Parish, Louisiana	Owner's Project Manager	Nicholas Olivier, PE
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70804 | (225) 379-1110 | Nicholas.Olivier@la.gov		
Services commenced by this firm (mm/yy)	07/18	Total consultant contract cost ($1,000's)	~$165,000
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$ 1,126

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)



Project Relevance:

- Public-Private Partnership Project
- Preliminary subsurface conditions evaluation
- Geotechnical investigation (borings, lab testing)
- Geotechnical analyses and recommendations
- Settlement analysis
- Slope stability and interaction analysis with USACE flood walls systems
- Pile Dynamic Analysis
- Construction consultation

The Belle Chasse Bridge and Tunnel Replacement Project represents a replacement of the aging Perez Bridge and Belle Chasse Tunnel spanning the Gulf Intracoastal Waterway on LA 23 with a 3,300-foot fixed-span bridge carrying both north and southbound traffic via four travel lanes. The $169 million project is a Public-Private Partnership (P3) between the Louisiana Department of Transportation and Development and the Plenary Infrastructure Belle Chasse Consortium, a large team of consultants and contractors. The Project is **LADOTD's first P3 concession** and is an essential part of Louisiana's long-term procurement plans and a roadmap for future transportation P3's in the state.

Designing and testing foundations for a long-span bridge in the site's soft Louisiana soils was no easy task, especially since the bridge would be supported by a combination of precast prestressed concrete (PCC) piles and relatively large 48-inch diameter steel pipe piles. Geotechnical recommendations are typically validated by on-site testing which can in turn cause construction delays due to the long set-up times needed when working in soft clay soils. To streamline the process, the GeoEngineers team completed a combination of test piles and dynamic testing (PDA) to provide early-acceptance criteria for production piles. Through such testing and analysis, the contractor didn't need to wait for set-up to complete testing before the piles could be approved.

The GeoEngineers team also had to contend with United States Army Corps of Engineers (USACE) regulated flood-control T-walls and levees on either side of the intracoastal waterway and evaluate how settlement, stability, pile driving vibrations and other construction activities might affect those structures.

GeoEngineers oversaw the dynamic testing of a 48-inch diameter steel pipe pile for the new bridge's main pier.

KEY STAFF USED IN PROPOSAL: J. Aronstein, L. Sant, D. Sauls, A. (Chien-An) Ju

17. Firm Experience:

Firm name	**GeoEngineers, Inc.**		Past Performance Evaluation Discipline(s)	Geotech	
Project name	**Loyola Drive/I-10 Interchange Design-Build**		Firm responsibility (prime or sub?)	Sub	
Project number	H.011670	Owner's name	Louisiana Department of Transportation and Development		
Project location	Jefferson Parish, LA		Owner's Project Manager	Tim Nickel, PE	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70804 | (225) 379-1110 | Timothy.Nickel@la.gov				
Services commenced by this firm (mm/yy)	01/19		Total consultant contract cost ($1,000's)	~$125,000	
Services completed by this firm (mm/yy)	Ongoing		Cost of consultant services provided by this firm ($1,000's)	$1,100	

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

GeoEngineers was retained to complete the geotechnical exploration, testing and engineering for this high-profile $125 million Design-Build project that will ultimately improve the Loyola Drive interchange to increase operational efficiency and traffic capacity. The existing I-10 interchange is a multi-level, controlled-access interchange consisting of two overpass bridges. The LANOIA Airport is planning to build a new terminal and subsequently move the I-10 exit from Williams Boulevard to Loyola Drive. To do this, the Design-Build team was selected to:

- Modify the existing ramps and construct a new multi-level interchange, including two one-way elevated flyovers and a diverging diamond on at-grade interchange Loyola Drive.
- Add auxiliary lanes along I-10, including over Duncan Canal.
- Construct noise barriers at various locations throughout the project corridor.
- Upgrade Loyola Drive north and south of I-10 and tie it into the LANOIA corridor Airport Access Road.
- Improve drainage and lighting, relocate utilities, and provide pier protection.

GeoEngineers' responsibilities have included:

- Development of a preliminary subsurface conditions evaluation describing local geology, research of available geotechnical information, and plotting of design standards to help refine the team's design approach.
- Geotechnical investigations and analyses.
- Provision of foundation, embankment, pile, and pavement design recommendations.
- Use of Pile Driving Analyzer (PDA) equipment to evaluate and monitor the installation of piles.

Project Relevance:
- Design-Build Project
- Preliminary subsurface conditions evaluation
- Geotechnical investigation (borings, lab testing)
- Geotechnical analyses and recommendations
- Pile Dynamic Analysis
- Construction consultation

KEY STAFF USED IN PROPOSAL: J. Aronstein, L. Sant, D. Sauls

17. Firm Experience:

Firm name	**GeoEngineers, Inc.**		Past Performance Evaluation Discipline(s)	Geotech	
Project name	**US 90/LA 318 Interchange Design-Build**		Firm responsibility (prime or sub?)	Sub	
Project number	H.004932	Owner's name	Louisiana Department of Transportation and Development		
Project location	St. Mary Parish, LA		Owner's Project Manager	Tim Nickel, PE	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70804 | (225) 379-1110 | Timothy.Nickel@la.gov				
Services commenced by this firm (mm/yy)	10/15		Total consultant contract cost ($1,000's)	~$733,000	
Services completed by this firm (mm/yy)	02/18		Cost of consultant services provided by this firm ($1,000's)	$84,000	

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

The US 90/LA 318 Interchange project was in preparation for the conversion of US90 to future I-49 in St. Mary Parish. The $ 55.7 million project included the construction of access ramps between US 90 and LA 318, realignment of the frontage road for local access parallel to US 90, and elevating US 90 over LA 318.

As part of the Design-Build team with Gilchrist Construction Company, GeoEngineers provided geotechnical engineering design services and construction recommendations. Their work included the completion of preliminary designs for compliance with AASHTO LRFD and LADOTD standards. GeoEngineers also provided geotechnical design to the bridge, road and contractor teams as needed throughout the duration of the Design-Build construction process. Geotechnical tasks delivered by GeoEngineers for the project included the following:

- Review of project geology and explorations previously completed.
- Subsurface explorations and laboratory testing for foundation, embankment, and pavement design.
- Engineering analysis and recommendations for driven pile foundations needed for highway overpass bridges and drainage culvert design.
- Engineering analysis and recommendations for wick drains and surcharge to reduce post-construction embankment settlement, including field monitoring.
- Field monitoring of pile dynamic testing included WEAP and PDA analysis.

Project Relevance:

- Design-Build Project
- Preliminary subsurface conditions evaluation
- Geotechnical investigation (borings, lab testing)
- Geotechnical analyses and recommendations
- Pile Dynamic Analysis
- Construction consultation

KEY STAFF USED IN PROPOSAL: J. Aronstein, L. Sant, D. Sauls

17. Firm Experience:

Firm name	**KPMG, LLP**	Past Performance Evaluation Discipline(s)	Other (Financial)
Project name	**Belle Chasse Bridge and Tunnel Replacement P3 Project**	Firm responsibility (prime or sub?)	Sub
Project number	4400005030	Owner's name	Louisiana Department of Transportation and Development
Project location	Belle Chasse, Louisiana	Owner's Project Manager	Nicholas J. Olivier, PE
Owner's address, phone, email	1201 Capitol Access Road Baton Rouge, LA 70802 | (225) 379-1133 | Nicholas.olivier@la.gov		
Services commenced by this firm (mm/yy)	2018	Total consultant contract cost ($1,000's)	Unknown
Services completed by this firm (mm/yy)	2020	Cost of consultant services provided by this firm ($1,000's)	$700

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

The Belle Chasse Bridge and Tunnel Replacement Project (the "Project") was a roughly $150 million bridge and tunnel replacement south of New Orleans, LA that required a private partner to assume risks associated with the design, build, finance, operation and maintenance of the Project in exchange for the ability to collect toll revenue for a flexible period of years dependent on the proposers' tolling strategy. The new fixed-span four-lane bridge will replace the existing Perez Bridge and the Belle Chasse Tunnel spanning the Gulf Intracoastal Waterway on LA 23 in Belle Chasse. The Project is **LADOTD's first P3 concession** and is an essential part of Louisiana's long-term procurement plans and a roadmap for future transportation P3's in the state.

Project Relevance:
- LADOTD's First P3 Concession
- Financial Model and Due Diligence
- Pre-procurement Activities
- Assistance With Selection of Qualified Firms to Propose
- Negotiations With Preferred Proposer

Key services provided by KPMG included assistance with the following:

- Preparation of a **financial model and due diligence** of the project to test viability under a number of different financial structures, tolling arrangements and prices given the LADOTD's project goal of implementing the lowest tolls for the shortest term.
- **Ongoing financial analysis** based on varying inputs and assumptions regarding project scope and costs, traffic and revenues, and market conditions.
- **Pre-procurement activities** and assistance with the development of procurement documents, including financial and commercial input to development of the Request for Qualifications (RFQ), Request for Proposals (RFP), and Concession Agreement.
- Evaluation of Statements of Qualifications and **assisting the LADOTD with selecting qualified firms** to submit a proposal for the Project.
- Evaluation of a final proposal and ensuring the proposal was consistent with market precedent and presented fair value to the LADOTD.
- **Negotiations with the preferred proposer**, including analysis of surrounding potential toll scenarios to balance risk exposure and reduce potential monetary impacts to LADOTD.

KEY STAFF USED IN PROPOSAL: J. Clarke, G. Wilkinson

17. Firm Experience:

Firm name	**KPMG, LLP**	Past Performance Evaluation Discipline(s)	Other (Financial)
Project name	**Texas Department of Transportation P3 Advisory Services**	Firm responsibility (prime or sub?)	Prime
Project number	N/A	Owner's name	Texas Department of Transportation
Project location	Texas	Owner's Project Manager	Benjamin Asher
Owner's address, phone, email	125 E. 11th, Austin, TX 78701 | (512) 463-8611 | benjamin.asher@txdot.gov		
Services commenced by this firm (mm/yy)	2005	Total consultant contract cost ($1,000's)	$8,500
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	Ongoing

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

TxDOT implemented an innovative P3 program leveraging the state wide Comprehensive Development Agreement (CDA) program, which encompasses design build, P3 and concession models. KPMG has been the financial and P3 advisor to TxDOT since 2005 in the design, development and implementation of the CDA program. KPMG's **Justin Clarke** served as a founder and leading member to provide TxDOT with innovative delivery, commercial and financial assistance to its P3 and CDA programs since inception of the CDA program. **Guy Wilkinson** has also supported a variety of initiatives related to P3 financial and advisory solutions under this contract.

The broad range of services that KPMG has provided to TxDOT includes assistance with the following:

- Assessing the P3 potential of over 110 unfunded projects through a complex screening process developed with TxDOT.
- Advising TxDOT evaluation teams in their review of proposals, including financial model analysis and financing assumptions.
- Analysis of financial feasibility for potential CDA projects and development of financial models to aid in structuring decisions.
- Development of financial models that represent both the bidder's view and the traditional delivery approach for comparison and TxDOT decision making purposes.
- Drafting of briefing papers on key policy issues and commercial positions and advising in the development of CDA-related requirements for legislation.
- Communication with market participants related to the CDA program in general and with specific CDA projects as procurements are initiated.
- Application of P3 "lessons learned" from other jurisdictions and providing advice and guidance for negotiations.
- Management of the application process for federal funding assistance, as well as supporting discussions with federal agencies.
- Advising TxDOT throughout the commercial and financial close process.
- Development of tolling policy, methods and interoperability considerations, as well as providing due diligence on traffic and revenue analyses.

Project Relevance:
- Advisor on Nearly 20 Transactions Across Various Delivery Models
- Assessment of Project P3 Potential
- Proposal Evaluation Assistance
- Development of Financial Models
- Management of Applications for Federal Assistance
- Development of Tolling Policy, Methods, and Interoperability Considerations

Under this contract, KPMG has been a **trusted advisor on nearly 20 innovative transactions across a variety delivery models** (Design-Build (DB), DB Finance, DB Maintain, and Concession) which has included the full suite of advisory services from feasibility, negotiation and procurement assistance. Select projects include: SH 130 (CTTS), SH 130 Seg. 5 & 6, North Tarrant Express (3), LBJ 635, DFW Connector, Horseshoe Project, SH 99 Grand Parkway (2), IH 35E Managed Lanes, Loop 1604, Energy Sector Roadway, Loop 375 Border Highway West, SH 71 Toll Lanes, SH 183 Managed Lanes, SH 360, Harbor Bridge, SH 249, Oakhill Parkway, and SH 288.

KEY STAFF USED IN PROPOSAL: J. Clarke, G. Wilkinson

17. Firm Experience:

Firm name	**KPMG, LLP**		Past Performance Evaluation Discipline(s)	Other (Financial)	
Project name	**VDOT Transportation P3 Advisory**		Firm responsibility (prime or sub?)	Prime	
Project number	N/A	Owner's name	Virginia Department of Transportation		
Project location	Statewide Virginia		Owner's Project Manager	John Lawson	
Owner's address, phone, email	600 E. Main St., Suite 2102, Richmond, VA 23219 | (804) 786-2707 | john.lawson@VDOT.Virginia.gov				
Services commenced by this firm (mm/yy)	2007		Total consultant contract cost ($1,000's)	Confidential	
Services completed by this firm (mm/yy)	Ongoing		Cost of consultant services provided by this firm ($1,000's)	Ongoing	

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

KPMG has been engaged as the long-term lead VDOT's financial advisor on its Public-Private Transportation Act (PPTA) program since 2007. KPMG has worked closely with the Commonwealth and VDOT as one of its key strategic infrastructure advisors. Specifically, we have assisted the Office of the Secretary of Transportation in developing and refining its P3 policy and program objectives and identified opportunities to enhance PPTA's governance and organizational structure. KPMG also assisted the Office of the Secretary of Transportation with the establishment of what is now the Virginia Office of P3s and the development and implementation of a new Project Screening and Prioritization process including financial analysis assistance of potential PPTA projects.

KPMG's services have included financial feasibility analysis, procurement option analysis, financial modeling, affordability and VFM analysis, risk analysis and strategy, economic and ROI analysis, market soundings, project management assistance, procurement assistance, bidder evaluations, commercial and financial close assistance, and ongoing advice during implementation phase. Projects for which financial advisory services have been provided include:

Project Relevance:

- Included First Dynamic Tolled HOT Lanes P3 Project in U.S.
- Financial Feasibility Analysis
- Procurement Option Analysis
- Financial Modeling
- Affordability and VFM Analysis
- Risk Analysis and Strategy
- Economic and ROI Analysis
- Procurement Assistance
- Commercial and Financial Close Assistance

- **Transform 66 P3:** This project included various improvements and the addition of High Occupancy Toll lanes along 22.5 miles of I-66 in Northern VA.
- **I-95/395/FedEx Express Lanes Extension:** This managed lanes toll concession project provided for the addition of HOT Lanes on I-95 and I-395 in Northern Virginia under three transactions.
- **I-495 Capital Beltway Express Lanes:** This 14-mile project is the first dynamic tolled HOT Lanes P3 project in the U.S. The project included the construction of four new lanes and the conversion of four existing lanes to HOT lanes (two in each direction), refurbishment 12 interchanges, and addition of new capacity.
- **Downtown/Midtown Tunnels Toll Concession:** The Downtown Tunnel/Midtown Tunnel/Martin Luther King Freeway Extension Project is comprised of the development and operation of a new two-lane tunnel under the Elizabeth River; maintenance, safety, and operational improvements to the existing Midtown and Downtown Tunnels; and extension of the MLK Freeway.
- **Hampton Roads Strategic Plan:** VDOT engaged KPMG to act as its financial, strategic and commercial advisor to support development of the transportation plan. Specifically, KPMG assisted VDOT with defining the program of projects by determining the optimal prioritization and delivery approach for the projects based on various policy, financial, and operational considerations including: transparency and stakeholder outreach, prioritization of funding, the role of tolling and risk allocation; and level of participation by the private sector.

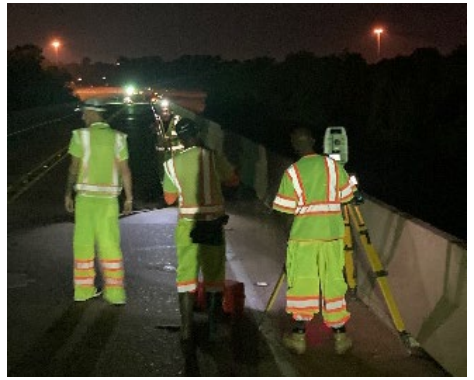
KEY STAFF USED IN PROPOSAL: J. Clarke, G. Wilkinson

17. Firm Experience:

Firm name	**NTB Associates, Inc.**	Past Performance Evaluation Discipline(s)	Survey
Project name	**Jimmie Davis Bridge (LA 511) Design-Build**	Firm responsibility (prime or sub?)	Sub
Project number	H.001779	Owner's name	Louisiana Department of Design and Development
Project location	Bossier & Caddo Parishes, LA	Owner's Project Manager	Thomas M. Gattle, III, P.E.
Owner's address, phone, email	922 West Pont Des Mouton Road, Lafayette, LA 70507 | (337) 962-7922 |tgattle@huvalassoc.com		
Services commenced by this firm (mm/yy)	01/22	Total consultant contract cost ($1,000's)	Unknown
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$1,140

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

NTBA is performing survey, ROW acquisition support, utility coordination and subsurface utility engineering for this $400 million Design-Build project to replace the Jimmy Davis Bridge across the Red River. The scope of this project consists of constructing a new four lane structure carrying LA 511 across the Red River, converting LA 511 (Jimmie Davis Hwy) into a four-lane, median-divided highway on the east side of bridge, and providing full access interchanges between LA 511 and Clyde Fant Memorial Parkway and Arthur Ray Teague Parkway.



Supplementing their primary services, NTBA also designed and implemented a Traffic Control Plan for a bridge closure to verify the horizontal and vertical control set by LADOTD during the original survey and verified the vertical control for both sides by running digital levels across the bridge which was not performed in the original survey. All of this was completed during night shifts to ensure the safety of employees and the public as well as to avoid traffic disruptions.

NTBA performed property surveys and title take-offs for approximately 50 properties adjacent to the route. The property survey submittal was prepared with apparent right-of-way shown. Final Mylar Right-of-Way Maps have been submitted for 21 parcels requiring right-of-way taking. The set included 21 plans sheets and one title sheet. NTBA also performed SUE services to designate all utilities within the project limits which included the creation of a conflict matrix showing all utilities in conflict with the construction. NTB is presently coordinating with the utility owners to relocate utilities that conflict with the construction and will monitor the relocation to ensure compliance with relocation plans. NTBA is using the Louisiana Department of Transportation Survey and Design Manual Addendum A as well as CI/ASCE Standard 38-02 to perform their work.

Project Relevance:

- Static GPS control
- Topographic and property surveying services
- Utility coordination
- QL A, B, C, & D utility designating/locating
- Preparation of title takeoffs, 60% ROW Maps, Final ROW Maps, and legal descriptions

KEY STAFF USED IN PROPOSAL: P. Rossini, M. King, W. Wales, B. Bunch, A. Schulze, I. Jack, B. Davis, P. Staiano, C. Higginbotham

17. Firm Experience:

Firm name	**NTB Associates, Inc.**	Past Performance Evaluation Discipline(s)	Survey
Project name	**Walter O. Bigby Carriageway (N. Parkway Extension)**	Firm responsibility (prime or sub?)	Prime
Project number	N/A	Owner's name	City of Bossier City
Project location	Bossier Parish, LA	Owner's Project Manager	Mark B. Hudson, PE
Owner's address, phone, email	P.O. Box 5337, Bossier City, LA 71171 | (318) 465-5801 | markhud1954@gmail.com		
Services commenced by this firm (mm/yy)	05/15	Total consultant contract cost ($1,000's)	$4,900.6
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$1,313.3

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

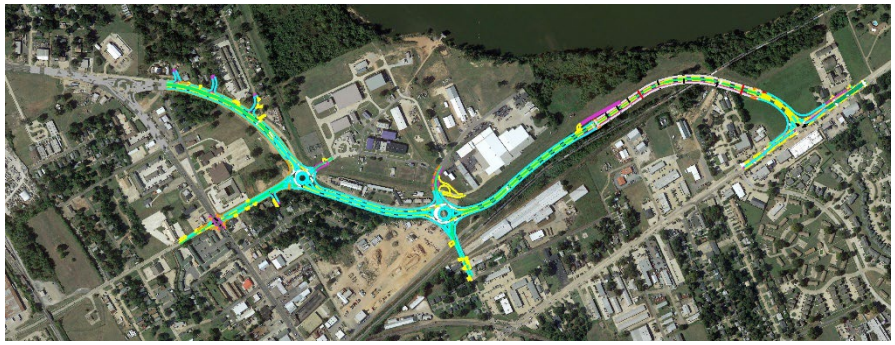
Project Relevance:

- Static GPS control
- Topographic, property and bathymetric surveying services
- Utility coordination
- QL A, B, C, & D utility designating/locating
- Surveys in support of SUE
- Preparation of ROW Maps and legal descriptions

This project consists of the design of the Walter O. Bigby Carriageway from north of Eatman Street to Benton Road. Walter O. Bigby follows an existing roadway for a portion of the alignment, then continues northward on new alignment between the Red River Levee and Union Pacific Railroad, crosses existing Union Pacific Railroad tracks with a bridge structure and connects to Benton Road at a new signalized intersection. Total project length includes approximately 5,300 feet of reconstructed city streets and 3,600 feet of new four-lane streets, which includes a 1,470-foot bridge structure. The $60 million project also includes two multi-lane traffic circles. The area included a major thoroughfare, local streets, riverbanks, levee crossings, and railroad rights-of-way.

NTBA served as the Prime consultant and **teamed with TRC Engineers as a major subconsultant partner**.

Bathymetric surveying services were performed to accurately determine the river bottom and channel location in association with the design of a new storm water outfall into the river and support a levee seepage analysis required by the USACOE. Associated work is being completed in accordance with the Louisiana Location and Survey Manual, CI/ASCE Standard 38-02, and City of Bossier standards.

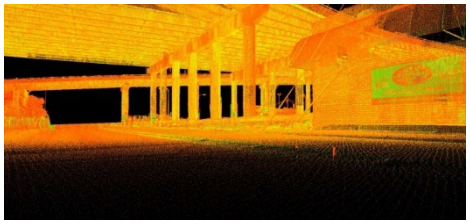


KEY STAFF USED IN PROPOSAL: P. Rossini, M. King, B. Bunch, A. Schulze, I. Jack

17. Firm Experience:

Firm name	**NTB Associates, Inc.**	Past Performance Evaluation Discipline(s)	Other (SUE)
Project name	**IDIQ Contract for Subsurface Utility Engineering (SUE) Services**	Firm responsibility (prime or sub?)	Prime
Project number	4400014660	Owner's name	Louisiana Department of Transportation and Development
Project location	Statewide Louisiana	Owner's Project Manager	Stanley Ard, PLS, PS
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802 | (225) 379-1101 | stan.ard@la.gov		
Services commenced by this firm (mm/yy)	01/19	Total consultant contract cost ($1,000's)	$3,000
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$149

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)



Project Relevance:
- Subsurface utility designating/locating

NTBA performed subsurface utility engineering services for two task orders under this IDIQ Contract. Both task orders were to **supplement the I-10: LA 415 to Essen Lane on I-10 and I-12 design-build project**.

Task Order No. 1 included additional QL B designating along East Washington Street both east and west of I-10 for approximately 1,100 feet, S. Acadian Thruway N. of I-10 for approximately 375 feet, and Dalrymple Drive S. off I-10 for approximately 375 feet.

Task Order No. 2 included QL B designating along Louis Street east of I-10 for approximately 530 feet, Eddie Robinson Drive near McKinley Middle Magnet for approximately 100 feet, and Pear Street for approximately 100 feet. It also included a large area on the south side of McKinley Middle near the bus drop off area as well as an area off Fiero Street to the banks of Lake Erie.

NTBA is currently awaiting NTP for Task Order No. 3 which will include QL B designating along I-12 for approximately 5 miles. NTBA produced QL B maps for each task order. Their survey department used their IDIQ Contract for Surveying Services to locate all the markings for incorporation into the MicroStation submittal.

KEY STAFF USED IN PROPOSAL: P. Rossini, M. King, B. Bunch, A. Schulze, I. Jack, B. Davis, J. King, C. Higginbotham

17. Firm Experience:

Firm name	**Vectura Consulting Services, LLC**		Past Performance Evaluation Discipline(s)	Traffic	
Project name	**Belle Chasse Bridge & Tunnel Replacement PPP**		Firm responsibility (prime or sub?)	Sub	
Project number	H.004791	Owner's name	Louisiana Department of Transportation & Development		
Project location	Belle Chasse, LA		Owner's Project Manager	Nickolas Olivier, PE	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802 | (225) 379-1133 | Nicholas.olivier@la.gov				
Services commenced by this firm (mm/yy)	04/19		Total consultant contract cost ($1,000's)	Unknown	
Services completed by this firm (mm/yy)	Ongoing		Cost of consultant services provided by this firm ($1,000's)	$211,890	

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

Project Relevance:
- P3 Critical Project
- First P3 Awarded by LADOTD
- Traffic Management Plan
- Traffic Study

Vectura has been serving as a traffic subconsultant responsible for providing various traffic engineering services for the $169 million Belle Chasse Bridge and Tunnel Replacement P3 Project associated with improvements along LA 23. The bridge will replace an existing bridge and tunnel with two lanes of travel in each direction. The new structure, with a 73-foot vertical clearance and 150-foot wide horizontal clearance, will be located between the existing vertical lift bridge and tunnel. **This is the first Public Private Partnership (PPP) awarded by DOTD**.

Vectura's responsibilities on the Project have included the following:

- Preliminary and final traffic studies
  - Forecast volumes were based on expected growth consistent with local zoning and planning efforts as well as the Regional Planning Commission travel demand model
- Temporary and final traffic signal plans.
- Assisting the Prime with development of the project's Traffic Management Plan (TMP).
- Provision of responses to Requests for Information (RFI's).
- Development of as-built plans for the traffic signals.

STAFF TO BE USED IN THIS PROPOSAL: B. Ferlito, L. Lambert, R. Rodrigue

17. Firm Experience:

Firm name	**Vectura Consulting Services, LLC**		Past Performance Evaluation Discipline(s)	Traffic	
Project name	**LA 3241: I-12 To Bush Corridor Study**		Firm responsibility (prime or sub?)	Sub	
Project number	H.004957.5	Owner's name	Louisiana Department of Transportation and Development		
Project location	Lacombe, LA		Owner's Project Manager	Joachim C Umeozulu, PE	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802 | (225) 379-1386 | Joachim.Umeozulu@la.gov				
Services commenced by this firm (mm/yy)	09/16		Total consultant contract cost ($1,000's)	$1,895	
Services completed by this firm (mm/yy)	05/17		Cost of consultant services provided by this firm ($1,000's)	$84	

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

Vectura prepared a formal traffic study for the new alignment of LA 3241 which was planned as part of the Transportation Infrastructure Model for Economic Development (TIMED) Program. The traffic study examined concepts that improved the safety and efficiency of the roadway consistent with the latest DOTD policies related to access management and complete streets. The study also included analyses for intersection and corridor improvements such as median openings, spacing of openings, signalized, unsignalized and roundabout intersections.

Project Relevance:
- Traffic Data Collection
- Traffic Study

Task 1 Data Collection

Vectura collected the following traffic data for 10 intersections:

- 7-day (mainlines) and 2-day (side streets) 24-hour tube counts with vehicle classification
- Turning movement counts for morning and evening peak periods
- 15-minute driveway counts
- Traffic Signal warrants, radar speed studies and sight distance evaluation
- Developed growth rate methodology and AM and PM peak forecast traffic volumes

Task 2 Traffic Study

This task included a roundabout study as defined in EDSM VI.1.1.5, VI.1.1.1 and DOTD Traffic Engineering Manual Section 20.2. Task elements included:

- Vistro and Sidra analyses for existing conditions
- Vistro and Sidra analyses for Implementation and Design Years.
- Development of intersection alternatives that included restricted median openings, signalized and unsignalized intersections, median U-turns at existing signal locations, restricted crossing U-turn (RCUT) intersections, and roundabouts
- Vissim model of the preferred corridor layout
- Draft Traffic Study Report (3 copies)

Task 3 Safety Analyses

- Development of a 3-year crash analyses report as per DOTD standards.

STAFF TO BE USED IN THIS PROPOSAL: B. Ferlito, B. Robicheaux, L. Lambert

17. Firm Experience:

Firm name	**Intelligent Transportation Systems, LLC**		Past Performance Evaluation Discipline(s)	ITS	
Project name	**Lafayette Regional ITS Architecture**		Firm responsibility (prime or sub?)	Sub	
Project number	H.014513	Owner's name	Louisiana Department of Transportation and Development		
Project location	Lafayette, LA		Owner's Project Manager	John Kelly	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802 | (318) 730-1445 | John.Kelly@dodt.la.gov				
Services commenced by this firm (mm/yy)	04/2021		Total consultant contract cost ($1,000's)	$29.9	
Services completed by this firm (mm/yy)	10/2022		Cost of consultant services provided by this firm ($1,000's)	$29.9	

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)

The scope of this Lafayette ITS Regional Architecture Project was to update to the regional intelligent transportation systems (ITS) architecture planning document for the Lafayette MPO area located in southern Louisiana which will guide the deployment of ITS in the region. The purpose for developing and maintaining a regional ITS architecture was to help implement systems that are relevant to user needs and furthermore to make projects or programs that come out of the process eligible for federal funds. By using the national ITS architecture framework, ITS LLC was able to advance integration and interoperability with other regional ITS architectures and deliver a system that meets stakeholder needs. All work conformed to the Federal Highway Administration (FHWA) Final Rule 940 Part 11 which mandates that projects planning to use federal dollars in their ITS deployments must have established an ITS Architecture for the region.

Within the regional architecture development, ITS LLC assisted the prime firm in the development of an ITS System Inventory to catalog existing technology and coverage across the defined region. This included CCTV cameras, PTZ cameras, dynamic message signs, vehicle detection systems, queue warning systems, traffic signal systems, and all associated communications. In addition, the firm helped to identify "blind spots" that might benefit from additional CCTV coverage along both I-10 and I-49, two critical interstate corridors that bisect the Lafayette Region. Consideration was also given to the integration of connected and autonomous vehicles and the amount of existing ITS infrastructure that may support that growing trend.

System interfaces and operational concepts were evaluated and further developed for future expansion of the Region's ITS system capabilities and functionalities. Incident management, a critical component to ITS systems, was also included in the Architecture Update. An ITS Deployment Plan was then developed to inform stakeholder decision-making of the outstanding needs of an ITS system for the Lafayette Region. Information flow and sharing is another element addressed in the Architecture Updates. Having a strong agreement in place with inter-operational agencies is key to the success of regional systems. Review of the region's ITS Maintenance plan was the final step in the update process.

KEY STAFF USED IN PROPOSAL: J. Fox

18. Approach and Methodology:

TRC Engineers, in cooperation with primary subconsultant HDR Engineering, has assembled an impressive team with local and national experience and expertise in every aspect of the noted scope of services as listed in Attachment A of this IDIQ Contract for Engineering and Technical Support Services for Critical projects. Drawing upon such capabilities, we offer a trusted source that can provide a rapid response to requests of a either a comprehensive nature or for specific services. We can also convene specialists that may be needed to support a need that is more unique.

Collectively, the TRC team has the bandwidth, flexibility, passion, and proven track record in Louisiana to provide expedited project requests under multiple or single Task orders, and in accordance with compressed and urgent scheduling to meet the needs of the LA DOTD.

Our additional subconsultants, NTB Associates, GeoEngineers, Vectura Consulting Services, LLC (**DBE),** Intelligent Transportation Systems, LLC and KPMG come with staff and project experience under similar aggressive schedule delivery, and are ready to perform and deliver quality services as well.

The following is our general approach and methodology on how the TRC team will provide the listed services:

Alternative Delivery Technical Services

TRC, along with key partners HDR Engineering and KPMG, have a rich and successful history of providing technical services while assisting the LA DOTD and other owners in the pre-procurement, procurement and/or administration of alternative project delivery methods. Such methods include Design-Build, Progressive Design-Build, Construction Management at Risk, and/or Public-Private Partnership (P3) Projects in Louisiana and throughout the country.

Attesting to our ability to meet the challenges of this contract, TRC has been involved with many Design-Build and Public-Private Partnership (P3) projects throughout the country for the past 20 years. Such projects have exhibited many of the same demands and challenges that the LA DOTD has and will encounter as it assesses the various engineering, financial, business, management and related matters pertaining to the evaluation, economic feasibility, contract negotiation and award, and management of innovative procurement and alternative delivery contracts.

Every year the number of public agencies turning to alternative delivery models increases. Understanding the true value of such projects is the first step in capitalizing on the strengths that these project delivery models have to offer. Perhaps the greatest value of such methods is their ability to transfer risk to the party who has the best ability to manage that risk and allow for the introduction of innovative financing schemes that may not be available to the public owner. Taking advantage of the best abilities that the public and private sectors each have to offer produces the most successful alternative delivery projects.

Conversely, such projects tend to be less successful when they are not allowed to fully capitalize on the respective strengths of the public and private partners, or worse when such projects are forced to follow a traditional bid-build approach. Not every project is a viable candidate for an alternative delivery procurement arrangement. Thus, choosing the best project and the best model can be a challenging decision for public agencies. The TRC team offers exactly the expertise and resources needed to provide that guidance

Establishing the process to evaluate and engage with the private sector to facilitate a successful project is another challenge facing every public owner. Business as usual cannot be the expectation when entertaining an Alternative Delivery project. Innovation with respect to contract language, design concepts, construction methods and techniques, and project administration needs to be the guide to truly leverage the strengths of such undertakings.

TRC has been involved with a broad range of transportation design-build and P3 projects and opportunities in six states and Canada. Such projects have ranged in size from $45 million to $12.5 billion and have encompassed green field road and bridge development projects, long-term concession arrangements, managed high occupancy toll lanes and design-build-finance-operate-maintain structures.

TRC's experience with P3 projects spans nearly 20 years, beginning with VDOT's first Public-Private Partnership project - the Pocahontas Parkway.

Project financing arrangements have included funding sources from TIFIA, public-sector investment or availability payments, Private Activity Bonds and private lenders, along with equity investment from private developers and concessionaires.

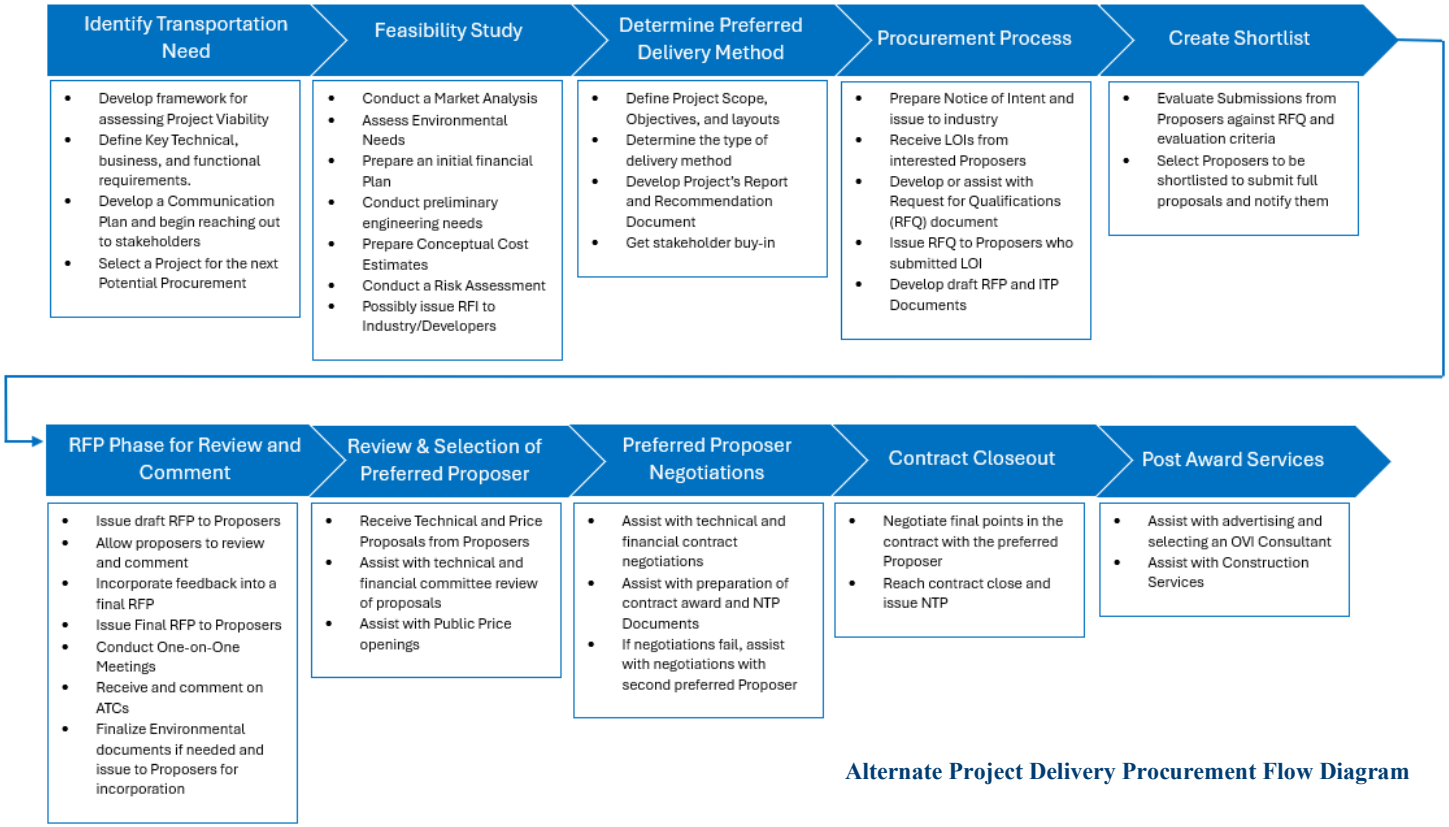
Our experience has included working with public agencies, developers, concessionaires, construction companies, lenders, and engineering firms. Our advisory and consultation services include owner's representation, lender's technical advisory services, development of long-term operations and maintenance programs, facility asset evaluations, design-build services, geotechnical engineering and subsurface explorations, quality assurance and acceptance, construction management and oversight, and security consultation.

Below is a flow diagram showing the general steps to procuring an Alternative Project Delivery Service such as a Public-Private Partnership (P3), Design-Build (DB), or Progressive Design-Build (PDB). Understanding the specific differences between delivery methods is key. For example, conventional DB projects are more linear with essentially a fixed scope (aside from approved modifications through ATCs), whereas a PDB or P3 facilitates flexibility and evolution of the project scope. The P3 also tends to involve a long-term partnership between public and private sectors. Contracting for a DB involves a single contract awarded from a competitive bidding, like a P3, whereas a PDB is developed from the owner awarding a contract based on qualifications and negotiation terms.

While a number of steps in the flow diagram below are pertinent to the early procurement process for a CMAR, the CMAR process is significantly different in that there are three entities that each have a separate contract with the owner and collaboration between all entities is conducted throughout the life of the procurement process and on into construction to help minimize risk. The three entities consist of:

- **Designer of Record** – Provides all the professional design services and construction services
- **Contractor** – Acts as the Construction Manager during the design phase and General Contractor during the construction phase
- **Independent Cost Estimator** – Responsible for determining an opinion of probable cost (OPM) and a guaranteed maximum price (GMP) for the Project and collaborates with the Contractor and Owner. If the OPM and GMP are determined to be acceptable, the Project goes to construction. If an agreement cannot be made, the Owner has the option to advertise for competitive bidding.

From the procurement flow diagram shown below and knowing the differences between the alternative delivery methods, the TRC team will develop a comprehensive scope and fee proposal to assist the LA DOTD at any stage of the procurement process, whether for a single item or for a comprehensive scope and fee proposal for an entire procurement process.



Alternate Project Delivery Procurement Flow Diagram

Project Management and Support

Project Management Plan

Probably the most critical element of executing and delivering a successful project comes down to how it is managed. TRC has been executing and delivering successful projects (small and large) to the LA DOTD since 2005 and elsewhere throughout the country. Similarly, HDR and our other supporting subconsultants have also delivered successful projects in Louisiana as well as other states.

We all agree that the development of a Project Management Plan (PMP) is crucial to delivering a successful Project. The PMP is a comprehensive document that begins with defining the Project objectives and scope, initial schedule, document control, Project Team and all resources, quality control/quality assurance plan, Project Design Criteria, communication plan, risk register, budget, cost management, and public outreach and communication. At its foundation, the PMP is a living document that will continue to develop and be modified throughout the life of the Project.

Where necessary, the TRC team can assist the LA DOTD with developing a project specific PMP for any type of alternative delivery method or singular task for any task order. Notably, **as Lead Designer for the LA 1/LA 415 Connector CMAR Project in West Baton Rouge Parish, TRC is tasked with developing the PMP for the Project Team**.

Management/Oversight of Projects

From our extensive experience with managing large high profile projects, many with accelerated schedules, we are available to assist the LA DOTD with the various stages of an active Critical Project where we can provide Project Management oversight such as conducting project meetings, reviewing of delivery schedules and budgets, etc. During every meeting, our team will provide meeting minutes that will include steps forward. As part of the document control process, we will record all meetings in a register that will document all meetings conducted on a project.

We can provide reviews of progress schedules in concert with contract documents submitted for a certain percentage of completion along with the remaining budget, and provide an independent cost risk schedule assessment on whether the Project is on schedule and budget or is at risk of not meeting one or either element.

The TRC team has extensive experience in conducting value engineering reviews as part of our own internal quality process and for clients. For this service, we conduct a methodical multidisciplinary independent review of the conceptual design documents as well as during other design phases. We investigate the potential for alternative design solutions that may prove to be a cost or service life benefit to the internal design team or Client/Owner. A report is developed and issued to the design team for review and consideration, and where value has been determined to be of benefit the recommendation(s) are incorporated into the project.

Initial Financial Plans (IFP), Grant Application, Miscellaneous Project Agreement

To assist LA DOTD with assessing the feasibility of each project, we have added the internationally respected firm KPMG to our team. For this element of work, KPMG will identify the potential public subsidy requirement or concession fee generated (if applicable) by a user fee project or network, the quantum of debt potentially required and supportable under the user fee revenue stream (including the relative merits and portions of each source of debt), and the equity investment requirements based on the specific economics of each project. More specifically they will:

- Test a range of alternatives based on project configuration, scope, tolling revenue maximization options (if appropriate), term of contract, and other features.
- Assess whether there exists sufficient market demand from contractors and developers based on the project's size, risk profile, scope of responsibility, funding sources, and financing structure.
- Consider the range of financial instruments available, including PABs, TIFIA, shorter term construction bank loans (a/k/a "mini-perms"), private placements, long-dated bank loans, accreting swaps, CABs, CIBs, GARVEEs, and leveraged lease structures.
- Assist LA DOTD, where necessary, in the development of any desired grant applications and agreements. It is important to note the KPMG was recently successful in helping California secure the largest railroad grant ever granted for their future high speed rail system.
- Consider the impact that equity investment has on project feasibility. *This is particularly important in the context of demand/revenue risk projects and is notably different than other types of P3s, including availability payments. Indeed, there are specific third-party infrastructure investors that can absorb more risk given the profile of the underlying investors. We bring this understanding to the LA DOTD, and is a key success factor as insurance and pension backed funds can be more conservative than those that make investments off their corporate balance sheet.*
- Synthesize the results of the financial models into a summary report for the LADOTD. The report outlines key financial model inputs, assumptions and outputs, then compares the relative benefit or cost for each respective project. The report will also detail potential commercial and financial structures and outline potential next steps for the project based on the analysis performed

KPMG's financial analysis will examine the direct cost of the innovative delivery approach and certain implied costs (including risk transfer). This analysis will be updated and checked for its validity as each project advances, new information or assumptions are made available, or project configuration or scope evolves.

As a valued member of the TRC team, KPMG offers a proven track-record using this financial analysis approach which has led to successful closings of operational innovative delivery and P3s in Colorado, North Carolina, Texas and Virginia using a variety of innovative financing tools as noted below:

Federal/State Financing Programs	Private Financing Programs
▪ TIFIA credit assistance ▪ RRIF loans ▪ Private Activity Bonds ▪ USDOT grant programs (e.g., INFRA. IIJA) ▪ State infrastructure banks (incl. funding by TIFIA)	▪ Taxable/tax-exempt bank loans ▪ Taxable/tax exempt bond ▪ Receivables gap financing ▪ Vendor gap financing ▪ Institutional investor debt & equity capital ▪ Private equity ▪ Pension funds

KPMG's contract and financial experts are well-versed in assisting with the development of agreements, including those of a miscellaneous project agreement nature.

Quality Control Reviews and Peer Reviews

Where a Quality Control Review or Peer Review is required, our team will develop the goals and objectives for those reviews. Where the LA DOTD would like us to review a set of contract documents, we will leverage the vast resources of our team to bring the necessary level of expertise to bear for completing the necessary review and provide comments on plans, special provisions, and estimates. This type of quality review will lend itself to be conducted in Bluebeam where markups and comments can be done and then issued to the consultant. Where staff are out of town, virtual meetings can be set up between needed staff and the LA DOTD. Following the review meeting, minutes will be prepared and issued with a scheduled turnaround time, with one more review being completed to confirm that corrections have been made.

For independent peer reviews, staff will be assigned that offer the requisite knowledge and experience to conduct an independent design approach and calculations, then compare their results to the original design documents and write a report on the findings. Where errors or a more economical design is determined through the peer review process, the original designer can make the necessary updates to bring the project to compliance.

Environmental and Permitting Services

For any environmental and or/permitting service assigned, TRC and/or HDR will conduct an initial review of all previous reports and documentation that has been conducted and determine the necessary studies, permitting and environmental assessment needs in accordance with NEPA. A comprehensive approach to this process is extremely important to avoid project delays and costs associated with environmental clearances and unavoidable impacts to Section 4(f)/6(f). To avoid these and other risks, the TRC team will develop a detailed schedule showing long-lead tasks, and conduct targeted public outreach at appropriate project milestones. Other critical tasks will be to properly schedule the development and submission of traffic reports, planning documents, and other environmental studies such as air, noise, wetlands, testing, sampling, etc.

Traffic Design Services

To drive his aspect of the contract, we have enlisted the expert services of Vectura Consulting Services to conduct all of the traffic services that may be needed. For each assignment, Vectura will conduct an assessment of the services needed to meet the goals of the project, then develop a representative scope and manhour estimate. Where needed, data collection will be conducted such as count requests, scheduling of data processing/analyzing that includes 24-hour Volume and Classification counts as well as turning movement counts. From the data obtained, Vectura will conduct an engineering analysis involving traffic modeling to analyze complex alternatives. Vectura has expertise in virtually all software packages and will develop reports in those formats to meet LA DOTD Standards. For intersections, the development of design studies will be conducted and construction plans for signals will be completed as well as associated MUTCD compliant signing and striping for traffic signals

Where a TMP is needed, TRC/Vectura will coordinate with the LA DOTD to obtain traffic volume and safety data for a traffic study to perform safety analysis and alternative route analysis. Where necessary, Vectura will navigate the TEPR process to arrive upon an optimum detour route and specify the correct TTC Details. Vectura will coordinate with the bridge and road designers on a Work Zone Impact Management Strategy document to minimize risk and delays to the traveling public and summarize all of this in a TMP report.

Where a new interchange is warranted or modification to an existing interchange is necessary, Vectura will develop an Access Justification Report (IJR) that will include either an Interchange Justification Report (IJR) or an Interchange Modification Report (IMR) in accordance the NEPA process to receive FHWA approval of the AJR.

Surveying Services, Subsurface Utility Engineering and Utility Relocation

To deliver these services as needed, TRC has partnered with NTB Associates who offers a strong commitment to quality service and client satisfaction as demonstrated in all their current and previous projects, many of which have been completed for the LA DOTD. Once a request for such services is received, TRC will coordinate with NTB's personnel immediately to schedule a Project Kick-off meeting to discuss timelines associated with the project, any route considerations already explored, and/or any necessary revisions. NTBA will evaluate each project to determine if they have performed work within or near each project which will allow them to start the project with previous knowledge. If no past work history exists, they will begin to gather information about the project area. NTB has the resources to begin field work on a project immediately upon Notice to Proceed.

NTB will begin by creating a GPS Static Survey Control Network for primary control points throughout the project, then compute and produce the control sketch for the LA DOTD to review and approve. They will then begin densifying secondary RTK Survey Control along the route to establish horizontal positions of the control points. When the horizontal positions of the control points are reviewed and the required accuracies met, digital levels will be run through all control points, both primary and secondary, to achieve the vertical positions and accuracies. Level data will be submitted daily for processing, calculating, and isolation of any errors or tolerance issues that may have occurred. All survey control will go through NTB's stringent QA/QC process that they've used on previous projects which have met or exceeded LA DOTD survey requirements.

While control is being established and verified, part of the project approach will be to clearly define the purpose of the Subsurface Utility Engineering and topographic surveying by the end user and its unique challenges. In this manner, the techniques to be used will be geared to result in a deliverable that meets or exceeds the end user's requirements to properly assess the conditions and design the new project by limiting conflicts or surprises during construction. While the locations and complexity will vary, the nature of the work will be the same; to provide utility inventories and plans for the LA DOTD to use in designing the project. NTB will perform title takeoffs for the project so that work on the property survey can begin as soon as the control network is established. Property surveying and topographic surveying will be completed simultaneously. Conventional surveys, Static and RTK GPS, and 3D LiDAR Terrestrial Scanning will be used on this project as appropriate.

Before designating/locating crews locate the first underground utility, they will meet with the Utility Engineer to review project limits and utilities known to be in the area. One-call notifications will be made prior to fieldwork to obtain a list of potential utility owners in the project area. Codes will be reviewed as well as any unique or challenging conditions that may be encountered. NTB crews are provided with shot count sheets and blank aerial plans of the area to record found utilities daily. They will record all found utilities in survey field books, along with all attribute information and number of shots taken and their respective depths. Flags will be placed for visual purposes.

If drainage maps are required, NTB will generate the drainage map limits by overlaying the preliminary project design limits onto an aerial/topographic map. All drainage structures within the design limits will be surveyed for location, type/size, and inverts obtained as part of the normal topographic survey. Structure sheets will be completed for each structure with a unique identifier to record the type of structure, size of pipes and the structure itself, inverts as a depth, and a diagram of the pipe layout within the structure. These sheets will be used by NTB office personnel to verify the data provided from the survey and to resolve any discrepancies. Once the field work is complete and the data reviewed, it is incorporated into the drainage map to assist in developing ridge lines and drainage areas.

With all the data merged into the main topo drawings, interim submittals will be made to the engineer until a complete topographic survey submittal can be made.

Once final alignments are established, NTB will begin to obtain title reports, if not provided by LA DOTD, for the affected properties for inclusion in the ROW maps. NTB will begin the Base ROW maps according to LA DOTD standards. Final ROW maps will be produced within 45 days of authorization to proceed, typically after the JPR meeting. All the ROW mapping, title takeoffs, title reports, and property surveying will be in accordance with LA DOTD standards.

Geotechnical Engineering Services

Based on GeoEngineers extensive experience providing geotechnical engineering services for the LA DOTD in every parish throughout the state, they are prepared and committed to providing the geotechnical services necessary to perform investigations, analysis and design in support of critical projects. This includes various forms of field investigations, laboratory testing, analysis, and design. They also have the experience and are prepared to provide oversight for construction related geotechnical services, including the completion of or review for PDA and CAPWAP analysis, settlement monitoring or analysis, and other required support.

GeoEngineers' approach for performing the geotechnical engineering services on behalf of the TRC team includes increased communication during planning and execution to better evaluate risk and allow for a risk-informed approach to decisions including scope development, scheduling, during field investigation and testing, during design analysis and reviews, and while planning and overseeing construction related services.

The most accurate and optimized geotechnical design is dependent upon starting with good information, which comes from the exploration and testing program and results in the boring logs. The boring logs and laboratory test results that will be submitted are the result of the efforts and knowledge of the engineer and must be

prepared under the engineer's responsible charge. To fulfill this duty, GeoEngineers' staff will be engaged and proactive throughout the entire process so they the obtain specific data that is required for each roadway and bridge design. Their involvement will begin in the preparation of the scope and continue through the following efforts to obtain accurate and useful results to input into and during design:

A. **Field Brief** – Before mobilization of the drilling crew, the engineer will have some brief meetings with the field supervisor who has visited the site and assessed safety and access, and to review the prepared drilling plan. This plan is then communicated to the drilling crew and logger, along with the boring location plan figure. High-quality and accurate boring logs begin with the quality of the field exploration and samples recovered which is a direct result of the drilling crew and logger being properly briefed for the specific project needs.
B. **Exploration** – The engineer will be available daily during field exploration to address questions or concerns that arise and provide guidance and feedback to the crew after review of each daily field report.
C. **Laboratory** – After samples are returned to the laboratory where extrusion and testing is performed, the engineer will provide guidance about preliminary classification and which testing assignments are needed based on the composition of the soil extruded. The engineer will then review the developed plan for testing the selected soil samples and be consulted during testing to revise the plan as needed based on real-time updates and the specific data required for the bridge design.
D. **Boring Logs** – Laboratory test results will be input into LA DOTD gINT boring logs. The engineer will review the test results, entries, and overall stratigraphy of the subsurface conditions based on experience and judgement. The logs will then be completed based on the engineer's edits.
E. **Seal** – The final logs are then completed based on the owners' edits, after discussion and agreement. The engineer is then able to stamp the final boring logs, having been responsible for their generation from before sample collection through final reporting. This last portion of 'responsible charge' includes developing the exploration data report to submit with the final logs and laboratory test results.

GeoEngineers plans on conducting a desk study prior to commencing any fieldwork in order to prepare the scope and evaluate the adequacy of the proposed scope for each site. We plan to perform geotechnical investigations that consist of soil borings or CPTs with laboratory testing, soil classification, site characterization, and exploration logs. In addition to the referenced ASTM designations, we plan to follow the *FHWA Geotechnical Engineering Circular No. 5* (GEC 5) for best practices pertaining to geotechnical site characterization. Water level readings will be made in all soil borings. Final coordinates and elevations will be surveyed. Furthermore, a lab extrusion log will be made, as applicable, with pocket penetrometer readings.

Bridge soil borings will be made using wet/mud rotary methods below the water table, with solid stem augering (ASTM D1452) above the water table. We plan to follow Standard DOTD sampling with Shelby tubes in cohesive soils (ASTM D1587 on 5-ft intervals) and Standard Penetration Testing (SPT) in cohesionless soils (ASTM D1586 on 3-ft intervals). Continuous sampling will be performed within at least the upper 10 feet. We plan to follow LA DOTD procedures during transport and storage of the samples (generally ASTM D1586) and log in the field using the visual-manual method for classification (ASTM D2488).

Roadway Design and Hydraulics

For any roadway design or hydraulics related Task Order (TO) assigned, we will first conduct a scoping meeting with appropriate LA DOTD personnel to accurately identify the project's needs and goals, discuss design criteria, determine specific deliverables to be prepared and develop a schedule for deliverable items. Using this information, a fee proposal will be prepared and, along with the detailed scope of work, be submitted to the LA DOTD for review and approval. Once this scope of work has been approved by the LA DOTD, the TRC team will begin developing preliminary plans for reviews at the 30%, 60%, 95% and 100% stages.

The 30% review will typically include development of plan sheets and preliminary typical sections. Typical sections will reflect the appropriate design criteria based on classification of the roadway and preferrable values will be selected unless conditions indicate otherwise. During this time, existing drainage areas will be reviewed for size of flow to determine whether existing drainage systems are adequate or require any improvements. Existing Drainage Area maps and Design Drainage Maps will be prepared. If the project requires sub-surface drainage, then roadway drainage will be evaluated to determine catch basin locations and pipe sizing. Preliminary cross sections will begin to determine the limits of construction, open channel flow requirements and if any additional right-of-way is needed. Roadway plans will be completed to match any drainage needs and geometric requirements including geometric details.

At the 60% review stage, preliminary drainage design will be completed and submitted for review along with a preliminary hydraulics design report. If the TO requires a Traffic Management Plan (TMP), preparation of this document will begin. A part of the TMP is the development of detailed maintenance of traffic plans and sequence of construction plans. TRC will review with the LA DOTD any specific needs for maintenance of traffic that must be met, such as maintaining the same number of lanes or if lane closures are permissible, and the use of temporary diversions as required. Following receipt of 60% review comments, plans will be revised to reflect required changes.

For the 95% review, all other deliverables will be completed along with a construction cost estimate and submitted to the LA DOTD for a Plan-In-Hand review (PIH). After comment resolution from the PIH review, 100% preliminary plans will be submitted.

The Final Plan stage will include submittals at 60%, 95%, 98% and 100%. For the 60% submittal, typical sections are completed, the hydraulic design and roadway/drainage plans are completed, and these are all submitted for review. During this time, work will proceed on detailed summary sheets, finalization of horizontal and geometric details, addition of construction notes, and review of right-of-way maps. At the 95% stage, all design work is basically complete, a final QA/QC check has been done, final quantities and a construction cost estimate have been prepared, special provisions are being prepared, and plans are submitted to the LA DOTD for an Advance Check Print (ACP) review. At the 98% stage, comments from the ACP review have been addressed, a final cost estimate has been prepared, special provisions have been finalized, and plans transmitted for final review. For the 100% submittal, signed and sealed plans and a final cost estimate are transmitted to the LA DOTD.

Bridge Design Services

Inspection and Evaluation of Existing Structures

TRC and HDR have significant experience conducting bridge inspection and evaluation, and have inspected virtually every type of bridge that is located in Louisiana. Our previous inspections have included NBIS routine inspections and in-depth inspections for the purpose of developing rehabilitation and repair plans. As part of any Task Order that will include an approved scope and fee for the services to be conducted, TRC will conduct plan and document retrieval and review to obtain information necessary for bridge inspection and evaluation. TRC and HDR have extensive bridge inspection experience and qualified bridge inspectors that will be used for the bridge inspections, including several with SPRAT rope access certification. TRC will coordinate with the appropriate subconsultants for traffic control, NDT, diagnostics, and any other specialty service required. Upon completion of the inspection, TRC will develop a comprehensive inspection report. If required, TRC will conduct an evaluation in accordance with BDEM Part 1 Chapter 6 to determine the suitable bridge rehabilitation or replacement scheme.

Bridge and Structural Analysis and Design

TRC and HDR also have extensive bridge and structural design experience. TRC has designed virtually every type of bridge in Louisiana, while HDR has considerable experience with the design and rehabilitation of movable bridges and the design of major complex river crossings. As presented in the 24-102, TRC has successfully designed multiple new bridges, including the I-49 Segment K interchange bridge and the Walter O. Bigby Carriageway bridge. TRC has also successfully conducted multiple bridge rehabilitation and repair plans for significant Louisiana structures, including the I-10 Mississippi River Bridge (MRB), LA 47 over IWGO, US 190 MRB, and several movable bridges. As part of any TO for bridge and structural analysis, TRC will coordinate with the LA DOTD and key stakeholders to select the most economical structure types for the project. Maintaining traffic during construction will be crucial to project success, and will rely on the implementation of a TMP that evaluates phased bridge construction vs. single bridge closures with temporary roadway crossovers; maintaining access control for adjacent detours; and maximizing the safety of vehicle, railroad, and marine traffic. General bridge plans will be developed to show the horizontal configuration of the bridge, along with vertical profiles featuring the top of rail/water and required height clearances and freeboard to the superstructure of the proposed bridge. We will coordinate horizontal and vertical alignments through the LA DOTD, USCG and railroads as needed for their approval to ensure that project design criteria are met. A preliminary hydraulics design report will be included with the 60% Preliminary Plans delivery. As part of the 100% Preliminary Plans submittal, TRC will prepare any required railroad or environmental clearance permits and begin developing any SWPPP plans. The Final Plans stages, for preliminary as well as rehabilitation plans, will include 30%, 60%, 90%, 95%, 98%, and 100% submittals

Bridge Load Rating (as-designed, as-built and condition)

Complementing our inspection and design expertise, TRC has extensive load rating experience and has conducted a significant amount of typical load ratings using AASHTOware BrR for the LA DOTD and such other states as Mississippi, Ohio and South Carolina. TRC has also conducted non-typical load ratings for complex bridges that cannot be modeled in AASHTOware BrR which have included kinked girders, complex truss bridges and swing-span bridges. Non-typical load ratings will typically include FEM analysis, development of capacity calculations and development of influence lines in accordance with LA DOTD requirements and influence line form V2022-7. TRC has conducted as-designed, as-built and condition load ratings. TRC has also conducted load rating that were a part of bridge evaluations in accordance with BDEM Part 1 Chapter 6. As part of any related TO, TRC will coordinate with the LA DOTD to determine the goal of the load rating task. TRC will complete a plan and document retrieval process which will include as-designed plans, as-built plans, shop drawings and inspection reports in order to develop an accurate bridge load rating. In-depth inspections will be conducted as necessary to gather required bridge information. TRC will work with LA DOTD to determine the appropriate load rating methodology to achieve the desired goals and will provide a comprehensive load rating report.

A proven Quality Management Plan (QMP) with the full support of corporate management backs TRC's inspection, analysis/load rating, rehabilitation, and instrumentation services. Using the QMP as a foundation, we will issue a project-

specific QA/QC Plan to the LA DOTD for review and approval within 10 days of award notification. For each TO, TRC will perform checks of the load ratings by either developing an independent set of calculations or performing a review of the assumptions and calculations. What is critical to the development of an accurate load rating is the assignment of technical assumptions, accurate identification of deteriorated/damaged members, and an analysis of boundary conditions assumed at the beginning of the process.

TRC is committed to providing superior safety performance and is confident that our safety culture, management, and oversight will allow for a working environment that identifies and eliminates unsafe conditions. TRC employees complete the most up-to-date safety training programs, including Louisiana "Safety Practices" and federal (OSHA) specific training requirements, and employ specific tracking mechanisms to ensure that all subcontractors (if used) have current health and safety training and certifications.

Plan Development and Letting Support Services

TRC develops plans that "look like DOTD" plans. Where the LA DOTD needs assistance with plan development and letting services, we will meet with the appropriate staff to determine the scope and develop a manhour estimate around specific rates of compensation. All plans will be developed in accordance with LA DOTD Criteria and be CADD conformed. Part of the services will include our staff studying the contract documents prior to advertisement so that when a question comes in, we can respond in a timely manner. If errors are found during the review process, drawings can be updated and issued as addendums.

Construction Support

The TRC team has a wealth of knowledge and experience, both locally and nationally, in conducting Construction Support Services. If this is a Project where the TRC team has designed as part of a supplemental request, we will provide a scope and fee proposal (initial manhours) to conduct the requisite services which may include, but not be limited to, a pre-construction meeting, periodic site visits, shop drawing reviews, responses to RFIs, NCRs, and Value Engineering proposals. We will attend weekly progress meetings, normally conducted virtually, and provide change order drawings where necessary.

Other Services

Tolling implementation, Design, and Support Services

Once TRC is assigned a T.O. for this service, we will bring in HDR to discuss and establish the needed objectives such as tolling points, integration with existing systems, type of architecture, type of technology, and user interface options. KPMG is also available to assist with or conduct a tolling and revenue study. Services can include prototype development, full-scale deployment, and training. Support services can include developing a maintenance and monitoring schedule, user support for technology operators, software updates and system upgrades and assist with reporting and analytics.

ITS Design and Support Services

ITS, LLC has been retained as part of the TRC team to take the lead, with support from Vectura, for all ITS Design services. Once assigned a project, ITS, LLC will assess the needs of the project such as communication systems architecture, design of a new system or upgrades/expansion of an existing system, networking layout to include camera surveillance systems, roadside message signs, and isolated or adaptive traffic signals. Once fully informed of the need, ITS will develop the necessary scope and fee proposal and execute the work once they get NTP. ITS, LLC will also serve to help develop technical provisions and performance specifications for the implementation of ITS on an alternative project delivery project.

Roadway and Aesthetic Lighting Design

TRC will work with the LA DOTD and HDR to conduct a study that identifies elements of the project assigned to us which present visual enhancement opportunities. The focus will be on lighting and architectural concepts that will provide harmonious shapes for piers, abutments, and the superstructure for bridges. Those dominant elements will be supplemented through thoughtful detailing of reveals, barriers, lighting, and abutments. As part of the initial services, communications should be conducted with the local arts community and the public at large to get input. Options for aesthetic lighting along the roadway and the bridges will be conducted. Once a general consensus is reached, a final design contract can be issued to implement the vision of the community.

19. Workload:

Firm(s) ALL FIRMS MUST BE REPRESENTED IN THIS TABLE	Past Performance Evaluation Discipline(s) *	Contract Number and State Project Number	Project Name	Remaining Unpaid Balance**
TRC Engineers, Inc.	Bridge	44-17033 and H.005121.5	LA 1/LA 415 Connector (* Pending supplement has not been executed by the date of the advertisement for Contract 4400029195 – 97)	*$0
	Bridge	44-24185 and H.015424.6	IDIQ Contract for Bridge Preservation Task Order No. 1 – Plank Road	$159,951
	Bridge	44-20156 and H.011965.6	LA 47 IWGO Bridge Rehabilitation CRES	$201,968
	Road	44-21128 and H.001234.6	LA 1: Port Allen Canal Bridge Replacement (Phase 1)	$1,532
	Road	44-21128 and H.001234.6	LA 1: Port Allen Canal Bridge Replacement (Phase 2)	$0
HDR Engineering, Inc.	Bridge	44-24186; H.015472	Task Order No. 2 – 577 Overpass Over I-20 Bridge Preservation – Project # 10365248	$24,863
	Bridge	44-24186; H.015472	Task Order No. 3 – 577 Overpass Over I-20 Bridge Preservation – Project # 10386036	$9,185
	Bridge	44-24186; H.015472	Task Order No. 4 – 577 Overpass Over I-20 Bridge Preservation – Project # 10390676	$34,229
	Other (Hydraulic Modeling)	4400017091	Task Order No. 2 – Louisiana Watershed Initiative (LWI) Statewide Modeling, Region 5 – Project # 10332486	$268,327
	Other (Hydraulic Modeling)	4400017091	Task Order No. 3 – Louisiana Watershed Initiative (LWI) Statewide Modeling, Region 5 – Project # 10337727	$1,185,587
	Other (Hydraulic Modeling)	4400017091	Task Order No. 4 – Louisiana Watershed Initiative (LWI) Statewide Modeling, Region 5 – Project # 10403496	$2,398,968
	Planning	440018780	Work Authorization No. 1 – Strategic Highway Plan (SHSP) Update and Regional SHSP Strategic Marketing and Advertising Support IDIQ – Project # 10299921	$12,237
GeoEngineers, Inc.	Planning	440018780	Task Order No. 2 – Strategic Highway Plan (SHSP) Update and Regional SHSP Strategic Marketing and Advertising Support IDIQ – Project # 10366533	$56,908
	Planning	4400026365; H.015223.2	Baton Rouge to New Orleans Rail Corridor Environmental Study – Project # 10368719	$1,690,134

	Geotech	H.004791	P3 Belle Chasse Bridge & Tunnel	$45,064
	Geotech	H.011670	Loyola Dr/I-10 Interchange	$2,000
	Geotech	H.001970	LA561 Boeuf River Bridge	$30,924
	Geotech	H.007300	I-20 Nutland Widen & Kansas Connector	$12,733
	Geotech	H.013821	LA6 Youngs Bayou Slope Repair	$10,054
NTB Associates, Inc.	Survey	4400019338 Multiple SP Nos. per bridge	Contract for Rural Bridge Replacement Initiative Phase II, Districts 05, 08, & 58 (Sub to Sigma)	$2,078
	Right-of-Way	4400019338 Multiple SP Nos. per bridge	Contract for Rural Bridge Replacement Initiative Phase II, Districts 05, 08, & 58 (Sub to Sigma)	$74,893
	Survey	4400019337 Multiple SP Nos. per bridge	Contract for Rural Bridge Replacement Initiative Phase II, Districts 02, 03, 07, 61, & 62 (Sub to BKI)	$0
	Right-of-Way	4400019337 Multiple SP Nos. per bridge	Contract for Rural Bridge Replacement Initiative Phase II, Districts 02, 03, 07, 61, & 62 (Sub to BKI)	$66,285
	Survey	4400017067 LWI Task Order 3	Louisiana Watershed Initiative (LWI) Modeling Contract – Region 1 (Sub to Atkins)	$3,481
	Survey	4400019715 H.008768.5	IDIQ Contract for Hydrographic Surveying Services – Task Order No. 12 – Summer Bridges	$70,489
	Right-of-Way	4400025041	Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program	$26,298
	Survey	4400026587 H.001779	Jimmie Davis Bridge (LA 511) (HBI) Design Build Project, Bossier Parish (Sub to James Construction/ Huval & Associates, Inc.)	$0
	Other (SUE)	4400026587 H.001779	Jimmie Davis Bridge (LA 511) (HBI) Design Build Project, Bossier Parish (Sub to James Construction/ Huval & Associates, Inc.)	$145,000
	Right-of-Way	4400026587 H.001779	Jimmie Davis Bridge (LA 511) (HBI) Design Build Project, Bossier Parish (Sub to James Construction/ Huval & Associates, Inc.)	$0
KPMG LLP	Other (Financial/Commercial)	4400005030 – Contract Number 62873 - Project	Innovative Procurement and Alternative Delivery Support Services	$0

	Other (Financial/Commercial)	4400006553 – Contract Number 4791.5 - Project	Innovative Procurement and Alternative Delivery Support Services	$0
Vectura Consulting Services, LLC	Traffic	4400017293 H.010616	I-20: LA 544 Overpass Replacement	$74,429
	Traffic	4400005484 H.005168.2	New Orleans Rail Gateway Avondale EA	$92,995
	CE&I	4400020018 H.007160	EBR Computerized Traffic Signal, Ph VB	$33,910
	Traffic	H.004791	Belle Chasse Bridge & Tunnel Replacement PPP	$14,740
	Traffic	4400021519 H.012030.5	KCS RR Overpasses HBI	$572
	Traffic	4400023075 H.013522	S. Lewis Street Widening	$7,499
	ITS	4400016364 H.015136.4	Northshore Regional ITS Architecture Update	$11,421
	ITS	4400017922 H.012845.1	C/AV Team and Working Group Support	$13,949
	ITS	44000020058 H.011507.1	Monroe Phase 3 SEA	429,217
Intelligent Transportation Systems, LLC	ITS	H.013256.6	I-10 ITS Scott to Lake Charles - Construction	$0
	ITS	H.013710.6	I-10: US61 to LaPlace Deployment	$18,961
	ITS	H.007160	EBR Computerized Signal Phase VB	$19,995
	ITS	H.001234.6	LA1 Port Allen Canal BR Replacement	$14,291
	ITS	H.013868.6(A)	ITS Routine Maintenance Engineering and Inspection (ME&I)	$129,583
	ITS	H.013868.6 (B)	ITS Responsive/Emergency ME&I Statewide	$48,280
	ITS	H.013868.5	ITS Maintenance Program Management and Operations	$2,679
	ITS	H.011504	Alexandria Phase 2	$27,685
	ITS	H.002424.6	LA 70: Sunshine Bridge – LA 22	$18,768
	ITS	H.003047	Pecue Lane/I-10 Interchange Phase III	$22,841
	Traffic	44-24461	LA 385 – Ryan St Intersection Improvements	$180,000
	Traffic	44-21887	Replacement of Fifteen Bridges	$79,573
	ITS	H.006474.1	Shreveport Immediate ITS SEA/Design	$18,760
	ITS	H.012845.1	CAV Team Support	$140,307
	ITS	H.013482	I-10 WBR Queue Warning	$122,508

	ITS	H.013866	I-12: LA 21 to US 190	$8,678
	ITS	H.014515.5	511 & ATMS SEA	$77,385
	ITS	H.015136.1	Northshore Regional Architecture	$19,757
	ITS	H.015137	Bonnet Carre ITS Upgrades SEA	$32,384

* The only past performance evaluation disciplines to be used are: Road, Bridge, Traffic, CE&I/OV, Geotech, Survey, Environmental, Data Collection, Planning, Right-of-Way, CPM, ITS, Appraiser and Other (please specify). If a firm has more than one past performance evaluation discipline for any single project, the firm can use multiple rows to express the remaining unpaid balance per evaluation discipline.

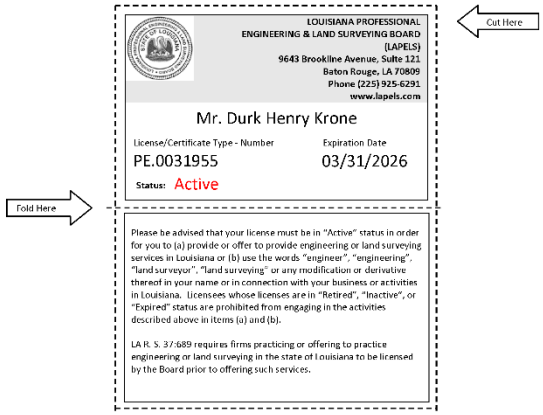
** Round to the nearest dollar. **Do not** round to the nearest thousands. If there are no active contracts with a remaining unpaid balance, please place N/A in the remaining unpaid balance column. Note: All firms must be represented in this table. Leaving the "remaining unpaid balance" column blank is not acceptable.

20. Certifications/Licenses:

LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD

As of 5/30/2024 the Louisiana Professional Engineering and Land Surveying Board (LAPELS) has the following information on file:

Mr. Durk Henry Krone
19113 Hickory Bay Court
Baton Rouge, Louisiana 70817



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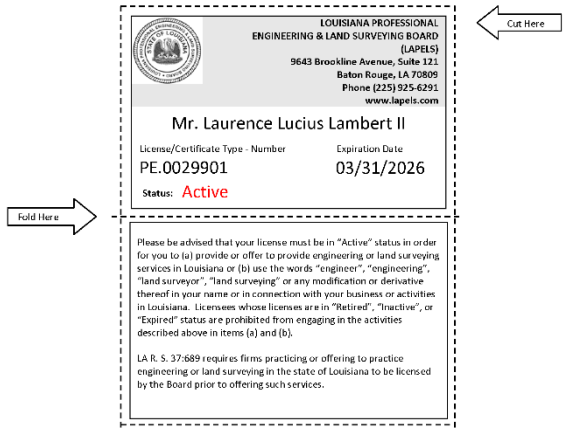
Mr. Laurence Lucius Lambert II
P. O. Box 14269
Baton Rouge, Louisiana 70898



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20. Certifications/Licenses:

LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD

As of 6/18/2024 the Louisiana Professional Engineering and Land Surveying Board (LAPELS) has the following information on file:

Mr. Paul Brian Rossini
525 Louisiana Avenue
Shreveport, Louisiana 71101

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9643 Brookline Avenue, Suite 121
Baton Rouge, LA 70809
Phone (225) 925-6291
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Mr. Paul Brian Rossini

License/Certificate Type - Number: PLS.0004731
Expiration Date: 09/30/2024
Status: Active

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As of 6/18/2024 the Louisiana Professional Engineering and Land Surveying Board (LAPELS) has the following information on file:

Mr. Bryan Turner Bunch
1409 Worsham Drive
Zachary, Louisiana 70791

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9643 Brookline Avenue, Suite 121
Baton Rouge, LA 70809
Phone (225) 925-6291
www.lapels.com

Mr. Bryan Turner Bunch

License/Certificate Type - Number: PLS.0005014
Expiration Date: 03/31/2026
Status: Active

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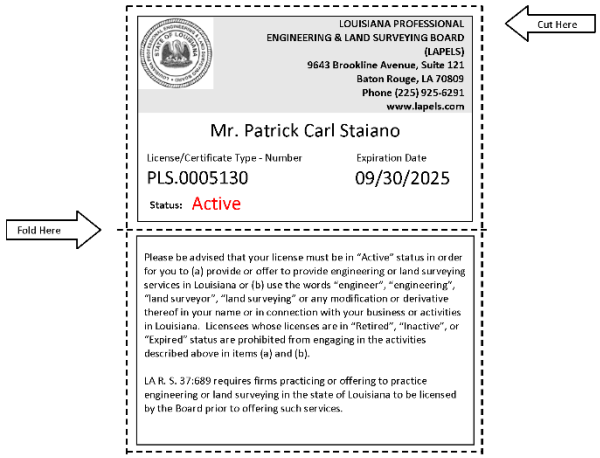
Mr. Patrick Carl Staiano
8643 Main Street
Zachary, Louisiana 70791



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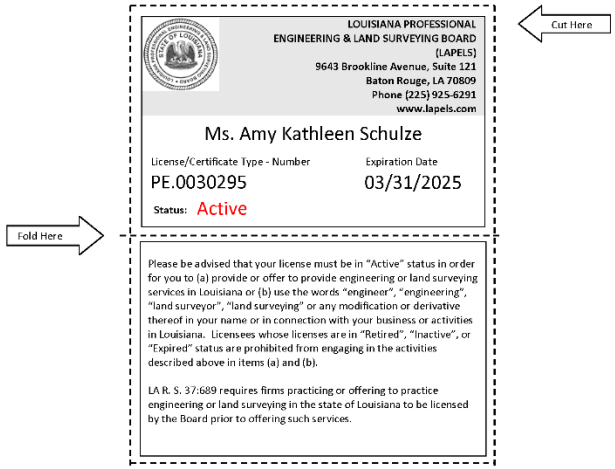
LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD

As of 6/18/2024 the Louisiana Professional Engineering and Land Surveying Board (LAPELS) has the following information on file:

Ms. Amy Kathleen Schulze
7184 Lakeland Drive
Zachary, Louisiana 70791



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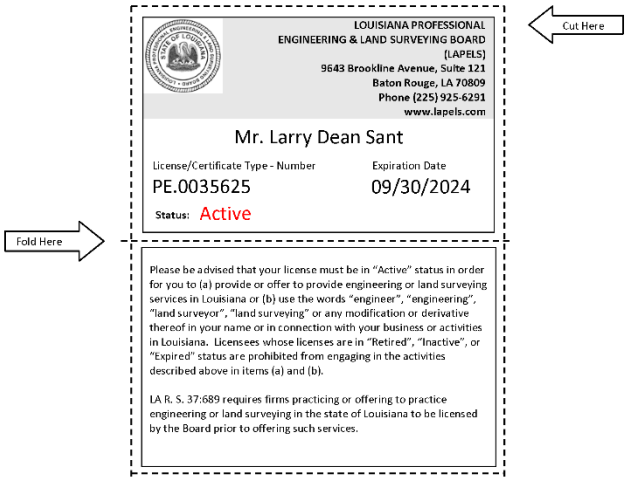
LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD

As of 9/20/2023 the Louisiana Professional Engineering and Land Surveying Board (LAPELS) has the following information on file:

Mr. Larry Dean Sant
15635 Malvern Hill
Baton Rouge, Louisiana 70817



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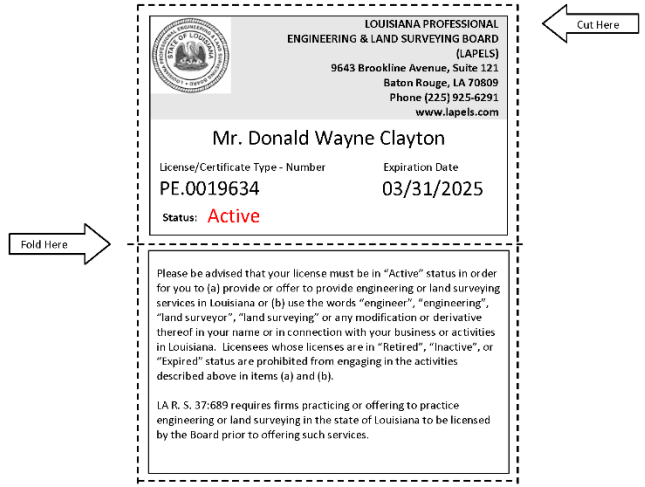
As of 5/30/2024 the Louisiana Professional Engineering and Land Surveying Board (LAPELS) has the following information on file:

Mr. Donald Wayne Clayton
4607 Waverly Boulevard
Alexandria, Louisiana 71303-2604



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LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD

As of 6/18/2024 the Louisiana Professional Engineering and Land Surveying Board (LAPELS) has the following information on file:

Mr. Michael Patrick Meroney
4406 Wentworth Drive
Fulshear, Texas 77441

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(LAPELS)
9643 Brookline Avenue, Suite 121
Baton Rouge, LA 70809
Phone (225) 925-6291
www.lapels.com

Mr. Michael Patrick Meroney

License/Certificate Type - Number: PE.0034489
Expiration Date: 09/30/2025
Status: Active

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LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD

As of 5/30/2024 the Louisiana Professional Engineering and Land Surveying Board (LAPELS) has the following information on file:

Mr. Michael Dean Paul
4545 Sherwood Common Blvd, Bldg 3, Suite A
Baton Rouge, Louisiana 70816

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LOUISIANA PROFESSIONAL
ENGINEERING & LAND SURVEYING BOARD
(LAPELS)
9643 Brookline Avenue, Suite 121
Baton Rouge, LA 70809
Phone (225) 925-6291
www.lapels.com

Mr. Michael Dean Paul

License/Certificate Type - Number: PE.0032172
Expiration Date: 03/31/2026
Status: Active

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LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD

As of 6/18/2024 the Louisiana Professional Engineering and Land Surveying Board (LAPELS) has the following information on file:

Mr. Wesley Dean Jacobs Sr.
6717 Oak Cluster Drive
Greenwell Springs, Louisiana 70739

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LOUISIANA PROFESSIONAL
ENGINEERING & LAND SURVEYING BOARD
(LAPELS)
9643 Brookline Avenue, Suite 121
Baton Rouge, LA 70809
Phone (225) 925-6291
www.lapels.com

Mr. Wesley Dean Jacobs Sr.

License/Certificate Type - Number	Expiration Date
PE.0030774	09/30/2024

Status: Active

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Please be advised that your license must be in "Active" status in order for you to (a) provide or offer to provide engineering or land surveying services in Louisiana or (b) use the words "engineer", "engineering", "land surveyor", "land surveying" or any modification or derivative thereof in your name or in connection with your business or activities in Louisiana. Licensees whose licenses are in "Retired", "Inactive", or "Expired" status are prohibited from engaging in the activities described above in items (a) and (b).

LA R. S. 37:689 requires firms practicing or offering to practice engineering or land surveying in the state of Louisiana to be licensed by the Board prior to offering such services.

Print and keep the following information for your record or verification. The pocket card may also be printed on card stock or laminated to keep with you as license/certificate verification.

Disclaimer
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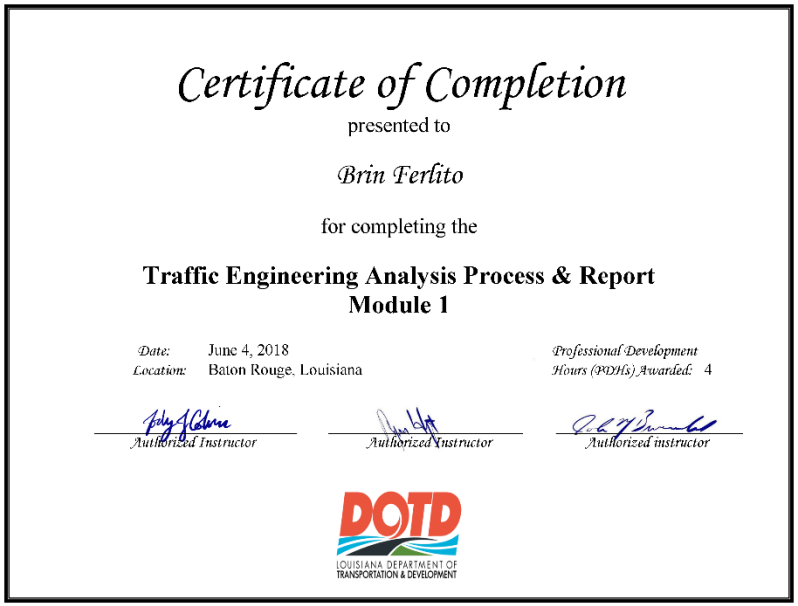
20. Certifications/Licenses:



Certificate of Completion

presented to

Brin Ferlito

for completing the

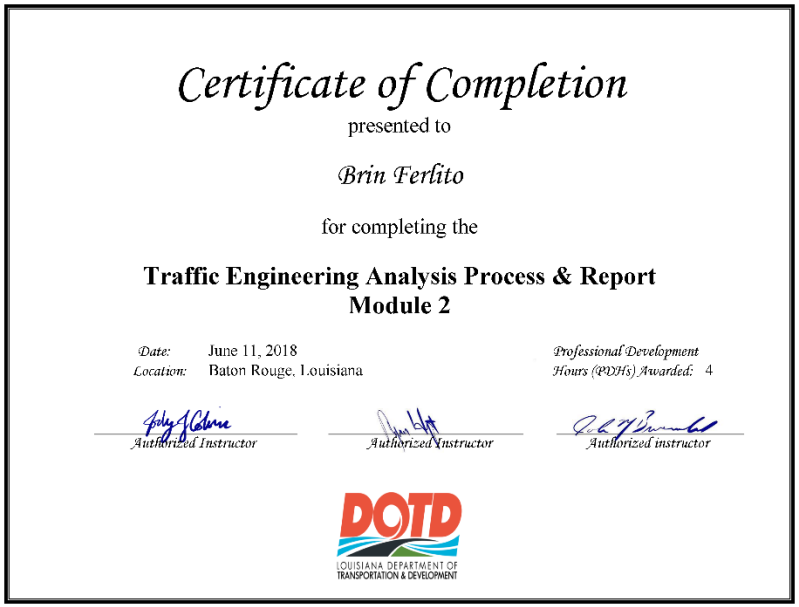
Traffic Engineering Analysis Process & Report
Module 1

Date: June 4, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 4

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Brin Ferlito

for completing the

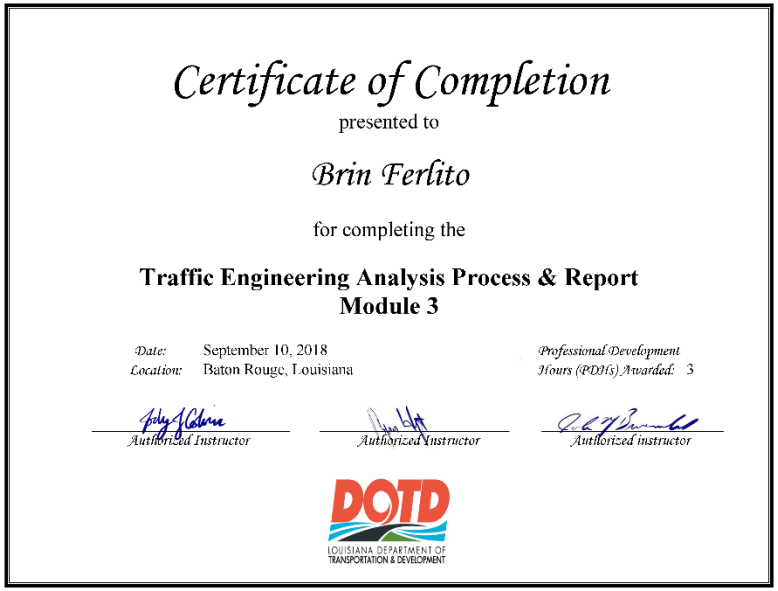
Traffic Engineering Analysis Process & Report
Module 2

Date: June 11, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 4

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Brin Ferlito

for completing the

Traffic Engineering Analysis Process & Report
Module 3

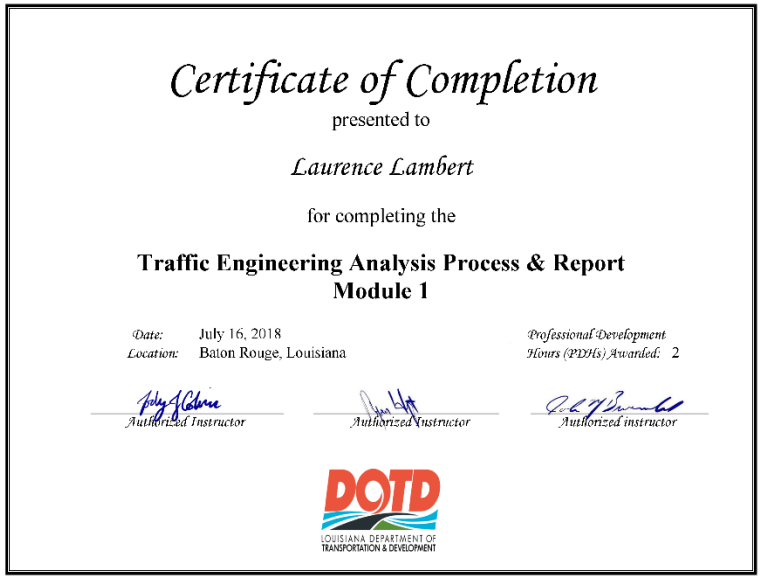
Date: September 10, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

20. Certifications/Licenses:



Certificate of Completion

presented to

Laurence Lambert

for completing the

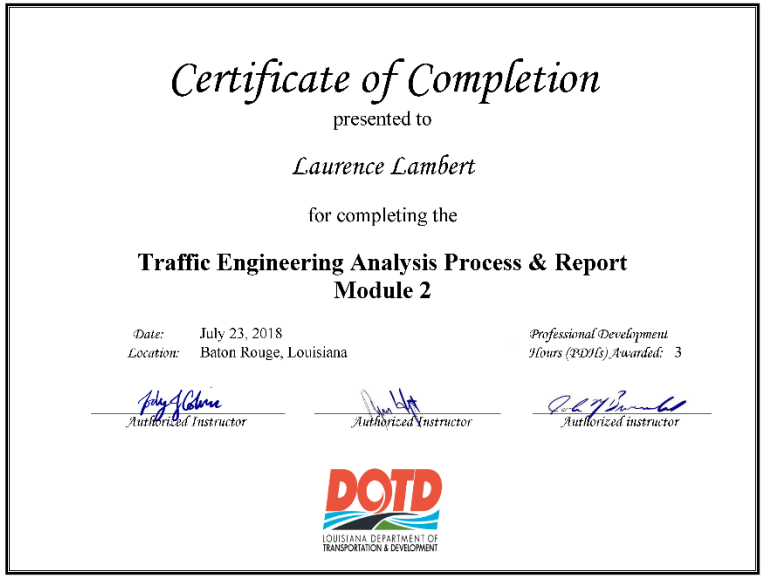
Traffic Engineering Analysis Process & Report
Module 1

Date: July 16, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 2

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Laurence Lambert

for completing the

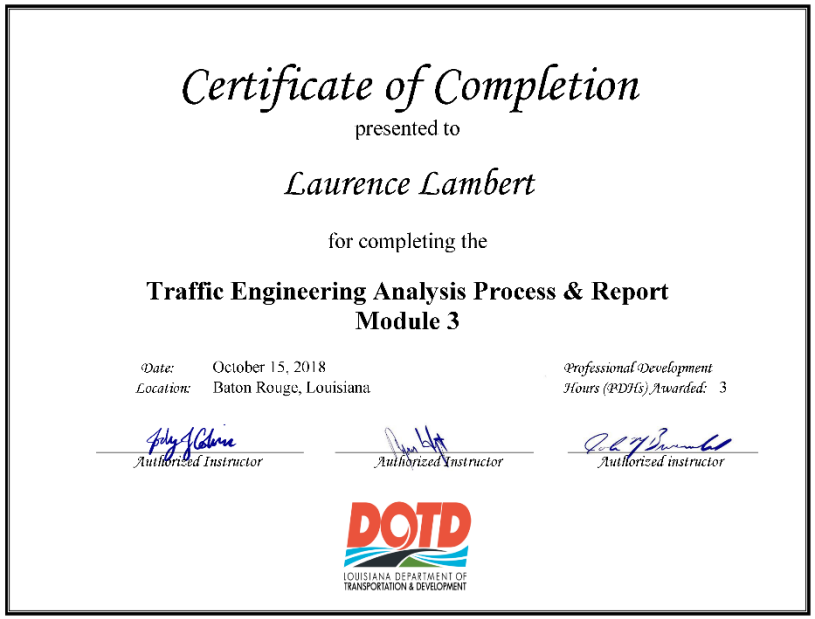
Traffic Engineering Analysis Process & Report
Module 2

Date: July 23, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Laurence Lambert

for completing the

Traffic Engineering Analysis Process & Report
Module 3

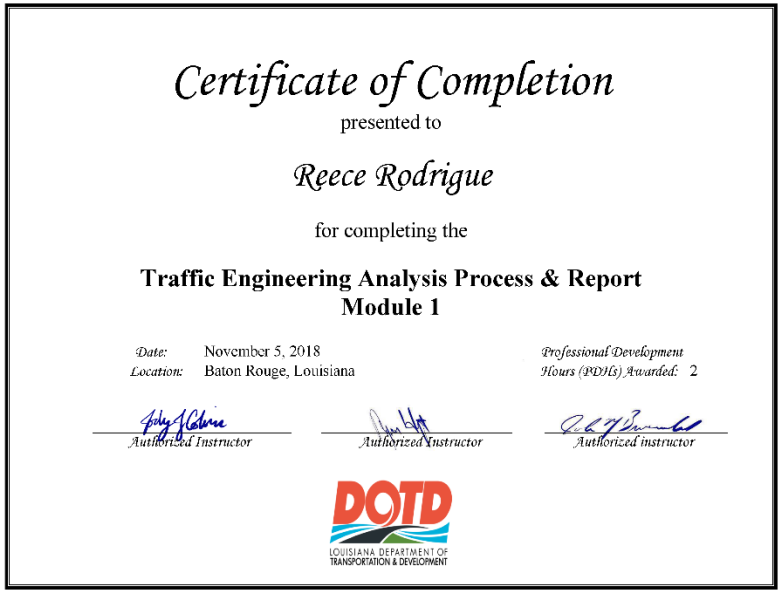
Date: October 15, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

20. Certifications/Licenses:



Certificate of Completion

presented to

Reece Rodrigue

for completing the

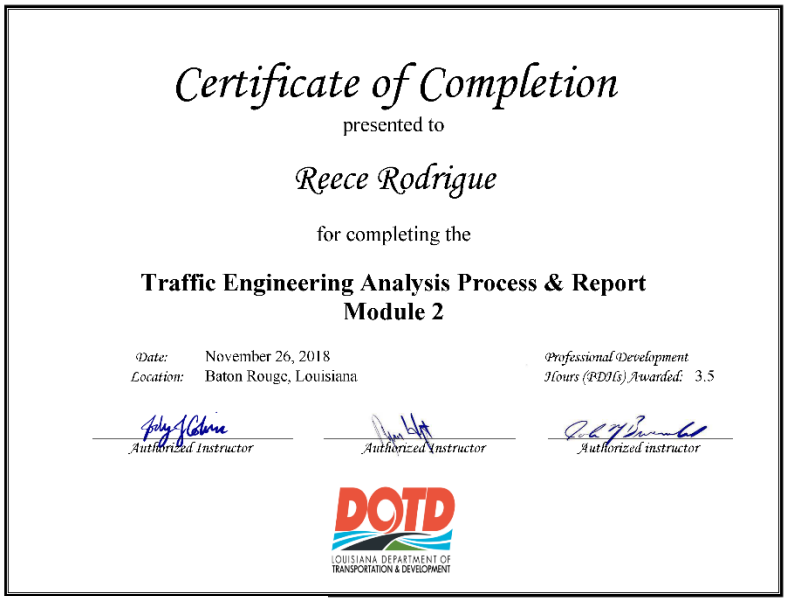
Traffic Engineering Analysis Process & Report
Module 1

Date: November 5, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 2

Authorized Instructor *Authorized Instructor* *Authorized Instructor*

DOTD LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Reece Rodrigue

for completing the

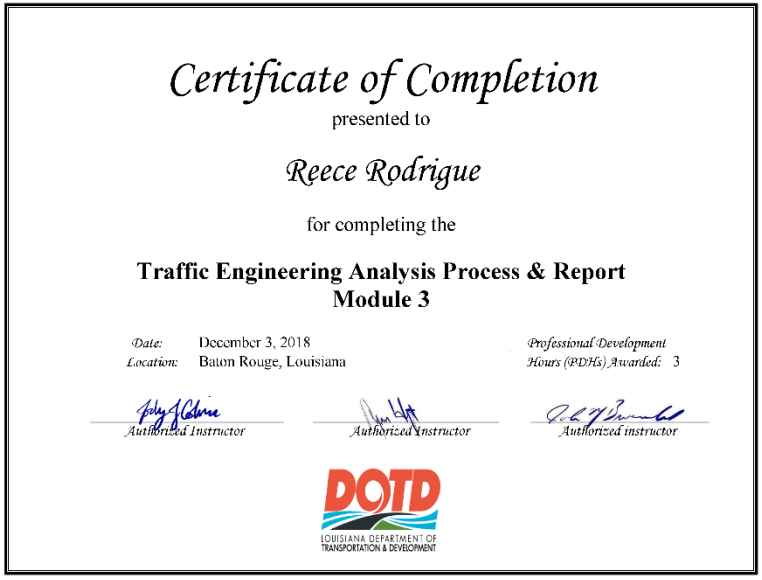
Traffic Engineering Analysis Process & Report
Module 2

Date: November 26, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3.5

Authorized Instructor *Authorized Instructor* *Authorized Instructor*

DOTD LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Reece Rodrigue

for completing the

Traffic Engineering Analysis Process & Report
Module 3

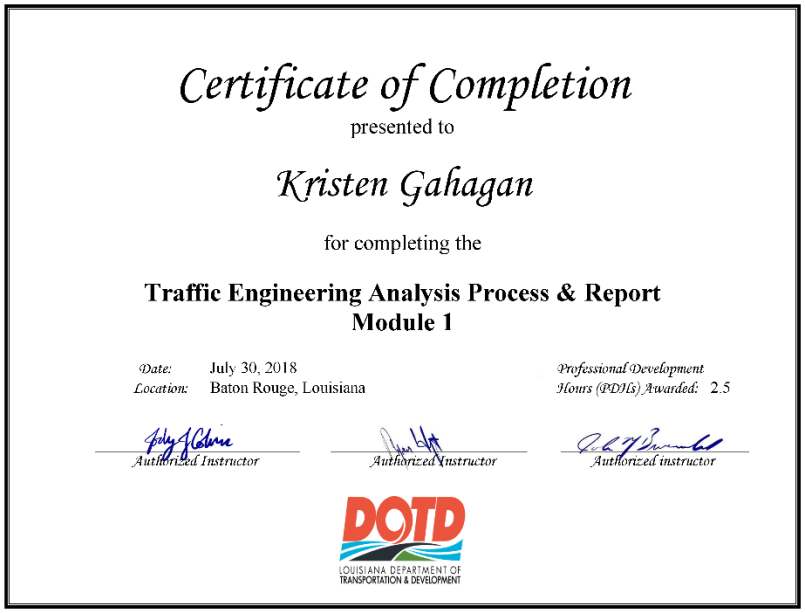
Date: December 3, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized Instructor*

DOTD LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

20. Certifications/Licenses:



Certificate of Completion

presented to

Kristen Gahagan

for completing the

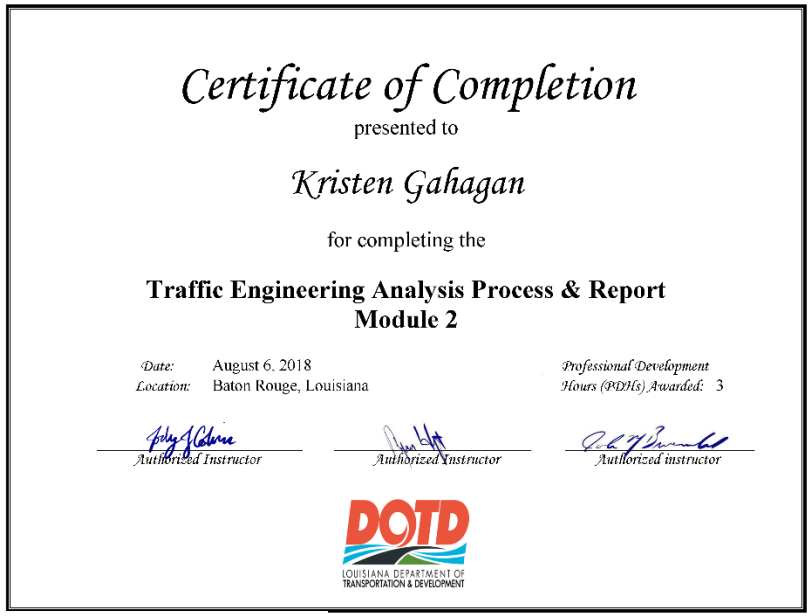
Traffic Engineering Analysis Process & Report
Module 1

Date: July 30, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 2.5

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Kristen Gahagan

for completing the

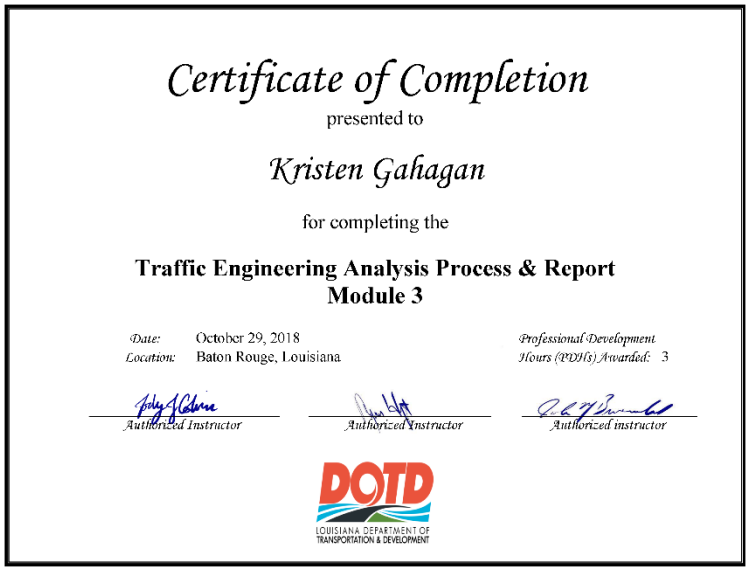
Traffic Engineering Analysis Process & Report
Module 2

Date: August 6, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Kristen Gahagan

for completing the

Traffic Engineering Analysis Process & Report
Module 3

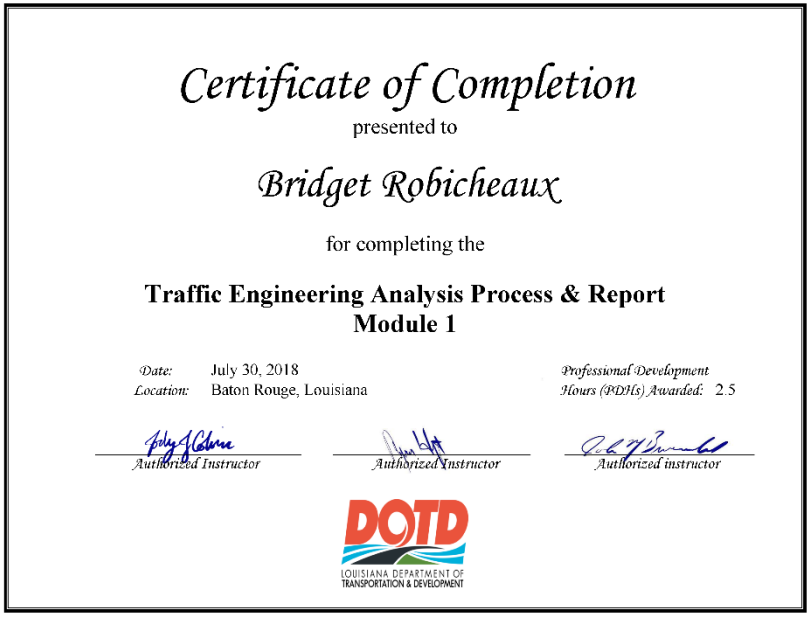
Date: October 29, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

20. Certifications/Licenses:



Certificate of Completion

presented to

Bridget Robicheaux

for completing the

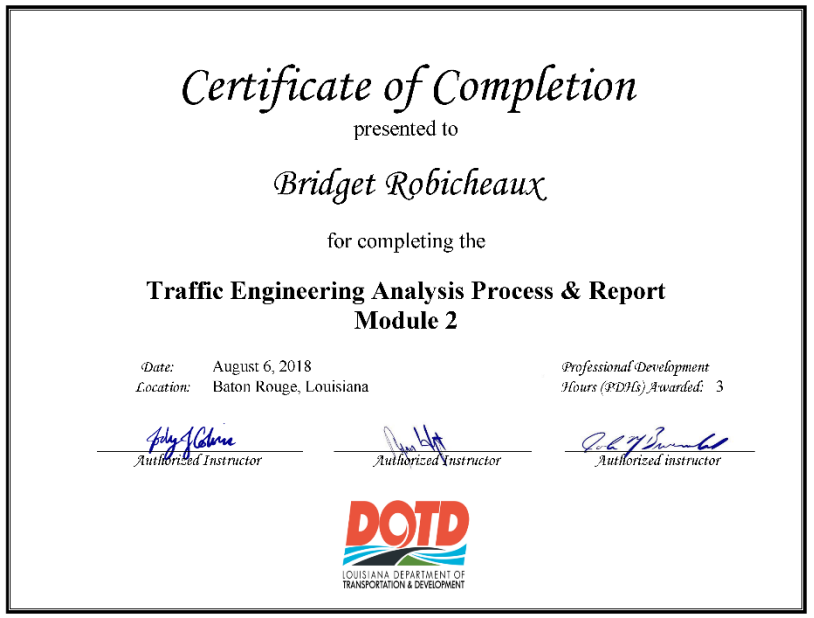
Traffic Engineering Analysis Process & Report
Module 1

Date: July 30, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 2.5

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Bridget Robicheaux

for completing the

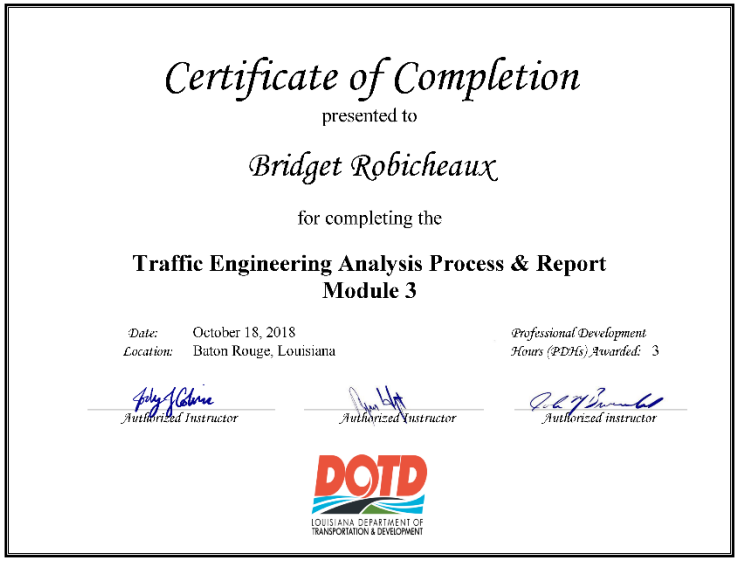
Traffic Engineering Analysis Process & Report
Module 2

Date: August 6, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT



Certificate of Completion

presented to

Bridget Robicheaux

for completing the

Traffic Engineering Analysis Process & Report
Module 3

Date: October 18, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor *Authorized Instructor* *Authorized instructor*

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

21: QA/QC Plan and/or Work Plan:

N/A

22. Sub-consultant information:

Firm Name (name must match as registered with Louisiana's Secretary of State)	Address	Point of Contact and email address	Phone Number
HDR Engineering, Inc.	4970 Bluebonnet Blvd., Suite C Baton Rouge, LA 70809	Wesley Jacobs, PE Wesley.Jacobs@hdrinc.com	(225) 465-6361
GeoEngineers, Inc.	11923 Sun Belt Court Baton Rouge, LA 70809	Larry D. Sant, PE LSant@geoengineers.com	(225) 293-2460
NTB Associates, Inc.	525 Louisiana Ave., Shreveport, LA 71101	Amy K. Schulze, PE, CFM aschulze@ntbainc.com	(225) 751-4002
KPMG, LLP	2323 Ross Avenue, Suite 1400 Dallas, TX 75201	Justin Clarke justinclarke@kpmg.com	(214) 840-2309
Vectura Consulting Services, LLC	4467 Bluebonnet Blvd, Suite A, Baton Rouge, LA 70809	Sheelagh Brin Ferlito bferlito@vecturacs.com	(225) 223-6685
Intelligent Transportation Systems LLC	37302 Commerce Lane Prairieville, LA 70769	Kimberly McDaniel, P.E., PTOE, PTP kimberly@itsanswers.com	(225) 751-9300

23. Location:

N/A