Louisiana Department of Transportation and Development

IDIQ CONTRACT FOR MOVABLE BRIDGE PRESERVATION STATEWIDE

CONTRACT NO. 4400023909

Request for Qualifications




May 10, 2022

Original

MODJESKI and MASTERS

DOTD FORM: 24-102

(Revised March 1, 2022)

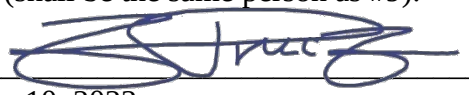
PROPOSAL TO PROVIDE CONSULTANT SERVICES

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 23 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.

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

1. Contract title as shown in the advertisement	**IDIQ Contract for Movable Bridge Preservation**
2. Contract number(s) as shown in the advertisement	**Contract No. 4400023909**
3. State Project Number(s), if shown in the advertisement	
4. Prime consultant name (as registered with the Louisiana Secretary of State where such registration is required by law)	**Modjeski and Masters, 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)	EF.0000570
6. Prime consultant mailing address	1055 St. Charles Ave., New Orleans, LA 70130
7. Prime consultant physical address (existing or to be established, if location is used as an evaluation criteria)	1055 St. Charles Ave., New Orleans, LA 70130
8. Name, title, phone number, and email address of prime consultant's contract point of contact	Zolan Prucz, PhD, PE, Senior Vice President (504) 524-4344, zprucz@modjeski.com
9. Name, title, phone number, and email address of the official with signing authority for this proposal	Zolan Prucz, PhD, PE, Senior Vice President (504) 524-4344, zprucz@modjeski.com
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 (shall be the same person as #9):  Date: May 10, 2022
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.	<u>Firm(s):</u> <u>Firm(s)' %:</u> Vectura Consulting Services, LLC 6.30% Marrero Couvillon & Associates, LLC 4.15%

12. Past Performance Evaluation Discipline Table:

As indicated in the advertisement, insert the completed table here. The percentages for the prime and sub-consultants must total 100% for **each past performance evaluation discipline**, as well as the overall total percent of the contract.

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. The crosswalk from the old categories to the new categories can be found at the link below:
http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/CCS/General%20Information/CPPR%20Crosswalk%20to%20New%20Evaluation%20Disciplines.pdf. (same link as in the advertisement)

Evaluation Disciplines	% of Overall Contract	M&M (Prime)	Vectura (DBE)	Arcadis	MCA (DBE)	Fugro	WJE	Moffat & Nichol	Fenstermaker	Meyer	BDI	KGC
Bridge	71%	77%		5%	5%		5%	5%			2%	1%
Road	13%	70%		10%					10%	10%		
Environmental	2%			50%					50%			
Traffic	7%		90%	5%					5%			
Geotech	4%					100%						
Survey	0%											
Other	3%	60%			20%					20%		
Identify the percentage of work for the overall contract to be performed by the prime consultant and each sub-consultant.												
Percent of Contract	100%	65.57%	6.30%	6.20%	4.15%	4.00%	3.55%	3.55%	2.65%	1.90%	1.42%	0.71%

13. Firm Size:

For all firms that are part of this team, indicate the approximate number of personnel to be committed to this contract, by DOTD Job Classification and the total number of personnel within the firm that could provide support, if needed. If a specialized job classification is required and not included on the DOTD job classification list, specify "Other (xxxx)" and include the classification title inside the parentheses. The DOTD Job Classification(s) to be used can be found at the following link: http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/CCS/Job_Qualification/Job%20Classifications%20with%20Descriptions.pdf

Firm name	DOTD Job Classification	Number of personnel committed to this contract	Total number of personnel available in this DOTD Job Classification (if needed)
MODJESKI and MASTERS	Principal	4	7
	Supervisor - Eng	9	15
	Supervisor - Other	1	11
	Engineer	3	6
	Engineer - Other	2	21
	Engineer Intern	4	19
	Professional	0	1
	Senior Technician	1	3
	Technician	1	2
	CADD Technician	2	9
ARCADIS	Principal	3	5
	Engineer	3	17
	Engineering – Aide	1	5
	Supervisor Engineer	4	10
	Environmental Pro	2	3
	Biologist/Wetlands	2	3
VECTURA CONSULTING SERVICES, LLC	Supervisor	2	2
	Engineer	3	5

MARRERO COUVILLON & ASSOCIATES Engineering & Construction	Principal	1	1
	Supervisor Engineer	1	2
	Engineer	2	2
	Designer	2	2
	Architect	1	1
FUGRO	Principal	1	1
	Supervisor-Engineer	2	5
	Engineer Intern	2	2
	Geologist	1	2
	CADD-Operator	1	2
	Driller	1	3
	Technician	4	8
	Administrative	1	2
	Clerical	1	2
	Party Chief	0	3
	Surveyor	0	2
WJE Wiss, Janney, Elstner Associates, Inc.	CADD Technician	1	4
	Clerical	2	7
	Engineer	0	3
	Engineer Intern	2	28
	Engineering-Aide	0	1
	Engineer - Other	2	28
	Geologist	0	2
	Principal	4	45
	Professional	4	19
	Senior Technician	1	58
	Supervisor - Arch	0	1
	Supervisor - Eng	1	13
	Supervisor - Other	3	113
	Technician	1	7

moffatt & nichol	Accountant	1	10
	CADD Technician	1	75
	Engineer (LA PE)	4	25
	Inspector – Bridge	12	50
	Supervisor – Engineer	2	8
	Technician	5	12
Meyer Engineers, Ltd. ENGINEERS & ARCHITECTS	Accountant	1	3
	Administrative	1	1
	Clerical	1	3
	Engineer	1	9
	Engineer Intern	0	2
	Inspector	0	4
	Inspector – Certified	2	4
	Inspector – Lead	1	1
	Planner	0	1
	Principal	1	1
	Supervisor – Engineer	1	2
	Architect – Licensed	2	6
	Interior Designer	1	1
BDI Bridge Diagnostics, Inc. (BDI)	Principal	3	3
	Supervisor – Engineer	6	6
	Supervisor – Other	14	14
	Engineer – Other	4	4
	Engineer – Intern	7	7
	Senior Technician	13	13
	Technician	4	4
	Computer Analyst	1	1
	Accountant	2	2
	Clerical	3	3
	Professional	6	6

	Biologist/Wetlands	0	1
	CADD Technician	0	4
	Clerical	0	2
	Engineer	1	14
	Environmental Pro	2	4
	GIS Analyst	0	2
	Inspector	0	3
	Inspector-Certified	0	2
	Inspector-Lead	0	3
	Instrument Man	0	4
	Party Chief	0	5
	Engineer Intern	0	9
	Principal	1	6
	Rodman	0	4
	Senior-Technician	2	9
	Supervisor-Eng	3	4
	Supervisor-Other	0	4
	Surveyor	2	3
	Technician	1	7
	Sr. Tech	3	3
	Principal	1	1

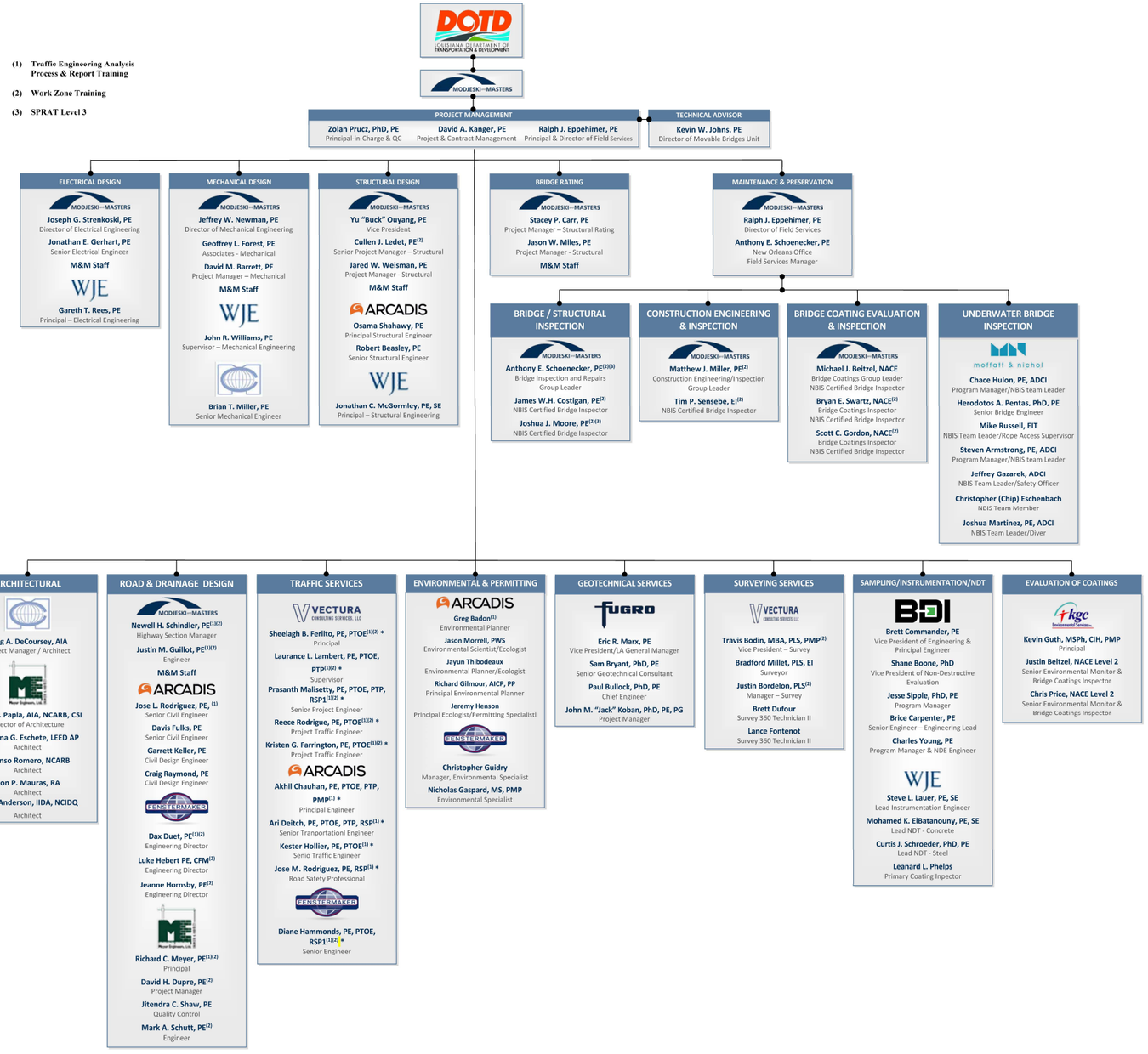
(Add rows as needed)

14. Organizational Chart:

Provide an organizational chart showing ALL **relevant** prime consultant and sub-consultant (if applicable) personnel assigned to the contract, area of project responsibility for each, and reporting lines for the purposes of this contract. An individual's role does not necessarily have to match their DOTD job classification identified in Section 13.

If applicable, identify all personnel performing traffic engineering analysis and/or QC of traffic engineering analysis by placing an asterisk next to their name. Include the certificates required by the Traffic Engineering Process and Report Training Requirements article of the Advertisement in Section 20.

It is acceptable to use an 11x17 format for Section 14.



 Prime consultant name: **Modjeski and Masters, Inc.**

15. Minimum Personnel Requirements:

Use the table below to identify both prime consultant and sub-consultant staff designated to work on this contract meeting the Minimum Personnel Requirements (MPRs) specified in the advertisement. Ensure the résumé reflects the required experience stated in the MPR.

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 / certification & number	State of license	License / certification expiration date
1	Zolan Prucz	Modjeski and Masters, Inc.	Civil PE #24019	LA	3/31/2024
	Ralph J. Eppehimer	Modjeski and Masters, Inc.	Civil PE #23251	LA	3/31/2023
2	Zolan Prucz	Modjeski and Masters, Inc.	Civil PE #24019	LA	3/31/2024
	Ralph J. Eppehimer	Modjeski and Masters, Inc.	Civil PE #23251	LA	3/31/2023
3	Zolan Prucz	Modjeski and Masters, Inc.	Civil PE #24019	LA	3/31/2024
	Yu Ouyang	Modjeski and Masters, Inc.	Civil PE #26117	LA	9/30/2023
4	Jeff W. Newman	Modjeski and Masters, Inc.	Mechanical PE #31815	LA	9/30/2023
	Geoffrey L. Forest	Modjeski and Masters, Inc.	Mechanical PE #45721	LA	9/30/2023
5	Jonathan E. Gerhart	Modjeski and Masters, Inc.	Electrical PE #43052	LA	3/31/2023
6	David A Kanger	Modjeski and Masters, Inc.	Civil PE #29048	LA	9/30/2022
7	Gregory A. DeCoursey, AIA	Marrero, Couvillon & Associates, LLC.	Architect/2620	LA	12/31/2022
	James Papia, AIA, NCARB, CSI	Meyer Engineers, Ltd.	Architect/3424	LA	12/31/2022
8	Cullen J. Ledet	Modjeski and Masters, Inc.	Civil PE #33222	LA	9/30/2023
	Jared Weisman	Modjeski and Masters, Inc.	Civil PE #43452	LA	9/30/2023
	Osama Shahawy	Arcadis	Civil PE #35652	LA	9/30/2022
	Robert Beasley	Arcadis	Civil PE #34159	LA	3/31/2023
	Jonathan C. McGormley	Wiss, Janney, Elstner Associates, Inc.	Civil PE #43912	LA	3/31/2024
	Herodotos A. Pentas, PhD, PE	Moffatt & Nichol	Civil PE #24660	LA	9/30/2022
9	Brian T. Miller, P.E.	Marrero, Couvillon & Associates, LLC.	Mechanical PE #26080	LA	9/30/2023

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc.**					
Name	**Zolan Prucz, PhD, PE**		Years of relevant experience with this employer		39
Title	Senior Vice President & Principal		Years of relevant experience with other employer(s)		7
Degree(s) / Years / Specialization			PhD 1984 Civil, Structural MS 1981 Civil, Structural BS 1976 Civil		
Active registration number / state / expiration date			24019 LA 3/31/2024		
Year registered	1988	Discipline	Civil		
Contract role(s) / brief description of responsibilities Dr. Prucz is the principal-in-charge of the Design Section for the New Orleans office. As such he oversees the design and preparation of plans and specifications for all projects, studies and ratings of bridges. Dr. Prucz has worked on bridge related projects since joining Modjeski and Masters, Inc. in 1983. His assignments ranged from design, evaluation and retrofit of fixed and movable bridges to evaluations of effects of vessel impact, seismic loads on bridges, the effects of fatigue and corrosion on steel bridges and bridge hydraulic and scour analysis and evaluation. Dr. Prucz was the principal investigator for developing the "Criteria for Design of Bridge Piers Against Ship Collision in Louisiana Waterways", which was used for bridge design in Louisiana and other states from 1985 to 1991, and he co-authored NCHRP 333, “Guidelines for Evaluating Corrosion Effects in Existing Steel Bridges”. One of his specialties is the design of bridge protection systems and investigation of ship collision accidents with bridges. Dr. Prucz will serve as Principal-in-Charge and fulfills MPR 1, 2 and 3 for 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 time specified in the applicable MPR(s).				
11/20 - Ongoing	**H.014564 Bayou Barataria Swing Bridge Allision Repairs. Lafitte, LA | LADOTD** In 2020, Modjeski and Masters provided emergency services in response to a vessel collision. A two-barge tow reportedly struck the 204’ steel swing span of the Bayou Barataria Bridge while traveling through the channel. Subsequently, the swing span was not operable and remained in the open position eliminating the only access across for the population of Ile De Barataria. Modjeski & Masters Inc. performed an initial damage inspection in addition to mechanical and electrical inspections of the structure. Previously in a separate task order, M&M developed and prepared a Navigation Impact Study in accordance with USCG requirements for the proposed crossing location over Bayou Barataria that would replace the existing structure. This study obtained and analyzed information related to present and future navigation uses and needs for the purposes of developing and evaluating alternatives for the new bridge. M&M is also providing a temporary fender repair design. Dr. Prucz served as the Principal-in-Charge for this project.					

6/10 – 12/15	**Gilmerton Bridge Replacement, Chesapeake, Virginia | VDOT** M&M engineered a plan that involved building a new lift bridge above and below the existing structure, with the original bascule bridge remaining functional until the float-in of the new span. M&M completed preliminary and final design of the new 335-foot long and 85-foot wide lift span – one of the widest lift spans ever. Eight 12-foot diameter drilled shafts were designed to reach 120 feet below ground and are some of the largest ever constructed using the oscillating method. Dr. Prucz provided technical assistance and guidance in this project.
10/09 – 12/11	**EJ&E Swing Bridge 522 Replacement. Joliet, IL | Canadian National Railway:** The Illinois River Bridge, No. 552, was originally built as four 154-foot fixed through truss spans and was converted to a vertical lift bridge 80 years ago. Under the provisions of the "Truman-Hobbs Act" of 1940, the United States Coast Guard is funding alteration of the Illinois River Bridge, No. 552, to provide a 300-foot marine opening. M&M designed the replacement vertical lift span of 348 feet with a maximum lift vertical clearance of 56 feet. M&M also collected relevant data, evaluated alternatives, established design criteria, cost estimates, prepared project report, and provided the final vertical lift bridge design. M&M provided construction management services. Dr. Prucz provided QA/QC support and technical guidance for this project.
09/07 – 08/09	**Houma Vertical Lift Bridge to Freeport, TX | Union Pacific Railroad:** The existing railroad swing bridge at Freeport, TX is a 288 foot long through truss span and the existing railroad vertical lift located at Houma, LA is a 258 foot long through truss span with two 29 foot tower spans. The swing span is to be removed and replaced with the relocated and rehabilitated vertical lift span. The lift span, towers, counterweights and machinery are to be relocated. New piers and approach structures will be provided at Freeport and a complete electrical system replacement will be provided. M&M provided preliminary design services, final structural, electrical and mechanical design services and prepared permit applications for this project. Dr. Prucz administered QA/QC and technical guidance of this project.
01/01 – 04/04	**Florida Ave Bridge Replacement. New Orleans, LA | Board Of Comm., Port Of New Orleans:** The existing Strauss Trunnion Bascule Bridge crossing the Inner Harbor-Navigation Canal at Florida Avenue provides a 91-foot opening for marine traffic. Funding was provided to replace the bridge with a new vertical lift bridge providing a 300-foot marine opening. The replacement bridge is at a low-level grade carrying one railroad track and two-roadway lanes plus two sidewalks. The lift span is 340 feet long and has a maximum lift clearance of 156 feet. Dr. Prucz applied his expertise in the QA/QC support area and offered technical guidance for this project.

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc.**					
Name	**Ralph J. Eppehimer, PE**		Years of relevant experience with this employer		39
Title	Sr. Vice President & Director of Field Services		Years of relevant experience with other employer(s)		1
Degree(s) / Years / Specialization			BS 1982 Civil Engineering		
Active registration number / state / expiration date			23251 LA 3/31/2023		
Year registered	1989	Discipline	Civil		

Contract role(s) / brief description of responsibilities

Mr. Eppehimer has over 38 years field services experience with Modjeski and Masters, Inc. and is the Director of Field Services. He has vast experience in all aspects of field services including new bridge construction, safety and maintenance inspections of existing bridges, repair and rehabilitation of bridges, and emergency response to bridge accidents. He has been the construction project manager, resident engineer, assistant resident engineer and technical advisor on a number of significant movable bridge projects, primarily railroad bridges. Mr. Eppehimer's technical specialties are the field inspection of all types of bridge, field monitoring of movable bridge construction, repair and rehabilitation of bridges, and the repair and retrofit of 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 time specified in the applicable MPR(s).
12/15 – 03/20	**UPRR 305.45 Angelton Sub San Bernard Bridge. Sweeney, TX** | Union Pacific Railroad (2016-2018) M&M provided the design for a new vertical lift bridge that will replace an existing swing span bridge over the San Bernard River in the Angleton Subdivision of the Union Pacific Railroad. M&M worked with the UPRR to accommodate an accelerated construction schedule, and provided construction support for the project. The new bridge was designed to be "remote control ready." Mr. Eppehimer served as the Principal-in-Charge for this project.
02/12-ongoing	**2007-062-RB Lapalco Bridge Repairs, Jefferson Parish, LA** This project involved the rehabilitation, repairs (structural, mechanical, electrical and architectural), and repainting of this four-lane, bascule highway bridge. Modjeski and Masters provided the development of plans and specifications and construction services. Mr. Eppehimer was the Project Manager for all the construction engineering support services associated with this project.
11/16– 5/17	**Port of New Orleans Seabrook Bridge Floor System Replacement. New Orleans, LA** Modjeski and Masters prepared the plans and specifications to replace the railroad floor system between the trusses of the Seabrook Railroad Bridge for the Port of New Orleans. M&M also developed the sequence of construction to minimize the impacts to the rail and marine traffic as well as maintain the span balance throughout construction. Mr. Eppehimer was Principal-in-Charge for this project.

02/17– 5/17	**Port of New Orleans Seabrook Bridge Link Pin Joints Emergency - Construction Services. New Orleans, LA**: After M&M completed the initial investigation and developed emergency repair contract documents for the partially failed 2nd Link joint on the Seabrook Strauss Bascule Bridge, the Port of New Orleans called upon M&M to provide Construction Support Services for the project. M&M reviewed all Contractor RFIs, shop drawings, and procedure submittals for the project. M&M also provided on-site construction inspection services throughout the repair effort. Mr. Eppehimer was Principal-in-Charge for this project.
03/09-01/10	**Bridge 73.31 across Bayou Boeuf, BNSF Railway, Amelia, LA** Mr. Eppehimer served as the Construction Project Manager for M&M, overseeing the replacement of an older, single- track railroad, through-plate girder swing span with a new through-plate girder swing span. He made monthly project site visits during construction, including during the span change-out period. He also provided construction engineering office support and supervised the full-time, on-site Resident Inspector on the project.
02/07-07/07	**Vertical Lift Span Relocation, Union Pacific Railroad, Houma, LA to Freeport, TX** Mr. Eppehimer served as the Construction Project Manager overseeing the disassembly and relocation of an existing, single- track railroad vertical lift span from Houma, LA to Freeport, TX where it was rebuilt with modifications to replace an older through-truss swing. He made monthly visits during construction to either project site, as appropriate, including during the span change-out period in Texas. He also provided construction engineering office support and supervised the full-time, on-site Resident Inspector.
01/01-05/09	**Florida Avenue Bridge Replacement, Port of New Orleans, New Orleans, LA** Mr. Eppehimer served as the Construction Project Manager for M&M, overseeing the replacement of an older bascule span carrying a double-track and two vehicular roadway lanes with a new vertical lift span carrying a single-track and two vehicular roadway lanes, to improve the width of the navigation channel. He made periodic fabrication shop visits, including to South Korea, and monthly project site visits during construction, including during the span change-out period. He also provided construction engineering office support and supervised the on-site Resident Engineer and inspection team.
1996-1997	**Casco Bay Bridge Replacement, Maine DOT, Portland, ME** The project called for the replacement of a double-leaf bascule bridge over the Fore River with a structure consisting of a 285 ft. double-leaf bascule span. Mr. Eppehimer served as a Technical Advisor to the Maine DOT during construction of the bascule spans. This assignment included making structural and machinery shop visits to observe fabrication and shop assemblies and tests, and providing a full-time presence, on-site, during the movable span and machinery erection period.

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc.**					
Name	**Kevin W. Johns, PE**		Years of relevant experience with this employer		24
Title	Movable Bridge Business Unit Director		Years of relevant experience with other employer(s)		0
Degree(s) / Years / Specialization			MS 1998 Civil Engineering BS 1996 Civil Engineering		
Active registration number / state / expiration date			044204	North Carolina	12/31/2022
35101	Alabama	12/31/2022	13403	New Hampshire	2/28/2023
PEN.0030631	Connecticut	1/31/2022	24GE05232700	New Jersey	4/30/2022
20136	Delaware	6/30/2022	092213	New York	1/31/2022
78268	Florida	2/28/2023	91792PE	Oregon	6/30/2022
55231	Massachusetts	6/30/2022	PE060642	Pennsylvania	9/30/2022
44386	Maryland	9/12/2022	31371	South Carolina	6/30/2022
6201056533	Michigan	8/3/2023	0402054007	Virginia	10/31/2022
51126	Minnesota	6/30/2022			
Year registered	2002	Discipline	Civil		

Contract role(s) / brief description of responsibilities

Mr. Johns is the Director of the Movable Bridge Business Unit with more than 20 years of experience. In the past 5 years, he has served as Project Manager or Task Leader on 28 movable bridge projects, 19 railroad projects and 9 movable railroad projects. Eight of these projects have had a construction cost of over $100 million. He has served as the Project Manager on the St. Joseph River Bascule Bridges Rehabilitations, Houghton/Hancock Vertical Lift Bridge Rehabilitation, and the Cheboygan Rolling Bascule Rehabilitation for MDOT. Mr. Johns also was the Deputy PM and Lead Structural Engineer for the Elizabeth City Bascule Bridge Replacement Project, which was completed under an accelerated design schedule. He served in a similar capacity for the in-depth rehabilitation of a swing span bridge in Wilmington, DE; for rehabilitation and tower heightening of a vertical lift bridge in Philadelphia, PA; and for the design of the Gilmerton Bridge, a new large vertical lift bridge in Chesapeake, VA. Mr. Johns is currently the Project Manager or Deputy Project Manager for the replacement of three movable bridges in Sacramento, CA; Secaucus, NJ; and Milford, CT.

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).
11/14 – 10/17	**Cheboygan Bridge Rehabilitation Cheboygan, Michigan | Michigan DOT:** M&M was contracted to perform engineering services for the electrical, mechanical and structural rehabilitation of the double leaf bascule bridge and its approaches at Cheboygan, MI. M&M prepared preliminary and final structure plans as well as the mechanical and electrical plans to rehabilitate the aging structure that was built in 1940. Mr. Johns served as the Project Manager and

	oversaw the structural design. He was in direct responsible charge of communication with MDOT, coordination of subconsultants, monitoring of the schedule and budget, and overall direction of the project. Although not explicitly part of the Scope he established biweekly calls with MDOT keep them informed of the project status and discuss any relevant issues. With the project team he facilitated weekly project meetings to ensure coordination among disciplines. During construction Mr. Johns is responsible for QA of responses to structural submittals and RFI's from the contractor.
09/13 – 12/14	**Portage Lake Lift Bridge Rehab. Houghton, Michigan | Michigan DOT :** M&M was selected by the MDOT for the rehabilitation design of the Portage Lake Lift Bridge. The bridge, which connects the cities of Houghton and Hancock, is the heaviest and widest double-deck vertical lift bridge in the world. M&M will lead the structural, electrical and mechanical design of the massive 269' long, 54' wide lift span. The lift span, which can be raised up to 100', features an upper and lower deck capable of carrying a total of eight lanes of US Highway 41 and M-26. M&M will also implement homeland security recommendations, provide structural repairs to the operator's house, and design upgrades to the barrier gates. Mr. Johns served as the Project Manager for the project and oversaw the structural design. He directed the efforts of the structural designers including the repairs to the operator's house from the high-load hit, repair of corroded floor system members, repair details for damaged railing, steel and concrete details for a support platform for new barrier gates, concrete spall repair in the deck and substructure; riprap scour protection; the construction cost estimate; and the project special provision. He coordinated the efforts of the mechanical, electrical and structural designers. He also coordinated the repairs with the Traffic Management Plan.
04/11 – 01/14	**Elizabeth City Bridge Replacement. North Carolina DOT (Elizabeth City, North Carolina):** As part of a Movable Bridge Services Agreement for North Carolina Dept. of Transportation, M&M has been contracted to replace the eastbound and rehabilitate the westbound bridges at Elizabeth City. The westbound span is a double leaf Hopkins trunnion bascule bridge. The new eastbound bridge is a double leaf trunnion bascule bridge. Mr. Johns served as both the Deputy Project Manager and the Lead Engineer on this Eastbound Bridge replacement and Westbound Bridge rehabilitation project. He was in direct responsible charge of the design of the new bascule girders, floorsystem, grid deck, counterweight, reinforced concrete bascule pier, and pipe pile footings. He was responsible for QA of the final plans, specs and cost estimate. He coordinated the efforts of and reviewed submission material for multiple subconsultants including the architect, geotechnical engineers, surveyors and fixed approach span designers. He facilitated regularly schedule project meetings to ensure coordination between all disciplines. He regularly communicated directly with NCDOT to keep them aware of the project status. During construction Mr. Johns was responsible for QA of responses to structural submittals and RFI's. Mr. Johns also developed repair details for a crack in the existing bascule girder web.

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc.**					
Name	**David A. Kanger, PE**		Years of relevant experience with this employer		26
Title	Associate - Structures		Years of relevant experience with other employer(s)		0
Degree(s) / Years / Specialization			MS 1996 Civil Engineering BS 1995 Civil Engineering		
Active registration number / state / expiration date			29048 LA 9/30/2022		
Year registered	2000	Discipline	Civil		

Contract role(s) / brief description of responsibilities

Mr. Kanger joined Modjeski and Masters, Inc. in 1996 and is an Associate in the firm's New Orleans office. During this period, he has been engaged in the design of fixed and movable, railroad and highway bridges. His design experience includes work in all phases of the design process from preliminary project development through construction support. Mr. Kanger has acquired significant emergency repair and field inspection experience including truss inspection, pin replacement monitoring, construction support for the Huey P. Long Bridge substructure and superstructure widening, and condition assessment of the New Orleans Westbank Expressway. Mr. Kanger is well-founded in designs using AASHTO and AREMA codes, including the development of hybrid highway-railway design criteria for the Huey P. Long Bridge Widening. He has extensive design experience with LRFD, load factor and working stress design.

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).
11/20 - Ongoing	**H.014564 Bayou Barataria Swing Bridge Allision Repairs. Lafitte, LA | LADOTD** In 2020, Modjeski and Masters provided emergency services in response to a vessel collision. A two-barge tow reportedly struck the 204' steel swing span of the Bayou Barataria Bridge while traveling through the channel. Subsequently, the swing span was not operable and remained in the open position eliminating the only access across for the population of Ile De Barataria. Modjeski & Masters Inc. performed an initial damage inspection in addition to mechanical and electrical inspections of the structure. Previously in a separate task order, M&M developed and prepared a Navigation Impact Study in accordance with USCG requirements for the proposed crossing location over Bayou Barataria that would replace the existing structure. This study obtained and analyzed information related to present and future navigation uses and needs for the purposes of developing and evaluating alternatives for the new bridge. M&M is also providing a temporary fender repair design. Dr. Prucz served as the Principal-in-Charge for this project.
11/16 - Ongoing	**West Larose Vertical Lift Construction Services. LADOTD (Larose, Louisiana):** As a continuation of previous work, M&M is reviewing shop drawings, responding to RFI's, and other submittals as part of the rehabilitation of the West Larose Vertical Lift Bridge during the construction phase of the project. Mr. Kanger served as Project Manager for this project.
12/16 – Ongoing	**4th Street Harvey Rehab. LADOTD (Harvey, Louisiana):** M&M provided construction support services for the rehabilitation of the double leaf rolling bascule bridge over the Harvey Canal in Harvey, LA. This was a continuation of previous design work orders in which M&M designed the necessary rehabilitation to extend the structure life by 40 years. Work included replacing the rolling lift tread and track plates and a new hydraulic operating system. Structural, Mechanical, and Electrical rehabilitation of a double rolling leaf bascule bridge was part of the scope of work. Mr. Kanger provided construction support services for this project.
05/16 - Ongoing	**US 11 Bridge Rehabilitation Design, New Orleans, LA | Louisiana Department of Transportation** M&M led a team providing structural, mechanical, electrical, and architectural rehabilitation services to extend the service life of the US 11 North and South bascule spans. The North bascule span is the only routinely operated span. In addition to repairs and improving the structural capacity to eliminate the weight posting of the bridge, the operator's house will be enlarged, and the span converted to hydraulic

	operation. The South bascule span is only opened manually (with a crane) when access is needed to service electrical utility lines crossing the lake. The span toes will be replaced to improve the structural capacity to eliminate the weight posting of the bridge. The operator houses will be rehabilitated to retain their historic appearance. The bascule spans comprise the largest spans (149') of the overall 4.7-mile bridge over Lake Pontchartrain. Mr. Kanger is the project manager for this project.
04/06 – 02/14	**Galveston Causeway Railroad Bridge Replacement. Galveston County (Galveston, Texas):** The Galveston RR Bridge is a 384-foot vertical lift span replacing the existing 125-foot bascule span and portion of the existing concrete arch spans to provide 300' horizontal navigation clearance by the order of USCG under the provisions of Truman-Hobbs Act. The project involves a complicated foundation arrangement, removal and anchorage of the existing arch structures, special truss and tower design, and challenging construction issues. Mr. Kanger provided preliminary tower design and field site survey for this project. He also provided construction support activities.
01/01 – 05/02 02/09 - 02/09	**Fort Madison Bridge Replacement. BNSF Railway Company (Ft. Madison, Iowa):** BNSF Railway requested M&M to value engineer their 10+ year old rehabilitation design of the Fort Madison Bridge across the Mississippi River. M&M reviewed the foundation design, painting, type of drive system and usage of high performance steel to determine if the design could be modified to reduce the potential construction cost. M&M was able to identify some cost savings alternatives that were now available after the original design work, which was performed in 2003. Mr. Kanger provided the design of substructure and foundation, tower top, and operator's house.
09/04 – 05/06	**Electrical Rehabilitation of Louisville Street Bascule Bridge & East Pearl River Swing Bridges. LADOTD (Monroe and St. Tammany Parishes, Louisiana):** M&M prepared the electrical plans with specification notes for the rehabilitation of the Louisville Street Bridge over the Ouachita River in Monroe, LA and the East Pearl River Bridge over the Pearl River in LA. Both bridges were in need of an electrical rehabilitation including lighting, gears and generator replacement. M&M also provided construction support services. Mr. Kanger provided structural evaluation, field inspection and details for submarine cable replacement for this double-leaf bascule bridge.
12/01 – 12/02 10/09 – 03/12 12/08 – 10/09	**Illinois River Bridge. Elgin, Joliet & Eastern Railway Company (Devine, Illinois):** The Illinois River Bridge was originally built as four 154-foot fixed through truss spans. About 1932, Span 2 was converted to a vertical lift span and the adjacent spans fitted with lifting towers, counterweights, and an electro-mechanical operating system, providing a 120-foot clear opening. Under the provisions of the "Truman-Hobbs Act" of 1940, the USCG is funding alteration of the bridge to provide a 300-foot marine opening. The replacement vertical lift span will be 348 feet long and have a maximum lift vertical clearance of 56 feet. M&M collected relevant data, evaluated alternatives, established design criteria, cost estimates, prepared project report, and provided the final design. Mr. Kanger designed and detailed the vertical lift bridge foundation and towers for this project. Upon this project becoming active as a result of ARRA stimulus funding, Mr. Kanger assisted with construction support activities.
07/05 – 03/06	**West Lake Swing Bridge - No.220.62. Union Pacific Railroad (Lake Charles, Louisiana):** Bridge No. 220.62 is a 222-foot through-truss swing bridge across the Calcasieu River. The project includes structural, mechanical and electrical modifications to provide for remote control of this mainline railroad bridge. The project provides complete new bridge electrical and PLC-based control systems and the conversion of manually operated machinery to a modern variable speed hydraulic drive for operating the bridge from the remote bridge tender's house on shore. Structural modifications will provide for supports for new electrical and mechanical equipment bungalows on the swing span. Center wedges, end wedges and rail lifts are also being converted to hydraulic operation. Closed circuit TV will provide for visual monitoring of the miter rail joints and marine traffic. Mr. Kanger provided design of swing bridge mechanical and operator house and platform replacement.

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc**.					
Name	**Yu Ouyang, PE**		Years of relevant experience with this employer		30
Title	Vice President		Years of relevant experience with other employer(s)		2
Degree(s) / Years / Specialization MS / 1990 / Civil Engineering MS / 1985 / Structural Engineering BS / 1982 / Civil Engineering					
Active registration number / state / expiration date			26117 LA 9/31/2023		
Year registered	1994	Discipline	Civil		
Contract role(s) / brief description of responsibilities Mr. Ouyang has been with Modjeski and Masters, Inc. since 1991, and has vast bridge engineering experience, ranging from conventional designs to special projects of high complexity, and from feasibility studies to construction services. He specializes in the design of fixed and movable highway and railroad bridges, and the rating and rehabilitation of existing bridges. His expertise also extends to analysis of complex bridge structures, vessel collision risk assessment and protection systems, seismic design, analysis and retrofit, and fatigue evaluations. He brings extensive experience in managing engineering and design efforts of varying sizes and difficulties, and in leading, coordinating and managing technical teams and subconsultants. His hands-on project management has led to successful and on-time completion of large and highly technical 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 time specified in the applicable MPR(s).
03/17 - ongoing	**LA 1 – Port Allen Bridge Replacement, Port Allen, LA | LADOTD** The ongoing project consists of replacing the existing northbound and southbound bridge structures on LA 1 over the Intracoastal Canal Waterway (ICWW). The proposed LA 1 SB Bridge will consist of 3 - 12' travel lanes and 2 - 10' shoulders and will be approximately 2,680' long. The proposed LA 1 NB Bridge will consist of 2 - 12' travel lanes and 2 - 10' shoulders (LA 1 NB roadway), a permanent 2' wide median barrier and 1 - 12' travel lane with 2 - 6' shoulders (I-10 EB Exit Ramp roadway). The Exit Ramp and LA 1 NB roadway will be separated by a permanent 2' wide median barrier until the LA 1 NB Bridge will bifurcate where the LA 1 NB roadway and I-10 EB Exit Ramp roadway will be carried on separate bridge structures. The LA 1 NB Bridge and I-10 EB Exit Ramp Bridge will be approximately 2,700' and 354' long, respectively. Both LA 1 NB and LA 1 SB Bridges will consist of a 870' long haunched three span continuous steel plate girder main span unit over the ICWW and prestressed concrete LG girder approach spans. Mr. Ouyang serves as Project Manager for this project.
09/17 – 09/21	**LA 16 over Tangipahoa River, Tangipahoa Parish, LA | LADOTD** M&M developed all necessary topographic surveys, preliminary and final plans for this bridge replacement project on LA 16, between LA 51 and LA 1054, in Amite City, LA. This project included reconstruction of the approach slabs and roadway on the east and west sides of the bridge. It was anticipated that traffic shall be maintained during construction with an on-site diversion roadway and bridge. The plans were prepared in accordance with AASHTO LRFD Bridge Design Specifications and the Bridge Design and Evaluation Manual (BDEM), DOTD 2017 Design Guidelines, DOTD 2016 Standard Specifications for Roads and Bridges, DOTD Road Design Manual, and DOTD Hydraulics Manual. QA/QC was provided in accordance with Part 1, Chapter 3 of BDEM. Construction Related Engineering Support was provided and is currently on-going. Mr. Ouyang served as the Project Manager for this project.

6/14 – 12/15	**Gilmerton Bridge Replacement, Chesapeake, Virginia | VDOT** M&M engineered a plan that involved building a new lift bridge above and below the existing structure, with the original bascule bridge remaining functional until the float-in of the new span. M&M completed preliminary and final design of the new 335-foot long and 85-foot wide lift span – one of the widest lift spans ever. Eight 12-foot diameter drilled shafts were designed to reach 120 feet below ground and are some of the largest ever constructed using the oscillating method. Mr. Ouyang provided QA/QC support for this project.
11/14 – 10/15	**Sault Ste. Marie Bascule and Swing Span Rehabilitation. Sault Ste Marie, MI | Canadian National Railway** The Sault Ste Marie Bridge is a landmark international crossing that consists of a vertical lift span, a swing span, a rolling bascule span, and nine through truss spans. Mr. Ouyang has served as lead engineer and project manager for many services provided for this bridge, including joint stabilization of the swing span, emergency hip hairpin replacement of the through trusses, and capacity assessment and structural rehabilitation of fixed, swing, and bascule trusses.
09/14 – 07/15	**Fort Madison Bridge Rehabilitation Value Engineering. Fort Madison, IA | BNSF Railway** BNSF Railway requested M&M to value engineer their 10+ year old rehabilitation design of the Fort Madison Bridge across the Mississippi River. M&M reviewed the foundation design, painting, type of drive system and usage of high performance steel to determine if the design could be modified to reduce the potential construction cost. M&M was able to identify some cost savings alternatives that were now available after the original design work which was performed in 2003. Mr. Ouyang performed independent value engineering of this railroad-highway dual use vertical lift bridge. The VE investigation was to identify cost saving measures, which included foundation types, tower span arrangement, span driving system, high performance steel, corrosion protection system and construction methods.
01/11 – 07/14	**Dubuque Bridge Rehabilitation. Dubuque, IA | Canadian National Railway (2011-2012)** The Dubuque Bridge is 1,532' long and was built between 1892-1899. It has an open deck and walkways on both sides of the track. It includes a 246' long through truss span at the east end, a 356' long through truss swing span over the navigation channel and three 221' long through truss approach spans at the west end. Mr. Ouyang served as the project manager for this rehabilitation effort and feasibility study.
07/05 – 11/11	**Galveston Bay Vertical Lift Bridge Fender, BNSF Railway (Galveston, Texas):** As structural manager for the project, Mr. Ouyang led the structural design effort for this complicated bridge replacement project, including a new fender system for the new vertical lift bridge. The Galveston RR Bridge is a 384' vertical lift span that replaced the existing 125' bascule span and portion of the existing concrete arch spans to provide 300' horizontal navigation clearance by the order of USCG under the provisions of Truman-Hobbs Act. The project involved a complicated foundation arrangement, removal and anchorage of the existing arch structures, and challenging construction issues. Mr. Ouyang performed project oversight and structural design. During the construction portions of this project, Mr. Ouyang responded to structural RFIs and provided office support services.
01/01 – 04/04	**Florida Ave Bridge Replacement. New Orleans, LA | Board Of Comm., Port Of New Orleans:** The existing Strauss Trunnion Bascule Bridge crossing the Inner Harbor-Navigation Canal at Florida Avenue provides a 91-foot opening for marine traffic. Funding was provided to replace the bridge with a new vertical lift bridge providing a 300-foot marine opening. The replacement bridge is at a low-level grade carrying one railroad track and two-roadway lanes plus two sidewalks. The lift span is 340 feet long and has a maximum lift clearance of 156 feet. Mr. Ouyang provided tower design and fender designs.

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc.**					
Name	**Jeffrey W. Newman, PE**		Years of relevant experience with this employer		30
Title	Senior Associate – Director of Mechanical Engineering		Years of relevant experience with other employer(s)		4
Degree(s) / Years / Specialization			BS 1987 Mechanical Engineering		
Active registration number / state / expiration date			0031815 LA 9/30/2023		
Year registered	2005	Discipline	Mechanical		

Contract role(s) / brief description of responsibilities

Mr. Newman is a Senior Associate and is the technical director for Modjeski and Masters' Mechanical Engineering department. His experience includes a wide variety of hands-on movable bridge engineering. Mr. Newman offers hard to match experience in inspection, evaluation and design of movable bridge machinery. His work in implementing strain gage instrumentation for use in the movable bridge industry has paved the way for many bridge owners to properly maintain and update their aging structures. Mr. Newman was a lead author for the first edition of the AASHTO LRFD Movable Highway Bridge Design Specifications and the project manager for the recently awarded NCHRP 12-112 Research Project. Recent work includes being the Project Manager for several traditional design and design-build projects including: Spit Bascule Bridge mech/elec upgrade (Sydney, AU), Fore River Vertical Lift Bridge replacement, and Livingston Avenue Swing Bridge mech/elec upgrade. Mr. Newman's ability to understand constructability and cross-discipline design and coordination make him a perfect fit to ensure clear and concise bid documents are provided on-time and under budget for movable bridge projects. He fulfills MPR #9.

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).
03/13-ongoing	**H.009479 LA 1 West Larose Vertical Lift Bridge over ICWW, Larose, LA | LADOTD** M&M provided rehabilitation plans for the upgrade of the structural, electrical, mechanical system to extend the life of the bridge 30-40 years for this vertical lift bridge. Additionally, a new fender system was designed, the operator house was significantly upgraded, and bridge repainted. A bridge inspection and development of scope of service preceded the preparation of plans. Mr. Newman is the Engineer of Record for the mechanical design of this project.
11/13-ongoing	**H.010016 US 11 Bridge over Lake Pontchartrain, New Orleans, LA | LADOTD** Within the US 11 Bridge, commonly known as the 5 mile bridge, are two double-leaf bascule spans (North Draw and South Draw). There was considerable damage to the bridge as a result of Hurricane Katrina. M&M was retained to determine the improvement needs structural, electrical and mechanical to extend the life by 20-30 years and to prepare rehabilitation plans. Mr. Newman is the Engineer of Record for the mechanical design of this project.

10/13-Ongoing	**H.010882 4th Street Harvey Bridge Rehabilitation. Harvey, LA** Categorized as a high priority project, the electrical, structural and mechanical rehabilitation of the 4th Street Bridge in Harvey, LA became a top priority for M&M. The bridge, a double leaf rolling bascule movable bridge, is approximately 40 years old and has recently experienced reliability problems. The rehabilitation was done to allow the structure to operate reliably for an additional 30-40 years with regular maintenance. Mr. Newman was the Engineer of Record for the plans and specifications for the mechanical design of this project.
10/12 – 11/16	**Fore River Bridge, Quincy, MA | Mass DOT.** As part of the design/build team led by the joint venture of White-Skanska-Koch and Parsons, M&M provided the final mechanical and electrical design for the Fore River Bridge lift span. The replacement of the Fore River Bridge, carrying Route 3A, is a signature project in the Massachusetts Accelerated Bridge Program. The new proposed vertical lift bridge provides a horizontal navigable channel of 250' and a vertical clearance of 175' in the open position. Extensive rehabilitation was required for the approaches to the proposed structure in addition to demolition of the existing temporary bridge and associated fender system. In addition to the mechanical and electrical services for the lift bridge replacement, M&M was also tasked with the vessel collision analysis and fender protection design. Mr. Newman is the Project Manager for mechanical and electrical design and construction support. This project was formatted as a Design-Build delivery requiring highly experienced engineering and management over a fast-paced schedule. Mr. Newman oversees all electrical and mechanical work and coordinates with structural design including the overall fabrication and erection schedule.
11/10-04/15	**H.005044 Rehabilitation of Houma Navigation Canal Swing Bridge, Houma, LA** This Project started with the development of a scope of services and cost estimate to determine the extent of rehabilitation that fit the DOTD budget. Included in the rehabilitation were: structural repairs, new mechanical and electrical systems, new traffic barriers and gates, new fender system, new operator house, concrete repairs, sampling existing paint coatings, repainting, rebalancing of swing span, and revetment repairs. One significant feature was the installation of a platform under the roadway for mounting the mechanical system and electrical components so that they would no longer be submerged during high water conditions. Mr. Newman was the Engineer of Record for all mechanical inspection, design and installation review.
04/07-05/11	**H.003985 Mermentau Swing Bridge Rehabilitation at Grand Chenier, LA** This Project was the rehabilitation of the LA 82 swing bridge over the Mermentau River. Included in the Project were structural repairs, electrical and mechanical upgrades, repainting, operator house upgrades, fender repairs, and traffic control devices. Traffic was maintained throughout the project. Mr. Newman was the Engineer of Record for all mechanical inspection, design and installation review.

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc.**					
Name	**Jonathan E. Gerhart**		Years of relevant experience with this employer		12
Title	Associate – Electrical		Years of relevant experience with other employer(s)		12
Degree(s) / Years / Specialization			BS 1998 Electrical Engineering		
Active registration number / state / expiration date			43052 LA 3/31/2023		
Year registered	2018	Discipline	Electrical		
Contract role(s) / brief description of responsibilities Mr. Gerhart is a Project Manager in Modjeski and Masters' Electrical Engineering Section and has over 24 years of experience in the design of electrical distribution systems, control systems and safety systems for 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 time specified in the applicable MPR(s).
05/16 - Ongoing	**US 11 Bridge Rehabilitation Design, New Orleans, LA | Louisiana Department of Transportation** M&M led a team providing structural, mechanical, electrical, and architectural rehabilitation services to extend the service life of the US 11 North and South bascule spans. The North bascule span is the only routinely operated span. In addition to repairs and improving the structural capacity to eliminate the weight posting of the bridge, the operator's house will be enlarged, and the span converted to hydraulic operation. The South bascule span is only opened manually (with a crane) when access is needed to service electrical utility lines crossing the lake. The span toes will be replaced to improve the structural capacity to eliminate the weight posting of the bridge. The operator houses will be rehabilitated to retain their historic appearance. The bascule spans comprise the largest spans (149') of the overall 4.7-mile bridge over Lake Pontchartrain. Mr. Gerhart was the lead electrical engineer for the complete electrical rehab of the power distribution, control system, and roadway lighting on the bridge
06/12 - 07/16	**LA 1 West Larose Vertical Lift Bridge over ICWW, Larose, LA | LADOTD** M&M provided rehabilitation plans for the upgrade of the structural, electrical, mechanical system to extend the life of the bridge 30-40 years for this vertical lift bridge. Additionally a new fender system was designed, the operator house was significantly upgraded, and bridge repainted. A bridge inspection and development of scope of service preceded the preparation of plans. Mr. Gerhart inspected the current condition of the electrical system and recommended the necessary improvements. Mr. Gerhart also participated in the design of the electrical system rehabilitation.
08/12 – 08/19	**Fore River Bridge, Quincy, MA | Mass DOT.** As part of the design/build team led by the joint venture of White-Skanska-Koch and Parsons, M&M provided the final mechanical and electrical design for the Fore River Bridge lift span. The replacement of the Fore River Bridge, carrying Route 3A, is a signature project in the

	Massachusetts Accelerated Bridge Program. The new proposed vertical lift bridge provides a horizontal navigable channel of 250’ and a vertical clearance of 175' in the open position. Extensive rehabilitation was required for the approaches to the proposed structure in addition to demolition of the existing temporary bridge and associated fender system. In addition to the mechanical and electrical services for the lift bridge replacement, M&M was also tasked with the vessel collision analysis and fender protection design. Mr. Gerhart was the lead electrical engineer for this project.
10/13 – 06/15	**4th Street Harvey Bridge over Harvey Canal. Harvey, LA | LADOTD:** Categorized as a high priority project for DOTD, M&M was engaged to develop a scope for the rehabilitation of the structural, electrical and mechanical systems for extending the life of the bridge 30-40 years. Plans include replacing the grid deck, new track and tread plates, replacing hydraulic system, new electrical control system, generator, and repainting the bridge. Mr. Gerhart was the lead electrical engineer for this project.
01/11- 09/15	**Jackson Street Bridge Rehabilitation, Alexandria, LA | LADOTD** M&M prepared the preliminary and final plans for the Jackson Street Bridge rehabilitation over Red River in Alexandria, LA. The rehabilitation includes repairing abutment damage caused by pavement growth, damaged approach slab, providing a relief mechanism for future growth, rehabilitating the lift span steel grid deck, and replacing the bridge & operating house electrical components. Mr. Gerhart performed an inspection of the existing condition of the electrical systems and provided recommendations for the necessary improvements. Mr. Gerhart also participated in the rehabilitation design
12/10 - 08/16	**Houma Navigational Canal Bridge Rehabilitation, Houma, LA | LADOTD** The Houma Navigational Canal Bridge is a swing bridge operated by hydraulic slewing cylinders. M&M is providing engineering design services for the rehabilitation of the drive machinery of this bridge. Mr. Gerhart was an Electrical Specialist on this project and was responsible for the design of the electrical system and provided construction support. Mr. Gerhart also performed the electrical inspection for this project.
08/11-01/12	**Lapalco Bascule Bridge Repairs, Harvey, LA | Jefferson Parish Dept of Public Works** This 2,840’ long four-lane high-rise bridge contains a double-leaf bascule girder span over the Canal. Over a period of years, for Jefferson Parish, M&M has inspected the bridge, developed plans for upgrading structural, electrical and mechanical components and provided construction support services. Emergency responses have been made following both marine collisions and hurricanes. Mr. Gerhart was part of the electrical design team.

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc.**					
Name	**Geoffrey L. Forest, PE**		Years of relevant experience with this employer		20
Title	Associate – Mechanical Design		Years of relevant experience with other employer(s)		0
Degree(s) / Years / Specialization			MS 2001 Mechanical Engineering BS 2000 Mechanical Engineering		
Active registration number / state / expiration date			PE45721 LA 9/30/2023		
Year registered	2021	Discipline	Mechanical		
Contract role(s) / brief description of responsibilities Mr. Forest is a Project Manager in the Mechanical Engineering Section of the firm. He has participated in various inspections of both fixed and movable bridges. Mr. Forest also has experience in bridge construction monitoring, inspection and condition reporting, detailing bridges for rating capacity, development of contract plans and specifications.					

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).
01/14 – Ongoing	**US 11 Bridge Rehabilitation Design, New Orleans, LA | Louisiana Department of Transportation:** M&M led a team providing structural, mechanical, electrical, and architectural rehabilitation services to extend the service life of the US 11 North and South bascule spans. The North bascule span is the only routinely operated span. In addition to repairs and improving the structural capacity to eliminate the weight posting of the bridge, the operator's house will be enlarged, and the span converted to hydraulic operation. The South bascule span is only opened manually (with a crane) when access is needed to service electrical utility lines crossing the lake. The span toes will be replaced to improve the structural capacity to eliminate the weight posting of the bridge. The operator houses will be rehabilitated to retain their historic appearance. The bascule spans comprise the largest spans (149') of the overall 4.7-mile bridge over Lake Pontchartrain. Mr. Forest led the mechanical design team for this unique bridge rehabilitation. The original machinery design included electric motors, open gearing, and a final rack and pinion set to move the bascule leaves. The span drive system was converted to hydraulic operation using linear hydraulic cylinders acting directly on the bascule girders. The bascule leaf superstructure and pier were modeled in 3D to aid in locating clearances and interferences with the new operating machinery
12/14 – 12/17	**In-Depth Inspection of Complex Structures Retainer – Various Bridges (Statewide) | LADOTD:** As a member of a multi-firm team, Modjeski and Masters was tasked to provide Structural, Mechanical, Electrical, and Coatings inspection services to perform multiple In-Depth Bridge Inspections for various bridges throughout the state of Louisiana, as a part of the ongoing statewide Complex Structures Inspection Retainer with the LADOTD. The inspections were performed using technical rope access and rappelling, aerial work platforms, and standard climbing techniques. Bridge conditions, including specific defects, were documented and

	presented in an inspection report and PONTIS/Inspect-Tech forms, along with repair recommendations and a full coatings evaluation report. Mr. Forest performed an in-depth condition inspection of the operating machinery for the movable bridges and authored the mechanical section of the inspection report.
03/10 – 06/16	**Houma Navigation Canal Bridge Rehabilitation. Houma, LA | LADOTD:** The Houma Navigation Canal Bridge is a swing bridge operated by hydraulic slewing cylinders. M&M is providing engineering design services for the rehabilitation of the drive machinery of this bridge. Mr. Forest performed field inspection and strain gage balancing of the existing operating machinery and design of the new machinery for the upgrade of the span drive system. Mr. Forest performed shop drawing review and response to Contractor RFI's. He also performed on site machinery installation support and inspection during construction.
10/13 – 06/15	**4th Street Harvey Bridge over Harvey Canal. Harvey, LA | LADOTD:** Categorized as a high priority project for DOTD, M&M was engaged to develop a scope for the rehabilitation of the structural, electrical and mechanical systems for extending the life of the bridge 30-40 years. Plans include replacing the grid deck, new track and tread plates, replacing hydraulic system, new electrical control system, generator, and repainting the bridge. Mr. Forest designed a new hydraulic span drive system to replace the existing hydraulic system. The new span drive was modeled after other LADOTD hydraulic span drives for consistency, but tailored specifically for this bridge. The design also included replacement of the center locks and tail locks with components that better retain the alignment of the spans. - Mr. Forest performed mechanical design for the rehabilitation. The work consisted of replacing the hydraulic span drive system in its entirety, as well as the track and tread plates. A staggered gear tooth profile was using in the track and tread design, which was modeled in 3D to create and verify the complex shapes
02/09 – 10/11	**Electrical Rehabilitation of Louisville Street Bascule Bridge & East Pearl River Swing Bridges. Monroe and St. Tammany Parish, Louisiana | LADOTD** M&M prepared the electrical plans with specificaton notes for the rehabilitation of the Louisville Street Bridge over the Ouachita River in Monore, LA and the East Pearl River Bridge over the Pearl River in LA. Both bridges were in need of an electrical rehabilitation including lighting, gears and generator replacement. M&M also provided construction support services.
11/06 – 02/07	**Stennis Space Center Bascule Bridge. Hancock County, MS | Stennis Space Center** This bridge is a double leaf bascule bridge. M&M provided an in-depth structural, mechanical, and electrical inspection. Mr. Forest was involved with the in-depth inspection and strain gauge balancing of the double-leaf bascule bridge operating machinery.

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc.**					
Name	**David M. Barrett, PE**		Years of experience with this firm/employer		29
Title	Associate – Mechanical Engineering		Years of experience with other firm(s)/employer(s)		2
Degree(s) / Years / Specialization			MS 1993 Mechanical Engineering BS 1991 Mechanical Engineering		
Active registration number / state / expiration date			PE38789 LA 9/30/2022		
Year registered	2014	Discipline	Mechanical		

Contract role(s) / brief description of responsibilities

Mr. Barrett joined the Modjeski and Masters, Inc. in 1993 and is an Associate in the firm's Movable Bridge Department. Mr. Barrett has significant experience in both the mechanical and structural aspects of bridge design, inspection, and testing, with concentration in movable bridge machinery. In addition to design work, this includes work during the construction stage of rehabilitation projects, including shop drawing review, inspections, and construction consultation. His experience includes swing spans, bascule bridges, and vertical lift bridges. Mr. Barrett has also developed computer programs for bridge machinery and balance analysis. He is well versed in many methods of non-destructive testing such as installation and monitoring of strain gages, accelerometers, displacement sensing sensors, ultrasonic methods, magnetic particle, dye penetrant, and balance measurements on 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.
07/14 – 08/14	**Port of New Orleans. Seabrook Bridge Operational Issues. New Orleans, Louisiana** M&M was contacted by the Port of New Orleans when the Seabrook Bascule Bridge experienced noises and stoppages during its operation. M&M quickly responded to perform a mechanical and structural inspection of the bridge and determined that a strain gage analysis was needed to accurately determine the cause of the vibration in the structure that was resulting in the stoppage. M&M performed the analysis and assisted the Port with the necessary repairs to rehabilitate the structure. Mr. Barrett was the lead mechanical engineer for this project.
12/13-01/14	**Norfolk Southern Corporation. North Draw Lake Pontchartrain - Testing Services. New Orleans, Louisiana** At an urgent request from Norfolk Southern, M&M provided strain gage balance testing of the single rolling leaf bascule span at the North Draw of the Lake Pontchartrain railroad crossing. Mr. Barrett participated in the strain gauge balance testing.

11/11-03/12	**Jefferson Parish. Lapalco Bridge over Harvey Canal. Harvey, Louisiana** The Lapalco Boulevard Bridge is a welded plate girder, double-leaf bascule bridge that carries four traffic lanes over the Harvey Canal. The firm performed structural, mechanical and electrical inspections, provided a report of findings/ recommendations, developed repair plans and monitored repairs and repainting. Mr. Barrett supervised the strain gage balancing of the double leaf bascule bridge.
01/12-03/12	**CSX Transportation. Rigolets Bridge - Pivot Machinery Rehabilitation. New Orleans, Louisiana** After a mechanical malfunction of the pivot machinery on the Rigolets Bridge, CSX contacted M&M to conduct an emergency site visit to determine the problem. M&M performed a mechanical evaluation of the swing span and developed both temporary and permanent repair plans for the structure. Mr. Barrett was the lead mechanical engineer for this project.
02/07 -03/07	**Union Pacific Railroad. Krotz Springs Bridge Mechanical Rehabilitation. Krotz Springs, Louisiana** The Krotz Spring Bridge is a swing span bridge in Krotz Springs. This 3435 ft. structure consists of pre-stressed, pre-cast concrete girders and steel truss spans crossing the Atchafalaya River. M&M worked on the rehabilitation of this bridge which included new end lifts. Mr. Barrett detailed the rehabilitation of existing mechanical components and designed new end lift, rail lift, and center latch machinery for this swing span. He also performed QA/QC and cost estimates for rehabilitation of the span drive system and span guide system.

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc.**					
Name	**Joseph G. Strenkoski, PE**		Years of relevant experience with this employer		9
Title	Senior Associate - Electrical		Years of relevant experience with other employer(s)		24
Degree(s) / Years / Specialization			BS 1988 Electrical Engineering		
Active registration number / state / expiration date			38336 LA 3/31/2024		
Year registered	2013	Discipline	Electrical		

Contract role(s) / brief description of responsibilities

Mr. Strenkoski has been employed by the Modjeski and Masters, Inc. since 2013. He has more than 27 years of experience in the electrical engineering consulting field including over a decade of project management work and almost two decades of electrical group management. Mr. Strenkoski has multi-discipline and multi-project management exposure including in-house coordination of civil, structural, and mechanical/electrical efforts, as well as relating with clients and consultants.

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).
02/17 - 08/2017 12/18 – 08/2019	**US 11 Bridge Rehabilitation Design, New Orleans, LA | Louisiana Department of Transportation** M&M led a team providing structural, mechanical, electrical, and architectural rehabilitation services to extend the service life of the US 11 North and South bascule spans. The North bascule span is the only routinely operated span. In addition to repairs and improving the structural capacity to eliminate the weight posting of the bridge, the operator's house will be enlarged, and the span converted to hydraulic operation. The South bascule span is only opened manually (with a crane) when access is needed to service electrical utility lines crossing the lake. The span toes will be replaced to improve the structural capacity to eliminate the weight posting of the bridge. The operator houses will be rehabilitated to retain their historic appearance. The bascule spans comprise the largest spans (149') of the overall 4.7-mile bridge over Lake Pontchartrain. Mr. Strenkoski is the Engineer of Record for the electrical design of this project.
06/13 – 02/15	**Joliet IL Bascule Bridges Automation. Illinois DOT (Joliet, Illinois):** The design team of M&M is providing engineering services related to a design to convert six bascule bridges on the Des Plaines River in Joliet, Illinois to remote control operations. This is a complex design involving the electrical and control upgrades required to remotely control six separate movable bridges of differing types from one remote location. Mr. Strenkoski is serving as the Senior Electrical Engineer on the project responsible for QA/QC and task management of the electrical and SCADA control design. He is also responsible for all cost estimating and quantity scheduling tasks to meet client standards.
06/14 – 02/15	**Elizabeth City Bridge Replacement/Rehabilitation. North Carolina DOT (Elizabeth City, NC):** As part of a Movable Bridge Services Agreement for North Carolina Dept. of Transportation, M&M has been contracted to

	replace the eastbound and rehabilitate the westbound bridges at Elizabeth City. The westbound span is a double leaf Hopkins trunnion bascule bridge. The new eastbound bridge is a double leaf trunnion bascule bridge. M&M provided construction management, including shop drawing review, shop inspection, and field inspection for the work on these bridges. Mr. Strenkoski assisted in construction support effort, construction meetings/site visits, and QA/QC of construction related responses.
02/14-07/15	**Lapalco Bascule Bridge Repairs, Harvey, LA | Jefferson Parish Dept of Public Works** This 2,840' long four-lane high-rise bridge contains a double-leaf bascule girder span over the Canal. Over a period of years, for Jefferson Parish, M&M has inspected the bridge, developed plans for upgrading structural, electrical and mechanical components and provided construction support services. Emergency responses have been made following both marine collisions and hurricanes. Mr. Strenkoski investigated the needs for replacing the braking system.
10/13-02/14	**Florida Avenue Bridge over Inner Harbor – Navigation Canal, New Orleans, LA** Hurricane Katrina flooded the Operator House electrical equipment room. M&M assisted the Port of New Orleans to secure funding from FEMA to rehabilitate the Operator House. The scope of services needed to be approved by FEMA and required modifications to provide the hazard mitigation and electrical repairs necessary to receive funding. Mr. Strenkoski provided assistance in site review and discussions of the situation.
04/14-05/14	**H.010882 4th Street Bridge Rehabilitation, Harvey, LA | LADOTD** The project involved the reliable performance of structural, mechanical, electrical, and architectural rehabilitation services of this bridge with the intent to extend the life of the bridge 30-40 years. Constructed in 1975, the bridge is a two-lane, double-leaf bascule bridge that carries LA18 across the Harvey Canal at Harvey, Louisiana. Mr. Strenkoski assisted with the evaluation of the electrical components of this bridge.

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc.**					
Name	**Newell H. Schindler, Jr., PE**		Years of relevant experience with this employer		2
Title	Supervisor Engineer – Highway Section Manager		Years of relevant experience with other employer(s)		39
Degree(s) / Years / Specialization			BS 1982 Civil		
Active registration number / state / expiration date			PE24130 LA 03/31/2024 Work Zone Training Compliant		
Year registered	1988	Discipline	Civil		

Contract role(s) / brief description of responsibilities:
Mr. Schindler has 39 years of experience in the management and design of infrastructure projects, 13 years of experience in the Road Design Section of LA DOTD, and 26 years of experience as a Consulting Engineer which has included Project Management and design of a multitude of infrastructure improvement projects. He has extensive knowledge of current LA DOTD and the American Association of State Highway & Transportation Officials' (AASHTO) policies and design procedures. In addition, Mr. Schindler supervised the design of a multitude of road and bridge improvement projects, including complex urban interstate, urban arterial, rural arterial, and minor bridge replacement projects. Projects included coordination with Traffic Engineers and the evaluation of traffic analyses to develop capacity and safety roadway improvements, including intersections and interchanges. He is familiar with the NEPA process and has completed the course "National Environmental Policy Act (NEPA) and Transportation Decision Making," sponsored by the National Highway Institute.

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).
12/20-03/22	**Cline Ave Bridge. East Chicago, Indiana | United Bridge Partners** Mr. Schindler served as lead engineer for several post construction design tasks. Performed an independent technical review (ITR) of final roadway signing and striping plans prepared by others to determine conformance with AASHTO, IDOT, and IMUTCD design criteria and guidelines. 23 non-conformance Items were identified and documented in M&M's NCR Report. Also provided the Client with 17 additional recommendations to improve the operation and safety of the Cline Ave. Bridge facility. Subsequently, prepared final construction plans to address the NCR items and recommendations. Final plans included signing and striping layouts along with sign structure details. Also prepared final plans for the installation of Guide (Attraction) signs along Indiana SR 912 and I-90 in Indiana and Illinois. Plans were prepared in accordance with IMUTCD, MUTCD and Illinois and Indiana sign guidelines. Also Served as lead engineer developing conceptual geometric layouts for two (2) proposed new partial and fully directional interchanges. at Riley Road and Cline Ave. Bridge (SR-912) (CAB). Five (5) conceptual interchange layouts were developed for the proposed Riley Rd./CAB Interchange and Three (3) conceptual interchange layouts were developed for the proposed Riley Rd./CAB Interchange and presented in a feasibility report. Conceptual roundabout layouts were developed for the ramp intersections. Developed design criteria for the proposed ramps in accordance with AASHTO and IDOT Interchange guidelines. Also developed plans for additional Guide Signage in Accordance with MUTCD.
02/17-05/20	**LA 37 (Sullivan Rd. – Liberty Rd.) Stage 0 Feasibility Study (S.P. No. H.00297.1). Baton Rouge, LA | LA DOTD** Mr. Schindler served as the Project Manager and Principal-in-Charge for a Stage 0 Feasibility Study to evaluate the constructability and operational feasibility of various safety and operational roadway improvement alternatives along an 8.5 mile segment of LA 37. Included the evaluation of improvements for the major intersections. Phase 1 services consisted of the, initial project research and data collection, initial site investigations, developing the Preliminary Purpose and Need and performing a traffic study for the Existing and

	No-Build conditions and developing the proposed improvement to carry forward to the Phase 2 Services. Mr. Schindler developed the Scope of Work for the Phase 2 Services. Phase 2 services included developing the design criteria for the evaluation of propose safety and capacity improvements alternatives, completing segments of the Stage 0 Feasibility Study and Environmental checklist.
05/12-08/16	**Baker Canal Bridge Replacement (S.P. No. H000698). Baker, LA | LA DOTD** Mr. Schindler was Project Principal, Engineer of Record and Quality Control Officer. Project consisted the design for the replacement of the northbound and southbound bridges over Baker Canal, along with reconstruction of the approach roadway and geometric improvements for the US 61//LA 964 interchange. Mr. Schindler performed technical quality control reviews for all aspects of the highway design in accordance with LA DOTD and AASHTO policies and criteria. He Performed technical quality control reviews of the horizontal and vertical design. He Performed quality control reviews of the hydrologic and hydraulic analyses in accordance with LA DOTD Hydraulics manual for drainage improvements (open ditch & sub-surface drainage). Mr. Schindler performed technical quality control reviews of the preliminary and final construction plans, which included typical sections, plan/profile sheets, traffic control plans, sequence of construction, and cross section sheets. Included guard rail in accordance with AASHTO's roadside design guide. He calculated construction quantities. He reviewed RFI and provided recommendations. He also reviewed and approved plan changes and provided construction support during the construction phase.
04/16-08/19	**Rossignol Road Bridge Replacement. Calcasieu Parish, LA | Calcasieu Parish Police Jury (CPPJ)** Principal-in-Charge and QA/QC officer overseeing the engineering design and construction for the replacement of an 80' timber bridge on Rossignol Road that crosses over Drainage Canal 8. Performed a Feasibility Study evaluating three (3) alternative bridge structures (Slab span, Geosynthetic Reinforced Soil Integrated Bridge System (GRS-IBS) with AASHTO Type II girders, and GRS-IBS with steel girders). HEC-RAS was utilized for hydraulic analysis of alternatives. Provided engineering services for the design and preparation of plans and specifications for a precast concrete slab span bridge replacement (3-spans), along with replacement of approach roadways. Construction was successfully completed in December 2019. In addition, assisted CPPJ in the advertisement and bidding of the proposed work and provided construction administration during construction.
03/10-09/12	**Neighborhood Planning, Stage 0 Feasibility Study, The Bayou District, St. Bernard Ave. (I-610 – Harrison Ave.) (RPC No. A-4.11). New Orleans, LA | New Orleans Regional Planning Commission (RPC)** Mr. Schindler was Project Manager and Principal-in-Charge. He completed a Stage 0 Feasibility Study for Transportation improvements along St. Bernard Avenue between I-610 and Filmore Avenue in the Bayou District neighborhood of New Orleans. Supervised the collection of traffic data, organized a project advisory committee, and provided conceptual alternatives for significant capacity improvements at the St. Bernard Ave./Caton St. Intersection. Alternatives included the conceptual designs of a roundabout, along with traditional signalized intersection with the addition of turn lanes. This project incorporated Complete Streets policies and included accommodating pedestrian and bicycle facilities.
02/13-06/14	**Judge Edward Dufresne Parkway Extension Stage 0 Feasibility Study and Safety Study (RPC P. No. UPWP A-5.13). Luling, LA | New Orleans Regional Planning Commission (RPC)** Mr. Schindler served as the Principal-in-Charge and QC/QA Officer for a Stage 0 Feasibility Study for evaluation of alternatives to extend Judge Edward Dufresne Parkway and/or provide emergency access to I-310 in the event of a train derailment. Collected traffic data, generated evacuation volumes, and prepared geometric alignment concepts and typical section drawings for the valuation of alternatives. Collected stakeholder input from the St. Charles Parish School Systems, Sheriff's Office, Department of Planning, Department of Parks and Recreation, LA DOTD, Parish elected officials and private landowners. Evaluated potential environmental, cultural, and socioeconomic resources within the designated project area and prepared alternatives maximizing the existing right-of-way and minimizing wetlands impacts.

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc.**					
Name	**Justin Guillot PE**		Years of relevant experience with this employer		1
Title	Engineer – Highway Section		Years of relevant experience with other employer(s)		4
Degree(s) / Years / Specialization			BS 2017 Civil		
Active registration number / state / expiration date			PE45792 LA 03/31/2024 Work Zone Training Compliant		
Year registered	2021	Discipline	Civil		

Contract role(s) / brief description of responsibilities:
Mr. Guillot has over 4 years of experience in the design of infrastructure projects. He has a broad knowledge of current Louisiana Department of Transportation and Development (LA DOTD) and the American Association of State Highway & Transportation Officials' (AASHTO) policies and design procedures. He has also served in project management roles and performed construction administration. In addition, Mr. Guillot has completed coursework by the Federal Highway Administration (FHWA) and National Highway Institute (NHI) in Roadside Safety Design, as well as the American Traffic Safety Services Association (ATSSA). He is certified as a Traffic Control Technician, Traffic Control Supervisor, and Flagger

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).
2/21 – 3/22	**Cline Avenue Bridge. East Chicago, IN:** This project involves various tasks related to the recent construction of a privately-owned 1.7-mile segmental box girder toll bridge. Mr. Guillot served in a general engineering support role in performing an Independent Technical Review of final Signage and Striping Plans produced by another consulting firm for conformance with Indiana Department of Transportation (InDOT) Design Guidelines as well as the Indiana Manual on Uniform Traffic Control Devices (IMUTCD). He was also tasked with proposing recommendations to improve the safety and operation of the bridge and roadway approaches, including revisions to the pavement marking layout and the addition of various warning and regulatory signs as well as roadway delineation. He produced final construction plans which included corrections to the items found not in compliance as well as the proposed recommendations. He calculated construction quantities and compiled an opinion of probable construction cost. He also reviewed construction material submittals from the contractor for conformance with the project specifications. Another task was the creation of conceptual layouts for new interchanges along the bridge. Mr. Guillot's role included determining the appropriate ramp design criteria (design speed, travel lane and shoulder widths, cross slope, maximum grades, curve radii, etc.) and designing multiple horizontal and vertical geometries for a total of 8 ramps at 2 different interchange locations in accordance with InDOT and AASHTO's "A Policy on Geometric Design of Highways and Streets". These ramps required complex layouts due to vertical clearance issues caused by the presence of overhead utilities and

	at-grade railroad tracks as well as limited right-of-way availability. He also produced conceptual layout drawings to illustrate each alternative.
3/21 – 6/21	**Calcasieu River Bridge (Prien Lake) Rating (S.P. No. H.009859.5). Lake Charles, LA:** Mr. Guillot served in a general engineering support role, which included utilizing AASHTOWare BrR and other bridge rating software to perform the calculations necessary to rate the prestressed concrete girder sections of the bridge, concrete pile bent caps, and the pin & hanger connections within the steel girder sections. He also contributed to the compilation of the final Rating Report.
2016 – 2019	**Rossignol Road Bridge Replacement. Calcasieu Parish, LA | Calcasieu Parish Police Jury (CPPJ)** Mr. Guillot provided general Engineering support for the replacement of an 80' timber bridge on Rossignol Road with a precast concrete slab span bridge. He performed geometric design of the bridge alignment and roadway approaches in accordance with AASHTO design criteria. He performed hydrologic and hydraulic analyses of roadway drainage elements and designed the approach guardrails as well as the bridge abutment scour protection, all to LA DOTD standards. He calculated final construction quantities and compiled an OPCC. He also assisted in the development of final construction plans and specifications.
2017 - 2020	**Central City Group A (FRC) (DPW P. No. 2017-RR021). New Orleans, LA | City of New Orleans - DPW** Mr. Guillot served as Design Lead during the preliminary and final design phases then transitioned to Project Manager and Construction Administrator upon the start of the construction phase. He performed geometric design in accordance with AASHTO design criteria and ensured compliance with the Americans with Disabilities Act (ADA) for full reconstruction (FRC) of 9 city blocks in the urbanized Central City Neighborhood. The project was a complex urban design due to the number of underground utilities and limited Right-of-Way. Mr. Guillot performed hydrologic and hydraulic analyses for the design of the sub-surface drainage system for a 10-year design storm in accordance with the LA DOTD Hydraulics Manual, along with design of the replacement of existing water and sanitary sewer systems. He oversaw development of the final construction plans and specifications, including typical sections, special details, plan/profile sheets, geometric details, joint layouts, and cross sections. Mr. Guillot calculated quantities for all construction bid items and compiled an Opinion of Probable Construction Cost (OPCC) which was ultimately within 1.1% of the winning contractor's bid. Upon the start of construction, Mr. Guillot was the primary point of contact for both the client and the contractor. He reviewed contractor material submittals and shop drawings for compliance with the plans and specifications. Lastly, he performed frequent site visits to ensure safe work practices were being followed and verify the contractor's implementation of proper temporary traffic control measures.

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc.**			
Name	**Michael J. Beitzel, NICET IV, NACE**	Years of relevant experience with this employer	48
Title	Senior Technician III	Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization		High School 1971 UNO Civil Engineering (part-time) 1972 - 1981	
Active registration number / state / expiration date NACE Certified Coating Inspector No. 5982 (Level 3 and Peer Review) NACE Corrosion Technician No. 5972 1986 NICET Level IV No. 071944		SSPC Member No. 000310 NBIS Certified SSPC C-3 and C-5 Refresher Work Zone Training compliant	
Year registered		Discipline	

Contract role(s) / brief description of responsibilities

Mr. Beitzel has worked in the Field Services Section of Modjeski and Masters, Inc. since 1974. He has experience in the inspection and evaluation of both fixed and movable bridges for highways and railroads. He has routinely assisted in matters pertaining to operations problems with movable bridges over many years. He has performed numerous bridge inspections/evaluations and has overseen rehabilitating work on a number of bridges, particularly for maintenance and preservation purposes. Mr. Beitzel was one of the very first persons nationwide to become a NICET IV Engineering Technician in the field of Bridge Safety Inspection. As such, he has participated in and has led inspection teams in the inspection of many bridges of all types including large Mississippi River Bridges. Mr. Beitzel is also a NACE Certified Coating Inspector with more than 40 years of experience in the inspection, plan and specification development for coating of bridges. He has conducted numerous bridge coating condition assessments and is M&M's Coating Group Leader.

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).
08/12 – 04/18	**H.000343/H.009943 US 190 Huey P. Long Bridge Construction Engineering & Inspection (Cleaning, Painting, Repairs [Phases I and 2]), Baton Rouge, LA.** This project provided construction engineering and inspection services for the through truss cantilever bridge that carries US 190, as well as one rail line over the Mississippi River in Baton Rouge, LA The 12,000+ foot bridge was in need of several repairs such as replacing elements in the steel approach and main spans, repairing navigation lighting, constructing retaining walls, placing guard rail, and repairing pavement. M&M also provided project administration, paint inspection, as well as environmental monitoring services during construction. The construction project consisted of structural repair, cleaning and painting of the steel superstructure. Mr. Beitzel oversaw the construction engineering and inspection services for the repainting of this bridge, provided QA services and mentoring to the field staff.

08/12 – 04/18	**H.000343/H.009943 US 190 Huey P. Long Bridge Construction Engineering & Inspection (Cleaning, Painting, Repairs [Phases I and 2]), Baton Rouge, LA.** This project provided construction engineering and inspection services for the through truss cantilever bridge that carries US 190, as well as one rail line over the Mississippi River in Baton Rouge, LA The 12,000+ foot bridge was in need of several repairs such as replacing elements in the steel approach and main spans, repairing navigation lighting, constructing retaining walls, placing guard rail, and repairing pavement. M&M also provided project administration, paint inspection, as well as environmental monitoring services during construction. The construction project consisted of structural repair, cleaning and painting of the steel superstructure. Mr. Beitzel oversaw the construction engineering and inspection services for the repainting of this bridge, provided QA services and mentoring to the field staff.
04/15 – 03/18	**H.011482 Huey P. Long Bridge Cleaning and Painting – Segment 7, Jefferson Parish, LA** The Huey P. Long Bridge is a high-level, combination highway and railroad truss bridge which crosses the Mississippi River in New Orleans, Louisiana and is part of the complex urban freeway system in the area. The total structure length, including approaches, is approximately 23,000 ft. The project consisted of the development of plans and specifications for the removal of lead paint and the recoating of the original bridge trusses and bracing above bridge deck level. CE&I services and a Level 4 Transportation Management Plan were provided. Mr. Beitzel developed the plans and specifications for the project and provided QA oversight for the CE&I services.
10/15 –04/18	**H.010636 US 90 Over Mississippi River (GNO 2) Structural Repairs and Spot-Painting, New Orleans, LA** M&M prepared plans for the repair and repainting of the Greater New Orleans Bridge No. 2 main bridge unit. Plans were also prepared for the repair of miscellaneous structural metalwork. Mr. Beitzel developed the plans and specifications for the repainting of the bridge and oversaw the construction engineering and inspection services for this project.
04/15 – 06/16	**H.009326.6 I-10/I-610 Bridge Repairs and Painting, Orleans, St. Charles and St. John Parishes, LA** The project provided for the complete cleaning and removal of existing lead based paint, application of new paint, and disposal of material in steel spans in the I-10/I-610 bridge near New Orleans, LA. Along with its sub-consultant KGC Environmental Services, Inc., M&M provided CE&I services to perform all painting inspection and environmental monitoring services. Mr. Beitzel provided QA oversight for the CE&I services.
05/12 – 03/15	**H.003028.5 Repaint I-10 Mississippi River Bridge West Approach, Baton Rouge, LA** This Project provided for sampling of existing paint coatings and site detailing for the preparation of plans and specifications for the repainting of the bridge west approach. A significant feature of this project was avoiding closure of any I-10 lanes. Mr. Beitzel oversaw the existing sampling of site conditions and developed the plans and specification for the repainting of this bridge.

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc.**					
Name	**Stacey P. Carr, PE**		Years of relevant experience with this employer		30
Title	Associate - Structures		Years of relevant experience with other employer(s)		1
Degree(s) / Years / Specialization			MS 2004 Structural BS 1990 Civil		
Active registration number / state / expiration date			26796 LA 9/30/2022		
Year registered	1996	Discipline	Civil		

Contract role(s) / brief description of responsibilities

Ms. Carr has extensive experience in the rating of highway, railroad, and combined highway/railroad structures, including large cantilever spans and movable bridges. Ms. Carr has overseen the gambit for rating bridges from small concrete slab spans to complex steel structures and gusset plates, as featured below. She is well experienced with AASHTOWare Bridge Rate (BrR) and is knowledgeable of both LFR and LRFR rating requirements.

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).
11/19 – 06/21	**H.009859.1: Load Rating of Fourteen Complex Bridges | LADOTD** Modjeski and Masters, Inc. is performing plan and document retrieval, bridge inspection (as needed), analysis and load rating, sampling/instrumentation and non-destructive testing (as needed), and plan production (as needed) for 14 complex bridges. The bridge types include swing spans, bascule spans, truss spans and curved steel spans. For the analysis and load rating task, M&M is generating a system structural model and performing an analysis of each bridge to determine dead and live load forces in the members. For the bridge superstructures, the "Girder System" in AASHTOWare BrR software is being used. For the complex bridges, a three-dimensional structural model is needed. M&M is also developing influence lines and COMPSTIL2 input files for complex substructures including hammerheads and inverted-T pier caps. All load rating analysis will follow current AASHTO Manual for Bridge Evaluation, the LADOTD Policies and Guidelines for Bridge Rating and Evaluation, and LADOTD Bridge Design and Evaluation Manual. Ms. Carr is the Project Manager who oversees and performs primary QC/QA for the load rating of the bridges.
10/19 – 05/21	**H.012485.1: Load Rating of 354 Off System Bridges | LADOTD** Modjeski and Masters, Inc. is performing plan and document retrieval, bridge inspection (as needed), analysis and load rating, sampling/instrumentation and non-destructive testing (as needed), and plan production (as needed) for 354 off system bridges including prestressed concrete bridges. For the analysis and load rating task, M&M is generating a system structural model and performing an analysis of each bridge to determine dead and live load forces in the members. For the bridge superstructures, the "Girder System" in AASHTOWare BrR software is being used. For the complex bridges, a three-dimensional structural model is needed. M&M is also developing influence lines and COMPSTIL2 input files for complex substructures including hammerheads and inverted-T pier caps. All load rating analysis will follow current AASHTO Manual for Bridge Evaluation, the LADOTD Policies and Guidelines for Bridge Rating and Evaluation, and

	LADOTD Bridge Design and Evaluation Manual. Ms. Carr is the Project Manager who oversees and performs primary QC/QA for the load rating of the bridges.
09/19 – 06/21	**H.000303.6: Danziger Bridge Repair and Rating | LADOTD** Modjeski and Masters, Inc. is performing repair and load rating services for the Danziger Bridge, a steel vertical lift structure with a steel girder superstructure supported by reinforced concrete piers, and the flanking approach structures. M&M is developing a LUSAS 3D model to evaluate main bridge and deck response to various conditions as well as for load rating purposes. AASHTOWare Bridge Rating BrR software will be used to perform load rating based on the present condition, capacity and loading of the bridge. All load rating analysis will follow current AASHTO Manual for Bridge Evaluation, the LADOTD Policies and Guidelines for Bridge Rating and Evaluation, and LADOTD Bridge Design and Evaluation Manual. Ms. Carr is the Project Manager who oversees and performs primary QC/QA for the load rating and analysis of this structure.
10/17 - 08/19	**H.009859.5: Nineteen Complex Bridge Load Rating and Evaluation. Louisiana | LADOTD** Modjeski and Masters, Inc. is performing plan and document retrieval, bridge inspection and analysis, and load and resistance factor rating of complex bridge structures, mainly steel vertical lifts. Gusset, truss, floorsystem and substructure components are being rated. Bridge inspections are focusing on gusset plates and existing member conditions for rating. AASHTOWare BrR is being used for the ratings, which follow current AASHTO Manual for Bridge Evaluation, the LADOTD Policies and Guidelines for Bridge Rating and Evaluation, and LADOTD Bridge Design and Evaluation Manual. Ms. Carr was the Project Manager who oversees and performs primary QC/QA for the load rating of the bridges.
02/16 - 10/17	**H.009859.5: Ten Truss Bridges Load Rating and Evaluation. Louisiana | LADOTD** Modjeski and Masters, Inc. is performing plan and document retrieval, bridge inspection and analysis, and load and resistance factor rating of complex bridge structures, including large cantilever trusses, vertical lifts and swing spans. Gusset, truss, floorsystem and substructure components are being rated. Bridge inspections are focusing on gusset plates and existing member conditions for rating. AASHTOWare BrR is being used for the ratings, which follow current AASHTO Manual for Bridge Evaluation, the LADOTD Policies and Guidelines for Bridge Rating and Evaluation, and LADOTD Bridge Design and Evaluation Manual. Ms. Carr was Project Manager who oversaw and performed primary QC/QA for the load rating of the bridges.
07/15 - 12/16	**H.009859.5 (A): Rating and Posting of On-System State Bridges. Louisiana | LADOTD** M&M performed load rating analyses for 110 existing bridge structures using the Load and Resistance Factor Rating Method. Elements to be rated include superstructure and substructure components. Provisions in the 2011 AASHTO Manual for Bridge Evaluation as well as LADOTD Policies and Guidelines for Bridge Rating and Evaluation were followed. Ms. Carr was group leader, oversaw, and performed primary QC/QA for the load rating of the structures, including prestressed concrete bridges.

16. Staff Experience:

<table>
<tr><td colspan="6">Firm employed by Modjeski and Masters, Inc.</td></tr>
<tr><td>Name</td><td colspan="3">Cullen J. Ledet, PE</td><td>Years of relevant experience with this employer</td><td>20</td></tr>
<tr><td>Title</td><td colspan="3">Senior Associate</td><td>Years of relevant experience with other employer(s)</td><td>0</td></tr>
<tr><td colspan="3">Degree(s) / Years / Specialization</td><td colspan="3">BS 2000 Civil Engineering</td></tr>
<tr><td colspan="3">Active registration number / state / expiration date</td><td colspan="3">33222 LA 9/30/2023
Work Zone Training Compliant</td></tr>
<tr><td>Year registered</td><td>2007</td><td>Discipline</td><td colspan="3">Civil</td></tr>
<tr><td colspan="6">Contract role(s) / brief description of responsibilities
Mr. Ledet has been employed as a Design Engineer in the New Orleans office of Modjeski and Masters, Inc. since 2002, after having interned two summers with the firm. During this period he has been engaged in the design of both fixed and movable highway and railroad bridges. Mr. Ledet has prepared designs, plans, and specifications for a number of projects both for improvements as well as complex projects.</td></tr>
<tr><td>Experience dates (mm/yy–mm/yy)</td><td colspan="5">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).</td></tr>
<tr><td>3/17 - ongoing</td><td colspan="5">LA 1 – Port Allen Bridge Replacement, Port Allen, LA | LADOTD
The ongoing project consists of replacing the existing northbound and southbound bridge structures on LA 1 over the Intracoastal Canal Waterway (ICWW). The proposed LA 1 SB Bridge will consist of 3 - 12’ travel lanes and 2 - 10’ shoulders and will be approximately 2,680’ long. The proposed LA 1 NB Bridge will consist of 2 - 12’ travel lanes and 2 - 10’ shoulders (LA 1 NB roadway), a permanent 2’ wide median barrier and 1 - 12’ travel lane with 2 - 6’ shoulders (I-10 EB Exit Ramp roadway). The Exit Ramp and LA 1 NB roadway will be separated by a permanent 2’ wide median barrier until the LA 1 NB Bridge will bifurcate where the LA 1 NB roadway and I-10 EB Exit Ramp roadway will be carried on separate bridge structures. The LA 1 NB Bridge and I-10 EB Exit Ramp Bridge will be approximately 2,700’ and 354’ long, respectively. Both LA 1 NB and LA 1 SB Bridges will consist of a 870’ long haunched three span continuous steel plate girder main span unit over the ICWW and prestressed concrete LG girder approach spans. Mr. Ledet serves as Deputy Project Manager for this project and is developing the General Plan and Elevation drawings while identifying any potential conflicts with utilities and existing structures.</td></tr>
<tr><td>12/15-02/17</td><td colspan="5">H.010620 US 90 from Albertson Pkwy to Ambassador Caffrey Pkwy – BNSF Frontage Road Bridges, Lafayette Parish, LA
M&M provided an independent QC review of the frontage road bridges over the BNSF Railroad. The bridges included construction of various continuous precast prestressed concrete girder spans supported on bent columns and pile footing foundations. Mr. Ledet performed the review of the structural plans and details at every submittal milestone.</td></tr>
</table>

6/12 –12/16	**S.P. H.009933: MacArthur Drive Interchange. Harvey, Louisiana | LADOTD** The MacArthur Interchange Project consisted of the addition of two new ramps to the Westbank Expressway near MacArthur Drive, as well as the demolition of two existing ramps. M&M was responsible for the substructure design for Ramps 7 and 8 in a complex urban setting which included steel pile footings and reinforced concrete columns. M&M also provided construction related engineering support services. Mr. Ledet provided peer review services of the original design. Mr. Ledet detailed the flared reinforced concrete columns and provided construction related engineering services for this project.
01/14-06/15	**US 90 (Future I-49) from Albertsons Pkwy to Ambassador Caffrey Pkwy, Lafayette Parish, LA** As a member of the Design-Build team with C.H. Fenstermaker & Associates, M&M provided an independent QC review of the structures over the BNSF Railroad and Albertsons Parkway. Both bridges included construction of various continuous precast prestressed concrete girder Spans supported on bent columns and pile footing foundations. The structures over the BNSF Railroad included a phased sequence of construction. Mr. Ledet performed the review of the structural plans and details at every submittal milestone.
12/01 – 12/02 12/08 – 10/09	**Illinois River Bridge. Elgin, Joliet & Eastern Railway Company (Devine, Illinois):** The Illinois River Bridge was originally built as four 154-foot fixed through truss spans. About 1932, Span 2 was converted to a vertical lift span and the adjacent spans fitted with lifting towers, counterweights, and an electro-mechanical operating system, providing a 120-foot clear opening. Under the provisions of the "Truman-Hobbs Act" of 1940, the USCG is funding alteration of the bridge to provide a 300-foot marine opening. The replacement vertical lift span will be 348 feet long and have a maximum lift vertical clearance of 56 feet. M&M collected relevant data, evaluated alternatives, established design criteria, cost estimates, prepared project report, and provided the final design. Mr. Ledet designed and detailed the framing for the operator house as well as the pier grillage structures.
09/08-02/11	**S. P. 701-65-1098 Replacement of LA3249 (Well Road) over I-20, Monroe, LA** This Project was the replacement of the Well Road Overpass using accelerated construction methods to construct replacement spans within the interchange R/W and over a weekend remove existing spans and install new spans. Mr. Ledet was the point of contact for Modjeski and Masters, Inc. He designed and detailed deck drainage; calculated quantities and generated construction cost estimate; construction services.
06/01-08/14	**S.P. 700-18-0014 Huey P. Long Bridge Widening at New Orleans, LA** This Project widens the existing bridge roadways through the widening of river piers using conventional and post-tension concrete, two new truss lines and 43' roadways to replace existing 18' roadways. The Project construction cost is $1.2B. This Project was a major complex design involving adding truss lines while maintaining existing traffic. Mr. Ledet assisted in the design and detail of the main river pier widening; designed and detailed plans and generated specifications for various components of the superstructure and substructure of the approaches, including steel and prestressed concrete girders; provided construction engineering support services for approaches contract.

16. **Staff Experience:**

Firm employed by **Modjeski and Masters, Inc**.					
Name	**Jared Weisman, PE**		Years of relevant experience with this employer		12
Title	Associate - Structures		Years of relevant experience with other employer(s)		0
Degree(s) / Years / Specialization BS / 2008 / Civil Engineering MS / 2010 / Civil Engineering					
Active registration number / state / expiration date			43452 LA 9/31/2023		
Year registered	2019	Discipline	Civil		
Contract role(s) / brief description of responsibilities Mr. Weisman has been employed with Modjeski and Masters since August of 2010. He has experience in the design, inspection, rating, and rehabilitation of a number of new and existing highway and railroad bridges. He has worked on a variety of bridge types including deck and through plate girders, prestressed concrete girders, swing, fixed, and bascule trusses, and inclined steel arch 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 time specified in the applicable MPR(s).
03/17 – Ongoing	**LA 1 – Port Allen Bridge Replacement, Port Allen, LA | LADOTD** The ongoing project consists of replacing the existing northbound and southbound bridge structures on LA 1 over the Intracoastal Canal Waterway (ICWW). The proposed LA 1 SB Bridge will consist of 3 - 12' travel lanes and 2 - 10' shoulders and will be approximately 2,680' long. The proposed LA 1 NB Bridge will consist of 2 - 12' travel lanes and 2 - 10' shoulders (LA 1 NB roadway), a permanent 2' wide median barrier and 1 - 12' travel lane with 2 - 6' shoulders (I-10 EB Exit Ramp roadway). The Exit Ramp and LA 1 NB roadway will be separated by a permanent 2' wide median barrier until the LA 1 NB Bridge will bifurcate where the LA 1 NB roadway and I-10 EB Exit Ramp roadway will be carried on separate bridge structures. The LA 1 NB Bridge and I-10 EB Exit Ramp Bridge will be approximately 2,700' and 354' long, respectively. Both LA 1 NB and LA 1 SB Bridges will consist of a 870' long haunched three span continuous steel plate girder main span unit over the ICWW and prestressed concrete LG girder approach spans. Mr. Weisman serves as the Lead Engineer for this project.
09/17 – 05/19	**LA 16 over Tangipahoa River, Tangipahoa Parish, LA | LADOTD** M&M developed all necessary topographic surveys, preliminary and final plans for this bridge replacement project on LA 16, between LA 51 and LA 1054, in Amite City, LA. This project included reconstruction of the approach slabs and roadway on the east and west sides of the bridge. It was anticipated that traffic shall be maintained during construction with an on-site diversion roadway and bridge. The plans were prepared in accordance with AASHTO LRFD Bridge Design Specifications and the Bridge Design and Evaluation Manual (BDEM), DOTD 2017 Design Guidelines, DOTD 2016 Standard Specifications for Roads and Bridges, DOTD Road Design Manual, and DOTD Hydraulics Manual. QA/QC was provided in accordance with Part 1, Chapter 3 of BDEM. Construction Related Engineering Support was provided and is currently on-going. Mr. Weisman serves as the Lead Engineer for this project.

09/17 – 01/20	**US 61 at Thompson Creek, West Feliciana Parish, LA | LADOTD** M&M provided all necessary preliminary and final plans for the rehabilitation of the northbound bridge and replacement of the southbound bridge on US 61 over Thompson Creek, between LA 10 and LA 964, near St. Francisville, LA. It was anticipated that traffic would be maintained during the construction of the new southbound bridge with temporary two-way traffic on the rehabilitated northbound bridge. The project also included the design and detailing of adding a helper bent to the northbound bridge. The plans were prepared in accordance with AASHTO LRFD Bridge Design Specifications and the Bridge Design and Evaluation Manual (BDEM), DOTD 2017 Design Guidelines, DOTD 2016 Standard Specifications for Roads and Bridges, DOTD Road Design Manual, and DOTD Hydraulics Manual. QA/QC was provided in accordance with Part 1, Chapter 3 of BDEM. Construction Related Engineering Support was provided and is currently on-going. Mr. Weisman serves as the Lead Engineer for this project.
09/17 – 02/20	**LA 1064 at Little Natalbany River, Livingston Parish, LA | LADOTD** M&M developed all necessary topographic surveys, preliminary and final plans for this bridge replacement project on LA 1064, near LA 43 and Hoover Road, in Albany, LA. This project included reconstruction of the approach slabs and roadway on the east and west sides of the bridge. It was anticipated that the roadway would be closed during construction and a detour route was detailed. The plans were prepared in accordance with AASHTO LRFD Bridge Design Specifications and the Bridge Design and Evaluation Manual (BDEM), DOTD 2017 Design Guidelines, DOTD 2016 Standard Specifications for Roads and Bridges, DOTD Road Design Manual, DOTD Hydraulics Manual, and DOTD Location and Survey Manual. QA/QC was provided in accordance with Part 1, Chapter 3 of BDEM. Construction Related Engineering Support was also provided. Mr. Weisman serves as the Lead Engineer for this project.
10/14-06/16	**S.P. 700-18-0014 Huey P. Long Bridge Widening at New Orleans, LA** This Project widens the existing bridge roadways through the widening of river piers using conventional and post-tension concrete, two new truss lines and 43’ roadways to replace existing 18’ roadways. The Project construction cost is $1.2B. This Project was a major complex design involving adding truss lines while maintaining existing traffic. r. Weisman helped produce ratings for the widened structure for a variety of vehicle types, performed gusset plate analysis and helped in the creation of the project report.
03/11-09/14	**I-74 Mississippi River Bridge Arch. Bettendorf, IA | Iowa and Illinois DOTs** The I-74 corridor in the Quad Cities is approximately seven miles long and crosses the Mississippi River between Bettendorf, Iowa and Moline, Illinois. Twin, 800’ span basket handle true arch bridges are being constructed to replace the existing crossing. M&M, as part of the Alfred Benesch team, designed the twin arch superstructures. Mr. Weisman assisted in the design of the variable depth plate girder floorbeams and analyzed preliminary erection schemes for the basket handle arch superstructure. He also calculated quantities for cost estimation and checked calculations for the pedestrian railings.

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc.**					
Name	**Anthony E. Schoenecker, PE**		Years of relevant experience with this employer		13
Title	Associate / New Orleans Field Services Manager		Years of relevant experience with other employer(s)		4
Degree(s) / Years / Specialization			BS 2005 Civil Engineering		
Active registration number / state / expiration date			35786 LA 03/31/2023 NBIS Certified Inspector / SPRAT Level III Certified Workzone Compliant		
Year registered	2010	Discipline	Civil		

Contract role(s) / brief description of responsibilities

Mr. Schoenecker is a Louisiana licensed Professional Engineer and will serve as Bridge Inspection Project Manager for this contract. He is the M&M New Orleans office Field Services Manager and is an NBIS Inspection Team Leader responsible for the coordination and execution of inspections and condition reporting. He is trained in Technical and Rope Access techniques and has numerous inspection certifications including: NHI 130055 - Safety Inspection of In-Service Bridges (and NHI 130053 Refresher Course), NHI 130078 - Fracture Critical Inspection Techniques for Steel Bridges; Level I and II Liquid Penetrant and Magnetic Particle Inspection; SPRAT Level III Rope Access Technician, and UAV Remote Pilot (Drone) Operator Permit.

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).
11/13- 2/14, 12/14- 8/15, 9/16 -11/16, 3/17 – 1/18	**4400002687 In-Depth Inspection of Complex Structures Retainer – Various Bridges, Statewide** As a member of a multi-firm team, Modjeski and Masters was tasked to provide Structural, Mechanical, Electrical, and Coatings inspection services to perform multiple In-Depth Bridge Inspections for various bridges throughout the state of Louisiana, as a part of the ongoing statewide Complex Structures Inspection Retainer with the LADOTD. The inspections were performed using technical rope access and rappelling, aerial work platforms, and standard climbing techniques. Bridge conditions, including specific defects, were documented and presented in an inspection report and PONTIS/Inspect-Tech forms, along with repair recommendations and a full coatings evaluation report. Mr. Schoenecker has participated as Team Leader in the inspection of five bridges and is Project Manager for two bridges under this contract. Mr. Schoenecker additionally served as office support for two bridges under this contract.
11/16– 5/17	**Port of New Orleans Seabrook Bridge Floor System Replacement. New Orleans, LA** Modjeski and Masters prepared the plans and specifications to replace the railroad floor system between the trusses of the Seabrook Railroad Bridge for the Port of New Orleans. M&M also developed the sequence of

	construction to minimize the impacts to the rail and marine traffic as well as maintain the span balance throughout construction. Mr. Schoenecker assisted with the design and field inspections.
02/17– 5/17	**Port of New Orleans Seabrook Bridge Link Pin Joints Emergency - Construction Services. New Orleans, LA**: After M&M completed the initial investigation and developed emergency repair contract documents for the partially failed 2nd Link joint on the Seabrook Strauss Bascule Bridge, the Port of New Orleans called upon M&M to provide Construction Support Services for the project. M&M reviewed all Contractor RFIs, shop drawings, and procedure submittals for the project. M&M also provided on-site construction inspection services throughout the repair effort. Mr. Schoenecker assisted in field inspections and CE&I.
05/10 – 06/12	**Houma Navigation Canal Bridge Rehabilitation. Houma, LA | LADOTD** The Houma Navigation Canal Bridge is an uneven steel two girder bob-tailed swing bridge located in Houma, Louisiana. The project was to inspect and develop details to rehabilitate the main span and perform other needed repair work to the main span and approaches. In addition, a new operator's house was to be provided and the electrical and mechanical systems replaced. The electrical and mechanical systems were to be elevated to minimize the potential for damage during high water. The new fender system was designed for higher vessel impact loads. Mr. Schoenecker was the team leader for the bridge inspection team.
2012-Ongoing	**Port of New Orleans INHC Bridge Inspections. New Orleans, Louisiana|** Port Of New Orleans This project included the inspection of four bridges owned by the Port of New Orleans. There are three Strauss-Trunnion bascule bridges carrying highway and railway traffic across the Inner Harbor – Navigation Canal between the Mississippi River and Lake Pontchartrain. The Seabrook and Almonaster Avenue bridges feature a 117-foot steel trough-truss lift span, two 45-foot high tower trusses and a counterweight truss. The St. Claude Avenue Bridge features a 93 ½ -foot steel trough-truss lift span, two 45-foot high tower trusses and a counterweight truss. The fourth bridge,the Florida Avenue Bridge, is a newer bridge that replaced an existing 115 ft. span Strauss Trunnion Bascule Bridge with a 340 ft. span vertical lift bridge. The replacement bridge carries one railroad track and two roadway lanes with two sidewalks and provides 156 ft. of vertical clearance over a 300 ft. wide navigation channel. These inspections included a 100% hands-on visual inspection of all structural, electrical and mechanical elements above the water line, including fatigue-sensitive and fracture-critical members, comprising the bridges and approaches. Mr. Schoenecker served as Lead Inspector and currently serves as Project Manager of these inspections.

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc.**					
Name	**Matthew J. Miller, PE**		Years of relevant experience with this employer		11
Title	Associate – Field Services		Years of relevant experience with other employer(s)		0
Degree(s) / Years / Specialization			BS 2010 Civil Engineering		
Active registration number / state / expiration date			39534 LA 09/30/2023 NBIS Certified Inspector Work Zone Training Compliant		
Year registered	2015	Discipline	Civil		

Contract role(s) / brief description of responsibilities

Mr. Miller is a registered professional engineer with 10 years of experience in the Field Services Section in the New Orleans Office. During his time at M&M, Mr. Miller has been primarily involved with CE&I inspection services on bridge repair and construction projects, and with the detailed, interim and special inspections of numerous railroad bridges. He has been involved in numerous emergency inspections and troubleshooting. Mr. Miller is certified in a variety of Bridge Inspection industry standard training, including FHWA-NHI Bridge Inspection Refresher and FHWA-NHI Safety of In-Service Bridges courses, e-Railsafe Safety Training, M&M's Technical and Rope Access 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 time specified in the applicable MPR(s).
02/18 – 09/19	**UPRR 305.45 Angelton Sub San Bernard Bridge Replacement. Union Pacific Railroad: (Angleton, Texas):** M&M provided the design for a new vertical lift bridge that replaced an existing swing span bridge over the San Bernard River in the Angleton Subdivision of the Union Pacific Railroad. M&M coordinated with the UPRR to accommodate an accelerated construction schedule and provided construction support for the project. The new bridge was designed to be "remote control ready." Mr. Miller served as the Assistant Resident Engineer and Chief Construction Inspector. Mr. Miller was involved in all aspects of the project's construction engineering and inspection duties from the fabrication and erection phase through the bridge change out, commissioning and project close out phases. Mr. Miller took part in reviewing submittals and RFI's, assisting Union Pacific Railroad with changes and disputes, and confirming that the as-built condition was in compliance with the plans and specifications.
04/16 – 01/18	**Union Pacific Railroad System Wide Inspections | UPRR Systemwide** Modjeski and Masters performed a system-wide inspection of steel bridges for Union Pacific Railroad (UPRR). A total of 1,280 bridges were inspected. The types of bridges inspected include through trusses, deck trusses, through plate girders, and deck plate girders on steel towers. Also included were movable structures such as

	bascule, swing and vertical lift bridges. Modjeski and Masters provided uniformity throughout the entire system by identifying inconsistencies in describing levels of severity noted with deficiencies and assisted the UPRR inspectors in identifying problem areas and the causes associated with them. Mr. Miller was the inspection team leader for this project.
7/14-9/14	**Belle Chasse Lift Bridge Inspection. Belle Chasse, Louisiana | New Orleans & Gulf Coast Railway** The New Orleans & Gulf Coast Railway selected M&M to perform an in-depth structural, mechanical and electrical inspection of the Belle Chasse Bridge over the Intracoastal Waterway. All structural members were observed at close range along with a close visual inspection of the electrical and mechanical systems. The inspection team took measurements of metalwork losses that could possibly result in reduced load carrying capacity of the structure. Mr. Miller served as inspection team leader for this bridge.
12/12-10/13	**4th Street Harvey Railroad Bridge. Harvey, Louisiana** M&M performed a mechanical, electrical and structural inspection of the 4th Street Harvey Canal Railroad Bridge. M&M provided a report detailing the findings of the inspection and made recommendations for repairs to the structure. Mr. Miller assisted in the structural inspection of this bridge.
04/14 – 08/14	**CSX West Pearl Swing Span Emergency. CSX Transportation (St. Tammany Parish, Louisiana):** When the swing span center bearing of the West Pearl River Bridge malfunctioned, CSX Railroad contacted M&M to perform an emergency site visit to determine the cause of the failure. M&M quickly performed a site visit to determine the cause and provided the railroad with an in-depth report to correct the problem. Mr. Miller was the initial responder on this project. He assisted CSXT with jacking the bridge and conducted the initial inspection of the center pivot bearing. After further evaluation, it was determined that the center bearing and associated components required significant rehabilitation. He prepared the repair plans and specifications to rehabilitate the bearing and associated components, as well as bridge temporary support details while machining took place. Train traffic was maintained throughout the entire project. He assisted CSXT with reinstalling the center bearing once defects were corrected in the machine shop.
5/11 – 01/12	**Houma-Freeport Railroad Bridge Relocation. Freeport, Texas | Union Pacific Railroad** The existing swing span railroad bridge in Freeport was removed and was replaced with the relocated and rehabilitated vertical lift span from Houma, LA. The lift span, towers, counterweights and machinery were relocated, as well. New piers and approach were provided as well as a complete electrical system replacement. M&M provided construction support. Mr. Miller assisted with construction support services.

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc.**					
Name	**Timothy P. Sensebe, EI**		Years of relevant experience with this employer		6
Title	Field Services Engineer		Years of relevant experience with other employer(s)		0
Degree(s) / Years / Specialization			BS 2015 Civil Engineering		
Active registration number / state / expiration date			EI.33006 LA 3/31/23		
Year registered	2016	Discipline	Civil		
Contract role(s) / brief description of responsibilities: Mr. Sensebe joined M&M in 2016 and engineering intern in the Field Services Section. His experience includes highway and railroad fixed and movable bridge inspection and construction monitoring. Mr. Sensebe is a FHWA Certified Bridge Inspector and is an Inspection Team Leader.					

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).
6/2020-5/2021	**Cline Avenue Bridge Review, Analysis and Construction Support** | United Bridge Partners The Cline Avenue Bridge is 6,236-foot long precast segmental bridge that spans over several rail lines, Riley Road, and the Indiana Harbor Canal in East Chicago, IN. The new structure will consist of 29 cast-in-place concrete columns that support 685 post-tensioned concrete single cell box girders segments which form the bridge's deck. Completion of this project will restore entrance into the Northwest Indiana area. Modjeski and Masters, Inc. was contacted by United Bridge Partners to perform a fully independent review on the design, review of construction documents, and provide an on-site presence for completion of construction of the 1.7 mile long segmental bridge. Design and construction work is ongoing. Mr. Sensebe is assisting with construction engineering and inspection services for this project.
6/2016-7/2020	**Lapalco Double Leaf Bascule Bridge Rehabilitation** | Jefferson Parish Dept of Engineering The Lapalco Boulevard Bridge over the Harvey Canal is a four-lane highway bridge. The main bridge portion of the Lapalco Boulevard Bridge is a welded plate girder, double leaf, trunnion type bascule with an open grid deck. The approach spans are comprised of steel girder spans and concrete girder spans with concrete decks, and concrete slab spans with curtain walls. Modjeski and Masters performed an in-depth inspection of structural, mechanical and electrical components and approach spans including a coatings inspection of the steel metalwork. M&M also performed a load capacity rating analysis of the structure and developed a written condition report detailing findings and recommendations. M&M performed UT investigations of the girder hanger pins, assessed the different brake systems for the bridge and developed mechanical and electrical contract documents for various repairs as well as provided construction monitoring services. Mr. Sensebe provided construction monitoring services for this project.

3/2019-6/2020	**Bonnet Carre Trestle Bridge Replacement- CE&I Laplace, Louisiana** | Canadian National Railway The existing bridge was one of three railroad crossings and a highway crossing that were built in 1934 to accommodate the construction of the Bonnet Carre Spillway. The trestle is 11,753 feet long and was opened to rail traffic in 1934. The superstructure is ballast deck timber trestle with the exception of 13 concrete fire breaks, five (5) concrete DVB spans, one (1) steel beam span and five (5) steel TPG spans. The replacement structure was designed on an offset alignment for an overall new length of 11,711' with a horizontal offset of approximately 50' east, with an exception near each end of the bridge where the alignment will transition back close to the existing track in order to utilize the old approach embankments. The new construction is precast concrete design with the superstructure composed of PPC DVB spans and the substructure consists of 1,139 24" square precast prestressed concrete piles supporting two (2) precast abutment caps with precast backwalls and 299 precast pier caps for 3, 4 and 6-pile piers. Modjeski and Masters provided professional CE&I services for the bridge replacement. These services included providing an on-site resident engineer with responsibility for daily construction inspection. Other specialized personnel was provided as needed to manage, inspect, test and otherwise oversee tasks involved with this project. Mr. Sensebe assisted with the construction engineering and inspection services.
5/2014-6/2016	**US 190 Mississippi River Bridge - Construction Engineering and Inspection (Repairs). Baton Rouge, Louisiana |** Louisiana Department of Transportation and Development M&M was retained by the LADOTD to provide construction contract administration and construction engineering and inspection services required during the repairs to the US 190 Mississippi River Bridge in Baton Rouge, Louisiana. Included in the project are assorted repairs and replacement of elements in the steel approach spans and main span, navigation light repair, construction of retaining walls, guard rail placement and miscellaneous pavement repair. Mr. Sensebe assisted with the construction engineering and inspection services for this project.

16. Staff Experience:

<table>
<tr><td colspan="6">Firm employed by Modjeski and Masters, Inc.</td></tr>
<tr><td>Name</td><td colspan="2">Jason W. Miles, PE</td><td colspan="2">Years of relevant experience with this employer</td><td>13</td></tr>
<tr><td>Title</td><td colspan="2">Associate - Structures</td><td colspan="2">Years of relevant experience with other employer(s)</td><td>0</td></tr>
<tr><td colspan="3">Degree(s) / Years / Specialization</td><td colspan="3">BS 2008 Civil</td></tr>
<tr><td colspan="3">Active registration number / state / expiration date</td><td colspan="3">37773 LA 09/30/2023</td></tr>
<tr><td>Year registered</td><td>2013</td><td>Discipline</td><td colspan="3">Civil</td></tr>
<tr><td colspan="6">Contract role(s) / brief description of responsibilities
Mr. Miles attended the AASHTOWare Bridge Rate (BrR) meeting titled “AASHTOWare Bridge Design and Rating Software User Group Meeting” in August 2014 and 2016. He also completed NHI Course No. 130092, Fundamentals of LRFR and Applications of LRFR for Bridge Superstructures and NHI Course No. 130081, LRFD for Highway Bridge Superstructures. Mr. Miles also has experience with finite element analysis, in particular through the use of Lusas software to check AASHTOWare BrR results. He will serve as a Load Rating and Analysis Engineer.</td></tr>
<tr><td>Experience dates (mm/yy–mm/yy)</td><td colspan="5">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).</td></tr>
<tr><td>11/19 – 06/21</td><td colspan="5">H.009859.1: Load Rating of Fourteen Complex Bridges | LADOTD
Modjeski and Masters, Inc. is performing plan and document retrieval, bridge inspection (as needed), analysis and load rating, sampling/instrumentation and non-destructive testing (as needed), and plan production (as needed) for 14 complex bridges. The bridge types include swing spans, bascule spans, truss spans and curved steel spans. For the analysis and load rating task, M&M is generating a system structural model and performing an analysis of each bridge to determine dead and live load forces in the members. For the bridge superstructures, the “Girder System” in AASHTOWare BrR software is being used. For the complex bridges, a three-dimensional structural model is needed. M&M is also developing influence lines and COMPSTIL2 input files for complex substructures including hammerheads and inverted-T pier caps. All load rating analysis will follow current AASHTO Manual for Bridge Evaluation, the LADOTD Policies and Guidelines for Bridge Rating and Evaluation, and LADOTD Bridge Design and Evaluation Manual. Mr. Miles is providing technical guidance, QC/QA, and report review for a team of over 10 rating personnel.</td></tr>
<tr><td>10/18 - 03/19</td><td colspan="5">H.012343.6 Sunshine Bridge Collision – Emergency Response. Donaldsonville, LA | LADOTD
The Louisiana Route 70 Sunshine Bridge is a steel cantilever through truss bridge that carries four lanes of traffic over the Mississippi River near Donaldsonville, LA. The three main truss spans are each about 800 feet in length and provide up to 133 feet in vertical clearance above high water. On October 12, 2018, a barge mounted crane was traveling upstream in the western most channel of the river. There was insufficient clearance as the barge passed underneath the bridge, and the back-stay of the crane impacted the downstream bottom chord of the truss. The impact caused significant damage to a bottom chord member, tearing off the bottom plate of the box member</td></tr>
</table>

	and inducing severe out of plane distortion. The member in question was a primary load path compression member, designed to carry 1,700 kips of dead load. LADOTD closed the bridge to traffic directly after the incident and engaged Modjeski and Masters to perform an emergency hands-on inspection using technical rope access techniques. With the damage documented, work on repair concepts began. Mr. Miles served as a lead engineer and structural analyst for this emergency project.
10/17 - 08/19	**H.009859.5: Nineteen Complex Bridge Load Rating and Evaluation. Louisiana | LADOTD** Modjeski and Masters, Inc. is performing plan and document retrieval, bridge inspection and analysis, and load and resistance factor rating of complex bridge structures, mainly steel vertical lifts. Gusset, truss, floorsystem and substructure components are being rated. Bridge inspections are focusing on gusset plates and existing member conditions for rating. AASHTOWare BrR is being used for the ratings, which follow current AASHTO Manual for Bridge Evaluation, the LADOTD Policies and Guidelines for Bridge Rating and Evaluation, and LADOTD Bridge Design and Evaluation Manual. Mr. Miles participated in the load rating analysis and reporting for this project.
02/16 - 10/17	**H.009859.5: Ten Truss Bridges Load Rating and Evaluation. Louisiana | LADOTD** Modjeski and Masters, Inc. is performing plan and document retrieval, bridge inspection and analysis, and load and resistance factor rating of complex bridge structures, including large cantilever trusses, vertical lifts and swing spans. Gusset, truss, floorsystem and substructure components are being rated. Bridge inspections are focusing on gusset plates and existing member conditions for rating. AASHTOWare BrR is being used for the ratings, which follow current AASHTO Manual for Bridge Evaluation, the LADOTD Policies and Guidelines for Bridge Rating and Evaluation, and LADOTD Bridge Design and Evaluation Manual. Mr. Miles participated in the load rating analysis and reporting for this project.
07/15 - 12/16	**H.009859.5 (A): Rating and Posting of On-System State Bridges. Louisiana | LADOTD** M&M performed load rating analyses for 110 existing bridge structures using the Load and Resistance Factor Rating Method. Elements to be rated include superstructure and substructure components. Provisions in the 2011 AASHTO Manual for Bridge Evaluation as well as LADOTD Policies and Guidelines for Bridge Rating and Evaluation were followed. Mr. Miles participated in the load rating analysis and reporting for this project.
06/2013 - 06/2014	**H.009479: LA 1 West Larose Vertical Lift Bridge over ICWW, Larose, LA** M&M was charged with the development of plans and specifications to rehabilitate and extend the life of this vertical lift bridge for 30-40 years. This includes structural, mechanical, electrical and architectural disciplines. Work included site inspections, scope development, preliminary and final design. Mr. Miles performed AASHTOWare Bridge Rate (BrR) ratings of the bridge.

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc.**					
Name	**Joshua J. Moore, PE**		Years of relevant experience with this employer		15
Title	Senior Engineer & Field Inspector		Years of relevant experience with other employer(s)		0
Degree(s) / Years / Specialization			BS 2006 Civil		
Active registration number / state / expiration date			36342 LA 09/30/2023 NBIS Certified Inspector / Sprat Level III Certified Work Zone Training Compliant		
Year registered	2011	Discipline	Civil		

Contract role(s) / brief description of responsibilities

Mr. Moore has been employed as a Design Engineer in the New Orleans office of Modjeski and Masters, Inc. since 2007 after having interned with the firm. He is assigned to the firm's Structural Design Section and has been involved in a variety of bridge projects with a focus on evaluation, analysis, and rehabilitation of complex structures. Mr. Moore is also a trained and experienced bridge inspector and specializes in inspections of bridges and other structures requiring Technical Access.

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).
11/18-ongoing	**Luling–Destrehan Bridge Latent Defects Review**. **Luling, Louisiana | LADOTD** Mr. Moore served as an Inspection Team Leader for this investigation of latent defects in the Luling–Destrehan Bridge Stay Cable system. Specific tasks included review and evaluate existing project documentation, performance of an on-site investigation of the stay cables and anchorages and developing a report of the findings and associated recommendations.
11/13 - 02/14 10/16 - 12/16	**4400002687 In-Depth Inspection of Complex Structures Retainer – Various Bridges, Statewide** As a member of a multi-firm team, Modjeski and Masters was tasked to provide Structural, Mechanical, Electrical, and Coatings inspection services to perform multiple In-Depth Bridge Inspections for various bridges throughout the state of Louisiana, as a part of the ongoing statewide Complex Structures Inspection Retainer with the LADOTD. The inspections were performed using technical rope access and rappelling, aerial work platforms, and standard climbing techniques. Bridge conditions, including specific defects, were documented and presented in an inspection report and PONTIS/Inspect-Tech forms, along with repair recommendations and a full coatings evaluation report. Mr. Moore participated in the inspection.
10/17-08/18	**H.009859.5: Nineteen Complex Bridge Load Rating and Evaluation. Louisiana | LADOTD** Modjeski and Masters, Inc. is performing plan and document retrieval, bridge inspection and analysis, and load and resistance factor rating of complex bridge structures, mainly steel vertical lifts. Gusset, truss, floorsystem and substructure components are being rated. Bridge inspections are focusing on gusset plates and existing

	member conditions for rating. AASHTOWare BrR is being used for the ratings, which follow current AASHTO Manual for Bridge Evaluation, the LADOTD Policies and Guidelines for Bridge Rating and Evaluation, and LADOTD Bridge Design and Evaluation Manual. Mr. Moore participated in the load rating of the bridges.
02/16-10/17	**H.009859.5: Ten Truss Bridges Load Rating and Evaluation. Louisiana | LADOTD** Modjeski and Masters, Inc. is performing plan and document retrieval, bridge inspection and analysis, and load and resistance factor rating of complex bridge structures, including large cantilever trusses, vertical lifts and swing spans. Gusset, truss, floorsystem and substructure components are being rated. Bridge inspections are focusing on gusset plates and existing member conditions for rating. AASHTOWare BrR is being used for the ratings, which follow current AASHTO Manual for Bridge Evaluation, the LADOTD Policies and Guidelines for Bridge Rating and Evaluation, and LADOTD Bridge Design and Evaluation Manual. Mr. Moore participated in the load rating of the bridges..
6/06 – 4/15	**S.P. 700-18-0014: Huey P. Long Bridge Widening, New Orleans, LA** The widening project for the Huey P. Long Bridge included new vehicular approaches on both sides of the Mississippi river plus making the main bridge into a three-barrel truss structure. This complex bridge carries three vehicular lanes in each side of two railroad tracks. M&M was charged to rate the widened portion of the bridge including the railroad. Mr. Moore participated in the rating of the bridge and bridge inspection as well as shop drawing review for the superstructure and substructure.
04/13 - 2/14	**H.009859: Crescent City Connection, Bridge No. 1, New Orleans, LA** This Task Order consists of inspection and LRFR load rating for the Greater New Orleans Bridge No. 1 – a complex steel cantilever through truss bridge. The rating is to include the superstructure, (including gusset plates and deck), selected substructure elements and piers. Mr. Moore participated in the gusset plate inspection of the bridge looking for distortion, loose fasteners, cracks and section losses. He also performed camera imaging to confirm gusset plate details
04/12 – 01/13	**Lapalco Boulevard, Harvey Canal Bridge. Harvey, Louisiana | Jefferson Parish** The Lapalco Boulevard Bridge over the Harvey Canal in Harvey, Louisiana is a four-lane highway bridge. The main bridge portion of the Lapalco Boulevard Bridge over the canal is a welded plate girder, double leaf, trunnion type bascule with an open grid deck. The approach spans are comprised of steel girder spans and concrete girder spans with concrete decks, and concrete slab spans with curtain walls. Mr. Moore supervised the production of pin replacement plans and also provided quality control.

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc**.					
Name	**James W. H. Costigan, PE**		Years of relevant experience with this employer		7
Title	Engineer – Field Services		Years of relevant experience with other employer(s)		0
Degree(s) / Years / Specialization			BS 2015 Civil		
Active registration number / state / expiration date			0044328 LA 09/30/2022 Work Zone Training Compliant NBIS Certified Inspector		
Year registered	2020	Discipline	Civil		

Contract role(s) / brief description of responsibilities

Mr. Costigan joined M&M in 2015 and is a Structural Engineer Intern for the Field Service Section. His experience includes highway and railroad large river and movable bridge inspection, design and construction monitoring. He has been the resident engineer on a highway bascule bridge roadway grating replacement project, a railroad bascule bridge floor system replacement project, and a railroad bascule bridge link pin replacement project. Mr. Costigan has assisted in the design of a new bridge fender system and many other repair designs following inspection findings. Mr. Costigan is a FHWA Certified Bridge Inspector and is an Inspection Team Leader, actively participates in Modjeski and Master's Technical Access Program as a Worker.

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).
10/18-03/19	**H.012343.6 Sunshine Bridge Collision – Emergency Response. Donaldsville, LA | LADOTD** The Louisiana Route 70 Sunshine Bridge is a steel cantilever through truss bridge that carries four lanes of traffic over the Mississippi River near Donaldsonville, LA. The three main truss spans are each about 800 feet in length and provide up to 133 feet in vertical clearance above high water. On October 12, 2018, a barge mounted crane was traveling upstream in the western most channel of the river. There was insufficient clearance as the barge passed underneath the bridge, and the back-stay of the crane impacted the downstream bottom chord of the truss. The impact caused significant damage to a bottom chord member, tearing off the bottom plate of the box member and inducing severe out of plane distortion. The member in question was a primary load path compression member, designed to carry 1,700 kips of dead load. LADOTD closed the bridge to traffic directly after the incident and engaged Modjeski and Masters to perform an emergency hands-on inspection using technical rope access techniques. With the damage documented, work on repair concepts began. Mr. Costigan was instrumental in the inspection of the damage as well as the construction engineering and inspection of the repair efforts.
11/16– 5/17	**Port of New Orleans Seabrook Bridge Floor System Replacement. New Orleans, LA** Modjeski and Masters prepared the plans and specifications to replace the railroad floor system between the trusses of the Seabrook Railroad Bridge for the Port of New Orleans. M&M also developed the sequence of

	construction to minimize the impacts to the rail and marine traffic as well as maintain the span balance throughout construction. Mr. Costigan was responsible for construction site monitoring, as-built drawings, and pay estimates.
02/17– 5/17	**Port of New Orleans Seabrook Bridge Link Pin Joints Emergency - Construction Services. New Orleans, LA**: After M&M completed the initial investigation and developed emergency repair contract documents for the partially failed 2nd Link joint on the Seabrook Strauss Bascule Bridge, the Port of New Orleans called upon M&M to provide Construction Support Services for the project. M&M reviewed all Contractor RFIs, shop drawings, and procedure submittals for the project. M&M also provided on-site construction inspection services throughout the repair effort. Mr. Costigan was the Resident Structural Engineer. During this project, Mr. Costigan monitored and oversaw construction, assisted in submittal reviews, wrote RFI Responses, attended progress meetings, wrote and reviewed punch lists, lead the project final walkdown, and reviewed project close-out documents.
04/16 - 01/17	**Port of New Orleans St. Claude Avenue Grating Replacement. New Orleans, LA** Engineering services for the design, preparation of plans and specifications, and construction monitoring and support services related to replacement of the steel roadway grating at the outboard lanes of the St. Claude Avenue Bridge. Mr. Costigan is responsible for shop drawing review, RFI review, construction site monitoring, as-built drawings, and pay estimates.
11/15-2/16 10/17-4/18	**Huey P. Long Inspection. Jefferson Parish, LA. Public Belt Railroad** The Huey P. Long Bridge is a high-level, combination highway and railroad bridge which crosses the Mississippi River. Modjeski and Masters, Inc. provides the following services for this bridge: annual routine inspections, 1/3 in-depth inspection each year, analysis of special railroad loading, emergency accident inspections repairs, engineering services for bridge maintenance, valuation (or Replacement Value). Mr. Costigan was part of the inspection team.
5/16 -07/16	**H.010016: US 11 Bridge over Lake Pontchartrain, New Orleans, LA** Within the US 11 Bridge, commonly known as the 5 mile bridge, are two double-leaf bascule spans (North Draw and South Draw). There was considerable damage to the bridge as a result of Hurricane Katrina. M&M was retained to determine the improvement needs structural, electrical and mechanical to extend the life by 20-30 years and to prepare rehabilitation plans. Mr. Costigan was responsible for bridge inspection and repair/ replacement design and documentation.

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc.**				
Name	**Bryan E. Swartz**		Years of relevant experience with this employer	15
Title	Engineering Technician		Years of relevant experience with other employer(s)	6
Degree(s) / Years / Specialization			High School Diploma 1999	
Active registration number / state / expiration date			NACE Certified Coating Inspector No. 10929 NBIS Certified, Work Zone Training Compliant SSPC C-3	
Year registered		Discipline		

Contract role(s) / brief description of responsibilities

Mr. Swartz joined Modjeski and Masters, Inc. in 2004 as an Engineering Technician. He has participated as an Inspection Team Member for the inspections of multiple highway and railway bridges of various types. Many of the bridges have been inspected in multiple years. In addition, he has extensive experience with coatings inspections of bridges. Mr. Swartz is qualified as Bridge Inspector per NBIS standards. He has also received coating training and is a NACE Certified Coating Inspector – Level 3.

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).
08/12 – 04/18	**H.000343 US 190 Huey P. Long Bridge Construction Engineering & Inspection, Baton Rouge, LA.** This project provided construction engineering and inspection services for the through truss cantilever bridge that carries US 190, as well as one rail line over the Mississippi River in Baton Rouge, LA. Due to past emissions from nearby chemical plants, the bridge has experienced significant corrosion issues. The 12,000+ foot bridge was in need of several repairs such as replacing elements in the steel approach and main spans, repairing navigation lighting, constructing retaining walls, placing guard rail, and repairing pavement. M&M is also providing project administration, paint inspection, as well as environmental monitoring services during construction. The construction project consists of structural repair, cleaning and painting of the steel superstructure. Mr. Swartz provided construction engineering and inspection services for the repainting of this bridge.
11/15 – 05/17	**H.010636 US 90 Over Mississippi River (GNO 2) Structural Repairs and Spot-Painting, New Orleans, LA** M&M prepared plans for the repair and repainting of the Greater New Orleans Bridge No. 2 main bridge unit. Plans were also prepared for the repair of the fender, loose, missing and deteriorated fasteners and roadway joints that had worn over time. Mr. Swartz provided construction engineering and inspection services for this project.

08/16-05/17	**H.011482 US 90 Huey P. Long Bridge Cleaning and Painting (Segment 7), Jefferson Parish, LA** The project provided for the development of plans and specifications for the removal of lead paint and the recoating of the original bridge trusses and bracing above bridge deck level. CE&I services and a Level 4 Transportation Management Plan were provided. Mr. Swartz assisted in developing the plans and specifications for this project. Mr. Swartz also provided Quality Assurance for the cleaning and painting portion of the project. This included QA inspection of cleaning and painting activities, preparing daily and weekly reports, preparing monthly estimates for work completed by the contractor, and verifying contractor compliance with the contract plans and specification
04/15-06/16	**H.009326.6 I-10/I-610 Bridge Repairs and Painting, Orleans, St. Charles and St. John Parishes** The project provided for the complete cleaning and removal of existing coatings, application of new paint, and disposal of material in steel spans in the I-10/I-610 bridge near New Orleans, LA. Along with its sub-consultant KGC Environmental Services, Inc., M&M is providing CE&I services to perform all painting inspection and environmental monitoring services. Mr. Swartz is the Coating Inspector for this project.
04/04-02/05 02/05-06/06 08/06-02/08 08/16-05/17	**US 90 Huey P. Long Bridge (multiple segments 2, 3, 4, 5 and 7), Jefferson Parish, New Orleans Public Belt Railroad** The cleaning and repainting of various features of the Huey P. Long Bridge. Mr. Swartz provided inspection of surface preparation and coating application for over two miles of elevated steel trestle.
02/10-04/12	**Illinois River Bridge No. 552 - Construction Services. Divine, Illinois| Canadian National Railway** The Illinois River Bridge, No. 552, was originally built as four 154-foot fixed through truss spans and was converted to a vertical lift bridge 80 years ago. M&M designed the replacement vertical lift span of 348 feet with a maximum lift vertical clearance of 56 feet. M&M also collected relevant data, evaluated alternatives, established design criteria, cost estimates, prepared project report, and provided the final vertical lift bridge design. M&M is providing construction management services. Mr. Swartz provided CE&I services for this project.
05/12-08/12	**H.009328.5) Mississippi River Bridge (Cleaning and Spot Painting) I-10 Main Bridge** The project involved the development of plans, specifications and construction services (Stage 5, Parts 1 & 2) for the cleaning and repainting of the main bridge of this I-10 Mississippi River crossing. Mr. Swartz assisted in developing the plans and specifications for this project.

16. Staff Experience:

Firm employed by **Modjeski and Masters, Inc.**				
Name	**Scott C. Gordon**		Years of experience with this firm/employer	21
Title	Senior Technician III		Years of experience with other firm(s)/employer(s)	5
Degree(s) / Years / Specialization			High School 1995 Various Training Courses	
Active registration number / state / expiration date			NACE Certified Coating Inspector No. 8115 (Level 3 and Peer Review) NBIS Certified Work Zone Training Compliant ASNT Level II	
Year registered		Discipline		
Contract role(s) / brief description of responsibilities			Team Leader, Structural Bridge Inspector and UT Inspector.	

Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc.
05/16 - Ongoing	**US 11 Bridge Rehabilitation Design, New Orleans, LA | Louisiana Department of Transportation** M&M led a team providing structural, mechanical, electrical, and architectural rehabilitation services to extend the service life of the US 11 North and South bascule spans. The North bascule span is the only routinely operated span. In addition to repairs and improving the structural capacity to eliminate the weight posting of the bridge, the operator's house will be enlarged, and the span converted to hydraulic operation. The South bascule span is only opened manually (with a crane) when access is needed to service electrical utility lines crossing the lake. The span toes will be replaced to improve the structural capacity to eliminate the weight posting of the bridge. The operator houses will be rehabilitated to retain their historic appearance. The bascule spans comprise the largest spans (149') of the overall 4.7-mile bridge over Lake Pontchartrain. Mr. Gordon performed UT testing to map all cracks and determine the depths of each crack. He also provided CE&I services during the construction of the project.
11/13 – 11/18	**UT Pins & Hangers - Testing | Louisiana Department of Transportation** This project provided a condition assessment of the pinned connections for approximately fifty bridges through the use of ultrasonic procedures as defined by FHWA publication FHWA-HRT-04-042 *"Guidelines for Ultrasonic Inspection of Hanger Pins"*. The ultrasonic inspection is conducted using both straight and angle beam transducers in a pattern that is capable of detecting any and all defects/flaws at critical locations. Mr. Gordon was part of the inspection team.
08/12 – 06/18	**H.000343 US 190 Huey P. Long Bridge Construction Engineering & Inspection, Baton Rouge, LA.**

	This project provided construction engineering and inspection services for the through truss cantilever bridge that carries US 190, as well as one rail line over the Mississippi River in Baton Rouge, LA. The 12,000+ foot bridge was in need of several repairs such as replacing elements in the steel approach and main spans, repairing navigation lighting, constructing retaining walls, placing guard rail, and repairing pavement. M&M is also providing project administration, paint inspection, as well as environmental monitoring services during construction. The construction project consists of structural repair, cleaning and painting of the steel superstructure. Mr. Gordon provided construction engineering and inspection services for the repainting of this bridge.
03/15-06/15	**Gramercy Mississippi River Bridge 2015 Inspection. Gramercy, Louisiana | Louisiana Department of Transportation** M&M performed a structural inspection of selected areas on the 3,101-foot cantilevered truss bridge at Gramercy, LA. M&M was responsible for the inspection from PP 12 to PP 24 on the main bridge trusses and the associated bracing between the two points. M&M also performed a coating inspection and evaluation of the entire main span of the structure. Technical access was used to assist in the inspection of the top 83 feet of the structure. Mr. Gordon was part of the inspection team.
02/14-03/14	**Delair Truss Pin Inspection & Testing. Philadelphia, Pennsylvania | Conrail Shared Assets** M&M provided a hands-on visual inspection of each of the 208 pin connected truss joints of the main span of the Delair Bridge and provided recommendations for a non-destructive testing program for the pin-connected truss joints on the structure. Under phase II of the project, Ultrasonic Testing of 10% to 15% of the 208 pin connected truss joints was performed. Mr. Gordon was part of the inspection team.
5/10-09/13	**Galveston Railroad Bridge - Construction Services, Galveston, TX** This project provided for the replacement of the existing 115 ft. span Scherzer Rolling Lift Bascule bridge in the Galveston Bay Railroad Causeway with a 385 ft. simple truss vertical lift bridge. The replacement bridge is a single-track, open deck, simple through Warren Type truss span and provide 300 ft. of horizontal clearance and 73 ft. of vertical clearance over the Intracoastal Waterway.
10/01-12/01 10/02-12/02 10/03-12/03 10/04-12/04 10/05-12/05 10/06-12/06 10/07-12/07 10/08-12/08	**Huey P. Long Bridge Annual Inspections. Jefferson Parish, Louisiana | New Orleans Public Belt Railroad** A high-level combination highway and railroad bridge which crosses the Mississippi River in New Orleans, Louisiana and is part of the complex urban freeway system in the area. The total structure length, including approaches, is approximately 23,000 feet. The main span unit is 3,524 feet long, consisting of a 750-foot cantilever through truss span, two 530-foot anchor truss spans, one 530-foot simple through truss span, and four deck truss spans. M&M has routinely performed yearly NBIS inspections since its opening. Mr. Gordon was part of the inspection team.

16. Staff Experience:

Firm employed by **Arcadis**					
Name	**Akhil Chauhan, PE, PTOE, PTP, PMP**			Years of relevant experience with this employer	13
Title	Principal Engineer			Years of relevant experience with other employer(s)	5
Degree(s) / Years / Specialization			MS / 2003 / Transportation Engineering, MIT BS / 2001 / Civil Engineering, Indian Institute of Technology		
Active registration number / state / expiration date			PE.033703 / LA / Exp. 09/2022; PTOE #2544 / USA / Exp. 11/2023 PTP #246 / USA / Exp. 12/2024; PMP #1444676 / PA / Exp. 08/2023		
Year registered	2008	Discipline	Civil Engineering		
Contract role(s) / brief description of responsibilities			Traffic 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 time specified in the applicable MPR(s).
07/12 – 11/14	**Chef Menteur Bridge and Approaches, Route US 90, Orleans Parish, LA.** *Principal Engineer.* Responsible for the High-priority bridge replacement EA and Line and Grade Study, responsible for coordinating traffic impact study. Traffic impact study coordination include reviewing available data with DOTD traffic engineer to identify gaps and propose additional data needs, investigating planned transportation improvement projects and traffic generators with DOTD and New Orleans RPC, reviewing design hour volumes (DHVs), average daily traffic (ADTs), and peak hour and24-hour truck percentages, and reviewing intersection and road segment capacity analyses.
11/20 – Ongoing	**I-10 CMAR, LADOTD, East Baton Rouge Parish, LA.** *Principal Engineer*. Responsible for technical advisory and QAQC of all traffic engineering tasks including development of permanent signing plans, Interchange Modification Reports, and Transportation Management Plans for the widening of Interstate-10 from LA 415 to Essen Lane and improvements to interchanges along this segment. One critical component of the project is maintaining traffic during the construction of new bridge structures. Multiple scenarios are being evaluated using a calibrated mesoscopic model to determine the impacts during construction and mitigations that will be necessary to minimize delay.
08/18 – 12/19	**I-10 Widening Mesoscopic Model and TMP, LADOTD, East Baton Rouge Parish, LA.** *Principal Engineer*. Responsible for supervising development of mesoscopic traffic model used for this project. The object of the study was to develop an existing conditions model. Responsibilities included defining study area, assessing data needs, developing data collection plan, preparing calibration documentation, and preparing model documentation.
04/13 – 10/20	**US 11 Railroad Bridge Replacement and Corridor Improvements EA, LADOTD, St. Tammany Parish, LA.** *Principal Engineer*. Responsible for crash analysis, operating speed tabulations, intersection and corridor

	analysis, line and grade, and public outreach for the proposed widening of US 11 between US 190 (Gause Boulevard) and I-12 in Slidell. Proposed improvements include the replacement of a bridge crossing the Norfolk Southern Railroad. Critically, this project includes analysis of several innovative alternatives for the proposed corridor, including "superstreets" and J-turn concepts.
01/18 – Ongoing	**I-20 Mesoscopic Model and TMP Using Dynameq, LADOTD, Bossier Parish, LA.** *Principal Engineer.* Responsible for supervising development of mesoscopic traffic model to predict queueing, delay and alternate travel patterns due to planned construction on I-20 to replace pavement. The project is anticipated to disrupt traffic in this critical portion of I-20. The project scope includes development and calibration of mesoscopic model, analysis of alternative routes, safety analysis, operational analysis, assistance with public outreach, development of a Level 4 TMP, and development of work zone mitigation strategies.
12/13 – 06/15	**LA 3235 Stage 0 Feasibility Study, LADOTD, Lafourche Parish, LA.** *Project Manager.* Responsible in the preparation of a formal traffic and access management Stage 0 study, in accordance with DOTD Stage 0 Manual of Standard Practice, that analyzed alternatives and enhanced mobility and safety on LA 3235. Main tasks included traffic data collection, warrant studies, traffic analysis, safety analysis, development of conceptual layouts, and public outreach. Intersections found to warrant signalization were also modeled in unconventional designs including U-turns, J-turns, and RCUTs. A preliminary cost estimate and conceptual layout drawings were also produced. During the study, it was found that crash modification factors (CMFs) for many access management principles are not found in the HSM's Part C predictive methods. Therefore, proposed a corridor-based approach in which Part D CMFs were applied at the corridor level after using Part C to predict future no-build crashes. This approach predicted changes to crash frequency, crash type, and severity type for the two build alternatives.
05/19 - Ongoing	**I-20 / I-220 Interchange Improvements and BAFB Access Design-Build, LADOTD, Bossier Parish, LA.** *Principal Engineer.* Responsible for overseeing the development of addendum to Interchange Modification Report, Transportation Management Plan, Temporary Traffic Control Plans, and Permanent Signing Plans to accommodate the design and construction of the project. The design build project includes the modification of the existing interchange at I-20 / I-220 with additional ramps and extension of I-220 to provide access to Barksdale Air Force Base.
01/14 – 02/17	**Traffic Engineering Retainer - US 71 Corridor Traffic and Safety Study – Phase 1, LADOTD, Rapides Parish, LA.** Project Manager: Responsible in the preparation of a corridor study for the purpose of enhancing mobility and safety on US 71 in Alexandria, LA. Main tasks included traffic data collection, warrant studies, traffic analysis, safety data analysis, and development of conceptual layouts. Data collection effort included automated one-week counts, manual turning movement counts and spot speed studies. A preliminary cost estimate and conceptual layout drawings were also produced during the study.

16. Staff Experience:

Firm employed by **Arcadis**					
Name	**Ari Deitch, PE, PTOE, PTP, RSP**		Years of relevant experience with this employer	8	
Title	Senior Transportation Engineer		Years of relevant experience with other employer(s)	2	
Degree(s) / Years / Specialization			BS / 2012 / Biological Engineering, Louisiana State University		
Active registration number / state / expiration date			PE.0041842 / LA / Exp. 03/2024; PTOE #4346 / USA / Exp. 11/2023 PTP #690 / USA / Exp. 07/2022; RSP #37 / USA / Exp. 12/2024; ATSSA TCT / TCS		
Year registered	2018	Discipline	Civil Engineering		
Contract role(s) / brief description of responsibilities			Traffic 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 time specified in the applicable MPR(s).
05/19 - Ongoing	**I-20 / I-220 Interchange Imp. And BAFB Access TMP and IMR, LADOTD, LA.** *Traffic Engineer.* Responsible for development of addendum to Interchange Modification Report, Transportation Management Plan, Temporary Traffic Control Plans, and Permanent Signing Plans to accommodate the design and construction of the project. The design build project includes the modification of the existing interchange at I-20 / I-220 with additional ramps and extension of I-220 to provide access to Barksdale Air Force Base.
08/14 – 10/18	**US 71 Corridor Traffic and Safety Study – Phase 1-3, LADOTD, Rapides Parish, LA.** *Traffic Engineer.* Responsible for providing traffic data collection, warrant studies, traffic analysis, safety data analysis, and development of conceptual layouts. Data collection effort included automated one-week counts, manual turning movement counts and spot speed studies. Collected crash data for the most recent three years from LADOTD crash database, analysed crash summaries and identify historical high-crash locations and over-representative crashes, determined crash types, frequencies and crash rates, reviewed individual crash reports to determine type and location of each crash, identified crash "hot-spot" locations, contributing factors for high-crash rates, and determined potential improvements.
11/20 - Ongoing	**I-10 CMAR, LADOTD, East Baton Rouge Parish, LA.** *Traffic Engineer.* Responsible for wide range of traffic engineering tasks including development of permanent signing plans, Interchange Modification Reports, and Transportation Management Plans for the widening of Interstate-10 from LA 415 to Essen Lane and improvements to interchanges along this segment.
10/19 – 06/21	**I-10 New Orleans to Slidell Hard Shoulder Running, LADOTD, Orleans Parish, LA.** *Traffic Engineer.* Responsible for the development of conceptual drawings and typical sections for proposed Hard Shoulder Running (HSR) alternatives on I-10 between New Orleans and Slidell. Purpose of the project is to evaluate the

	feasibility of implementing HSR lanes along I-10 to alleviate existing bottlenecks and congestion along critical segments of the corridor.
10/15-Ongoing	**US-90 Business Signing Upgrades and TMP, LADOTD, Orleans and Jefferson Parishes, LA.** *Assistant Project Manager.* Responsibilities include taking inventory of existing signs and structures, developing a signing layout plan for the project area in accordance with the latest state and federal policy guidance, developing signing plans through 100% final design stage, developing a Transportation Management Plan to be used during construction of the project, and coordinating reviews and submittals with LADOTD Traffic Engineering Design Section. The purpose of the project is to replace all existing signs within the project area, which includes sections of Interstate-10 and US-90 Business in and around New Orleans' Central Business District. This requires careful planning in the placement of signs and structures to accommodate the complex roadway network in this area. Arcadis completed the design plans and TMP in 2019 and is currently providing constr. support.
04/19 – 12/19	**East Baton Rouge Parish Signal Detection Upgrades, LADOTD, East Baton Rouge Parish, LA.** *Traffic Engineer.* Technical lead of project tasks involving field signal inventory and the creation of updated signal plans and quantities. The project includes 39 intersections identified in East Baton Rouge Parish to be upgraded from video detection to magnetometer detection.
04/19 – 12/19	**US 90 Traffic Signal Timing Upgrades, LADOTD, Lafayette Parish, LA.** *Traffic Engineer.* Technical lead of project tasks involving traffic data collection and analysis, signal inventory, peak period determination and observations, warrant analysis, travel time runs, traffic signal analysis using Synchro 10 software, and development of updated TSI forms following latest LADOTD standards.
08/14 – 06/15	**LA 3235 Stage 0 Feasibility Study, LADOTD, Lafourche Parish, LA.** *Traffic Safety Analyst.* Responsible for review of existing crash data and traffic operations analysis, development of safety countermeasures, conceptual drawings, and Stage 0 documentation. LADOTD Stage 0 Safety Study to develop access management strategies and roadway improvements that will maintain and improve mobility, improve safety, support existing and future development along the LA 3235 corridor. The LA 3235 corridor was initially constructed as a high-speed roadway to facilitate truck traffic to and from Port Fourchon. Since its construction, numerous commercial and residential developments have created unsafe conditions along the corridor.
02/15 – 11/17	**Intersection Feasibility Study: Evangeline Thwy, Johnston St, & Louisiana Ave, LADOTD, Lafayette Parish, LA.** *Traffic and Safety Analyst.* Responsible for review of existing crash data, traffic operations analysis, and development of design alternatives. Objective is to develop alternatives for the intersection of Evangeline Thruway (US167/90) and Johnston Street (US167) / Louisiana Avenue (LA 94) that will improve safety and mobility. Evangeline Thruway consists of two one-way roadways with three lanes in each direction. Three alternatives for each intersection at Johnston Street / Louisiana Avenue were developed based on the results traffic and safety analysis.

16. Staff Experience:

Firm employed by **Arcadis**					
Name	**Kester Hollier, PE, PTOE**		Years of relevant experience with this employer	1	
Title	Senior Traffic Engineer		Years of relevant experience with other employer(s)	16	
Degree(s) / Years / Specialization			BS / 2004 / Civil Engineering, Louisiana Tech University		
Active registration number / state / expiration date			PE.034304 / LA / Exp. 03/2023; PTOE #3928 / USA / Exp. 11/2024		
Year registered	2009	Discipline	Civil Engineering		
Contract role(s) / brief description of responsibilities			Traffic 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 time specified in the applicable MPR(s).
11/20 – Ongoing	**I-10 CMAR, LADOTD, East Baton Rouge Parish, LA.** *Project Manager*. Responsible for traffic engineering tasks including development of permanent signing plans and Interchange Modification Reports for the widening of Interstate-10 from LA 415 to Essen Lane and improvements to interchanges along this segment. One critical component of the project is maintaining traffic during the construction of new bridge structures. Multiple scenarios are being evaluated using a calibrated mesoscopic model to determine the impacts during construction and mitigations that will be necessary to minimize delay.
09/12 – 02/16	**Replace Belle Chasse Tunnel and Bridge Stage 0 Feasibility Study and Stage 1 EA, LADOTD, Plaquemines Parish, LA.** *Traffic Engineer*. Responsible for the traffic analysis along LA 23 (Belle Chasse Highway) between LA 428 (Behrman Highway) and LA 406 (Woodland Highway) for multiple 6-lane bridge alternatives that would be proposed to replace the existing Belle Chasse Tunnel and lift bridge over the Intercoastal Waterway. These alternatives included 3%, 4%, and 5% bridge grades that modified roadway geometry and intersection location. Responsible for the review of the roadway portion and costs for the Line and Grade Study along with the review of the construction sequencing and constructability review.
05/14 – 08/20	**Causeway Blvd. at Earhart Expwy. Interchange, LADOTD, Jefferson Parish, LA.** *Traffic/Civil Engineer*. Responsible for the design of traffic control and construction sequencing, pavement marking layout, quantity analysis, and quality control for a new interchange at LA 3139 (Earhart Expwy.) and LA 3046 (Causeway Blvd.) in Jefferson Parish, LA. Provided review for the interchange traffic sign and traffic signal layouts. Identified all necessary design waivers and design exceptions required for LADOTD approval. Provided geometric layout design, typical section design and review, and joint layout design for several interchange ramps and underpasses.
06/11 – 02/13	**LA 1 Toll Facilities, LADOTD, Vernon Parish, LA.** *Traffic Engineer*. Responsible for the new toll signage, pavement marking layout and queue analyses for the LA 1 Toll facility modifications at the new Leeville bridge
11/17 – 07/20	**LA 466 (5th Street) Improvements Traffic Study, City of Gretna, Je, LA.** *Project Manager / Traffic Engineer*. Responsible for the traffic study and impacts for the proposed complete streets improvements along

	the LA 466 corridor between LA 23 and Richard St. in Gretna, Louisiana. Tasks included data collection along the corridor and at designated intersections, safety and crash analysis along the corridor, trip generation/land use and performing existing traffic analysis and future traffic analysis for proposed final alternative. The traffic study was prepared to follow the Louisiana Department of Transportation and Development's Traffic Engineering Process and Report Guidelines. The project also included a stand along pedestrian study along the corridor at designated intersection and the design of accessible pedestrian signals at signalized intersections.
12/17 – 11/19	**Causeway Boulevard Widening Traffic Study, Jefferson Parish, LA.** *Project Manager / Traffic Engineer*. Responsible for the traffic study for the proposed widening of Causeway Boulevard between Metairie Rds. and West Esplanade Blvd. in Jefferson Parish, LA. Tasks included data collection, traffic volume redistribution, left-turn placement and turn bay storage length, and existing traffic analysis and future traffic analysis of a preferred alternative.
10/18 – 01/19	**LA 22 Traffic Circulation and Corridor Analysis, NORPC, St. Tammany Parish, LA.** *Traffic Engineer*. Responsible for the development of three future alternatives along Northshore Boulevard between I-12 and US-190 in Slidell, LA. Managed the data collection process and peak period observations to determine existing traffic patterns as well as the safety analysis along the corridor. Developed three alternatives that used a combination of traffic signal retiming, J-turns, and roundabouts to provide better access management along Northshore Boulevard as well as improve traffic flow in the corridor for current and proposed future conditions with consideration given to proposed future developments using trip generation and land use analysis.
01/10 – 04/11, 07/13 – 01/14	**Stumberg Lane Extension, City of Baton Rouge Green Light Plan, East Baton Rouge Parish, LA.** *Traffic Engineer*. Responsible for the design of new traffic signals at US 61 (Airline Highway) and LA 73 (Jefferson Highway) for the extension of Stumberg Lane in Baton Rouge, LA. Also, responsible for the design and layout of the fiber optic interconnect along the proposed extension.
05/09 – 07/13	**LA 23 Widening (Lapalco Blvd. – Engineers Rd.), LADOTD, Jefferson and Plaquemines Parishes, LA.** *Traffic/Civil Engineer*. Responsible for the road design and geometrics for the widening of LA 23 in Jefferson and Plaquemines Parish between Lapalco Blvd. (La 428) and Engineers Rd. (La 3017). Developed traffic analysis for the traffic signal timing and required turn bay lengths at intersections. Developed traffic signing plans, pavement marking layouts and temporary traffic control plans.
11/07 – 12/08	**Marathon Petroleum US-61 Access Improvements, LADOTD/Marathon Petroleum Company, John the Baptist Parish, LA.** *Traffic Engineer*. Responsible for the traffic forecasting and analysis for the Traffic Impact Study for the expansion plans for the Marathon Oil Refinery in Garyville, LA. Performed traffic analysis and signal design for the new main entrance to the refinery as well as the required turn lanes from US-61 to different points of entry to the refinery site.

16. Staff Experience:

Firm employed by **Arcadis**					
Name	**Jose M. Rodriguez, RSP**			Years of relevant experience with this employer	5
Title	Safety Analyst			Years of relevant experience with other employer(s)	4
Degree(s) / Years / Specialization			MS / 2014 / Civil Engineering, LSU BS / 2006 / Civil Engineering, Julio Garavito Colombian Engineering School		
Active registration number / state / expiration date			RSP # 12 / USA / Exp. 12/2022		
Year registered	2019	Discipline	Road Safety Professional		
Contract role/brief description of responsibilities			Traffic 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 time specified in the applicable MPR(s).
11/20 - Ongoing	**I-10 CMAR, LADOTD, East Baton Rouge Parish, LA.** *Traffic and Safety Analyst.* Responsible for QAQC and technical oversight for all safety analysis including existing crash analysis and trend identification, collision diagrams, and predictive safety analysis using Highway Safety Manual Methods.
02/17 – 08/17	**LA 157 from US 80 to South of LA 614 Study, LADOTD, Bossier City, LA.** *Traffic and Safety Analyst*. Performed benefit-cost analysis including both, operations, and safety. A traffic study to evaluate existing, no-build and proposed build alternatives for LA 157 (Booker Rd. to south of LA 614) for intermittent (five year) and 20-year plan using VISSIM and Synchro.
08/14 – 02/17	**Traffic Engineering Retainer - US 71 Corridor Traffic & Safety Study - Phase 1, LADOTD; Rapides Parish, LA.** *Safety Analyst*. Assisted in the prediction of future safety performance along the corridor. Responsible for development of conceptual design of intersection and corridor build alternatives. Specific duties included determining applicability of various intersection and corridor mitigation, ensuring design features accommodate roadway attributes, and identifying extent of ROW impacts.
02/17 – 02/18	**I-49 Interchange Safety Improvement Studies, LADOTD, Lafayette Parish, LA.** *Safety Analyst*. Responsible for the collection and evaluation of historical crash data, screening and selection of available safety improvement strategies that typically include alternative intersection configuration, roundabouts, corridor geometry and lane configuration, and driver awareness improvements. Safety analysis using HSM, IHSDM. Conceptual design of corridor/intersection safety improvements.

04/16 – 06/18	**Pete's Highway Interchange EA/IMR, LADOTD, Denham Springs, LA.** *Traffic and Safety Analyst.* Responsible for methodology development and overview of traffic analyses for a high-priority project. Work involves completing an EA and providing traffic engineering services related to improving congestion and operations along Range Avenue at the I-12 interchange. Design alternatives included two split diamond interchange options with roundabout, Page 28 of 57 Firm Name. Arcadis U.S., Inc. partial cloverleafs, and collector distributor road components at both Range Avenue and the next existing, eastern overpass at Pete's Highway (LA 16); and a diverging diamond interchange alternative at Range Avenue.
04/16 – Ongoing	**1-12 Hard Shoulder Running (HSR) Safety Study - Safety Studies Retainer, LADOTD, East Baton Rouge, Livingston Parishes, LA.** *Safety Analyst*. Reviewed and summarized the current best practices and safety research information on hard shoulder running experience in the U.S and Europe. Research included shoulder / median width and impacts to safety, desirable lengths for effective hard shoulder running, and CMFs to predict impacts to safety by reducing lane and / or shoulder widths. Produce a high-level technical memorandum that will assess various options of utilizing existing I-12 shoulders, researching the best practices, analyzing the safety and operational benefits, and determining the likely costs. Evaluated safety based on, crash analysis, the HSM predictive methods and the ISATe tool for Freeways. Estimated costs and benefits of operational and safety analysis for proposed alternatives.
04/15 – 09/18	**New Orleans Pedestrian Stage 0 Safety Feasibility Study, Louisiana Department of Transportation and Development (LADOTD), Orleans Parish, LA.** *Safety Traffic Analyst*. Safety analyses performed utilizing the Highway Safety Manual 2010 guidelines and Crash Modification Factors (CMFs) from other sources. Analyses include developing two build alternatives that address safety and operational issues at each intersection for all road users and developing a stage "0" checklist.
05/18 – Ongoing	**Baton Rouge Pedestrian Bicycle Safety Action Plan, LADOTD, Baton Rouge, LA.** *Safety Analyst*. Supported the development and delivery of a Pedestrian and Bicycle Safety Action Plan for the City of Baton Rouge. Responsibilities include completing a review of crash data, identification of priority locations, and creation of targeted countermeasures based on roadway type. He was responsible of reviewing the crash data in both (Geographic Information Systems) GIS and PowerBI to determine areas to focus on the locations of 10 locations in the most need for pedestrian/bicycle safety improvement. The second phase of the project will allow for the development of detailed studies at the top 10 identified locations where safety countermeasures such as low-cost pedestrian and bicycle facility improvements.
08/18 – Ongoing	**Local Road Systemic Safety Task Order Contract, ODOT, Statewide.** *Safety Analyst*. Assisted with four concurrent task orders to perform data driven systemic safety analysis for ODOT's current SHP initiative to promote regional safety through systemic safety analysis. Each task order includes data collection / conflation / QA/QC, database management, data evaluation, examining crash history, developing crash trees, identifying focus facilities, identifying risk factors, identifying segments of the network that may be at risk for crashes, identifying and prioritizing safety improvements, and developing online web applications to clearly convey results to stakeholders using ESRI ArcMap and Microsoft PowerBI.

16. Staff Experience:

Firm employed by **Arcadis**					
Name	**Osama Shahawy, PE**			Years of relevant experience with this employer	1
Title	Principal Structural Engineer			Years of relevant experience with other employer(s)	30
Degree(s) / Years / Specialization			MS / 1991 / Civil (Structures), Florida State University BS/1983/Civil Engineering		
Active registration number / state / expiration date			PE.0035652 / LA / Exp. 09/2022		
Year registered	2001	Discipline	Civil Engineering		
Contract role(s) / brief description of responsibilities			Bridge Design		

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).
04/12 – 05/13	**LA 1 over I-19 Bridge Rehabilitation, Rapides Parish, LA.** *Project Manager, Engineer of Record*. Provided professional inspection, rehabilitation design, and construction engineering services. The bridge is a 4 spans steel plate girder structure that has uneven settlement and rotation at the abutments which required rehabilitation to stabilize the movement and raise the bridge back to its original as built elevation. Responsibilities included directing team and over all task involves the preparation of geometric layout plan development; bridge design and final plans, specifications and estimates for LA 1 Bridge over I-49 according to LADOTD BDEM. Performed QA/QC, prepared construction cost estimate, reviewed/revised plans based on LADOTD comments.
03/18 - 05/20	**IH 37 in Corpus Christi, Courpus Christi, TX.** The project limits are from Redbird Lane to the IH 37/US 77 interchange north of the Nueces River (CSJs 0074-05-098 and 0074-06-241) located in Nueces and San Patricio Counties for the Corpus Christi district (16). Responsibilities include, monitor progress and review status. Provide QC/QA for interim and final submittal for IH37 northbound and southbound, including bridge widenings. Review calculation for spliced post tension girders. Provide engineering supervision and technical assistance to staff. Review and confirm that Engineer had followed the State's District guidelines in developing the plans.
06/17- Ongoing	**I I-635 LBJ East Design Build, Dallas, TX.** Design TM & EOR for segment 2 and Alternative design of segment 4. Segment 2 consists of 3 roadway overpasses and KCS railroad crossing. Segment 4 is IH30 interchanges with IH635; the design is based on Turbine movement which provide construction cost saving and minimize impact on traffic during construction and bridge replacements. Develop plans and specifications for segment 2 bridges, and I30/IH 635 interchange bridges (segment 4 alternative). Prepare and review final plans and pre-bid estimated quantities.

07/13 – 05/16	**I30/I35E Interchange- Horseshoe Design Build, Dallas, TX.** Responsibilities included review and QC of plans and calculations. Reviewed design criteria and conducted peer review on concrete girder bridges and verified foundation design loads and analysis for single and multi-columns bent caps. Preformed independent design review (IDR) on multiple superstructures and substructures design for connector Bridges. Prepared IDR summary notes and check list for structure components that verify structure components and vertical clearance. Designed and detailed five (5) unalike large signs to mount on existing concrete and steel bridges. Prepared and reviewed mounting details and connection to concrete and steel railroad bridges. The Sign truss structure designed and detailed to accommodate different skew angles and sign sizes
03/14 – 11/14	**I-495 over the Christina River Emergency Repair. Delaware DOT, Delaware, DE.** *Member of response team,* acted quickly in response to a call from Delaware DOT to assess and design emergency and long-term repairs for a bridge on a critical section of interstate with ADT over 90,000. The bridge was closed because of piers that had shifted laterally and tilted approximately 2 feet from their position. Pier movements resulted in significant structural distress to existing pile foundations. The Bridge decks of SB & NB were lifted and the concrete barriers separating the two sides, normally flush with each other, were separated by as much as 18 inches. Four bents were constructed to replace two of existing bent caps and used as lifting towers for the SB&NB bridges.
10/20 – Ongoing	**I-10 CMAR, East Baton Rouge Parish, LA.** *Lead Bridge Engineer, Engineer of Record.* Responsible for Construction Management at Risk (CMAR) to improve Interstate 10 through widening and reconstruction of the mainlane from 3 to 4 lanes in each direction, including bridge replacement and rehabilitation, interchange and ramp modification, shoulder widening, and auxiliary lane(s) from LA 415 to Essen Lane on I-10 and I-12. Responsibilities include replacing Nairn Dr. bridge over I-10 with a signature type bridge and preparing conceptual bridge plans required for the Right-of-Way Corridor. Responsibility includes design and detail of the Nairn Dr. bridge according to design criteria and LADOTD BDEM. Participate in meetings and work with the CMAR Contractor and LADOTD to develop preferred bridge concepts at completion.
08/20 – Ongoing	**I-10 New Orleans to Slidell Hard Shoulder Design and Feasibility, LA DOTD, New Orleans, LA.** S*tructure Manager.* Conducting bridge design evaluation for the use of Active Transportation and Demand Management (ATDM) strategies on 1-10 in Orleans and St. Tammany Parishes. The Project is to determine improvements of implementing shoulder lanes on Interstate 10 in New Orleans East area. Responsibilities include preliminary bridge design to determine construction cost for structure widening of EB & WB I-10 based on 4 scenarios utilizing existing shoulders on 1-10, as one of the scenarios.
08/20 – 11/20	**Alphonse Forbes Bridge at Sandy Bayou Replacement, City of Baton Rouge, East Baton Rouge Parish, LA / 18-Br-Pt-0017.** *Structure Manager.* Responsible for the replacement of the Alphonse Forbes Road Bridge over Sandy Creek located in Central, Louisiana, in East Baton Rouge Parish. Reviewed final plan and calculations QC design analysis and final bridge structure plans for 5 concrete slab span bridge. Provide read lines and review comments for final plans and estimated quantities according to LADOTD guidelines.

16. Staff Experience:

Firm employed by **Arcadis**					
Name	**Robert Beasley, PE**			Years of relevant experience with this employer	32
Title	Senior Structural Engineer			Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization			BS / 1989 / Civil Engineering, University of Akron, Structures		
Active registration number / state / expiration date			PE.0034159 / LA / Exp.03/2023		
Year registered	2005	Discipline	Civil Engineering		
Contract role(s) / brief description of responsibilities			Bridge Design		

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).
11/17 – 12/20	**H.009250 / I-10. Highland to LA 73 Design-Build, LADOTD, East Baton Rouge Parish, LA.** *Independent Design Reviewer.* For performing an independent design assessment and analytical check of the new interstate bridges over Highland Road (LA 42) as well as for the widening and rehabilitation of the interstate bridges over Bayou Manchac. The Highland Road bridge was 310'-0" long with a 190'-0" steel plate girder main span. The Bayou Manchac bridge was 200'-0" long with 25'-0" slab spans on pile bents. Arcadis completed separate, independent calculations of the deck, girders, slab spans, bearings, splices, and substructure using DOTD approved design software.
01/07 – 11/13	**Gulf Intracoastal Waterway, West Closure Complex, US Army Corps of Engineers, New Orleans, LA.** *Lead Bridge Engineer.* This $800 million project which was completed using the ECI (early contractor involvement) method. This method is the same as Construction Management at Risk **(CMAR).** Arcadis worked directly with the Corps and Contractor to reduce flood risk for residences and businesses in three parishes on the west bank of the Mississippi River. As a part of this project Arcadis developed an access bridge using precast, prestressed concrete voided slabs on pile bents with precast concrete piles. Portions of the access structure were supported on the pump station inlet walls. Numerous utilities going to and from the pump station were supported on the side and below the voided slabs.
03/19 – Ongoing	**US 90 Business Signing Upgrade Construction Engineering Support Task Orders, LADOTD, Jefferson & Orleans Parishes, LA / H.010634.5.** *Senior Structural Engineer:* Responsible for review of Requests for Information (RFI), Steel and Anchor Bolt Shop Drawings, and other Contractor Submittals. Participated in designing of the overhead and roadside signing structures following LADOTD and AASHTO design standards for the US 90 Business corridor for a length of approximately 9.8 miles.
1/11 – 06/16	**I-75 Over US 6, WOO-75-10.61 Accelerated Bridge Replacements, ODOT, Bowling Green, OH.** *Senior bridge Designer.* For major bridge reconstruction project along I-75 in Wood County, Ohio which extends from Portage Road to Devil's Hole Road. A unique project element is the bridge replacement of WOO-75-12.94

	which carries I-75 over US 6, known locally as Grand Army of the Republic Freeway. An innovative approach is being used for this 4-span bridge replacement, termed Accelerated Bridge Construction (ABC), which will "slide" the Northbound and Southbound bridge replacement superstructures into final position over 2 distinct weekends. The new 200' long structures are 2-span, prestressed concrete I-beams supported on stub abutments on piling behind MSE walls and cap & column piers founded on piling.
02/12 – 09/15	**WOO-75-12.94 Third Lane Widening, ODOT, District 2, Ohio.** *Project Manager and Lead Bridge Engineer.* Bridge project that was part of the reconstruction and widening of approximately nine miles of I.R.75. The project includes interchange acceleration and deceleration improvements as well as mainline bridge rehabilitations and/or replacements. During the initial phases of the project Arcadis evaluated the U.S. 6 interchange for design deficiencies and provided revised geometrics. Another key feature of the project utilized by ODOT was to replace the I-75 over U.S. 6 mainline bridge utilizing accelerated bridge construction (ABC) techniques. To provide the required vertical clearance, U.S. 6 was lowered. Duration of construction of the bridge was six months utilizing ABC instead of a typical two season project. Traffic on I.R. 75 was disrupted for two weekends only. U.S. 6 traffic was reduced to bi-directional traffic for the entire project duration and closed for two weekends. The existing 4-span rolled steel beam bridge was replaced by a 2-span prestressed concrete beam structure. The substructure consisted of stub abutments behind MSE walls and a cap and column pier, all constructed underneath the existing bridge while maintaining traffic. The 200' long superstructure was constructed adjacent to the existing bridge. In one weekend an existing bridge was demolished, a new superstructure was pulled into position and all ancillary work was completed.
01/11 – 11/12	**Bridge Design for Oberlin Rd., West Ridge Rd. and Gulf Rd. Bridges, Ohio Turnpike Commission, Lorain County, OH.** *Lead Bridge Engineer*. Responsible for repair, replacement and/or rehabilitation of the following bridges over the Turnpike in Lorain County: (1) Bridge Parapet Investigation and Replacement/Rehabilitation of the Oberlin Road Bridge over the Turnpike at Milepost 141.2; (2) Approach Slab and Substructure Investigation and Repair/Replacement of the West Ridge Road Bridge over the Turnpike at Milepost 142.6; and (3) Bridge Deck Replacement of the Gulf Road Bridge over the Turnpike at Milepost 146.4**.**
03/18 - Ongoing	**East Jessup Yard Improvements, Confidential Client, Howard Co., MD.** *Lead Bridge Engineer*. For this project where Jessup Yard is a critical juncture for freight locomotives between Savage and Dorsey Maryland as this location is also the station meeting place for all east/west MARC service from Baltimore to Washington. The project includes the addition of a second lead track that allows arriving trains to use to avoid entering mainline tracks and causing delays to the mainline traffic. An existing brick arch culvert was widened using standard details to span Dorsey Run. The single span bridge extension consists of 44' steel rolled beams on steel pipe pile supported end bents. The design was developed to avoid track outages on the existing line. Construction is scheduled for 05/19.

16. Staff Experience:

Firm employed by **Arcadis**					
Name	**Jose L. Rodriguez, PE**		Years of relevant experience with this employer	1	
Title	Senior Civil Engineer		Years of relevant experience with other employer(s)	24	
Degree(s) / Years / Specialization			BS / 1992 / Civil Engineering, University of New Orleans		
Active registration number / state / expiration date			PE.0030492 / LA / Exp. 03/2023		
Year registered	2003	Discipline	Civil Engineering		
Contract role(s) / brief description of responsibilities			Roadway Design		

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).
02/07 – 10/09	**John James Audubon Bridge Approach (Design-Build [DB]), LADOTD, New Roads, LA.** *Project Designer.* Responsible for the geometric horizontal and vertical alignment for five approach bridges to the John James Audubon Cable Stay Bridge. The longest cable-stayed bridge in the Western Hemisphere consisting of 1,583' main span. Jose was also in charge of the quality control for all bridge approaches and the design of all precast concrete girders for the project.
10/17 – 03/18	**Traffic Turn Lanes on Highway LA 3127, Yuhuang Chemical Inc., St. James, LA.** *Quality Control (QC).* Review for the design of two turn lanes into the Yuhuang Chemical Methanol plant in St. James Louisiana. During construction, Jose provided the owner, with construction design services for the duration of the construction phase.
1/06 – 09/09	**New Orleans Submerged Roadway Program Management, LADOTD / New Orleans Regional Planning Commission, New Orleans, LA.** *Project Designer and Quality Control Reviewer.* For this multi-million-dollar program management team for the DOTD and the Federal Highway Administration (FHWA). Jose helped develop design guidelines and processes for the standardization of engineering work for the repair of damaged roadways by Hurricane Katrina in the City of New Orleans and other Parishes. He was responsible for conducting quality control reviews on roadway plans prepared by other engineering firms for compliance with DOTD and FHWA design standards.
12/15 – 01/16	**Magnolia Ridge Levee Project, City of New Orleans, St. Charles Parish, LA.** *Quality Control (QC).* QC review and plan preparation for the Magnolia Ridge Levee project for St. Charles Parish.
02/10 – 06/11	**I-10 from Veterans to Clearview, LADOTD, Metairie, LA.** *Project Designer.* Responsible for roadway plan preparation for widening 1.2 miles of I-10 from three lanes to five lanes in each direction. The project also included bridge work to accommodate the new roadway widening. Jose was also responsible for the alignment and design of concrete sound walls along the corridor. He helped implement an innovative two-sided concrete stamp process for the noise wall precast concrete panels.

05/12 – 12/15	**Earhart Boulevard Causeway Interchange, LADOTD, New Orleans, LA.** *Project Designer*. Responsible for the geometric design and roadway plan preparation for the Earhart Boulevard Causeway Interchange. The Earhart Boulevard Causeway Interchange purpose was to assist in traffic congestion relief for the east-west flow in traffic for the New Orleans Metro Area. It consisted of the development roadway and bridge ramps for the creation of an elevated signal-controlled interchange. The estimated construction cost for this project was approximately fifty-nine million dollars. Responsible for the development of all horizontal and vertical alignments for this project as well as roadway plan preparation, developing all roadway cross sections, drainage design, utility conflict resolution and cost estimating for the project. Bentley InRoads was used for the development of the roadway plans for this project.
07/09 – 07/15	**Peters Road Expansion, Phases I, II and III, LADOTD, Plaquemines, LA.** *Project Designer.* Responsible for the geometric design, plan preparation and wetland delineation of Peters Road Phase I, II and III. The projects consisted of a new roadway, elevated crossing over the Intracoastal Waterway, approach roadways in Jefferson and Plaquemines parishes to tie Peters Road to Louisiana 23 near Barrier Road. The projects were prepared in coordination with Plaquemines, DOTD and USACE.
06/04 – 01/11	**Causeway Boulevard Interchange Improvements Phase I and II, LADOTD, Metairie, LA.** *Project Designer*. For the project, which consisted of widening Causeway Boulevard elevated structure at Veterans Boulevard and the construction of new at grade and elevated ramps to provide better accesses, improve safety and ease congestion at this heavily travel interchange. Responsible for evaluating existing girders, the design of new precast concrete girders and the roadway plan preparation for this project. Also, responsible for evaluating and design of new sewer and water lines for the project as well as coordinating the removal and replacement of all utilities affected by the new roadways or/and structure foundations.
01/08 – 05/08	**I-12 to Bush Corridor Study Phase III (IES), LADOTD, St. Tammany Parish (STP), LA.** *Project Designer.* Responsible for evaluating environmental issues and developing design alternatives in accordance with the National Environmental Policy Act (NEPA) for transportation improvements.
1/20 – 5/20	**NC73 Highway Widening, North Carolina DOT, Mecklenburg County, North Carolina.** *Project Engineer.* Responsible for the Temporary Traffic Control Plan preparation for the widening of NC 73. A principal arterial roadway, NC 73 Highway, was widened from a two-lane undivided roadway into a four-lane divided highway with a 30 foot wide median. The project presented many challenges for the Temporary Traffic Management Plan's preparation due to the high traffic volumes on NC 73, time restrictions for lane closures, and all NASCAR events at Charlotte Motor Speedway for the duration of the project. To mitigate traffic disruption and enhance roadway safety, assisted in preparing the Transportation Operation Plans and sequence of construction for the project. All design work was performed following NCDOT and the latest MUTCD standards.

16. Staff Experience:

Firm employed by **Arcadis**					
Name	**David Fulks, PE**		Years of relevant experience with this employer	14	
Title	Senior Civil Engineer		Years of relevant experience with other employer(s)	12	
Degree(s) / Years / Specialization			MS / 2019 / Engineering Management, The George Washington University BS / 1997 / Civil Engineering, Portland State University		
Active registration number / state / expiration date			PE.030151 / LA / Exp. 09/2022		
Year registered	2002	Discipline	Civil Engineering		
Contract role(s) / brief description of responsibilities			Roadway Design		

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).
08/11 – 11/14	**Chef Menteur Bridge and Approaches, Route US 90, LADOTD, Orleans Parish, LA.** *Lead Roadway/Bridge Geometrics and Cost Engineer.* Responsible for preparing the proposed geometric configurations of a bridge replacement at Chef Menteur Pass. Investigated four alignments as well as both low-level moveable and high-level fixed span bridge configurations. Performed detailed geometric layout of both the mainline highway, bridge, and adjacent collector roadways to mitigate impacts to environmentally sensitive resources and local residential, commercial, and historical interests.
04/13 – 07/14	**US 11 Railroad Bridge Replacement and Corridor Improvements EA, LADOTD, St. Tammany Parish, LA.** *Lead Engineer.* Geometry and roadway design, line and grade study development, and cost estimates for the replacement of an historic railroad overpass bridge and upgrading an existing two-lane rural highway to a four-lane divided highway with access control. Early coordination with Norfolk Southern Railroad.
07/15 – 06/17	**US 190B at Jefferson Ave Roundabout Design, LADOTD, St. Tammany Parish, LA**. *Roadway Engineer.* Geometric and roadway design, preliminary plans preparation, and cost estimate for replacing an existing four-way signalized intersection with a single-lane elliptical roundabout.
05/14 – 05/15	**Joe Sevario / Roddy Road Roundabouts Stage 0 Feasibility Study, LADOTD, Ascension Parish, LA.** *Task Manager and Lead Engineer*. Geometric and roadway design and cost estimates for the replacement of ten existing stop-controlled intersections with single-lane roundabouts.
01/14 – 03/17	**Pete's Highway EA, LADOTD, Livingston Parish, LA.** *Lead Roadway / Bridge Geometrics and Cost Engineer.* High-priority project completing an environmental assessment and traffic engineering services related to improving congestion and operations along Range Avenue in the vicinity of the I-12 interchange. Design alternatives included two split diamond interchange options with roundabout, partial clover leaves, and collector-distributor road components at both Range Avenue and the next existing, eastern overpass at Pete's Highway (LA 16) and a diverging diamond interchange alternative at Range Avenue.

11/14 – 10/15	**LA 44 and Loosemore Road Roundabout, LADOTD, Ascension Parish, LA.** *Deputy Project Manager and Lead Engineer.* Geometric and roadway design, preliminary subsurface utility investigation, and cost estimates for the replacement of an existing two-way stop-controlled intersection with either a single-lane roundabout or two single-lane roundabouts and right-in/right-out control at the existing intersection.
12/13 – 06/15	**Safety Studies Retainer - LA 3235 Stage 0 Safety Feasibility Study, LADOTD; Lafourche Parish, LA**. *Lead Roadway Geometrics and Cost Engineer*. Designed geometric layout of safety improvements including access management, restrictive intersections, and added turn lanes. Developed construction cost estimates for proposed improvements to assess feasibility of proposed alternatives.
09/09 – 03/12	**I-20 – Garrett Road Connector Interchange Improvements, LADOTD, Ouachita Parish, LA.** *Lead Engineer.* Geometry and roadway design of the new KCS Railroad overpass and connector between Kansas Lane and Garrett Road, including interstate interchange modifications to include two-lane roundabouts at ramp intersections, and three two-lane roundabouts along the corridor outside of the interchange. Improvements to the pedestrian and bicycle facilities were included in accordance with the LADOTD Complete Streets Policy. The compact project area required a detailed layout to confirm feasibility.
09/12 – 09/13	**US 165 Connector and Ouachita River Bridge EIS, LADOTD, Ouachita Parish, LA.** *Roadway Design Engineer.* Responsible for preparing roadway and bridge general plan designs, line and grade report development, and cost estimates for a new five-mile elevated highway through Chauvin Swamp north of Monroe, LA. An in-town corridor was also developed which entailed upgrading Louisville Avenue and Hudson Lane in Monroe, the Lea Joyner Bridge over the Ouachita River, and Stella Street in West Monroe to function as a one-way couplet. Early coordination with Delta Southern Railroad was included.
06/00 – 12/00	**Hesper and Helios Avenue Street Rehabilitation, Jefferson Parish Engineering Department, Harvey, LA.** *Roadway Engineer.* Completed inspections and rehabilitation recommendations for eight blocks of local streets. Rehabilitation required demolition and replacement of concrete road panels, milling and overlay of asphalt surfaces, and installation of drainage inlets and subsurface drainage, as well as replacement of damaged and under-performing subsurface drainage. Performed inspections, collaborated with Parish representatives and utility companies, identified appropriate rehabilitation measures, and produced plans illustrating the rehabilitation recommendations.
2/09 – 4/10	**US 90 – WBV 73 Western Tie-In Crossing Lake Cataouatche Area, United States Army Corps of Engineers (USACE) – New Orleans District, Jefferson Parish & St. Charles Parish, LA.** *Deputy Project Manager and Lead Roadway / Drainage Engineer. Development* of preliminary and final design P&S for a 2,540-foot PPC girder / column bent bridge, highway approaches, and frontage roadways.

(Add rows as needed)

16. Staff Experience:

Firm employed by **Arcadis**					
Name	**Garret Keller, PE**		Years of relevant experience with this employer	11	
Title	Civil Design Engineer		Years of relevant experience with other employer(s)	0	
Degree(s) / Years / Specialization			MS / 2003 / Transportation Engineering, Louisiana State University BS / 2011 / Civil Engineering, Louisiana State University		
Active registration number / state / expiration date			PE.040977 / LA / Exp. 03/2023		
Year registered	2012	Discipline	Civil Engineering		
Contract role(s) / brief description of responsibilities			Roadway Design		

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).
08/11 – 09/13	**Chef Menteur Bridge and Approaches EA, LADOTD, Orleans Parish, LA.** *Roadway Designer.* Responsible for geometry and roadway design for a high-priority bridge replacement. Key issues included minimizing impacts to Bayou Sauvage National Wildlife Refuge, Fort McComb, the existing bridge that is eligible for the NRHP, and compliance with Complete Streets Policy.
10/15 – 4/18	**North Bayou Black Drive Bridge / Hanson Canal, LADOTD, Terrebonne Parish, LA.** *Roadway Designer.* Responsible for design of roadway approaches and guard rail for bridge replacement over Bayou Black. Prepared preliminary and final plans, specifications, and construction cost estimates.
07/15 – 06/17	**US 190B at Jefferson Avenue Roundabout Design, LADOTD, St. Tammany Parish, LA**. *Roadway Designer* Responsible for geometric and roadway design for replacing an existing four-lane signalized intersection with a single-lane roundabout. The project also included a Context Sensitive Solutions study to optimize benefit to the adjacent real estate and community needs.
11/12 – 04/13	**LA 594 (Millhaven Rd.) Alternatives, I-20 Economic Development Corporation, Ouachita Parish, LA.** *Roadway Designer.* Roadway intersection and roundabout improvement alternatives for a LADOTD Stage 0 study. Two roundabouts were evaluated in compliance with EDSM V.1.1.5 (Analysis) and V.1.1.6 (Design).
02/09 – 02/13	**US 90 WBV 73- Western Tie-In Crossing Lake Cataouatche Area (Bridge/Roadway Approach/T-walls), USACE - New Orleans District, Jefferson & St. Charles Parishes, LA.** *Project Designer.* Preparation of Plans and Specifications for new floodwall and highway bridge in St. Charles Parish. Design of floodwalls, four-lane highway bridge, and detour roads to maintain traffic traveling on US Highway 90. The project involved improvement layout and quantity calculations in support of cost estimates.
02/19 – Ongoing	**NDRC Ohio Creek Watershed Project, City of Norfolk, VA.** *Lead Civil Engineer.* Project consists of earthen berms, reinforced concrete floodwalls, and internal stormwater pump stations, as well as, upgraded existing transportation infrastructure to provide better mobility and safety for pedestrians and bicyclists.

16. Staff Experience:

Firm employed by **Arcadis**					
Name	**Craig Raymond, PE**		Years of relevant experience with this employer	8	
Title	Civil Design Engineer		Years of relevant experience with other employer(s)	0	
Degree(s) / Years / Specialization			BS / 2013 / Civil Engineering, Louisiana State University		
Active registration number / state / expiration date			PE.0042715 / LA / Exp. 03/2023		
Year registered	2018	Discipline	Civil Engineering		
Contract role(s) / brief description of responsibilities			Roadway Design		

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).
04/13 – 07/14	**U.S. 11 Railroad Bridge Replacement and Corridor Improvements EA, LADOTD, St. Tammary Parish, LA.** *Roadway/Bridge Design*. Environmental Assessment for replacement of the US-11 Bridge, which includes widening of US-11 from two lanes to four lanes from US-190 north to 1-12. Responsibilities include providing alternative development and plan preparation for two alternatives.
01/14 – 12/14	**Kansas Lane – Garrett Road Connector and 1-20 Improvements, LADOTD, Ouachita Parish, LA.** *Roadway Engineer*. Responsible for roadway design for an Environmental Assessment for the improvement of 5 different interchanges along Garrett Rd. The project includes design for incorporating modern roundabouts to the 5 interchanges.
01/14 – 12/14	**LA 16 (Pete's Highway) I-12 Interchange, LADOTD, Livingston Parish, LA.** *Roadway Engineer*. Environmental Assessment for the improvement of I-12/South Range Avenue diamond interchange, as well as north and south of I-12 along South Range Avenue. Responsibilities include providing alternative development, typical sections, and plan preparation consisting of existing/required right of way and existing utilities.
11/16 – 08/19	**LA 88 Roundabouts Prelim Plans, LADOTD, Iberia Parish, LA.** *Roadway Engineer*. Responsible developing construction plans to install two single-lane roundabouts at the US 90 ramp terminals where it intersects LA 88. Plans include modifying service road intersections to J-Turn intersections and installing additional U-Turn locations to accommodate U-Turn movements.
07/15 – 06/17	**US 190B at Jefferson Avenue Roundabout Design, LADOTD, St. Tammany Parish, LA.** *Roadway Engineer*. Responsible for completing Preliminary Plans based on comments from the client. This involved the development of MicroStation files such typical pavement section and details, plan and profile sheets, and construction sequencing sheets.
11/14 – 11/15	**LA-44 and Loosemore Road Roundabout Feasibility Study, LADOTD, Ascension Parish, LA.** *Roadway Engineer*. Responsible for roadway design for the improvement of existing roadway infrastructure at the intersection of LA-44 and Loosemoore Road. The project includes design for incorporating modern roundabouts to the interchanges to enhance mobility and safety, collection of data from all existing utilities and cost estimate.

16. Staff Experience:

Firm employed by **Arcadis**					
Name	**Greg Badon**		Years of relevant experience with this employer		8
Title	Environmental Planner		Years of relevant experience with other employer(s)		4
Degree(s) / Years / Specialization			BS / 2008 / Natural Resource Management, Louisiana State University		
Active registration number / state / expiration date			USACE 1987 Manual Wetland Delineation Training (Completed 2012); NHI Course 142073 Applying Section 4(f). Putting Policy into Practice; NHI Course 142005 NEPA and the Decision-making Process		
Year registered	N/A	Discipline	N/A		
Contract role(s) / brief description of responsibilities			Environmental		

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).
08/19 – 11/20	**Alphonse Forbes Bridge Over Sandy Bayou Replacement, East Baton Rouge Parish, Watson, LA**. *Planner.* The Alphonse Forbes Road bridge was closed and Arcadis was selected by the City-Parish to complete a design study, topographic survey, and preliminary and final designs. Developed a solicitation of views (SOV) packet, which was distributed to elected officials as well as government agencies. The SOV provided background information, which allowed the U.S. Army Corps of Engineers to provide guidance as to the format and permit they would expect to replace the bridge over U.S. Wetlands.
4/13 – Ongoing	**US 11 Norfolk Southern Railroad Overpass Replacement, LADOTD, St. Tammany Parish, LA.** *Project Manager and Project Scientist.* Mr. Badon was responsible for public/stakeholder outreach, agency coordination, technical workshop preparation, EA document preparation, noise modeling and traffic count field work, Phase I ESA fieldwork, wetland delineation, threatened and endangered species survey, stream assessments, document/records research, and technical report preparation.
12/13 – 8/17	**LA 3235 Stage 0 Feasibility Study, LADOTD, Lafourche Parish, LA**. *Project Scientist*. Responsible for Stage 0 Preliminary Scope and Budget and Environmental Checklists, Purpose and Need, environmental inventory and public outreach. Following the LADOTD Stage 0 Manual of Practice, all environmental resources within the study area were reviewed for potential impacts. Required right-of-way was determined and geometric layouts and cost estimates were generated.
5/13 – 5/15	**Joe Sevario/Roddy Rd Stage 0 Safety Study, LADOTD, Ascension Parish, LA.** *Project Scientist.* Responsible for Stage 0 Preliminary Scope and Budget and Environmental Checklists, Purpose and Need, environmental inventory and public outreach. Following the LADOTD Stage 0 Manual of Practice, all environmental resources within the study area were reviewed for potential impacts. Required right-of-way was determined and cost estimates were generated.
03/17 – Ongoing	**Baton Rouge Pedestrian-Bicycle Safety Action Plan / Stage 0 Feasibility Study, LADOTD, LA.** *Project Manager*. Responsible for the development and delivery of a Pedestrian and Bicycle Safety Action Plan for the City of Baton Rouge. Responsibilities include completing a review of crash data, identification of priority

	locations, and creation of targeted countermeasures based on roadway type. The second phase of the project will allow for the development of detailed studies at the top 10 identified locations where safety countermeasures such as low-cost pedestrian and bicycle facility improvements.
10/13 – 08/17	**Retainer Contract for Safety Studies, Statewide LA.** *Public Outreach.* Since 2013, Arcadis has assisted LADOTD as a prime consultant for the retainer contract. For two of the task orders under this contract, including LA 3235 Corridor Stage 0 Feasibility Study and Joe Sevario/ Roddy Road Roundabouts Stage 0, has been responsible for public/stakeholder outreach oversight and agency coordination. Organized and coordinated an open-house public meeting, developed mailers, and distributed them to local schools, churches, the metropolitan planning commission, community radio, and the chamber of commerce, developed public meeting summary detailing attendance, common issues, and included a response for each question received during the comment period.
05/12 – Ongoing	**US 165 Connector and Ouachita River Bridge Environmental Impact Statement, LADOTD, Ouachita Parish, LA.** *Deputy Project Manager.* Responsible for Section 4(f) resource documentation and investigation, property owner information, coordination with local agencies and stakeholders, an exhaustive wetland inventory / NWI ground-truthing investigation, biological resources and Threatened and Endangered Species review/documentation, and a wetland delineation. Also coordinated with LDWF on property exchange and plans for the Chauvin Swamp Tract Wildlife Management Area.
03/17 – Ongoing	**I-49 South (Ricohoc to Berwick) Supplemental Environmental Impact Statement (SEIS), LADOTD, St. Mary Parish, LA.** *Project Manager.* Following the December 2006 Record of Decision (ROD), LADOTD determined that the estimated cost for this segment of I-49 exceeded available resources and the corridor. Efficiencies would need to be developed to upgrade the existing US-90 to Interstate I-49 by constructing a safe corridor while minimizing impacts to businesses, residents, wetlands, and farmlands flanking the corridor. Responsible for project schedule, budget, agency coordination and project updates. Also responsible for public / stakeholder outreach & oversight, existing conditions documentation, field work, purpose and need development, and completion of LADOTD's Environmental Checklist.
01/14 – Ongoing	**Pete's Highway / I-12 EA / IMR and Alternatives, LADOTD, Livingston Parish, LA.** *Project Manager.* Known regionally as one of the most congested interchanges of I-12, Range Road (LA 3002) has been the bane of commuters for years. Responsible for public outreach and coordination, LADOTD Environmental Checklist, acquisition of property owner info and technical report documentation.

(Add rows as needed)

16. Staff Experience:

Firm employed by **Arcadis**					
Name	**Jason Morrell, PWS**		Years of relevant experience with this employer	6	
Title	Environmental Scientist / Ecologist		Years of relevant experience with other employer(s)	12	
Degree(s) / Years / Specialization			BS / 1999 / Environmental Economics		
Active registration number / state / expiration date			Professional Wetland Scientist – #2319 / USA / Exp. 04/2023		
Year registered	2013	Discipline	Environmental Sciences		
Contract role(s) / brief description of responsibilities			Environmental		

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).
10/15 – 04/18	**North Bayou Black Drive/Hanson Canal Bridge (OSBP) – LADOTD, Terrebonne Parish, LA**. *Ecologist*: Completed a technical review of the Biological Resources and Wetland Findings Report, including required exhibits, prepared for replacement of an off-system highway bridge. Findings from the wetland delineation report were used for a USACE Jurisdictional Determination and Section 404 permit application.
07/16 – 03/18	**Bayou Sara Streambank Restoration, West Feliciana Parish Department of Public Works, West Feliciana Parish, LA**. *Ecologist*: Project involves stabilizing the streambank along approximately 3,600 feet along Bayou Sara, where severe erosion is impacting the Town of St. Francisville's Wastewater Treatment Facility, pond levees, and the Parish's only access road (Ferdinand Street) to the Mississippi River. Completed a wetland delineation and protected species habitat assessment within the area proposed for bank stabilization, as well as adjacent staging and access areas. Provided technical review of a Biological Resources and Wetland Findings Report, including required exhibits, and NWP 13 PCN, including permit sketches for bank stabilization for which USACE authorization was successfully obtained.
07/16 – 11/16	**Pete's Highway / I-12 EA / IMR and Alternatives, LADOTD, Livingston Parish, LA.** *Ecologist*: Led a wetland delineation and protected species habitat assessment along Range Road in the vicinity of the I-12 interchange for the proposed interchange improvement project. Provided technical review of a Biological Resources and Wetland Findings Report, including required exhibits, in support of the NEPA Environmental Assessment.
12/15 – Ongoing	**Reisor Subdivision Bridge Replacements, Union Pacific Railroad, Natchitoches Parishes, Louisiana and Caddo Parish, LA/Harrison County, TX.** *Lead Ecologist:* Responsible for wetland delineation and protected species habitat assessments for replacement of two structurally deficient railroad bridges on the Union Pacific Reisor Subdivision line. Completed wetland findings report, including required exhibits, and calculated impacts to streams and wetlands for bridge replacements. Coordinated with design for impact avoidance and minimization and provided technical review of a Nationwide Permit (NWP) 14 Pre-Construction Notification (PCN), including permit sketches submitted to the USACE Fort Worth District for the Caddo Parish, LA/Harrison County, TX bridge.

12/15 – Ongoing	**Environmental Analysis on Federal-Aid Projects by Consultant - FY 2016 & 2018, GDOT, Statewide, GA.** *Associate Project Manager*: Responsible for managing GDOT embedded ecologists assigned management of ecology studies, permitting, and biological assessment for 80+ transportation projects. Responsible for managing environmental studies on projects through a Menu of Services (MOS) contract. Services provided include MOS scope and budge development, staff and subcontractor management, client and agency coordination, and technical review. Manage preparation of Nationwide and Individual Section 404 permitting and Section 7 ESA consultation, including Biological Assessments, for GDOT infrastructure development and improvement projects.
04/18 – Ongoing	**State Funded Program Consultant Contract Environmental Document – FY 2017, GDOT, Statewide, GA.** *Associate Project Manager:* Responsible for developing ecology toolkits, guidance documents, and templates for GDOT Office of Environmental Services use and publication. The toolkits provide clear and concise guidance for GDOT staff and consultants completing ecology studies, environmental permitting, and biological assessment. Services provided include collaboration with GDOT, FHWA, USACE, USFWS and the Georgia Department of Natural Resources (GeorgiaDNR) on guidance document development. Under this contract, a Biological Assessment template was developed with GDOT, USFWS, and FHWA for completing formal Section 7 Endangered Species Act (ESA) consultation on GDOT projects.
01/14 – 04/14	**I-285 at Riverside Drive, GDOT, Fulton County, GA.** *Lead Ecologist*: Led ecology surveys and reporting for the proposed conversion of signalized intersections at I-285 eastbound and westbound ramp termini and Riverside Drive to single lane roundabouts. Responsibilities included wetland delineation and protected species habitat assessment. Completed technical review of findings report, including required exhibits, and agency coordination to support NEPA documentation for the federally funded project.

(Add rows as needed)

16. Staff Experience:

Firm employed by **Arcadis**					
Name	**Jayun Thibodeaux**		Years of relevant experience with this employer	2	
Title	Environmental Planner / Ecologist		Years of relevant experience with other employer(s)	3	
Degree(s) / Years / Specialization			BS / 2017 / Environmental Management Systems, Louisiana State University		
Active registration number / state / expiration date			Relevant Training: Basic Wetland Delineation training by WTI (2018)		
Year registered	N/A	Discipline	N/A		
Contract role(s) / brief description of responsibilities			Environmental		

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).
04/20 – Ongoing	**LA 82 Improvement, Sabine Pass LNG, LP, Cameron Parish, LA.** *Ecologist*. Assisted in preparation of environmental resource reports and data analysis for submittal to the Federal Energy Regulatory Commission (FERC) for approval under the Natural Gas Act (NGA). Prepared ecology report, a Section 404 permit application, Section 7 Endangered Species Act documentation, and created figures utilizing GIS for the LA 82 improvements and modifications to the liquefied natural gas (LNG) facility entrance.
02/19 – 04/19	**Holton Harris Road Bridge, Monroe & Corie, Inc., LP, Over Lake Vernon in Vernon Parish, LA.** *Ecologist.* Conducted a WOTUS delineation for the replacement of an 80-foot long by 18-foot-wide timber bridge on Holton Harris Road, crossing Vernon Lake located south of the City of Anacoco, Louisiana. Responsible for preparing a preliminary environmental finding report and submitting a Nationwide Permit 14 Pre-Construction Notification.
05/20 – Ongoing	**Louisiana Coastal Use Permit Submittal – COP Stratco, Terrebonne Parish, LA.** *Technical Lead*. Responsible for developing and preparing guidance documents, resource reports, and identifying potential impacts for a joint permit application with the LDNR, OCM, and the USACE New Orleans District. The project involves the removal of several structures including abandoned oil wells, flowlines, and a barge that served as a well pad located in the Louisiana Coastal Zone. Reviewed available data to identify potential impacts to oyster leases, pre-existing pipelines/crossings, and prop washing zones. Created figures utilizing geographic information systems (GIS) software to illustrate project location(s), path, access, and oyster leases in accordance with LDNR and OCM's guidelines.

16. Staff Experience:

Firm employed by **Arcadis**					
Name	**Richard Gilmour**		Years of relevant experience with this employer		31
Title	Principal Environmental Planner		Years of relevant experience with other employer(s)		6
Degree(s) / Years / Specialization			MCRP / 1984 / Planning, Ohio State University- Main Campus BS / 1979 / Anthropology, Ramapo College of New Jersey		
Active registration number / state / expiration date			Certified Planner / US American Institute of Certified Planners Professional Planner – # 4828 / NJ / Exp. 05/2022		
Year registered	1991	Discipline	City Planning		
Contract role(s) / brief description of responsibilities			Environmental		

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).
01/17 – 04/19	**Flood Protection Queens Midtown & Hugh L Carey Tunnel, New York City (NYC) Transit, Bridges & Tunnels, NY**. *Task Manager*: Managed the completion of all permitting and approvals required from federal (**USACE**, **USCG**), State (New York State Office of Parks Recreation and Historic Preservation), and local (New York City [NYC] Landmarks Preservation Commission, NYC Department of City Planning (DCP) Coastal Consistency, NYC Department of Transportation [DOT]) agencies for permanent and deployable flood control improvements in State and Federal waters of the U.S. (Hugh L. Carey Tunnel Air Vent in NY Harbor) and within city street rights-of way. Required consultation and coordination with NYC DOT, NYC Transit, NYC Parks, Amtrak, NYC Department of City Planning, and other agencies.
01/01 – 12/03	**Popham Road Bridge Replacement Environmental Assessment, Village of Scarsdale, Scarsdale, NY**. *Project Manager*: Managed the preparation of an Environmental Assessment (EA) in compliance with the National Environmental Policy Act (NEPA) for review and approval of funding by the FHWA and New York State Department of Transportation (NYSDOT) for the replacement of the Popham Road bridge which spans the Metro-North rail line. The EA was also completed in compliance with New York State (NYS) Environmental Quality Review (SEQR) and NYSDOT regulations for implementing SEQR. The analysis led to a determination of no significant impact. The project included the following specialized studies: Phase IA and Phase IB archaeological investigations, hazardous waste/contaminated materials assessment, and asbestos assessment. Public participation components of the project included presentations at a public information meeting and locally televised Planning Board meeting.
01/95 - 12/97	**Woodland Avenue Viaduct Environmental Assessment, Westchester County Department of Public Works, White Plains, NY.** *Deputy Project Manager*: Completed a NEPA/SEQR EA for rehabilitation/replacement of a National Register of Historic Places (NRHP) listed historic bridge along the Bronx River Parkway that spans the Bronx River and Metro-North commuter rail line. Responsible for studies of impacts on noise, historic and archeological resources, and natural resources. As a result of bridge inspection studies, analysis of traffic accident records, and a Phase IB archaeological investigation, a preferred alternative

	was chosen which resulted in a Categorical Exclusion (CE) determination. The project received an Engineering Excellence Award from the American Consulting Engineers Council.
01/07 -12/20	**Crane Road Bridge Replacement Environmental Assessment and Permitting, Westchester County Department of Public Works, Scarsdale and Greenburgh, NY.** *Project Manager:* Responsible for the completion of an EA in compliance with NEPA, NYS SEQR, and documentation for a CE determination by the FHWA under NEPA for the federally funded Reconstruction of the Structures Carrying the Bronx River Parkway over the Bronx River and Metro North Railroad (Crane Road Viaduct) (PIN 8110.13) in Scarsdale and Greenburgh, NY. Provided oversight, coordination, and direction of technical analyses for three build alternatives and a No Build alternative that included a Phase I Archaeological Investigation, hazardous materials investigation, Noise Study, Environmental Justice screening, Air Quality Screening, Stormwater Pollutant Loading analysis, Floodplain Evaluation, Scour Analysis, tree survey, and water quality sampling and analyses. The bridge is a contributing element of the Bronx River Parkway Reservation, which is NRHP listed. As such, prepared a Programmatic Section 4(f) Statement in consultation with the project's historic preservation consultant to address Section 4(f) cultural resource considerations. Also led the preparation of permit applications and obtained approvals for a Nationwide Permit from the USACE and the NYS Department of Environmental Conservation for a CWA Section 401 Water Quality Certificate, which were obtained in record time.
09/14 – 08/16	**Reconstruction of I-95 (MP NE14 to MP NE15), New York State Thruway Authority (NYSTA), Rye, NY.** *Project Manager*: Responsible for environmental studies, impact analyses, and environmental documentation under NEPA/NY SEQR for reconstruction of ramps and bridges along I-95, between I-287 and the Connecticut state line. Prepared for and participated in meeting with the NYSTA and FHWA during scoping and in presentations to local elected officials and the public during informational meetings.

16. Staff Experience:

Firm employed by **Arcadis**					
Name	**Jeremy Henson**		Years of relevant experience with this employer	4.5	
Title	Principal Ecologist/Permitting Specialist		Years of relevant experience with other employer(s)	15	
Degree(s) / Years / Specialization			MS / 2011 / Ecology, Texas State University BS / 2001 / Biology, University of Central Missouri		
Active registration number / state / expiration date			Certified Ecologist		
Year registered	2009	Discipline	Ecology		
Contract role(s) / brief description of responsibilities			Environmental		
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).				
09/19 – Ongoing	**Fortier Manufacturing Facility – Wetland Delineation and Permitting Support Project, Cornerstone Chemical Company; Jefferson Parish, Louisiana.** *Senior Technical Permitting Lead* for a wetland delineation and permitting analysis for a chemical facility expansion project located in Jefferson Parish, Louisiana. The project site is approximately 800 acres on the south side of the Mississippi River and is bisected my numerous forested wetlands and canals. Conducted a preliminary Waters of the U.S delineation and preliminary jurisdictional determination; threatened and endangered species evaluation; and desktop cultural resources assessment within the project site. Prepared a technical report depicting the boundaries of potentially jurisdictional resources and an analysis of the subsequent environmental permitting requirements based on the project parameters. Currently engaged in project permitting support and will engage with applicable regulatory agencies, as needed.				
11/18 – 01/19	**Comite River Diversion – Pipeline HDD Project, Confidential Oil & Gas Client Pipeline Company; East Baton Rouge Parish, Louisiana.** *Lead Scientist* for the relocation of Confidential Oil & Gas Client Company's LA-90, 16-inch diameter gasoline pipeline prior to construction of the Comite River Diversion Canal located north of Baton Rouge, Louisiana. The proposed project is a 12-mile diversion channel, which would be constructed from the Comite River to the Mississippi River. The purpose of the project is to provide flood-damage reduction for residents in the lower part of the Comite River Basin by diverting flood waters into the Mississippi River. In addition to the construction of the canal, associated infrastructure such as control structures, levees, roads, and utilities will need to be constructed, modified, or relocated to implement the project. Performed environmental/ecological assessment and the following agency coordination and permitting: U.S. Army Corps of Engineers (USACE) Section 404/10 and 408 permitting; Louisiana Department of Environmental Quality (LDEQ) 401 Water Quality Certification and stormwater permitting; Louisiana Department of Wildlife and Fisheries (LDWF) rare wildlife species coordination; Louisiana Office of Cultural Development-Division of Historic Preservation (LOCD-DHP) coordination; and city/parish floodplain permitting and levee crossing coordination.				

08/18 - 02/19	**Northeast Sanitary Sewer Line Project - City of College Station, Texas.** *Project manager and senior technical lead* on the development of an Environmental Assessment for the HUD-funded Northeast Sanitary Sewer Line Project in College Station, Texas. The funding was allocated through the Community Development Block Grant (CDBG) program and HUD served as the lead federal agency. The responsible entity was the City of College Station and the project served to relocate and expand an existing 36-inch sewer main for increase capacity from surround community growth and development. Arcadis completed the Environmental Assessment following the HUD NEPA process outlined in 24 CFR Part 58, including preparation of the EA checklist, floodplain/wetland notification form, public scoping, agency coordination, site survey, and permitting support.
06/18 – 12/18	**Monte Sano Bayou Pipeline Water – Pipeline HDD Project, Confidential Oil & Gas Client Pipeline Company; East Baton Rouge Parish.** *Lead Scientist* for the installation of a new cross-brace members within the existing pipe support structure over Monte Sano Bayou in East Baton Rouge Parish, Louisiana. Services included environmental/ecological assessment and regulatory permitting services for the pipeline. Project-related agency coordination and/or permits included: USACE Section 404/10 permitting; LDEQ 401 Water Quality Certification and stormwater permitting; LDWF rare wildlife species coordination; LOCD-DHP coordination; and city/parish floodplain permitting and levee crossing coordination.
04/17 – 02/18	**Houston Toad Habitat Assessment, AV Mcgraw; Dallas, Texas.** *Project Manager and Senior Technical Ecologist* for a proposed 800-acre hydraulic frac-sand development project in Burleson County, Texas. Led the development of a focused habitat assessment for the federally listed endangered Houston toad, which paved the way for comprehensive impact avoidance and Incidental Take permitting negotiations with U.S. Fish and Wildlife Service. The proposed project was considered unviable by multiple other biologists and environmental permitting experts; however, thorough site analysis, planning, and agency engagement allowed for the implementation of voluntary long-term (three-year) protocol-level species surveys, agency reporting, and impact mitigation.

16. Staff Experience:

Firm employed by **Vectura Consulting Services, LLC**					
Name	**Sheelagh Brin Ferlito, PE, PTOE**		Years of experience with this firm/employer	6	
Title	Principal		Years of experience with other firm(s)/employer(s)	27	
Degree(s) / Years / Specialization			B.S. / 1988/ Civil Engineering		
Active registration number / state / expiration date			PE.0025383 / LA 9/30/2023		
Year registered	1993	Discipline	Civil		
Contract role(s) / brief description of responsibilities			Traffic Signal Design Supervisor / QC for TMP		

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).
07/19 – current	**H.004791 DOTD Belle Chasse Bridge & Tunnel Replacement PPP (Belle Chasse, LA)** Brin is the 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 is the first ever Public-Private-Partnership performed by Louisiana DOTD. She coordinated the detour plans based on the sequence of construction as part of the **Level 2 Transportation Management Plan (TMP**).
02/20 – 11/21	**H.010616 DOTD I:20 LA 544 Overpass Replacement (Ruston, LA)** Brin is the project manager for the **Transportation Management Plan (TMP)** as part of a design for a bridge replacement and three roundabouts in Ruston, LA. The TMP was a **Level 2** and included evaluation of 10 Sequence of Construction Phases. Detours included rerouting traffic to other interchanges at nighttime only, rerouting traffic from I-20 to the off ramp and on ramp at nighttime only, and rerouting traffic to service roads in vicinity of the project. Brin coordinated the queue analysis with DOTD to determine when lane closures would be allowed utilizing 24-hour tube counts. She will also coordinate the development of temporary traffic signal plans for this project as well.
07/18 – 04/19	**LA 1 Pedestrian Crosswalk Study and Traffic / Pedestrian Signal Design West Baton Rouge Parish, Addis, LA** Brin developed a Pedestrian Crosswalk Study and **Traffic Signal Construction Plans** for the intersection of LA 1 at LA 990 in Addis, LA. 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. Brin also assisted with the Parish with the DOTD Permit Request for Intersection Control Devices on a State Right of Way.
09/16-04/17	**H.004957.5 I-12 To Bush - LA 3241 (I-12 – LA 36) Corridor Study (St. Tammany Parish, LA)** Brin was the project manager of a formal DOTD traffic study for the new alignment of LA 3241 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. The traffic study included **alternative analyses** to improve the safety and efficiency of the roadway consistent with the latest DOTD policies related to access management and complete

	streets. Specific access management features examined included intersection improvements, median openings, and U-turns, spacing and type of openings, signalization of intersections and roundabouts. Brin developed the safety analyses report for the project
08/12-05/13	**H.009998 LA 935 Safety / Stage 0 Study (Ascension Parish, LA)** Brin developed the safety analyses report for the **Stage 0 Study**. She coordinated and collected existing traffic data using Jamar equipment. She used HCS and Interactive Highway Safety Design Model (IHSDM) Software for the analyses. She developed MicroStation drawings with scaled aerials to show crash diagram locations as well as proposed alternate layouts. Histograms developed in Excel were used to show the comparison of various crash conditions with statewide averages. Crash records for 3 years were obtained from crash1 database.
06/02-04/04	**SPN 737-94-0030 Shreveport ITS Near-Term Phase 3A (Shreveport, LA)** Brin developed the construction plans for the **design of ITS** equipment on a 22 mile stretch of I-220 in Shreveport, LA. The project included 36 closed circuit television cameras, 5 dynamic message signs, and 143 radar vehicle detectors. Project included plan preparation of communications diagrams, fiber optic allocation diagrams, fiber optic termination diagrams, telecommunication facilities, power services, wireless transmitters and receivers, related conduit and end equipment, general notes, special details, estimated construction cost and terrain analyses.
06/01-08/03	**SPN 737-94-0028 Shreveport ITS Near-Term Phase 1 (Shreveport, LA)** Brin designed **ITS equipment construction plans** for a 10 mile stretch of I-20 in Shreveport, LA. Equipment included 17 Video cameras, 8 Dynamic Message Signs and 66 radar counters. This project included plan preparation of communications diagrams, fiber optic allocation diagrams, fiber optic termination diagrams, telecommunication facilities, power services, wireless transmitters and receivers, related conduit and end equipment, general notes, special details, estimated construction cost and terrain analyses.

(Add rows as needed)

16. Staff Experience:

Firm employed by **Vectura Consulting Services, LLC**					
Name	**Laurence Lucius Lambert, II, PE, PTOE, PTP**		Years of experience with this firm/employer		6
Title	Supervisor		Years of experience with other firm(s)/employer(s)		18
Degree(s) / Years / Specialization			B.S./1997/Civil Engr. M.S./2006/Civil Engr. (Transportation focus) M.B.A./2010		
Active registration number / state / expiration date			PE.0029901 / LA / 3/31/2024		
Year registered	2001	Discipline	Civil		
Contract role(s) / brief description of responsibilities			Traffic Signal Design QC / TMP Supervisor		

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).
02/21 - 03/21	**H.013256.5 I-10 ITS Scott to Lake Charles (Southwest Louisiana)** Laurence was the lead traffic engineer for a Level 2 **Traffic Management Plan** (TMP) for the construction of ITS equipment along I-10. The plan included a safety strategy that included a CAT Scan, LOS determination utilizing Citrix data, lane closure recommendations based on a queue analysis and public information strategies.
04/18 – 12/21	**H.010960.5 LA 30 Roundabouts at Tanger & I-10 Gonzales (Ascension, LA)** Laurence provided a Quality Control review of the **temporary construction and sequence of construction plans**. Vectura also provided Quality Control review of **signing and striping plans** at 30% and 60% plan sets to ensure the **roundabouts** conformed to the Pavement Markings Details Sheet PM-09 and the Manual on Uniform Traffic Control Devices (MUTCD) details on roundabouts.
10/17 - 10/18	**H.013025 LA 182 (University Avenue) Corridor Planning Study (Lafayette, LA)** Laurence was the lead transportation engineer for a **Corridor Planning Study** for LA 182. The scope focused on improving safety and mobility for pedestrian, bicycle, and transit users. Laurence collected AM & PM peak vehicle turning movement counts as well as pedestrian and bicycle counts. Laurence coordinated with the Acadiana Planning Commission to **develop growth rates and design year volumes**. Laurence then performed Highway Capacity Manual analysis for 5 intersections along the intersection analyses for the signalized and roundabout controlled alternatives. Included in the study was a **safety analyses** of five intersections and the intermediate segments. Based on the results of the safety analysis, Laurence provided design criteria to the design team for improving safety of pedestrians, bicycles, and vehicles.
03/18-06/18	**H.006474.1 Shreveport Immediate ITS Phase 2b (Shreveport, LA)** Laurence was the task leader for Procurement and Alternative Analysis Configuration portions of the Systems Engineering Analysis (SEA) that complied with Code of Federal Regulations Title 23, 940.11). The Procurement task consisted of investigating the methods of procurement for the deployment project where the procurement options for the pros and cons for each method were documented. The Alternatives Analysis Configuration consisted of analyzing three possible project configurations where the pros and cons of the needed equipment and communication options were documented.

09/16 - 04/17	**H.004957.5 I-12 To Bush - LA 3241 (I-12 – LA 36) Corridor Study (St. Tammany Parish, LA)** Laurence was the 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. Laurence 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. Laurence, along with Brin, **collected 7-day, 24-hour counts** w/ classification on mainlines, turning movement counts for morning and evening peak periods and speed data for mainlines. Laurence also developed a VISSIM **traffic simulation model** of the preferred alternative.
04/11 - 09/11	**SPN 424-04-0032 US 90 at Louisiana 85 Design-Build Maintenance of Traffic Plan (Iberia Parish, LA)** Laurence developed a **Maintenance of Traffic** plan that accommodated the bridge and road widening, but also maintain passage of large trucks and freight through the heavily travelled corridor crucial for agricultural goods and farming. Laurence was the Lead Traffic Engineer for one of the first design-build projects undertaken by DOTD, which included the construction of a grade separated, diamond interchange to replace the existing US 90 intersections with Louisiana 85 in Iberia Parish to upgrade this future I-49 corridor to interstate standards.
06/10 - 10/10	**SPN 454-02-0071 I-12 Widening Design-Build Amite River Bridge to Juban Road Maintenance of Traffic Plan (Livingston Parish, LA)** Laurence was responsible for designing a **Maintenance of Traffic** plan that would keep drivers informed of real time traffic situations through a comprehensive traffic management system. Four lanes (two lanes in each direction) were to remain open during peak travel times throughout the length of the project. Temporary lane closures only occurred at night.
04/07-12/07	**SPN 737-99-0799 Baton Rouge to New Orleans ITS-TIM Phase 1 Design Build Project (Jefferson and St. John the Baptist Parishes)** Laurence was the project manager for an ITS Design-Build project, where Laurence **represented the DOTD ITS Section**. Laurence was responsible for developing a Systems Engineering Analysis that was used to solicit proposals from Design-Build teams. Laurence also assisted the DOTD ITS Section with the development of the Scope of Services Package (SOSP) that was used during the procurement process.
09/06-09-07	**EBR 06-CS-HC-00012 Downtown Baton Rouge Signal Project (Baton Rouge)** Laurence was the Project Manager to develop construction plans to upgrade 29 signals in downtown Baton Rouge as part of the EBR Green Light Plan. He coordinated numerous utility conflicts during construction since current utility plans were not readily available in an old part of town. He made several signal pole foundation location adjustments based on numerous field visits with utility companies.

16. Staff Experience:

Firm employed by **Vectura Consulting Services, LLC**					
Name	**Prasanth Malisetty, PE, PTOE, PTP, RSP1**		Years of experience with this firm/employer	1	
Title	Senior Project Engineer		Years of experience with other firm(s)/employer(s)	17	
Degree(s) / Years / Specialization			B.E. / 2003/ Civil Engineering; M.S. / 2004/ Civil Engineering		
Active registration number / state / expiration date			PE.0035792 / LA / 3/31/2023		
Year registered	2010	Discipline	Civil		
Contract role(s) / brief description of responsibilities			Data Collection / Senior Project Engineer		

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).
09/20 – 12/21	**H.011909.5-4 Roundabout: US 171 at Boone St. (Vernon Parish)** Prasanth was the lead design engineering for temporary signal design associated with the **sequence of construction** for the roundabout at US 171 at Boone St.
09/20 – 12/21	**H.010960.5 LA 30 Roundabouts at Tanger I-10 (Ascension Parish)** Prasanth was the lead design engineering to produce the temporary signal design associated with the **sequence of construction** for the roundabouts on LA 30 in Gonzales, LA. This project consists of eight proposed construction phases.
01/21 – 05/21	**H.013256 - I-10 ITS Scott to Lake Charles (Lafayette, Acadia, and Jefferson Davis Parishes)** Prasanth and Reece were responsible for measuring anticipated construction quantities and producing a cost estimate for fifteen sites along I-10 where CCTV cameras were being installed by using DOTD's Bid Tabulation and Cost Estimating Tool.
12/18 – 7/20	**H.002297 LA 37 Sullivan Road to Liberty Road (Baton Rouge)** Prasanth was the project manager to develop feasible roadway improvement that will improve operation and increase safety along the LA 37 corridor. The project included data collection, development of growth rates, existing and future traffic analyses. Prasanth was responsible for traffic forecasting for no-build and future alternatives using the CRPC travel demand models. Also, performed the existing and future traffic analysis and propose potential alternatives to mitigate existing deficiencies.
11/17 – 12/18	**H.013264 District 08 Safety Investment Plan (Louisiana)** Prasanth was the project engineer responsible for preforming districtwide safety analysis and preliminary engineering studies for various locations considered high potential for safety improvements. Responsible for evaluating crash statistics to identify possible roadway issues by using appropriate safety analysis tools and recommend potential operation safety countermeasures. Developed Countermeasure Evaluation Tool (CET) tool which aid in determining total crash reduction for each proposed countermeasure with associated cost savings and perform benefit / cost analysis.
8/10 – 2/18	**DOTD Traffic Engineering Contracts (Statewide, LA)** As a project engineer for numerous task orders for Signal Timing Studies and Designs, Prasanth was responsible for coordinating data collection tasks, intersection analysis, crash analysis, developing coordinated signal timing plans and field implementation / fine tuning along 27 corridors throughout statewide which involved 264 intersections. Following are the list of corridors

	• District 04; LA 1, LA 526 & US 171, Shreveport, LA; LA 3, LA 3105 & LA 72, Bossier, LA – 110 intersections, 7 corridors • District 02; LA 3040 & LA 57, Houma, LA; LA 20, Thibodaux, LA; US 61, New Orleans, LA – 44 intersections, 4 corridors • District 62; US 11, Slidell, LA; LA 19, Baker, LA; LA 44, Gonzales, LA; LA 3124 & LA 60, Bogalusa, LA; LA 10 Franklinton, LA; LA 16, Amite, LA; LA 38, Kentwood, LA; LA 25, Folsom, LA – 68 intersections, 9 corridors • District 58; US 425, Vidalia & Ferriday, LA – 11 intersections, 2 corridors • District 08; LA 1208-03, US 71 & LA 28 – 21 intersections, 3 corridors District 07; US 190 & US 171, DeRidder, LA – 10 intersections, 2 corridors

16. Staff Experience:

Firm employed by **Vectura Consulting Services, LLC**					
Name	**Reece Rodrigue, PE, PTOE**			Years of experience with this firm/employer	2
Title	Project Traffic Engineer			Years of experience with other firm(s)/employer(s)	7
Degree(s) / Years / Specialization			B.S. / 2013/ Civil Engineering		
Active registration number / state / expiration date			PE.0042074 / LA / 3/31/2024		
Year registered	2017	Discipline	Civil		
Contract role(s) / brief description of responsibilities			Traffic Project Engineer		

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).
01/21 – 05/21	**H.013256 - I-10 ITS Scott to Lake Charles (Lafayette, Acadia, and Jefferson Davis Parishes)** Reece was a member of the subconsultant team who was tasked with reviewing the ITS plans for 15 sites along I-10 where CCTV cameras were being installed. Reece 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.
07/21 – Current	**H.007160 - EBR Computerized Traffic Signal, Phase VB (Baton Rouge)** Reece is part 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 in accepting the manufactured poles. Reece, with the DOTD, City-Parish and the Contractor conducted field visits to confirm pole foundation locations.
09/20 – 12/21	**H.011909.5-4 Roundabout: US 171 at Boone St. (Vernon Parish)** Reece is an essential design engineer, who is assisting in the production of the temporary signal design associated with the sequence of construction for the roundabout at US 171 at 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)** Reece is a design engineer, who is assisting in the production of the temporary signal design associated with the sequence of construction for the roundabouts on LA 30 in Gonzales, LA. This project consists of eight proposed construction phases. He assisted in calculating the temporary pole heights, determining the placement location for the temporary poles for each phase, measuring and calculating clearance intervals. Reece 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.
04/20 - Current	**H.004791 DOTD Belle Chasse Bridge & Tunnel Replacement Public-Private Partnership Project (Belle Chasse)** Reece is the project engineer responsible for designing the temporary traffic signal for the intersection of LA 23 at Engineers Rd. The design of the temporary signals is set for eight phases of construction per the anticipated sequence of construction. Temporary pole location and heights were recommended for placement for use for all construction phases. Vehicle clearance interval calculations were conducted for each phase in accordance with DOTD and ITE guidance. Reece is responsible for producing the traffic impact analysis portion

	of the Traffic Management Plan, which were also used in planning for the permanent and temporary signal timing plans. Reece is also a valued design engineer 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. Reece maintains correspondence with the fellow design engineering team for product consistency. In addition, Reece was responsible for reviewing and approving shop drawings that were submitted by the contractor for use in construction.
02/16 - 12/16	**H.005733.5 US 190 Superstreet Task Order (St. Tammany Parish)** Reece was a team member responsible for the layouts for the US 190 Superstreet signal designs. He created the preliminary plans using the CAD software program MicroStation V8i. He aided in the technical design of each intersection. He conducted field inspections to verify 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)** Reece served as a design engineer for the traffic signal plans for the 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 that 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.

16. Staff Experience:

Firm employed by **Vectura Consulting Services, LLC**					
Name	**Kristen Gahagan Farrington, PE, PTOE**			Years of experience with this firm/employer	1
Title	Project Traffic Engineer			Years of experience with other firm(s)/employer(s)	7
Degree(s) / Years / Specialization			B.S. / 2014/ Civil Engineering		
Active registration number / state / expiration date			PE.0042785 / LA / 3/31/2023		
Year registered	2016	Discipline	Civil		
Contract role(s) / brief description of responsibilities			Traffic Project Engineer		

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).
03/19 – 11/19	**H.012311 LA 429 Connector Stage 0 (Ascension Parish)** Kristen was the 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. Kristen served as the civil engineer responsible for designing 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 materials and minutes, coordinated with interchange study consultants for a cohesive project, and wrote report.
09/17 – 09/18	**H.011160 LA 73 Corridor Study Stage 0 (LA 74 to LA 621) (Ascension Parish)** Kristen was the 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.
04/18 – 04/19	**H.011243.1 I-49 at US 190 and LA 31 Interchange Improvements Stage 0 (St. Landry Parish)** Kristen was the 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.
04/19 – 6/21	**H.013817.1 A 117 Improvements Stage 0 (Vernon and Natchitoches Parishes)** Kristen served as project engineer responsible for a **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. Kristen was responsible for performing the safety analysis including crash rate number method, over-representation, CAT Scan

	quality assurance, HSM existing safety analysis, and No-Build Analysis. Kristen 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. Kristen compiled all findings in the **Stage 0** report and coordinated with stakeholders and local agencies to ensure purpose and need of project is met.

16. Staff Experience:

Firm employed by **Marrero, Couvillon & Associates, LLC**				
Name	**Brian T. Miller, P.E.**		Years of experience with this firm/employer	7
Title	Sr. Mechanical Engineer		Years of experience with other firm(s)/employer(s)	29
Degree(s) / Years / Specialization			B.S. / 1986 / Mechanical Engineering	
Active registration number / state / expiration date			#26080 / LA / 9.30.2023	
Year registered	1983	Discipline	Mechanical Engineering	
Contract role(s) / brief description of responsibilities				
Mr. Miller has over 35 years of engineering experience in mechanical engineering, project engineering and project management. Mr. Miller has been responsible for various projects ranging from HVAC systems design to wastewater pump stations. Brian is working with clients in both the public and private sector, such as the Recovery School District in New Orleans, the Louisiana State Department of Transportation, the Ascension Parish School Board, as well as various Architects and Engineering firms.				

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).
05/15-Present	**St. Tammany Parishes, U.S. 11 Bridge Over Lake Pontchartrain Rehabilitation – Orleans, LA -**Mechanical engineer for the design of the rehabilitation of two Operator's Houses at an existing bridge over Lake Pontchartrain. Work is being done as part of a larger bridge rehabilitation project. Design is sensitive to the historic nature of the bridge and Operator's Houses.
06/12-04/18	**Lafourche Parish, W. Larose Vertical Lift Rehabilitation -Route: LA-1, Larose, LA. -**Engineer responsible for the mechanical design for rehabilitation of the Operator's House at an existing bridge over the Intracoastal Waterway. Work was done as part of a larger bridge rehabilitation project.
10/13-05/16	**Louisiana DOTD, 4th Street Harvey Bridge Rehabilitation, Jefferson Parish, LA. -** Mechanical engineering design for rehabilitation of the Operator's House at an existing bridge over the Harvey Canal. Work was done as part of a larger bridge rehabilitation project.
04/09-04/12	**Louis Armstrong New Orleans International Airport, Airfield Lighting Vault, Kenner, LA -** Mechanical engineer for the design of a new building to house airfield lighting control equipment. Construction was designed to withstand the effects of a Category 4 hurricane.
5/15-10/16	**LA-1 Reroute from Golden Meadow to Leeville, Golden Meadow, LA.** – Project Manager for lighting design for 9 mile section of widened DOTD highway (LA 1 from Golden Meadow to Leesville). Electrical and controls infrastructure for ITS equipment and design of new toll booths.

16. Staff Experience:

Firm employed by **Marrero, Couvillon & Associates, LLC**				
Name	**Gregory DeCoursey, AIA**		Years of experience with this firm/employer	26
Title	Architectural Engineer		Years of experience with other firm(s)/employer(s)	20
Degree(s) / Years / Specialization			B. Arch / 1977 / Architecture M.Arch / 1982 / Architecture	
Active registration number / state / expiration date			#2620 / LA / 12.31.2021	
Year registered	1980	Discipline	Architecture	
Contract role(s) / brief description of responsibilities				
Gregory has performed services as both Architect and Project Manager for Engineering Projects for the Louisiana Department of Transportation and Development and for other Public Works and Private Sector Commercial 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 time specified in the applicable MPR(s).
01/14-Present	**St. Tammany Parishes, U.S. 11 Bridge Over Lake Pontchatrain Rehabilitation – Orleans, LA -** Architect for the design of the rehabilitation of two Operator's Houses at an existing bridge over Lake Pontchartrain. Work is being done as part of a larger bridge rehabilitation project. Design is sensitive to the historic nature of the bridge and Operator's Houses.
06/12-04/18	**Lafourche Parish, W. Larose Vertical Lift Rehabilitation -Route: LA-1, Larose, LA. -** Architect responsible for the architectural design for rehabilitation of the Operator's House at an existing bridge over the Intracoastal Waterway. Work was done as part of a larger bridge rehabilitation project.
10/13-05/16	**Louisiana DOTD, 4th Street Harvey Bridge Rehabilitation, Jefferson Parish, LA.** - Architectural Designer for rehabilitation of the Operator's House at an existing bridge over the Harvey Canal. Work was done as part of a larger bridge rehabilitation project.
04/09-04/12	**Louis Armstrong New Orleans International Airport, Airfield Lighting Vault, Kenner, LA -** Architect for the design of a new building to house airfield lighting control equipment. Construction was designed to withstand the effects of a Category 4 hurricane.

16. Staff Experience:

Firm employed by: **Fugro USA Land, Inc.**				
Name	**Eric Marx, PE**		Years of relevant experience with this employer	21
Title	Vice President, Louisiana General Manager		Years of relevant experience with other employer(s)	3
Degree(s) / Years / Specialization			MS / 2001 / Civil Engineering BS / 1999 / Civil Engineering	
Active registration number / state / expiration date			31479 / LA / March 31, 2023	
Year registered	2004	Discipline	Civil	
Contract role(s) / brief description of responsibilities			***Geotechnical Principal-in-Charge*** Mr. Marx will provide engineering review and oversite of the program tasks as well as serve as the contract signatory for Fugro USA Land, Inc.	

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).
2001 – current	Principal-in-Charge, Fugro Louisiana General Manager. Eric Marx has provided geotechnical services on transportation, government, industrial, commercial and coastal infrastructure projects since joining Fugro in 2001. He has been both engineer and engineer-of-record on some of Louisiana's high-profile transportation projects over the last 20 years, including the I-10 Twin Span Replacement Project, John J. Audubon Bridge, and numerous task orders, as part of previous retainer contracts. Eric's role has involved managing and executing task orders, developing and overseeing field programs, achieving and maintaining laboratory certifications and performing and reviewing geotechnical engineering analyses. Many of the projects have required access in difficult site conditions and required advanced engineering evaluation.
01/10 – 03/17 08/20 - Current	**LADOTD Statewide Geotechnical Retainer Contract, Louisiana.** Mr. Marx served as principal-in charge for this program which included performing over 20 task orders for bridge structures across Louisiana with a total program cost of over $4M. The scope of work included soil borings (on land and in water), cone penetration test (CPT), laboratory testing, engineering analysis, and design recommendations. Fugro was also retained to install geotechnical instrumentation. Mr. Marx was Principal-in-Charge, negotiated and oversaw completion of task orders, and worked with DOTD to ensure client satisfaction on deliverables.
04/04 - current	**Bridge Scour Analysis, Statewide Louisiana.** Mr. Marx served as project engineer, project manager and is currently principal-in-charge for the project. Fugro was selected by the Louisiana Department of Transportation and Development (LADOTD), with the assistance of selected Design Consultants, in evaluating the stability of critical bridge structures across the state regarding scour susceptibility. Since 2004, Mr. Marx has supervised evaluations on over 300 bridges across Louisiana including coordination of geotechnical field investigations, laboratory testing, and Electric Cone Penetrometer Test (ECPT) soundings. Geotechnical engineering analyses included deep foundation evaluations on driven piles, drilled shafts and **caissons** for varying scour events and development of soil parameters.

09/17 - 07/19	**Kansas Lane, Garrett Road Connector.** Mr. Marx was Principal-In-Charge for Fugro and provided contract oversight for the project. Work included conducting geotechnical field investigations and geotechnical analyses for the roadway project with significant interaction with the local airport and businesses. Mr. Marx reviewed results of field and laboratory analyses and performed QA checks on deep foundation calculations, embankment settlement calculations of driven and drilled foundations and MSE Wall recommendations.
2015-2019	**Livingston Parish Road Improvement Program, Livingston Parish, LA** Mr. Marx Served as Principal-In-Charge. Livingston Parish funded this project to rehabilitate approximately 40 roads across the parish each year. Fugro's work included soil borings and collection of bulk samples, laboratory testing for classification and bench scale testing for cement treatment, engineering recommendations for pavement thickness and subgrade preparation, and construction materials testing observations to document compliance with plans and specifications Mr. Marx oversaw the field operations and engineering analyses.
2005-2008	**Twin Spans Replacement Project, Orleans and St. Tammany Parishes, Louisiana.** Mr. Marx was a Project Engineer on the project to replace the Twin Spans bridge damaged during Hurricane Katrina. Mr. Marx coordinated the field program which consisted of 30 soil borings and over 260 CPT's to depths between 100 and 190 feet in 15 feet of water. Mr. Marx helped develop the pile load testing program and performed axial and lateral pile capacity calculations using LRFD methodology.

16. Staff Experience:

Firm employed by: **Fugro USA Land, Inc.**				
Name	**Sam Bryant, PhD, PE**		Years of relevant experience with this employer	37
Title	Senior Geotechnical Consultant		Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization			PhD / 1983 / Civil Engineering MS / 1979 / Civil Engineering BS / 1978 / Civil Engineering	
Active registration number / state / expiration date			40695 / LA / 9-30-2022	
Year registered	2016	Discipline	Civil	
Contract role(s) / brief description of responsibilities			**Senior Consultant.** Dr. Bryant will guide engineering analyses and perform technical review on project tasks.	

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).
1983 – current	Dr. Bryant joined Fugro in 1983 as a manager in geotechnical engineering. He has significant experience supervising all phases of geotechnical investigations including field exploratory programs, laboratory, engineering analyses and instrumentation. Since 2013, Dr. Bryant's work has been focused on Louisiana infrastructure projects. He has performed advanced modeling for pile capacity, drilled shaft capacity, embankment stability and settlement, earth retaining structures, pavements, seepage, and soil structure interaction. Dr. Bryant is currently serving as the lead geotechnical engineer on an oversight team for CPRA to review geotechnical analyses on two large river diversion projects. (Mid-Breton and Mid Barataria Sediment Diversion projects.
02/17 – 09/17	**I-12 to Bush: LA 3241, I-12/LA 434 Interchange to LA 36, St. Tammany Parishes, Louisiana.** Dr. Bryant served as Geotechnical Engineer-of-Record for the project. The project consisted of widening 2.2 miles of existing roadway and designing 6.1-miles of new roadway with several new bridges and culvert crossings. During the project, he performed the following tasks: • supervised the geotechnical data collection for the project including deep soil borings for structures and shallow soil borings for pavement • performed deep foundation calculations including axial capacity, lateral capacity and settlement • performed pile length calculations for each bent along the structure • performed settlement and stability calculations for new embankments up to 20-ft in height
09/14 - current	**Bridge Scour Analysis, Statewide Louisiana.** Dr. Bryant was a Senior Consultant for the project. Fugro was selected by the Louisiana Department of Transportation and Development (LADOTD), with the assistance of selected Design Consultants, in evaluating the stability of critical bridge structures across the state regarding scour susceptibility. Dr. Bryant has assessed complex bridge structures, specifically large river crossings and performed engineering analyses including deep foundation evaluations for varying scour events and development of soil parameters.

09/17 - current	**Kansas Lane, Garrett Road Connector and I-20 Improvements, Ouachita Parish, Louisiana.** Dr. Bryant served as Geotechnical Engineer-of-Record for the project. The project consisted of widening existing roadway with new approach embankments and bridge structures. During the project, he performed deep foundation calculations including axial capacity, lateral capacity and settlement; performed pile length calculations for each bent along the structure; and performed settlement and stability calculations for new embankments up to 20-ft in height. Global stability and settlement were also performed on MSE walls.
09/13 - 03/17 08/20 - Current	**LADOTD Statewide Geotechnical Retainer Contract, Louisiana.** Dr. Bryant served as Senior Consultant for this project which included performing over 20 task orders for bridge structures across Louisiana. The scopes of work include soil borings (on land and in water), laboratory testing, engineering analysis, and design recommendations. Fugro was also retained to install geotechnical instrumentation. He provided technical guidance on select task orders.

16. Staff Experience:

Firm employed by: **Fugro USA Land, Inc.**				
Name	**Paul Bullock, PhD, PE**		Years of relevant experience with this employer	7
Title	Chief Engineer		Years of relevant experience with other employer(s)	35
Degree(s) / Years / Specialization			PhD / 1999 / Civil Engineering MS / 1984 / Civil Engineering BS / 1980 / Civil Engineering	
Active registration number / state / expiration date			33812 / LA / 9-30-2022	
Year registered	2008	Discipline	Civil	
Contract role(s) / brief description of responsibilities			**Senior Consultant.** Paul will provide technical consultation and oversight for task orders with deep foundation capacity evaluation, deep foundation testing using PDA and load testing.	

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).
01/1980 - current	Paul Bullock is considered a global expert on site characterization and evaluation of the performance of deep foundations. His specialization includes dynamic monitoring using the Pile Driving Analyzer, Static Load Testing, O-Cell and PIT/CSL integrity testing of drilled shafts, cast-in-place, and driven piles. His career started as a field engineer in the 1980's working on site characterization and foundation evaluation of over 18 bridges. Paul transitioned to academia working as an Assistant Professor at The University of Florida between 2000 and 2004. He then returned to consulting in 2004 working for GRL Engineers where he continued to develop the practice of evaluation of foundation performance. Paul's experience expanded into Louisiana in 2010 where he began evaluating pile foundations on large infrastructure projects in soft soil environments. He joined Fugro in 2011 and has continued to mentor staff and advance the practice of deep foundations on large scale projects in Louisiana. He is the author of over 20 publications and is a committee member/editor on ASTM and Geotechnical Testing Journal publications. His Louisiana project experience is detailed below.
2019	**Calcasieu LNG, Cameron Parish, Louisiana.** Senior Consultant, PDA tests and setup capacity evaluation for driven pipe piles.
2015-2017	**Cameron LNG Liquefaction, Hackberry, Louisiana.** Senior Engineer, performing PDA and static tests for DeWaal Piles.
2010-2015	**Permanent Canals & Closures Pumps Project, Orleans Parish, Louisiana.** Senior Engineer, performing PDA, setup curves and static tests for driven steel pipe piles and square concrete piles.
2010-2011	**I-12 O'Neal Lane Overpass, East Baton Rouge Parish, Louisiana.** Drilled shaft design, PDA/CSL, post grout.
2010-2011	**I-10 KCS Bridge, East Baton Rouge Parish, Louisiana.** Drilled shaft design, PDA/PIT/CSL tests.
2011	**Baton Rouge SWWTP, East Baton Rouge Parish, Louisiana.** PDA and PIT, 14-inch DeWaal piles.
2010	**IHNC Seabrook Gate, Orleans Parish, Louisiana.** PDA and Static Tests, 30-in steel pipe piles.

16. Staff Experience:

Firm employed by: **Fugro USA Land, Inc.**				
Name	**John M. "Jack" Koban, Jr., PhD, PE, PG**		Years of relevant experience with this employer	7
Title	Project Manager/Business Development		Years of relevant experience with other employer(s)	14
Degree(s) / Years / Specialization			PhD / 2017 / Earth Sciences MS / 2008 / Earth Sciences BS / 2003 / Geological Engineering	
Active registration number / state / expiration date			36060 / LA / March 31, 2021; 1045 / LA / May 10, 2020	
Year registered	2010; 2016	Discipline	Environmental; Geoscientist	
Contract role(s) / brief description of responsibilities			**Task Order Manager.** Dr. Koban will be responsible for the project management and engineering analysis as described in the advertisement and subsequent task orders issued.	

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).
2015 – current	Dr. Koban joined Fugro as the Laboratory Manager with over 5 years of experience in environmental consulting and corrective action, over 4 years of experience in geotechnical engineering, and 6 years in environmental research. In addition to directing and overseeing laboratory operations for numerous DOTD projects over the past 6 years with Fugro, Dr. Koban has served to develop and strengthen relationships within the state by providing advocacy and engagement at the federal government and private level. As a board member of ASCE, he has helped to promote DOTD projects in the Engineering Community and served as a co-author for the 2017 Louisiana Infrastructure Report Card published by ASCE.
05/15 - 03/17 08/20 – Ongoing	**LADOTD Statewide Geotechnical Retainer Contract, Louisiana.** Dr. Koban served as laboratory manager for this program which included performing over 20 task orders for bridge structures across Louisiana with a total program cost of over $4M. The scope of work included soil borings (on land and in water), laboratory testing, engineering analysis, and design recommendations. As lab manager, Dr. Koban was responsible for assigning laboratory tests, running advanced testing procedures, and training and technical oversight of a team of laboratory technicians. Additionally, he reviewed results and developed boring logs for reporting. testing assignments, reviewed results and developed boring logs from various task orders under this contract.
03/18 - 7/18	**Kansas Lane, Garrett Road Connector and I-20 Improvements, Ouachita Parish, Louisiana. (H.004774.5 and H.007300.6**). Dr. Koban served as laboratory manager for this project which included management of samples, test assignments, advanced testing, and engineering review of test results. Dr. Koban's background in both Engineering and Geology provided expertise in both the qualitative assessment of soils for visual classification and the more quantitative aspects in the laboratory allowing for detailed and accurate classifications needed for engineering analysis.
05/18 - 10/18	**LA 44 to US 61, Germany Road Roadway Improvements (H.013793).** Dr. Koban served as laboratory manager for this project which included management of samples, test assignments and engineering review of

	testing results. Dr. Koban's understanding of the geology of Louisiana and experience with DOTD projects acquired through the previous retainer projects allowed for effective and reliable engineering services in the geotechnical laboratory.
08/18 - 12/18	**Proposed LNG Pre-FEED Geotechnical Study, Lafourche Parish.** Dr. Koban served as the project manager and project engineer for the pre-FEED geotechnical investigation and study associated with a proposed LNG facility in south Lafourche Parish, Louisiana. Duties included preliminary site visit, field and lab coordination, pile capacity and settlement analysis in support of the project. The project's next phases are currently in early stages of planning. Dr. Koban's educational and professional experience in engineering geology particularly in coastal/nearshore environments was an asset for the pre-FEED study of this proposed major installation and associated infrastructure. The project offered tremendous experience in executing projects in the types of difficult environments and challenging soil conditions that many DOTD projects face in southern Louisiana.

16. Staff Experience:

Firm employed by **Wiss, Janney, Elstner Associates, Inc.**				
Name	**Jonathan C. McGormley**		Years of relevant experience with this employer	28
Title	Principal		Years of relevant experience with other employer(s)	1
Degree(s) / Years / Specialization			BS, 1992, Civil Engineering, University of Cincinnati MS, 1994, Civil Engineering, Purdue University	
Active registration number / state / expiration date			***In addition to LA, Mr. McGormley is licensed in 7 other states and is a licensed Structural Engineer in IL.***	
Year registered	2019	Discipline	**PE LA,** License No. 43912 / expires 3/31/2024	
			NBIS Certified Team Leader and Program Manager	
			NHI 130078 - Fracture Critical Inspection Techniques of Steel Bridges	
			NHI 130055 - Safety Inspection of In-Service Bridges (& Refresher 130053)	
			ATSSA Traffic Control Technician Training/ TC Supervisor Training	
Contract role(s) / brief description of responsibilities			Mr. McGormley will fulfill MPR8, leading WJE's structural engineering including instrumentation and testing, bridge inspections, and repair design.	

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).
07/19–ongoing	**Danziger Lift Span Bridge, US 90, over the Industrial Canal, New Orleans, LA:** Project Manager responsible for overseeing the inspection of portions of the lift span contributing to reported operational issues, an in-depth inspection of the lift bridge machinery and electrical systems, and development of repairs to restore the bridge's long-term functionality and reliability. Oversaw the development of a unique monitoring and sensor installation plan, the installation of instrumentation and monitoring equipment, and the creation of a web-accessible reporting platform to evaluate the bridge's operations over an extended period. Assisted with development of plans and specifications to address emergency repairs including the installation of polyester polymer concrete lift span orthotropic deck overlay repairs, replacement of failed pinion bearings, elimination of lift span-to-approach span contact issues, and the improvement of the lift span seating by counterweight movements and air buffer repairs. Bridge monitoring is ongoing.
05/19–08/19; 08/20–ongoing	**I-255 Jefferson Barracks Bridge over the Mississippi River, Emergency Repairs, Mehlville, MO:** Project Manager responsible for emergency repairs and subsequent rehabilitation repair design. Following the discovery of a six-foot-long crack in the steel tie girder during a fracture critical inspection, performed an in-depth inspection of similar details, obtained material samples for laboratory testing, coordinated emergency repairs, oversaw repair installation, and prepared investigation report. Completed bridge rehabilitation plans for the twin, tied-arch structures with construction ongoing.
03/21–ongoing	**Luling Bridge Deck Overlay Repair Consultation, St. Charles Parish, LA:** Project Manager responsible for revising the project specifications and providing quality control assistance for the repair of an orthotropic deck overlay system comprising and epoxy underlayment with a SFRC overlay on the cable-stayed spans. Installed a long-term monitoring system to evaluate the performance of the overlay repairs.
02/19–ongoing	**US 90 over Bayou Ramos, St. Mary Parish, LA:** Project Manager leading the investigation of delayed end cracking of precast, prestressed concrete (PPC) girders. The project includes the evaluation of previously collected monitoring data,

	development of a detailed finite element model to examine crack initiation and repair options, inspection of existing retrofits, laboratory testing of CFRP repairs, and development of a trial retrofit program.
09/21–ongoing	**I-10/310 Bonnet Carré Fire Damage Repair, St. Charles Parish, LA:** Project Manager overseeing the emergency inspection and load rating of the PPC girders, substructures, and bridge deck damaged by fire. Developed repair scope of work and estimated probable construction costs. Preparation of repair drawings and specifications ongoing.
12/21-ongoing	**Jefferson St. Bascule Bridge Rehabilitation, Joliet, IL:** Project Manager overseeing the rehabilitation of structural, mechanical, and electrical components of this rolling Scherzer lift bridge. Inspection and design work ongoing.
02/19–07/19	**Lake Shore Drive Bridge over the Chicago River, Girder Fracture Investigation, Chicago, IL:** Project Manager leading the investigation, stabilization, and repair installation after the bridge experienced two girder fractures related to corrosion.
10/18–01/19	**Sunshine Bridge over the Mississippi River, St. James Parish, LA:** Project Manager responsible for the development and implementation of a monitoring plan to provide information regarding redistribution of loads during the installation of repairs to the truss bottom compression chord damaged by impact. Responsible for the design of the jacking system, review of member repair design, site observations, preparation of shop and jacking procedure drawings, field technical assistance, and chord jacking operations oversight.
03/15–06/17	**IH-345 Inspection, Analysis, and Retrofit Design, Dallas, TX:** Project Manager for a fracture critical inspection of the 1.6-mile-long steel two-girder structure connecting I-35, I-45, and US 75 with local city streets, visual examination of substructure elements, and a visual and exploratory study of the PT deck. Oversaw instrumentation and field load testing for finite element method model calibration and trial retrofit installations. Developed fatigue retrofit contract documents and provided on-site construction observation and technical support throughout construction.
03/14–12/14	**S. Halsted Street over the Little Calumet River, Chicago, IL:** Project advisor performing QA/QC for load ratings and gusset plate rehabilitation design to address live load rating concerns for this steel truss bridge.
09/13–09/13	**Grand Avenue Bascule Bridge, Chicago, IL:** Project Engineer for gusset plate condition assessment, load ratings, and preliminary retrofit development for members of this double leaf bascule bridge with inadequate live load capacity.
04/10–04/11	**Hylebos Bridge, Tacoma, WA:** Project Engineer conducting the visual inspection of the double-leaf bascule bridge in preparation for its rehabilitation.
02/10–08/10	**Scherzer Rolling Lift Bridges, Joliet, IL:** Project Manager for fracture critical inspections, gusset plate load rating, and repair recommendations of three lift bridges over the Illinois River.
03/08–06/09	**I-5 Columbia River Bridge, Portland, OR:** Project Engineer for span balance and counterweight adjustments of lift span bridge. Documented number and location of concrete blocks, cored counterweights to determine voids, oversaw instrumentation of operating rope turnbuckles and pinion shafts, inspected bearings and guide rollers.

16. Staff Experience:

Firm employed by **Wiss, Janney, Elstner Associates, Inc.**					
Name	**John R. Williams**		Years of relevant experience with this employer	3	
Title	Supervisor		Years of relevant experience with other employer(s)	23	
Degree(s) / Years / Specialization			BS /Engineering Science / The Pennsylvania State University / 1996		
Active registration number / state / expiration date			***In addition to LA, Mr. Williams is licensed in 13 other states and 5 Canadian Provinces.***		
Year registered	2020	Discipline	**PE LA**, License No.: PE.0044300 / expires 09/30/2022		
Contract role(s) / brief description of responsibilities			Mr. Williams will serve as Lead Mechanical Engineer responsible for task orders involving 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 time specified in the applicable MPR(s).
07/19–ongoing	**Danziger Lift Span Bridge, US 90, over the Industrial Canal, New Orleans, LA:** Senior Mechanical Engineer for the inspection of portions of the lift span contributing to reported operational issues, an in-depth inspection of the lift bridge machinery systems, and development of repairs to restore the bridge's long-term functionality and reliability. Assisted with the development of a unique monitoring and sensor installation plan, the installation of instrumentation and monitoring equipment, and the creation of a web-accessible reporting platform to evaluate the bridge's operations over an extended period. Lead the development of plans and specifications to address emergency failed pinion bearing repairs. Performed strain gage testing to measure span balance, implemented weight changes and air buffer repairs to improve seating of the span, and determined through testing that the span drive differentials on both towers were not functioning properly, requiring work with the manufacturer to properly adjust the associated clutches.
08/15–ongoing	**3rd Street Bascule Bridge over Islais Creek, San Francisco, CA:** Project Manager and Lead Mechanical Engineer for the design of a replacement bridge that included new span operating machinery, new span support machinery for the new leaf to be supported by the existing substructure and development of complex construction staging to address constraints for the number and duration of outages for MUNI light rail services. The project started with a detailed scoping inspection including a rating assessment of the structure, mechanical, and electrical systems that identified critical deficiencies leading to the decision to replace the bascule span superstructure in its entirety.
07/20–1/20	**St. Claude Avenue Bridge Construction Engineering Services, New Orleans, LA:** Project Manager and Senior Mechanical Engineer for construction engineering services on an expedited basis to assist with the replacement of the second link pins which connect the counterweight truss to the balance link. Services included balance testing, design of the counterweight support system, development of a sequence of work for supporting the structure, unloading and removing the pins, completing the repairs and restoring the bridge to service within a marine navigation closure that was controlled by repairs to the adjacent lock. Mechanical engineering services were provided on an expedited basis due to the short time-period between the award of the project and the start of the marine navigation closure.
10/14–07/19	**St. Peters Canal Swing Bridge Replacement, Cape Breton, NS, Canada:** Project Manager and Engineer of Record overseeing the mechanical and hydraulic machinery design for this new hydraulically operated center bearing swing bridge. Responsibilities included design and backchecking of design calculations, plans preparation and detailing, and preparation of contract specifications and construction cost estimates during design. Responsibilities during construction

	included coordination of a team of mechanical and electrical engineers and inspectors to review and approve construction submittals and provide complete shop and field inspection of all mechanical/electrical aspects of the rehabilitation project.
08/08–08/18	**Columbus Road Lift Bridge, Cleveland, OH:** Senior Mechanical Engineer for the rehabilitation project with the objective to maintain the historic character of the structure while significantly reducing maintenance requirements and improving overall system efficiency. A scoping inspection of the mechanical machinery determined suitability for continued long-term service and compliance with current AASHTO code requirements. The new mechanical design provides for complete replacement of all span support machinery, span drive machinery, and span locks.
07/14–02/18	**Burlington Canal Lift Bridge, Hamilton, ON, Canada:** Movable Bridge Construction Specialist and Heavy Machinery Specialist for the contractor as part of a major electrical and minor mechanical rehabilitation of this critical vertical lift bridge. The electrical scope of work included complete replacement of the electrical power and control systems for the bridge including an aerial cable installation and skew control of the lift span. The mechanical scope of work included replacement of the high-speed end of the span drive machinery (brakes, speed reducer, shaft, and couplings). The scope of work required the contractor's engineer to sign and seal all submittals including shop drawings.
03/10–11/17	**Sir Ambrose Shea Lift Bridge Replacement, Placentia, NL, Canada:** Project Manager and Mechanical Engineer of Record responsible for the design of span drive machinery, span lock machinery and span support machinery for a new tower drive lift bridge. Duties included preparation and review of all relevant calculations (sized motor, gear tooth strength calculations, sized brakes, shaft calculations for moment and torsion, sized couplings, designed machinery base plates, sized span lock bars, sized span lock and lockbar actuator, performed fatigue analysis of trunnion shaft, and sized trunnion bearings), and preparation of design drawings, specifications, and cost estimates as part of design. During construction, responsibilities included review of contractor's shop drawings and procedures for conformance to contract requirements, disposition of non-conformance reports, and responding to requests for information or changes.
02/04–11/13	**Mystic Bridge Rehabilitation, Connecticut DOT, Groton, CT:** Project Manager and Senior Mechanical Engineer for the rehabilitation of the historic single leaf, mechanically operated Brown bascule bridge. The mechanical design included upgrades to the capacity of the span drive machinery and design of a custom vehicular safety barrier gate to rise out of the roadway to protect errant vehicles from entering the waterway with the bridge raised yet remain visually unobtrusive with the bridge seated and open to vehicular traffic. Responsibilities included design and backchecking of design calculations, plans preparation and detailing, and preparation of contract specifications and construction cost estimates.

16. Staff Experience:

Firm employed by **Wiss, Janney, Elstner Associates, Inc.**			
Name	**Gareth T. Rees**	Years of relevant experience with this employer	3
Title	Principal	Years of relevant experience with other employer(s)	51
Degree(s) / Years / Specialization		College Associateship Electrical Engineering (Bsc electrical equivalent) / 1968 / Polytechnic of Wales (now University of South Wales).	
Active registration number / state / expiration date		***In addition to LA, Mr. Rees is a licensed P.E. in 17 other states, the UK, and 6 Canadian Provinces.***	
Year registered	Discipline	PE LA, License No.: PE.0040754 / expires 09/30/2022	
Contract role(s) / brief description of responsibilities		Mr. Rees will serve as Lead Electrical Engineer responsible for task orders involving 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 time specified in the applicable MPR(s).
07/19–ongoing	**Danziger Lift Bridge - New Orleans, LA:** Lead Electrical Engineer for the inspection of relevant portions of the main lift span contributing to reported operational issues, an in-depth inspection of the lift bridge machinery and electrical systems, and development of repairs to restore the long-term functionality and reliability of the bridge. Prepared a new lift span skew control system design after the existing Selsyn components were removed from the bridge, developed electrical controls for the clutches with the span drive differentials, and provided recommendations for rehabilitation of the bridge.
08/15–ongoing	**3rd Street Bascule Bridge over Islais Creek, San Francisco, CA:** Senior Electrical Engineer for the design of a replacement bridge that included the design of new electrical power and control systems to be integrated with the MUNI light rail traction power and signal system.
03/20–12/20	**Skew Detection System Replacement on Vertical Lift Bridges, LA:** Principal Investigator to review alternatives for skew control, monitoring, and indication for tower drive vertical lift bridges based on effective management of skew and minimizing advanced electronic equipment. The study included a literature review, interviews with current owners and maintainers of vertical lift bridges, and interviews with industry control specialists experienced in skew control systems. As a result of the study, a preferred system of skew control that combines the use of direct skew measurement with an inclinometer for skew monitoring and trip indication, and indirect measurement of skew using encoders for controlling skew during operation was recommended. To minimize maintenance, mean-time-to-repair, and to limit dependency on PLC systems, it was recommended that control integration be achieved using SMART relays (that contain self-diagnostics) that may easily be replaced in the event of an issue.
03/18–02/20	**Charles Berry (Erie Ave) - Lorain 6 Bascule Bridge Rehabilitation, Lorain, OH:** Movable Bridge Project Coordinator for the rehabilitation of the operating and support systems for this historic double leaf deck truss bascule bridge including complete replacement of the drive machinery and electrical power and controls control systems. Services included review, coordination and integration of the mechanical, electrical, and structural systems, review of all shop drawings for fit-up and constructability; shop inspection of critical components; field oversight during construction for critical assemblies; verification of final alignment of machinery; shop and field acceptance testing of the electrical system installation, commissioning of the installed operating systems, strain gage operational testing and power recordings to confirm satisfactory performance of the newly installed systems, and development of the Operations and Maintenance Manual.

04/13–10/19	**Fort Madison Toll Bridge, Fort Madison, IA:** Engineer of Record and Project Manager for the rehabilitation of this double decker swing span bridge. The first phase was the design of a new aerial and submarine power cable installation, the new installation to be configured as redundant power sources. The design of the submarine cable installation included surveying of the existing submarine cable, routing of the new cable, and designing and specifying the cable. The work also included excavation requirements and developing an approved trenching system. The design and contract documents were developed based on staged construction to satisfy marine, railroad, and highway operations as well as Coast Guard and emergency services with respect to bridge operating outages. Construction services were also performed.
03/10–11/17	**Sir Ambrose Shea Lift Bridge, Placentia, NL, Canada:** Engineer of Record for the design of a replacement tower drive vertical lift bridge with two duty motors and brakes in each tower and two sets of span locks. The bridge operator's control house is located at roadway level and remote from the bridge with CCTV surveillance and fiber optic communications to the towers. The PCL-based control system was designed with Hot standby redundant PLC's, a human machine interface (HMI), and control console and a redundant fiber optic communications transmission backbone. The electric services are distributed to state-of-the-art intelligent MCC's in each of the bridge towers and have internal communications capabilities and interface directly with the bridge control system PLC for bridge operation, drive monitoring, and data acquisition.
06/14–06/16	**East Roundbunch Road over Cow Bayou, Orange County, TX:** Lead Electrical Engineer responsible for designing new drives, controls, and field devices for the span drive machinery and the end wedge machinery as part of a rehabilitation of this historic structure to provide long-term reliable service. Span drive machinery was comprised of components with a proven history of utilization on movable bridges and was powered by an electric motor. Design and integration of new traffic control features, bridge and maintenance lighting, and a CCTV system were also included.
01/14–12/14	**Haystack Bascule Bridge over Petaluma River, Petaluma, CA:** Engineer of Record and Lead Electrical Engineer for the relocation, rehabilitation, and reassembly of a single leaf rolling lift bascule railroad bridge. The designed bridge electrical systems consist of modern PLC logic control and flux vector variable frequency drives. The electric service and standby generator for bridge back-up power are located on one side of the navigable channel with the bridge operating system on the other. An under-channel installation was developed to connect the electric service equipment and associated communications to the bridge operating system. The system design included communications, fire life safety system design as well as the integration of the bridge operating system with the railroad train control.
10/10–02/12	**Port Severn Swing Bridge 60 Rehabilitation, Port Severn, ON, Canada:** Lead Electrical Engineer for a bridge inspection, condition survey, engineering analysis and preparation of plans, specifications, and cost estimate.

16. Staff Experience:

Firm employed by **Wiss, Janney, Elstner Associates, Inc.**					
Name	**Steven L. Lauer**			Years of relevant experience with this employer	11
Title	Supervisor-Other			Years of relevant experience with other employer(s)	
Degree(s) / Years / Specialization			BS, 2009, Civil Engineering, Purdue University MS, 2010, Civil Engineering, Purdue University		
Active registration number / state / expiration date					
Year registered	2015	Discipline	PE IL, License No.: 062-068057 / expires 11/30/2023		
Year registered	2016	Discipline	SE IL, License No.: 081-007838 / expires 11/30/2022		
			NBIS Certified Team Leader/Program Manager		
			NHI 130078 - Fracture Critical Inspection Techniques of Steel Bridges		
			NHI 130055 - Safety Inspection of In-Service Bridges (& Refresher 130053)		
			Society of Professional Rope Technicians/ Level I		
			Transportation Worker Identification Credential (TWIC)		
			Indiana Bridge Load Rating Engineer, IN000551-2022-ATL-F-LRE		
Contract role(s) / brief description of responsibilities			Mr. Lauer will serve as Lead Instrumentation Engineer. He also will participate in load ratings, NDE, and bridge inspections.		

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).
07/19–ongoing	**Danziger Lift Span Bridge, US 90, over the Industrial Canal, New Orleans, LA:** Project Engineer assisting in the development of a unique monitoring and sensor installation plan, the installation of instrumentation and monitoring equipment, and the creation of a web-accessible reporting platform to evaluate the bridge's operations over time. The monitoring was designed to assess bridge span lift operations and included laser distance devices, linear potentiometers, strain gages, temperature measurements, ultrasonic distance measurements, and Wi-Fi cameras.
02/22–ongoing	**Luling Bridge Deck Overlay Repair Consultation, St. Charles Parish, LA:** Project Engineer assisting with the development of a long-term monitoring system to evaluate the performance of the repairs the orthotropic deck overlay system comprising and epoxy underlayment with a SFRC overlay on the cable-stayed spans.
01/21-ongoing	**Washington Ave Bridge over the Mississippi River, Minneapolis, MN:** Project Engineer responsible for finite element modeling of the bridge structure, load rating, and the design and installation of the instrumentation system capable of recording strain, displacement, rotation, and temperature. Various scan rates record structure behavior during daily and long-term thermal cycles and live load events. The double-deck bridge has a pedestrian level, and the vehicular level was retrofitted to include light rail transit by adding trusses between the original girders and now has bearing seat distress.
08/21-ongoing	**Blackhawk Bridge carrying Iowa 9 over the Mississippi River, Lansing, IA:** Project Manager responsible for the wireless pier monitoring instrumentation system. Data is remotely accessed and presented on a website for the owner. This work followed our routine, in-depth, element-level, fracture critical, inspections that included ultrasonic testing (UT) of pins for the three truss spans and approach spans. An inspection report and repair recommendations were developed.

06/21-04/22	**SR 62 over Pigeon Creek, Evansville, IN:** Project Engineer responsible for bearing pad inspection and corresponding instrumentation system designed to aid in determining the cause of walking elastomeric bearings.
10/19–11/21	**Sherman Minton Bridge - I-64 over the Ohio River, New Albany, IN:** Project Engineer for instrumentation and monitoring, crack arrest hole retrofit installation, and Team Leader of fracture critical and routine inspections of truss members using rope-access and structure climbing techniques of the double-deck bridge having tied arch trusses as the main spans and an approach span combination of deck/through trusses.
05/21–10/21	**I-40 Hernando Desoto Bridge, Emergency Repairs, Memphis, TN:** Project Engineer assisting the contractor in the tie girder fracture repairs for the I-40 Bridge, which was closed due to a partial section fracture. Installed emergency instrumentation utilizing rope-access techniques, mobilizing personnel and equipment to have a working web-accessible system with over 25 sensors functional in a week. Participated in the development of measurement and reporting procedures to be used during tensioning and de-tensioning of the temporary jacking system used for the tie girder repairs.
06/21	**I-294 under St. Charles Road, Berkley, IL:** Project Manager for the evaluation of steel multi-beam structure directly exposed to vehicular fire to determine its fitness to return to service. Performed limited inspection, field hardness testing, and steel core extraction for benchtop hardness testing at WJE's Northbrook, IL laboratory and unilateral static tensile tests.
10/18–01/19	**Sunshine Bridge over the Mississippi River, St. James Parish, LA:** Project Engineer for the development and implementation of a monitoring plan to provide information regarding redistribution of loads during the installation of repairs to the truss bottom compression chord damaged by impact. Assisted with the design of the jacking system, review of member repair design, site observations, preparation of shop and jacking procedure drawings, field technical assistance, and chord jacking operations oversight.
02/17-12/17	**Joe Page Vertical Lift Span over the Illinois River, Hardin, IL:** Project Manager responsible for bearing reaction determination via load cells and dynamic strain gage balance testing.
08/16-08/17	**Michigan Avenue Bascule Bridge over the Chicago River, Chicago, IL:** Project Manager for construction project balance calculations and dynamic strain gage balance testing of this double deck, quadruple-leaf, bascule truss bridge with single-unit, side-by-side leaf pairs.
05/11–12/15	**Transport of Long Prestressed Concrete Girders, LA:** Project Engineer for the dynamic monitoring of two long prestressed girders during transport from the precast yard to their final installation at the bridge site. Performed field instrumentation to monitor dynamic strain and inertial motion, which provided acceleration and rotational orientation of the girder with wireless communication. Evaluated data using dynamic 3D model with sensor mapping and interactive geolocation to correlate significant strain events with position and transport activity. Assisted in preparation of report to LADOTD and LTRC. Monitoring included wireless data collection from video, strain gages, thermocouples and gyroscopes.

16. Staff Experience:

Firm employed by **Wiss, Janney, Elstner Associates, Inc.**					
Name	**Curtis J. Schroeder**		Years of relevant experience with this employer	3	
Title	Engineer-Other		Years of relevant experience with other employer(s)	8	
Degree(s) / Years / Specialization			BS, 2009, Civil Engineering, Michigan Technological University MS, 2011, Civil Engineering, Purdue University PhD, 2018, Civil Engineering, Purdue University		
Active registration number / state / expiration date			***Dr. Schroeder is also a licensed PE in two other states***		
Year registered	2021	Discipline	SE IL, License No.: 081.008638 / expires 11/2022		
Year registered	2015	Discipline	PE WI, License No.: 44013 / expires 7/2022		
			NHI 130078 - Fracture Critical Inspection Techniques of Steel Bridges		
			NHI 130055 - Safety Inspection of In-Service Bridges (& Refresher 130053)		
			AWS Certified Welding Inspector		
			NDT Ultrasonic Technician - Level II		
			NDT Magnetic Particle Testing - Level II		
Contract role(s) / brief description of responsibilities			Dr. Schroeder will lead nondestructive testing of steel elements focusing on phased array UT (PAUT) and MT. He will also participate in sampling, bridge inspection, load rating, and development of welding procedures.		

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–ongoing 06/19–07/20	**Purdue-Fort Wayne Pedestrian Bridge, Fort Wayne, IN:** Project Engineer assisting with UT and PAUT inspection of CJP welds, review of repair design calculations, load rating, and visual, MT, and UT inspection of repairs for this cable stay bridge.
01/21–ongoing	**Chicago Skyway Bridge, Chicago, IL:** Project Engineer assisting with visual inspection and load rating of primary members and gusset plates on steel deck truss bridge and steel piers.
11/21–02/22	**Susquehanna River Railroad Bridge, Havre de Grace, MD:** Project Engineer assisting with UT and PAUT inspection of 45 pinned connections of deck truss railroad bridge with known defect indications.
05/21–01/22	**SR 66 over I-64, Carefree, IN:** Team leader for special inspection of bridge containing 18 pinned hinge connections, including visual inspection, ultrasonic testing (UT), and magnetic particle testing (MT). Assisted with development and implementation of repairs for cracked pin plate fillet welds.
09/21–12/21	**Water Street Bridge, Pittston, PA:** Project Engineer for the the UT of ten transfer pins in steel through-truss bridge.
08/21–10/21	**Black Hawk Bridge, Lansing, IA:** Project Engineer responsible for UT and PAUT of 21 pinned connections in a steel through truss and suspended spans. Assisted with fracture critical inspection of steel through-truss spans.
07/21–08/21	**Hernando de Soto Bridge, Memphis, TN:** Project Engineer for the fracture investigation of a tie girder fabricated using T-1 steel in one of two tied arches. Performed UT, PAUT, and wet fluorescent MT of removed fracture specimen and steel cores. Performed QA verification of PAUT inspection procedure.

03/21–08/21 05/19–09/19	**Jefferson Barracks Bridge, St. Louis, MO:** Project Engineer for the fracture critical inspection of the twin tied-arch bridges over the Mississippi River. Performed PAUT and MT inspection of tie girder welds during emergency repair work to estimate extent and size of cracking. Performed inspection of welded repairs as a certified welding inspector (CWI), assisted with follow-up MT inspection of tie girder welds, and reviewed weld repair design for rehabilitation project.
05/21–08/21 09/19–11/19	**Burlington-Bristol Bridge Sheave Inspections, Burlington, NJ:** Project Engineer performing PAUT of surface indications on thrust face of vertical lift bridge cast sheave and wet fluorescent MT inspection of cast sheaves. Assisted with development of repair recommendations.
04/21–06/21	**Hawthorne Bridge, Portland, OR:** Project Engineer assisting with UT and wet fluorescent MT inspection of vertical lift bridge trunnions, including through-bore examinations.
01/21–05/21	**US 136 over Wabash River, Covington, IN:** Team Leader for special inspection of a post-tensioned, concrete trapezoidal box girder bridge that included visual inspection of epoxy-injected cracks in the web wall, ground penetrating radar (GPR) inspection to locate vertical shear reinforcement, and concrete core removal for testing of concrete strength.
01/21–04/21	**Franklin Street Bridge, Michigan City, IN:** Project Engineer assisting with the development of tread casting crack repairs and performing visual and MT inspection of field-welded repairs.
09/20–01/21	**North Dakota DOT Pin and Link Inspections, ND:** Project Manager for PAUT of 344 bridge pins on 17 bridges with both pin and hanger and pinned hinge connections.
10/20–11/20	**Eagle's Nest Bridge, Hebron, ND:** Project Manager for repair of cracked pin plates at bridge pinned hinges. Developed weld repair solution and performed MT and CWI inspection of welded repairs.
08/20–11/20	**Charles Berry Bridge, Lorain, OH:** Project Engineer assisting with UT inspection of bascule bridge trunnions, including through-bore examinations.
04/20–06/20	**US 6 over SR 331, Bremen, IN:** Team Leader for special inspection of bridge containing 14 pinned hinge connections, including visual inspection, UT, and MT. Assisted with development of repair recommendations for cracked pin plate fillet welds.
05/19–08/19 01/17–03/17	**Delaware River Bridge, Bristol, PA:** Project Engineer to develop PAUT inspection plan to locate weld-filled holes in truss members within a gusset plate connection. Assisted with PAUT technician performance testing. (2017) Project Engineer to develop UT inspection plan to locate weld-filled holes in truss members. Assisted with investigation of bridge member fracture.

16. Staff Experience:

Firm employed by **Wiss, Janney, Elstner Associates, Inc.**					
Name	**Mohamed K. ElBatanouny**		Years of relevant experience with this employer	7	
Title	Supervisor-Other		Years of relevant experience with other employer(s)	5	
Degree(s) / Years / Specialization			BS, 2008, Civil Engineering, Helwan University MS, 2010, Civil Engineering, University of South Carolina PhD, 2012, Civil Engineering, University of South Carolina		
Active registration number / state / expiration date					
Year registered	2018	Discipline	SE IL, License No.: 081.008166/expires 11/2022		
Year registered	2018	Discipline	PE IA, License No. P24910/expires 12/2023		
Year registered	2020	Discipline	PE UT, License No. 11805073-2202/expires 3/2023		
Year registered	2021	Discipline	PE WI, License No. 48217 - 6/expires 7/2022		
Contract role(s) / brief description of responsibilities			Dr. ElBatanouny will lead the nondestructive testing and evaluation of concrete elements He will also serve as an instrumentation engineer for structural monitoring and load testing task orders.		

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).
04/19-ongoing	**Performance Evaluation of Polyester Polymer Concrete Overlays, Iowa DOT, various locations:** Project Manager responsible for inspection and condition documentation of two bridge decks using visual inspection, GPR, half-cell potential, impact echo, sounding, and material testing. The project included construction observation, assistance, and acceptance testing (rebound hammer and pull-off testing) during installation of the first polyester polymer overlays on Iowa DOT bridges. Follow-up inspections, every 2 years, and service life analysis are also being completed.
01/21–ongoing	**Condition Assessment of Approach Slabs, South Dakota DOT, various location:** Project Manager responsible for inspection and condition documentation of 15 bridge approach slabs using visual inspection, GPR, and elevation surveys. Also included is an assessment of differential settlement at the approach slabs.
07/19–ongoing	**Danziger Lift Span Bridge, US 90, over the Industrial Canal, New Orleans, LA:** Project Engineer assisting in the development of a unique monitoring and sensor installation plan, the installation of instrumentation and monitoring equipment, and the creation of a web-accessible reporting platform to evaluate the bridge's operations over time. The monitoring was designed to assess bridge span lift operations and included laser distance devices, linear potentiometers, strain gages, temperature measurements, ultrasonic distance measurements, and WiFi cameras. Assisted with the development of specifications for the installation of polyester polymer concrete lift span orthotropic deck overlay repairs.
03/21–ongoing	**Luling Bridge Deck Overlay Repair Consultation, St. Charles Parish, LA**: Project Engineer responsible for providing quality control assistance for the repair of an orthotropic deck overlay system comprising and epoxy underlayment with a SFRC overlay on the cable-stayed spans. Developed and installed a long-term monitoring system to evaluate the performance of the overlay repairs.
06/21 – 08/21	**Nondestructive Evaluation of Industrial Equipment Foundation, Indiana, multiple facilities:** Project Manager responsible for inspection and condition documentation of industrial equipment foundations to detect voiding condition using NDT methods including ultrasonic pulse velocity (UPV) and ultrasonic shear-wave tomography.

09/16 –12/21	**James K. Polk Building, Nashville, TN**: Project Manager responsible for the long-term acoustic emission and vibration monitoring of post-tension wire breaks.
05/18–10/20	**Ship Channel Bridge, Houston, TX**: Project Engineer to monitor girder movement in existing bridge.
12/18–02/19	**Chicago Public School District, Chicago, IL:** Project Engineer participating in the structural condition assessment; instrumentation and load testing of reinforced concrete roofs (several schools, date for one load test is included).
10/18–01/19	**Sunshine Bridge, St. James Parish, LA:** Project Engineer for the development and implementation of a monitoring plan to provide information regarding redistribution of loads during the installation of repairs to the truss bottom compression chord damaged by impact. Assisted with field technical assistance and chord jacking operations oversight.
05/18–09/18	**High-Rise Building, Chicago, IL:** Project Engineer completing the condition assessment of post-tensioned slabs and concrete façade using multiple NDT techniques including GPR, rebound hammer, ultrasonic pulse velocity (UPV) and ultrasonic shear-wave tomography to detect voiding conditions within the concrete slabs.
03/15–06/17	**IH-345 Inspection, Analysis, and Retrofit Design, Dallas, TX:** Project Engineer for instrumentation and field load testing for finite element method model calibration and trial retrofit installations of this 1.6-mile-long steel structure connecting I-35, I-45, and US 75 with local city streets. Instrumented bridge units using wireless instrumentation, reusable strain transducers, and string pots to install gages at over 200 locations. Oversaw rolling load tests to collect in-plane live load and fatigue response stinger and girder cross section.
04/16–10/16	**TTC Steeles West Subway Station, Ontario, Canada:** Project Engineer performing condition assessment of subway concrete walls using GPR, impulse response, and ultrasonic shear-wave tomography.
05/15–12/15	**CTA Yellow Line Embankment Investigation, Skokie, IL**: Project Engineer responsible for installing emergency tilt monitoring of temporary slope protection system after sudden collapse of an earthen embankment below an active mass transit rail line due to adjacent construction work.
05/11–12/15	**Transport of Long Prestressed Concrete Girders, LA:** Project Engineer for the dynamic monitoring of two long prestressed girders during transport from the precast yard to their final installation at the bridge site. Worked on data evaluation of collected dynamic strain and inertial motion data. Evaluated data using dynamic 3D model with sensor mapping and interactive geolocation to correlate significant strain events with position and transport activity. Assisted in preparing report for the LADOTD and LTRC.

16. Staff Experience:

Firm employed by **Wiss, Janney, Elstner Associates, Inc.**				
Name	**Leonard L. Phelps**		Years of relevant experience with this employer	37
Title	Supervisor-Other		Years of relevant experience with other employer(s)	8
Degree(s) / Years / Specialization			BS, 1979, Biology, University of Illinois BA, 1979, Chemistry, University of Illinois MS, 1991, Chemistry, DePaul University	
Active registration number / state / expiration date				
Year registered	2021	Discipline	SSPC (AMPP) Certified Protective Coatings Specialist, 2021-014-012 / expires 12/31/2025	
Contract role(s) / brief description of responsibilities			Mr. Phelps will serve as the Primary Coating Inspector.	

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).
04/21–11/21	**Pacific Highway Land Port of Entry Envelope Renovation, Blaine, WA:** Lead Chemist, as part of the building envelope upgrade, provided project advice regarding the coating specification, minimum adhesion rating for tests on canopy coating, coating tape adhesion test results, and coating submittals.
08/21	**I-255 Jefferson Barracks Bridge over the Mississippi River, Emergency Repairs, Mehlville, MO:** The twin structures consist of a main span 910-ft long tied-arch structure with a steel box arch and a 12-foot-deep steel I-shaped tie girder. WJE completed bridge rehabilitation plans for both structures with construction ongoing. As Lead Chemist, assisted with bridge cable specification development and guidance regarding metalizing of the hanger cables that have experienced corrosion in the splash zone. The specification included trial testing to determine the proper blast media to prepare the surface without substantially removing the existing galvanized coating.
04/15	**I-20/I-55 Bridge over the Pearl River, Fatigue Retrofits, Jackson, MS:** The twin I-20/I-55 structures consist of precast prestressed concrete girder approach spans and a 3-span continuous welded plate girder river crossing with a maximum span length of 130 ft. MDOT retained WJE to develop and install fatigue retrofits to address distortion-induced cracking and to correct observed section loss in the girders at the abutments. As Lead Chemist, provided guidance for the surface preparation which included coatings containing lead and painting of the bridge repairs. Also advised on bridge coating repair issues including the removal of a holding primer prior to the application of a permanent coating system.
10/11–03/14	**Airport Cooling Tower, Location Withheld for Client Confidentiality:** Blistering and delamination of the polyurethane-based liner from interior concrete surfaces of upper and lower precast concrete cells of a cooling tower prompted a field investigation of the liner system, which included observations of the liner, sealant, and panel-to-panel conditions, as well as measurement of in-wall concrete relative humidity, determination of liner adhesion and coating thickness measurements. Samples of the liner and concrete substrate were also obtained and reserved for laboratory studies by Mr. Phelps. Laboratory studies of selected samples included visual, microscopic, and petrographic examinations; analyses by SEM/EDS; and analyses by infrared spectroscopy, and x-ray diffraction. Studies for acid-soluble chloride contents and conformational coating thickness were also conducted. The primary contributing cause to these delaminations was exposure of water to the backside of the liner at open, breached, weathered, and split sealant joints. Water at the backside interface can move past the backer rod to the sealant and create breaches in the sealant joints by freezing/ice

	jacking. Irregularities associated with installation techniques and methods may also contribute to the formation of mid-field blisters. Drawings and specifications were prepared to remediate the failed coating.
06/11–04/14	**Reeds Island Bridge, Hilo, HI:** Served as Primary Coating Inspector and Lead Chemist to prepare specifications for preparation and shop painting of new galvanized steel, and for the painting and repair of site elements in a damp, wet environment due to average rainfall of about 130 inches of rain per year and waterway below. Led efforts to perform site inspections of shop and field surface preparation and coating application. The field coating application was in a wet environment due to frequent Hilo rainfall, and waterway below.
10/12–11/12	**Iowa Department of Transportation, Various Locations:** Served as a Primary Coating Advisor and Reviewer for the inspection and evaluation of weathering steel patinas for thirty-one bridges as part of research project to evaluate the performance of weathering steel bridge structures to identify types of structures that are most vulnerable to chloride contamination, identify locations on individual structures that are most susceptible, identify possible testing methods or inspection techniques, evaluate the effectiveness of water washing, and develop prioritization for washing based on the type and condition of the structure.
09/05–10/07	**State of Hawaii, Aloha Stadium, Honolulu, HI:** Primary Coating Inspector and Lead Chemist responsible for assessing the condition of the substrate and extant coatings applied to structural weathering steel of the Aloha Stadium. Subsequently developed specifications for the preparation and coating (zinc-rich primer; epoxy stripe, filler, and intermediate; and fluoropolymer finish-- brush, roller, and airless spray) of the salt contaminated structural weathering steel. Performed numerous site inspections of multiple phases of work required to prepare and coat the steel in a salt environment.
03/1999–08/1999	**Chicago Skyway, Chicago, IL:** Project Manager and Primary Coating Inspector performing a condition assessment of existing coatings and underlying steel substrate of the Calumet Bridge, viaducts, overpasses, and ramps. Adhesion testing, coating thickness measurement, review of substrate condition, and assessment of original substrate preparation were done.
12/1996	**Bridge of the Americas, Panama City, Panama:** Primary Coating Inspector overseeing the coating condition survey for the bridge condition evaluation of the riveted tied-arch bridge that runs east to west and spans a mile and a half over the Panama Canal. For the condition survey of the coating covering the bridge steel (an oil-based primer pigmented with red lead and top coated with aluminum pigmented alkyd-based coating), witnessed tests conducted by contractor on the existing coating system and he conducted random on-site evaluations of the existing coating on accessible areas of the bridge, including surface chloride analyses, peel-adhesion tests, and coating thickness tests. Performed a review of the coating specifications and proposed a method of surface preparation and a recoating system.

16. Staff Experience:

Firm Employed by	**Moffatt & Nichol**		
Name	**Chace Hulon, PE, ADCI**	Years of relevant experience with this employer	8
Title	Program Manager and NBIS Team Leader	Years of relevant experience with other employer(s)	9
Degree(s) / Years / Specialization		BS / 2005 / Civil Engineering / Norwich University, Vermont	
Active registration number / state / expiration date		Professional Engineer: 39701 / LA / Exp. 09/30/23	
Year registered: 2009	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities		**NBIS Team Leader/ ADCI-certified Dive Supervisor / SPRAT Rope Access Technician**	

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).
11/19 – Present	LADOTD IDIQ for In-Depth Inspection of Complex Bridges, Statewide, Louisiana. MN Project Manager and Team Leader for one of the current five-year retainer contracts as a major subconsultant to HNTB, contracted to perform in-depth bridge inspections on complex, signature, long-span bridges throughout Louisiana. Performed the inspections of both cable-stayed bridges in Louisiana (Audubon and Luling) with rope access techniques to inspect a total of 208 cables between the two bridges, their Gensui Dampers, and anchorages. Performed the inspection of the I-10 Horace Wilkinson Bridge completely utilizing rope access techniques and rolling lane closures to greatly minimize traffic impacts. Performed a supplemental inspection of the GNO Cantilever Truss Bridges in New Orleans utilizing rope access techniques. Performed a fracture critical inspection of the Green Bridge, a steel tied arch in New Orleans utilizing rope access and UAS access techniques. Performed the inspection of the I-10 Bridge over the Calcasieu River in Lake Charles utilizing rope access on FCM's and UAS access techniques on columns. Hands-on management and implementation of the QC review plan is vital to the continued success of this project. 10938.00
1/20 – Present	LADOTD IDIQ for Statewide In-Depth Bridge Inspection of Complex Structures, Louisiana. MN Project Manager and Team Leader for one of the current five-year retainer contracts as a major subconsultant to Gresham Smith, contracted to perform in-depth bridge inspections on complex, movable, long-span, and precast segmental box girder bridges throughout Louisiana. Performed and lead the structural, mechanical, and electrical inspections of six (6) movable bridges utilizing detailed, nondestructive and laboratory testing methods with hand sketches. Hands-on management and implementation of the QC review plan is vital to the continued success of this project. 10801.00
09/14 – Present	LADOTD IDIQ for Underwater Bridge Inspection, Statewide, Louisiana. Project Director and Team Leader for the third cycle of contracts in which we have performed 1,375 underwater NBIS bridge inspections statewide. Bridge types included movable bridges, long-span bridges with caissons and deep foundations, timber bridges

	with multiple bents in the water, culverts and multi-span bridges up to 14 miles in length. Assisted DOTD with several emergency response requests within hours utilizing local team members. 8346.00, 9840.00, 211288.00
02/21-Present	LADOTD Underwater Bridge Inspections (2020-2025) - Task 1, Statewide, Lousiana. Project Principal for routine underwater inspections of 75 bridges including major bridges over large waterways with deep foundations and dynamic channel conditions. All diving inspections were augmented with acoustic imaging technology for bridges over large waterways with high-risk environmental conditions. Hydrographic surveys were performed using the HydroLite-TM and MatLab for accurate and repeatable channel soundings at these bridge sites

16. Staff Experience:

Firm Employed by	**Moffatt & Nichol**		
Name	**Herodotos A. Pentas, PhD, PE**	Years of relevant experience with this employer	1<
Title	Senior Bridge Engineer	Years of relevant experience with other employer(s)	32
Degree(s) / Years / Specialization		PhD / 1990 / Civil Engineering, Louisiana State University MS / 1986 / Civil Engineering, Unversity of Alabama at Birmingham BS / 1984 / Civil Engineering, Unversity of Alabama at Birmingham	
Active registration number / state / expiration date		Professional Engineer: #24660 / LA also FL, MS, & TX	
Year registered 1992	Discipline	Civil and Structural	
Contract role(s) / brief description of responsibilities		**Bridge design 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 time specified in the applicable MPR(s).
2017	West Drive & Lock #2 Road Bridges Inspection & Load Analysis, St. Tammany Parish, Louisiana. Project manager for inspection, load analysis, and rating of timber bridge and concrete bridges by applying AASHTO and LADOTD Standards.
2016	Hickory Street Bridge Inspectioin, St. Tammany Parish, Louisiana. Project manager for bridge inspection, load analysis, and recommendations of improvements of timber plank bridge with damaged pile supports.
1997	LADOTD S.P. No. 737-99-0441 & 737-99-0158, Assessment of Bridge Damage by Watercraft, Divisions 2, 3, & 7, Louisiana. PM for baseline inspections of fender systems/substructures of 134 bridges to determine damages caused by marine vessels. Provided damage assessment, repair plan preparation, cost estimates, repair procedure, & report. Project received national attention due to its effectiveness & execution.
1996	LADOTD S.P. No. 700-99-0118, Structural Load Rating, 118 Bridge, Louisiana. Project manager for load rating of 118 bridges throughout the state. A majority of the bridges were prestressed concrete and steel plate girder design.
1996	LADOTD S.P. No. 700-99-0264, Bars Re-Rate, Louisiana. Project manager for conversion of all existing BARS load rating WSM and LFM files to VIRTIS database and running of converted BARS files to verify VIRTIS rating results for 493 structures. Analyzed with finite element method, three structures for three super-load permit vehicles and recommended distribution factor, influence line, permit laod review procedure, and examples for typical complex members (truss span, steel & prestressed girder, steel and reinforced concrete cap beam.
1993	LADOTD S.P. No. 700-30-0002, Complex Structures Load Rating, 37 Bridges, Louisiana. As Project Manager, led analysis and rating of 37 complex steel and concrete bridges using both working stress and load factor

	methods. Structure types included simple and mult-span steel curved plate girders, simple and multi-span normal and skewed box girders, and curve box girders.
1993	LADOTD S.P. No. 359-02-0012, Clear Lake Bridge Design, Louisiana. Project engineer for preliminary and final design for LA 1226 bridge over Clear Lake, a five-span continuous unit utilizing AASHTO Type IV precast prestressed concrete girders supported by 30-in-diam concrete pile bents.
1992	LADOTD S.P. No. 033-03-0033, Red River Bridge, Louisiana. Project engineer for preliminary and final design of superstructure, piers, and piles of LA Highway 107 over Red River at Moncla. Superstructure consisted of four-span steel composite girders. Substructure consisted of reinforeced concrete piers. Performed the ship impact analysis for piers and related analysis of bridge.

16. Staff Experience:

Firm Employed by	**Moffatt & Nichol**			
Name	**Mike Russell, EIT**		Years of relevant experience with this employer	1<
Title	NBIS Team Leader and Rope Access Supervisor		Years of relevant experience with other employer(s)	11
Degree(s) / Years / Specialization			BS / 2015 / Civil Engineering, Central Connecticut University	
Active registration number / state / expiration date			Engineer-in-Training: #35255 / TN	
Year registered	N/A	Discipline	Civil and Structural	
Contract role(s) / brief description of responsibilities			**NBIS Team Leader / SPRAT Rope Access Supervisor-Level III / FAA Remote Drone Pilot**	

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).
08/21 – Present	LADOTD IDIQ for In-Depth Inspection of Complex Bridges, Statewide, Louisiana. Team Member, Drone Operator, and Rope Access Supervisor for one of the current five-year retainer contracts (2019-2024) as a major subconsultant to HNTB, contracted to perform in-depth bridge inspections on complex, signature, long-span bridges throughout Louisiana. Performed the inspection of the I-10 Bridge over the Calcasieu River in Lake Charles utilizing rope access on fracture critical members and UAS drone access techniques on columns, secondary members and connections. Responsible for inspecting the steel substructure units utilizing fall protection techniques and a work boat platform with a rope access safety management plan. Responsible for inspecting the lower chord of the main span steel arched through truss utilizing fall protection and rope access techniques. Responsible for working together with other supervisors and team leaders on site to communicate the hazards and mitigation techniques for safe operations and rescue pre-plans. Documented field notes and sketches utilizing traditional methods amenable to the project team leader for standardized report processing. Organized electronic files per the quality management plan and reviewed the draft report for consistency and accuracy.
04/19 – Present	LADOTD IDIQ for Statewide Ancillary Sign Inventory and Inspection, Louisiana. Team Leader and Rope Access Supervisor for both five-year retainer contract to perform over 1700 sign truss inspections throughout Louisiana, including the Orleans District along this corridor. Lead the development of the new Sign Truss Inspection Program by implementing policies and standard operating procedures. Managed and utilized the fall protection safety program with rope access techniques and rescue plans. Lead the development of an application for an internal tablet-based inventory management system. Non-destructive testing was performed on all anchor rods at all cantilever structures, base plates with excessive standoff distances, and where deficiencies were observed at steel and aluminum welds. Managed the QC report review process and the QA field and office

	review process. Managed and planned the Temporary Traffic Control plans and setups for lane closures throughout the state along with all of the District traffic engineers. Analyzed altered load paths.
1/22 – Present	LADOT In-Depth Inspections of Complex Bridges - Audubon Bridge, LA | Rope Access supervisor and NBIS Inspector Planning for the in-depth NBIS routine and fracture critical inspection of the Audubon Bridge.

16. Staff Experience:

Firm Employed by	**Moffatt & Nichol**		
Name	**Steven Armstrong, PE, ADCI**	Years of relevant experience with this employer	8
Title	NBIS Team Leader	Years of relevant experience with other employer(s)	2
Degree(s) / Years / Specialization		MS / 2021 / Civil Engineering / University of New Orleans BS / 2015 / Civil and Environmental Engineering / University of New Orleans	
Active registration number / state / expiration date		Professional Engineer: 44405 / LA / Exp. 09/30/22	
Year registered: 2020	Discipline	Civil	
Contract role(s) / brief description of responsibilities		**NBIS Team Leader / FAA Remote Drone Pilot / SPRAT Rope Access Technician / ADCI-certified Diver**	

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).
11/19 – Present	LADOTD IDIQ for Statewide In-Depth Bridge Inspection, Louisiana. Team Member for one of the current five-year retainer contracts as a major subconsultant to HNTB, contracted to perform in-depth bridge inspections on complex, signature, long-span bridges throughout Louisiana. Performed the inspections of the Audubon cable-stayed bridge with rope access techniques to inspect a total of 136 cables, the HDPE protection, and anchorages. Performed the inspection of the I-10 Horace Wilkinson Bridge (New Bridge) completely utilizing rope access techniques and rolling lane closures to greatly minimize traffic impacts. Performed draft inputs and consolidated notes from multiple teams to present proper data consistently throughout the report.
1/20 – Present	LADOTD IDIQ for Statewide In-Depth Bridge Inspection of Complex Structures, Louisiana. Team Member for one of the current five-year retainer contracts as a major subconsultant to Gresham Smith, contracted to perform in-depth bridge inspections on complex, movable, long-span, and precast segmental box girder bridges throughout Louisiana. Performed the structural inspections of six (6) movable bridges along with the M&E team. Utilized nondestructive UT methods to accurately document section loss in fracture critical members. Performed draft inputs and consolidated notes from multiple teams to present proper data consistently throughout the report.
09/14 – Present	LADOTD IDIQ for Underwater Bridge Inspection, Statewide, Louisiana. NBIS Team Leader for the current five-year retainer contract to perform Levels I, II, and III underwater bridge inspections in accordance with NBIS and AASHTO Manual for Bridge Element Inspection. Responsible for leading underwater inspection teams to complete field work, inspection reports, and quality control reviews. Bridge types inspected consisted of movable bridges, truss bridges, timber stringer bridges, cable-stayed bridges, and single and multi-span girder bridges up to fourteen miles in length. Site conditions included salt and fresh waters, with varying levels of current, having low to no visibility. UAI techniques were utilized to locate structural deficiencies and identify bottom conditions.

16. Staff Experience:

Firm Employed by	**Moffatt & Nichol**		
Name	**Jeffrey Gazarek, ADCI**	Years of relevant experience with this employer	6
Title	NBIS Team Leader and Safety Officer	Years of relevant experience with other employer(s)	10
Degree(s) / Years / Specialization		Commercial Diving with Concentration in Subsea Inspection / 2005 / Divers Institute of Technology	
Active registration number / state / expiration date		N/A	
Year registered	N/A	Discipline	N/A
Contract role(s) / brief description of responsibilities		**NBIS Team Leader / Safety Officer / Equipment Manager / SPRAT Rope Access Technician / ADCI-certified Diver**	

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).
09/14 – Present	LADOTD IDIQ for Underwater Bridge Inspection, Statewide, Louisiana. NBIS Team Leader for the third cycle of contracts in which we have performed 1,375 underwater bridge inspections statewide. Responsible for leading dive operations for underwater inspection teams to complete field work, writing inspection reports, and performing quality control reviews. Bridge types inspected consisted of movable bridges, truss bridges, timber stringer bridges, cable-stayed bridges, and single and multi-span girder bridges up to fourteen miles in length. Site conditions included salt and fresh waters, with varying levels of current, having low to no visibility. UAI techniques were utilized to locate structural deficiencies and identify bottom conditions.
04/16 – Present	LADOTD IDIQ for Statewide Ancillary Sign Inventory and Inspection, Louisiana. Team Leader and Rope Access Supervisor for both five-year retainer contracts. Performed ~40% of 1700 sign truss inspections throughout Louisiana. Utilized fall protection and rope access techniques with rescue plan development. Performed non-destructive testing on all anchor rods at all cantilever structures, base plates with excessive standoff distances, and where deficiencies or impacts were observed at steel and aluminum welds. Drafted and reviewed inspection reports per the quality management plan. Monitored the TTC lane closures and reviewed the TTC plans for over 10 lane closures throughout the state.
11/14 – Present	MDOT 2014 & 2021 Underwater Bridge Inspection Contract, Districts 1 & 2, Mississippi. NBIS Bridge Inspector performed underwater inspections of 12 bridges in accordance with NBIS and MDOT PONTIS Inspection Manual. Bridges inspected were constructed of concrete, steel, and timber, and high-resolution scanning sonar was used on selected bridge elements. Responsible for pre-inspection planning, scheduling, field work, performing NDT and soundings, diving operations, drafting reports, sketches, and repair recommendations.
11/19 – Present	LADOTD IDIQ for Statewide In-Depth Bridge Inspection, Louisiana. Team Member for one of the current five-year retainer contracts as a major subconsultant to HNTB, contracted to perform in-depth bridge inspections on complex, signature, long-span bridges throughout Louisiana. Performed the inspection of the I-10 Horace Wilkinson Bridge (New Bridge) completely utilizing rope access techniques and rolling lane closures to greatly minimize traffic impacts.

16. Staff Experience:

Firm Employed by	**Moffatt & Nichol**		
Name	**Christopher (Chip) Eschenbach**	Years of relevant experience with this employer	4
Title	NBIS Team Member	Years of relevant experience with other employer(s)	6

Degree(s) / Years / Specialization			Associates / 2015 / Welding Technology
Active registration number / state / expiration date			N/A
Year registered	N/A	Discipline	N/A
Contract role(s) / brief description of responsibilities			**NBIS Underwater Inspector / SPRAT Rope Access Technician / ADCI-certified Diver**

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).
11/19 – Present	LADOTD IDIQ for Statewide In-Depth Bridge Inspection, Louisiana. NBIS Team Member for one of the current five-year retainer contracts as a major subconsultant to HNTB, contracted to perform in-depth bridge inspections on complex, signature, long-span bridges throughout Louisiana. Performed the inspections of both cable-stayed bridges in Louisiana (Audubon and Luling) with rope access techniques to inspect a total of 208 cables between the two bridges, their Gensui Dampers, and anchorages. Performed the inspection of the I-10 Horace Wilkinson Bridge completely utilizing rope access techniques and rolling lane closures to greatly minimize traffic impacts. Performed a supplemental inspection of the GNO Cantilever Truss Bridges in New Orleans utilizing rope access techniques. Performed a fracture critical inspection of the Green Bridge, a steel tied arch in New Orleans utilizing rope access and UAS access techniques. Performed the inspection of the I-10 Bridge over the Calcasieu River in Lake Charles utilizing rope access on FCM's and UAS access techniques on columns.
1/20 – Present	LADOTD IDIQ for Statewide In-Depth Bridge Inspection of Complex Structures, Louisiana. NBIS Team Member for one of the current five-year retainer contracts as a major subconsultant to Gresham Smith, contracted to perform in-depth bridge inspections on complex, movable, long-span, and precast segmental box girder bridges throughout Louisiana. Performed and lead the structural, mechanical, and electrical inspections of six (6) movable bridges utilizing detailed, nondestructive and laboratory testing methods with hand sketches. Hands-on management and implementation of the QC/QA plan is vital to the continued success of this project.
08/18 – Present	LADOTD IDIQ for Underwater Bridge Inspection, Statewide, Louisiana - UWI District 62, Baton Rouge, LA | Bridge Inspector for bridges in district 62. Responsibilities included the underwater portion of the bridge inspection. Tasks for inspection of said bridges included inspection of all underwater members, gathering sediment depths around bridges, listing any additional defects not listed in previous reports, taking photos and updating current information on each bridge. Responsibilities for the job compiled of equipment preparations, driving the truck and company boat, diving on bridges and assisting with the inspection and data collection for the bridges above the water. The diving operations were conducted from the Baton Rouge pontoon boat using surface-supplied diving or scuba diving techniques to ensure safe practices as well as clear and precise notations.
09/18 – Present	LADOTD IDIQ for Statewide Ancillary Sign Inventory and Inspection, Louisiana. Bridge Inspector for the current five-year retainer contract to perform approximately 50% of 1,700 routine and interim overhead sign structure inspections.

16. Staff Experience:

Firm Employed by	**Moffatt & Nichol**			
Name	**Joshua Martinez, PE, ADCI**		Years of relevant experience with this employer	7
Title	NBIS Team Leader and Diver		Years of relevant experience with other employer(s)	5
Degree(s) / Years / Specialization			MCE / 2013 / Structural Engineering, North Carolina State University BCE / 2009 / Structural Engineering, United States Air Force Academy	
Active registration number / state / expiration date			Professional Engineer: 42085 / LA / 3/31/22	
Year registered	2013	Discipline	Civil	
Contract role(s) / brief description of responsibilities			**NBIS Team Leader / SPRAT Rope Access Technician / ADCI-certified Diver**	

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).
06/17 – Present	LADOTD IDIQ for NBIS Underwater Bridge Inspection Retainer Contract, Statewide. NBIS Team Leader for the current five-year retainer contract to perform Levels I, II, and III underwater bridge inspections in accordance with NBIS and AASHTO Manual for Bridge Element Inspection. Site conditions included salt and fresh waters, with varying levels of current, having low to no visibility. UAI techniques were utilized to locate structural deficiencies and identify bottom conditions. Responsible for leading underwater inspection teams to complete field work, inspection reports, and quality control reviews.
09/13 – 06/17	LADOTD 2013 NBIS Underwater Bridge Inspection Retainer Contract, Statewide. NBIS Inspector for the previous five-year retainer contract to perform Levels I, II, and III underwater bridge inspections in accordance with NBIS and AASHTO Manual for Bridge Element Inspection. Responsible for underwater inspection field work, inspection reports, and quality control reviews. UAI techniques were utilized to locate structural deficiencies, identify potential undermining, observe the limits of scour, and document the limits of riprap installations.
03/17 – Current	Statewide Topside Inspection of Bridges for the North Carolina Department of Transportation, North Carolina. NBIS Team Leader responsible for topside inspection of bridges under two, consecutive, multi-year, on-call contracts. Inspected single and multi-span bridges as well as concrete, steel, and timber. Mr. Martinez was responsible for rating the overall bridge condition and determining critical maintenance items per state requirements. He also developed and generated reports rating to the element base level. Mr. Martinez familiarized himself with several inspection vehicles including a bucket truck, snooper, and under-bridge platform. He served as engineer reviewer for reports to ensure accuracy and proper rating per National Highway Institute (NHI) guidance.

16. Staff Experience:

Firm Employed by	**Moffatt & Nichol**			
Name	**Charles Balzarini, PE**		Years of relevant experience with this employer	9
Title	NBIS Team Leader and Diver		Years of relevant experience with other employer(s)	7
Degree(s) / Years / Specialization			BS / 2008 / Civil Engineering, University of Alaska, Anchorage	
Active registration number / state / expiration date			Professional Engineer: 13854 / AK / Exp. 12/31/2023	
Year registered	2013	Discipline	Civil	
Contract role(s) / brief description of responsibilities			**NBIS Team Leader / SPRAT Rope Access Technician / ADCI-certified Diver**	

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).
06/17 – Present	LADOTD IDIQ for NBIS Underwater Bridge Inspection Retainer Contract, Statewide. NBIS Team Leader for the current five-year retainer contract to perform Levels I, II, and III underwater bridge inspections in accordance with NBIS and AASHTO Manual for Bridge Element Inspection. Site conditions included salt and fresh waters, with varying levels of current, having low to no visibility. UAI techniques were utilized to locate structural deficiencies and identify bottom conditions. Responsible for leading underwater inspection teams to complete field work, inspection reports, and quality control reviews.
11/19 – Present	LADOTD IDIQ for Statewide In-Depth Bridge Inspection, Louisiana. NBIS Team Leader for one of the current five-year retainer contracts as a major subconsultant to HNTB, contracted to perform in-depth bridge inspections on complex, signature, long-span bridges throughout Louisiana. Performed the inspections of the Luling cable-stayed bridge in New Orleans with rope access techniques to inspect a total of 72 cables between the two bridges, their Gensui Dampers, and anchorages. Performed the inspection of the I-10 Horace Wilkinson Bridge completely utilizing rope access techniques and rolling lane closures to greatly minimize traffic impacts. Performed a supplemental inspection of the GNO Cantilever Truss Bridges in New Orleans utilizing rope access techniques. Performed a fracture critical inspection of the Green Bridge, a steel tied arch in New Orleans utilizing rope access and UAS access techniques.
04/16 – Present	LADOTD IDIQ for Statewide Ancillary Sign Inventory and Inspection, Louisiana. Team Leader for both five-year retainer contracts to perform approximately 40% 1700 sign truss inspections throughout Louisiana. Utilized the fall protection and rope access techniques with rescue plan development. Performed non-destructive testing on all anchor rods at all cantilever structures, base plates with excessive standoff distances, and where deficiencies or impacts were observed at steel and aluminum welds. Hands-on inspection work was performed overhead by bucket truck and climbing on active highways. Aluminum and steel sign truss members were inspected for inventory and for structural defects in accordance with FHWA guidelines. Drafted and reviewed inspection reports per the quality management plan. Monitored the TTC lane closures and reviewed the TTC plans for over 10 lane closures throughout the state.

16. Staff Experience:

Firm Employed by	**Moffatt & Nichol**		
Name	**Matthew Balzarini, PE**	Years of relevant experience with this employer	5
Title	NBIS Team Leader and Diver	Years of relevant experience with other employer(s)	4

Degree(s) / Years / Specialization			BS / 2011 / Civil Engineering, University of New Orleans
Active registration number / state / expiration date			Professional Engineer: 118893 / AK / Exp. 12/31/23
Year registered	2017	Discipline	Civil
Contract role(s) / brief description of responsibilities			**NBIS Team Leader / SPRAT Rope Access Technician / ADCI-certified Diver**

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).
11/19 – Present	LADOTD IDIQ for Statewide In-Depth Bridge Inspection, LA. NBIS Team Leader Member for one of the current five-year retainer contracts as a major subconsultant to HNTB, contracted to perform in-depth bridge inspections on complex, signature, long-span bridges throughout LA. Performed the inspections of both cable-stayed bridges in LA (Audubon and Luling) with rope access techniques to inspect a total of 208 cables between the two bridges, their Gensui Dampers, and anchorages. Performed the inspection of the I-10 Horace Wilkinson Bridge completely utilizing rope access techniques and rolling lane closures to greatly minimize traffic impacts. Performed a supplemental inspection of the GNO Cantilever Truss Bridges in New Orleans utilizing rope access techniques. Performed a fracture critical inspection of the Green Bridge, a steel tied arch in New Orleans utilizing rope access and UAS access techniques. Performed the inspection of the I-10 Bridge over the Calcasieu River in Lake Charles utilizing rope access on FCM's and UAS access techniques on columns.
06/18 – Present	LADOTD IDIQ for NBIS Underwater Bridge Inspection Retainer Contract, Statewide. NBIS Team Leader and Team Member for the current five-year retainer contract to perform Levels I, II, and III underwater bridge inspections in accordance with NBIS and AASHTO Manual for Bridge Element Inspection. Site conditions included salt and fresh waters, with varying levels of current, having low to no visibility. UAI techniques were utilized to locate structural deficiencies and identify bottom conditions. Responsible for leading underwater inspection teams to complete field work, inspection reports, and quality control reviews.
07/18 – Present	LADOTD IDIQ for Statewide Ancillary Sign Inventory and Inspection, LA. Team Leader for both five-year retainer contracts to perform approximately 10% 1700 sign truss inspections throughout Louisiana. Utilized the fall protection and rope access techniques with rescue plan development. Performed non-destructive testing on all anchor rods at all cantilever structures, base plates with excessive standoff distances, and where deficiencies or impacts were observed at steel and aluminum welds. Drafted and reviewed inspection reports per the quality management plan. Monitored the TTC lane closures and reviewed the TTC plans for over 10 lane closures throughout the state.

16. Staff Experience:

Firm Employed by	**Moffatt & Nichol**		
Name	**Laura Miller, EIT**	Years of relevant experience with this employer	4
Title	Assistant Inspector and Diver	Years of relevant experience with other employer(s)	16

Degree(s) / Years / Specialization			MBA / 2017 / Business Administration, Tulane University MS / 2017 / Global Management, Tulane University MS / 2012 / Civil & Environmental Engineering, San Jose State University BS / 2002 / Human/Regional Geography and Spanish, United States Military Academy
Active registration number / state / expiration date			**Engineer-in-Training:** EI.0034949 / Lousiana
Year registered	2021	Discipline	Civil
Contract role(s) / brief description of responsibilities			**Assistant Inspector / SPRAT Rope Access Technician / ADCI-certified Diver**

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).
09/19 – 03/20	LADOTD 2017 NBIS Underwater Bridge Inspection Retainer Contract, Statewide. NBIS Inspector for the current five-year retainer contract to perform Levels I, II, and III underwater bridge inspections in accordance with NBIS and AASHTO Manual for Bridge Element Inspection. Completed underwater inspection field work, inspection reports, and quality control reviews. Underwater acoustic imaging techniques were utilized to locate structural deficiencies, identify potential undermining, observe the limits of scour, and document the limits of riprap installations.
09/19 – 03/20	LADOTD Statewide Ancillary Sign Inventory and Inspection, Louisiana. Assistant Inspector for the current five-year retainer contract to perform approximately 30% of the 1700 sign truss inspections (routine and interim) throughout Louisiana. Utilized a tablet-based inventory management system with a custom designed application. Utilized fall protection techniques for inspections of fatigue prone details on steel and aluminum box trusses members. Non-destructive testing was performed on steel and aluminum welds, high stress moment connections and anchor rods. Performed QC report reviews in accordance with FHWA guidelines.
06/18 – 08/18	Battery Park City Authority, Phase 6 Pile Remediation, New York, New York. Inspector-Diver for underwater inspection of Battery Park. The project included underwater inspection of piles, caps, and beams along with the seawall inspection. The first phase of work was to ensure that completed repairs were intact and upheld their integrity. The second phase of the assignment was to look all uninspected piles, caps and beams and report back any details that will need to be addressed and repaired.

16. Staff Experience:

Firm Employed by	**Moffatt & Nichol**		
Name	**Yehoshua "Josh" Gilad, PE**	Years of relevant experience with this employer	10
Title	Senior Mechanical Engineer	Years of relevant experience with other employer(s)	25
Degree(s) / Years / Specialization		MS / 1980 / Mechanical Engineering, Rice University BS / 1971 / Mechanical Engineering, Israel Institute of Technology Graduate Courses / 1981 / Electrical Engineering, University of Houston	
Active registration number / state / expiration date		Professional Engineer: M30046 / CA / Exp. 09/30/22	
Year registered 1986	Discipline	Mechanical Engineer	
Contract role(s) / brief description of responsibilities		**Mechanical Engineer for Bridge Inspection 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 time specified in the applicable MPR(s).
11/19 - Present	LADOTD IDIQ for Statewide In-Depth Bridge Inspection of Complex Structures, Louisiana. Mechanical engineer for current five-year retainer contract (2019-2024) to perform in-depth bridge inspections of mechanical, electro-mechanical, & electro-hydraulic systems for sing span bridges & prepare mechanical sections of inspection reports. Conducted in accordance with AASHTO Movable Bridge Manual, mechanical inspection examined electric motor driven gearing operations associated with main span rotation and wedge operation or live load shoes to support four corners of movable span, thruster brake, gear box, speed reducers, solenoid brakes, traffic gates, and barrier gates. Inspection also examined general operation, open gearing, speed reducers, shafts, shaft bearings/shaft couplings, hydraulic power units, hydraulic piping system, hydraulic cylinders/motors/ rotary actuators, hydraulic directional control valves [DCV], machinery base, access ladder/platforms, balance wheel, tracks, and barriers. For all systems and components, condition assessment is performed, and the systems and components are classified and ranked in accordance with LADOTD criteria, with recommendation for repair or replacement, where applicable. To date, he has completed in-depth mechanical inspection of six swing span bridges: · Bayou Teche (LA 3182) Bayside Bridge (Recall 006306), New Iberia, LA – span-hydraulic, wedge-hydraulic · Indian Village Bridge (LA 3066S) (Recall 054472) over Plaquemine Bayou – span-hydraulic, wedge-hydraulic · Bayou Grosse Tete Bridge (LA 0077) (Recall 054360) over Intracoastal Waterway, Iberville Parish, Plaquemine – span-hydraulic, wedge-hydraulic · Highway 56 Bridge (LA 0056) (Recall 003450) over Boudreaux Canal, Terrebonne Parish, Chauvin – span – hydraulic, wedge -mechanical · Convent Street Bridge (LA 0324) (Recall 009130) over Bayou Teche, St. Mary Parish, Charenton – span-mechanical, wedge-mechanical · Bayou Teche (LA 0671) (Recall 005860), Jeanerette, LA – span-mechanical, wedge-mechanical
02/93 – 06/94	Movable Bridge Inspection along the Amtrak Northeast Corridor. As part of New Haven to Boston rail line electrification project, inspected movable bridges including all bascule & swing bridges along the way. Inspection collected data for use in conceptual design of retractable catenary overhead wire system designed to clear bridge when it was about to open & move back on the bridge after it closed.

16. Staff Experience:

Firm Employed by	**Moffatt & Nichol**		
Name	**J. Alan Gregg, Jr. PE**	Years of relevant experience with this employer	1.5
Title	Electrical Engineer	Years of relevant experience with other employer(s)	5
Degree(s) / Years / Specialization		BS / 2015 / Electrical Engineering, Kennesaw State University BA / 2008 / Political Science, Augusta University	
Active registration number / state / expiration date		Professional Engineer: GA / 45320 / Exp. 12/31/22	
Year registered 2019	Discipline	Electrical Engineer	
Contract role(s) / brief description of responsibilities		**Electrical Engineer for Bridge Inspection 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 time specified in the applicable MPR(s).
11/19 - Present	LADOTD IDIQ for Statewide In-Depth Bridge Inspection of Complex Structures, Louisiana. As a subconsultant under a five-year retainer contract for in-depth inspection of complex and movable bridges, Mr. Gregg has served as Moffatt & Nichol's electrical engineer to provide in depth electrical systems inspection and reports for swing span movable bridges. Conducted in accordance with AASHTO Movable Bridge Inspection, Evaluation and Maintenance Manual and the LADOTD Bridge Design and Evaluation Manual, electrical inspection examined power supply and distribution equipment, control systems, electrical motors/motor controls, electrically operated brakes, control cabinets, conductors, conduit systems, lighting and receptacle outlets, grounding systems, and lightning protection systems. In addition to thorough visual inspection, Mr. Gregg utilized the following advanced measurement and inspection methods: • cable and motor winding insulation resistance testing • grounding system impedance testing • measurement of motor no-load and full load voltages • measurement of motor starting and full-load currents. Electrical section of inspection reports assessed condition and provided repair recommendations for all inspected electrical components. To date, Mr. Gregg has completed in-depth electrical inspection of four Louisiana swing span bridges.
10/17 – 12/18	I-20/US-21 Bridge Replacement & Intersection Improvements, Columbia County, Georgia. Electrical engineer for project involving demolition & replacement of a bridge over Interstate-20 and conversion of ramp intersections above interstate into roundabouts. Provided lighting & associated electrical distribution design for interstate access ramps and interchange roundabouts. Design challenges included special coordination to account for existing high-voltage overhead transmission lines passing over the roadway, as well as transition lighting for motorists departing the interchange and moving toward surrounding unlighted areas.

02/19 – 05/20	Berckmans Road Phase II, Augusta, Georgia. Bridge replacement & cross section realignment/modifications of a 0.8-mile-long section of roadway which included conversion of a 4-way intersection into a roundabout. Provided lighting design for roundabout and two legs of Berckmans road that connect to it. Design challenges included constrained right-of-way, dense roadside overhead utilities, and the need for significant light trespass mitigation near residences adjacent to portions of the roadway.

16. Staff Experience:

Firm employed by **Meyer Engineers, Ltd.**					
Name	**Richard C. Meyer, P.E.**		Years of relevant experience with this employer		**40**
Title	Principal-in-Charge		Years of relevant experience with other employer(s)		**0**
Degree(s) / Years / Specialization			B.S. Civil Engineering 1980, Tulane University		
Active registration number / state / expiration date			24012 / LA / 03-31-2022		
Year registered	1988	Discipline	Civil Engineering		
Contract role(s) / brief description of responsibilities			Project Principal / Oversee 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 time specified in the applicable MPR(s).
Richard C. Meyer is the Principal and is involved with all aspects of administering engineering projects including client contact, cost estimates, design, quality control, contract administration, and contract closeout. He coordinates the Engineering staff and has participated in most facets of Civil Engineering including structural, sanitary and storm sewerage, roads and bridges, airport designs, and construction management. He is knowledgeable of the DOTD's "Roadway Design Manual", "Hydraulics Manual", "Testing Procedures Manual", and "Sampling Manual". As Project Engineer for the Federal Aid System Projects, he has administered assistants, certified inspectors, and field representatives for the construction of asphaltic concrete and Portland concrete roadways and drainage systems for over thirty (30) years. The work included interpreting contract documents, preparing pay requests and change orders, and coordination with Federal, State and Parish Representatives. He is a member of the Louisiana Engineer's Society, the American Society of Civil Engineers, the American Concrete Institute, National Society of Professional Engineers, Louisiana Floodplain Managers Association, and the American Council of Engineering Companies.	
03/08-09/11 04/18-Present	**S.P. No. H.007272: Howard Avenue Extension (Loyola Avenue – LaSalle Street), Orleans Parish**: Project Principal for the Howard Avenue **Extension** (Loyola Avenue – LaSalle Street). The project consists of a 1,600' **concrete roadway**, base course, curbs, sidewalk, ADA compliant ramps, drain lines, utility adjustments, striping, traffic signals, and street lighting. The work also includes right-of-way acquisition. Construction Cost: $3.2M (EST)
06/13-02/19	**S.P. No. H.010184: LA 59: Curve Realign and Tunnel at Trace, St. Tammany Parish:** Project Principal for **road improvements** and pedestrian tunnel. Construction Cost: $3.6M
02/14-06/17	**S.P. No. H.007855: LA 431 @ LA 934 Intersection Improvements, Ascension Parish:** Project Principal for **adding turn lanes** and drainage improvements. Construction Cost: $1.5M
09/07-02/12	**S.P. No. 704-92-0039: LA DOTD Submerged Roads Program, Orleans, and St. Bernard Parishes**: Project Principal for the LA DOTD Submerged Roads (Paths to Progress) Program. The project consisted of providing Design under a retainer contract which included five (5) separate bid packages. The work included base repair, asphalt and concrete patching, asphalt overlay, concrete road, concrete curbs, sidewalks, and drainage repairs. The construction cost of all Task Orders was **$61 Million.**
04/19-Present	**S.P. No. H.011310: Ford Street Extension, East Baton Rouge Parish:** Project Principal for preparing Preliminary Plans to **extend Ford Street** from LA 67 (Plank Road) to Howell Place Road. The **extension** will be

	an urban collector with a design speed of 30 MPH and will consist of two (2) 11' lanes, 30' raised grass median, curb and gutter with subsurface drainage and sidewalks. Water and sewer will also be included in the design. Construction Cost: $3.5M (EST)
01/18-Present	**State Project No. H.013850: Duplessis Road Safety Widening, Ascension Parish:** Project Principal for the design, plan preparation and construction administration for the Duplessis Road Safety **Widening** Project. Duplessis Road is categorized as an **Urban Collector Roadway** that provides a **connection between major LA DOTD roads**: Airline Highway (US 61) and Old Jefferson Highway (LA Highway 73). As part of the Move Ascension roadway improvement program, Meyer is tasked with designing the full roadway reconstruction of the 1.65-mile portion of the road to **widen the road** from 18' wide to 26' wide (two (2) 11' lanes and two (2) 2' wide paved shoulders). The **roadway and shoulder safety widening** will aide in vehicle recovery and provide a safer roadway for traveling motorists. Also included in this project is the drainage design and layout of the new subsurface and roadside ditch sections. Construction Cost: $5.2M (EST)

16. Staff Experience:

Firm employed by **Meyer Engineers, Ltd.**				
Name	**David H. Dupre, P.E.**		Years of relevant experience with this employer	32
Title	Civil Engineer		Years of relevant experience with other employer(s)	3
Degree(s) / Years / Specialization			**B.S. Civil Engineering 1984, Louisiana State University**	
Active registration number / state / expiration date			**23422/LA/03-31-2022**	
Year registered	**1989**	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities			**Responsible Charge / Project Manager / Vice President**	

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).
	David H. Dupre is a Principal and a Professional Civil Engineer, registered in the State of Louisiana. He will in Responsible Charge/Project Manager. He is involved with all aspects of administering engineering projects which include client contact, cost estimates, design, quality control, construction administration, preparation of reports, plans and specifications. He participates in most facets of Civil Engineering design including roads, bridges, drainage, sanitary sewer, water and structural. He is the **Chairman** on the **State Board** of the **American Council of Engineering Companies Louisiana (ACECL)**. He was also the former New Orleans Chapter President. In 2016, he was honored in receiving the **Outstanding Civil Engineer** award from the New Orleans Branch of the **ASCE**. He is also a member of SAME, ASCE, APWA, CMAA and LES. He has designed projects in accordance with DOTD's "Roadway Design Manual", "Hydraulics Manual", "Bridge Manual", "Complete Streets Manual", and the "Louisiana Standard Specification for Roads and Bridges". He is certified in Local Public Agency Qualification Core Training, **Construction Engineering and Inspection (CE&I) Training**, Project Planning, Feasibility & Application Workshop, Project Design and Delivery Training. He completed the Designing Streets for Pedestrian & Bicycle Safety Workshop. He is a **LADOTD certified Traffic Control Supervisor and Flagger**.
03/08-09/11 04/18-Present	**S.P. No. H.007272: Howard Avenue Extension (Loyola Avenue – LaSalle Street), Orleans Parish**: Project Manager currently managing and designing the Howard Avenue **Extension** (Loyola Avenue – LaSalle Street). The project consists of a 1,600' **concrete roadway** with curbs, subsurface drainage, **turn lane**, 7' wide sidewalks, striping, traffic signals and street lighting. Construction Cost: $3.2M (EST)
06/13-02/19	**S.P. No. H.010184: LA 59: Curve Realign and Tunnel at Trace, St. Tammany Parish:** Project Manager who designed the LA 59: Curve Realign and Tunnel at Trace project. Improvements included flattening the radius of LA 59 at the existing dangerous "S" curve and construction of a pedestrian tunnel under LA 59. Work included a **new roadway section**, widening an existing section of LA 59, a box culvert "tunnel" with approach ramps, and drainage improvements. Construction Cost: $3.6M
11/13-08/16	**S.P. No. H.007855: LA 431 @ LA 934 Intersection Improvements, Ascension Parish:** Project Manager who provided engineering and project management for the LA 431 @ 934 (Goldplace Road) **intersection improvements** in Ascension Parish. This DOTD Urban System Project included adding **left and right turn lanes**. **Road improvements** included **pavement widening**, asphalt pavement and base course, asphalt mill and overlay, and drainage. Construction Cost: $1.5M

11/18-04/19	**Bainbridge Street Access to MSY (Stage 0 Study), City of Kenner:** Program Manager for the Intermodal Access/Impact Study. The purpose of this study was to develop, define, and analyze a range of feasible **improvements to Bainbridge Street**, between the Louis Armstrong New Orleans International Airport (LANOIA) campus and Veterans Boulevard. The project defined and quantified LANOIA related **traffic impacts on the roadway**, as well as reasonable forecastable land use changes and corresponding trip generation patterns envisioned in the adjacent area controlled by the City of Kenner**.**
04/19-Present	**S.P. No. H.011310: Ford Street Extension, East Baton Rouge Parish:** Project Manager for preparing Preliminary Plans to **extend Ford Street** from LA 67 (Plank Road) to Howell Place Road. The **extension** will be an urban collector with a design speed of 30 MPH and will consist of two (2) 11' lanes, 30' raised grass median, curb and gutter with subsurface drainage and sidewalks. Water and sewer will also be included in the design. Construction Cost: $3.5M (EST)
09/95-03/05	**S.P. No. 700-18-0080: Route US 190 Junction 433-US11, St. Tammany Parish:** Project Manager and designed drainage and geometry. Improvements included a **four-lane rural section, a five-lane urban section**, two (2) 180-foot long slab span bridges, subsurface drainage, and a pedestrian tunnel. Side streets included Northshore Boulevard and Camp Villere Road. Construction Cost: $23M
09/07-02/12	**S.P. No. 704-92-0039: LA DOTD Submerged Roads Program, Orleans, and St. Bernard Parishes**: Project Manager for the first phase of the LA DOTD Submerged Roads (Paths to Progress) Program Phase "A". The project consisted of providing Design under a retainer contract which included five (5) separate bid packages. The work included base repair, asphalt and concrete patching, asphalt overlay, concrete road, concrete curbs, sidewalks, and drainage repairs. The construction cost of all Task Orders was **$61 Million.**
01/21-Present	**Jefferson Highway at Bluebonnet Boulevard, East Baton Rouge Parish:** Project Manager for the Jefferson Highway at Bluebonnet Boulevard Intersection project. As **part of the MOVEBR Program**, the project includes **extending the north and south bound left turn lanes and right turn lanes** on Bluebonnet. Other work includes drain inlet structures, driveways, and light pole relocations. Construction Cost: $1.3M (EST)

16. Staff Experience:

Firm employed by **Meyer Engineers, Ltd.**					
Name	**Jitendra C. Shah, P.E.**		Years of relevant experience with this employer		36
Title	Quality Control		Years of relevant experience with other employer(s)		11
Degree(s) / Years / Specialization			M.S. Civil Engineering 1975, Wayne State B.S. Civil Engineering, 1973, The Detroit Institute of Technology		
Active registration number / state / expiration date			19551 / LA / 03-31-2023		
Year registered	1981	Discipline	Civil Engineering		
Contract role(s) / brief description of responsibilities			Quality Assurance/Quality Control		
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).				
Jitendra C. Shah will perform Quality Control on this project and is involved with all aspects of administering engineering projects which include client contact, cost estimates, ***design***, quality control, construction administration, and contract closeout, preparation of reports and plans and specifications. He participates in most facets of Civil Engineering design including structural, sanitary and storm sewerage, water, sidewalks, drainage, ***roads and bridges***, and airport designs. He has completed the DOTD/RPC sponsored course "Designing Streets for Pedestrian & Bicycle Safety. He has completed the FHWA and DOTD sponsored course on Stream Stability and Scour at Highway Bridges. He is an Associate Member of the Institute of Transportation Engineers, and a member of the American Society of Civil Engineers and the Louisiana Engineering Society.					
11/14-05/18	**S. Galvez Street (Toledano Street to Martin Luther King Boulevard, Orleans Parish:** Project Manager for the **reconstruction** of S. Galvez from Toledano Street to Martin Luther King Boulevard (approximately 1,800 feet). The construction of the **concrete roadway** included two 12-foot-wide traveling lanes and 8' parking lane in each direction separated by a median. Additional features included curbs, new traffic signals, subsurface drainage, water line, sewer line, and street lighting replacement. Construction Cost: $5.5M				
06/13-02/19	**State Project No. H.010184: LA 59: Curve Realign and Tunnel at Trace, St. Tammany Parish**: Quality Assurance/Quality Control for LA 59: Curve Realign and Tunnel at Trace project. Improvements included flattening the radius of LA 59 at the existing dangerous "S" curve as the road crosses the trace, and construction of a pedestrian tunnel under LA 59. Work included a **new roadway section** as well as widening an existing section of LA 59. Other **road improvements** included drainage improvements, utility relocations, and raising the grade of the road two feet under the tunnel. Construction Cost: $3.6M (EST)				
08/12-08/19	**Treme-Lafitte Neighborhood Infrastructure Rehabilitation, Orleans Parish:** Project Engineer for the infrastructure rehabilitation project of the Treme-Lafitte Neighborhood. The Treme-Lafitte neighborhood consists of about 200 blocks in the City of New Orleans, bound by Esplanade Avenue, St. Louis Street, N. Broad Street, and N. Rampart Street. The infrastructure rehabilitation project consists of the **repair or complete replacement of roadway pavement**, curbs, sidewalks, and driveways damaged by Hurricane Katrina. The project also consists of the upgrading of the water line system including modifications to the existing system and				

	upgrading or constructing handicapped ramps at intersections to bring the neighborhood up to current ADA standards. Construction Cost: $5.8M (EST)
09/11-02/12	**State Project No. 704-92-0039: LA DOTD Submerged Roads Program, Orleans, and St. Bernard Parishes**: Project Manager for the second phase of the Paths to Progress LA DOTD Submerged Roads Program. The project consisted of providing Design and Construction Engineering and Inspection under a retainer contract which included ten (10) different Task Orders for five (5) separate bid packages. This project was for the permanent **repair to Federal aid eligible roads** as a result of damage due to Hurricane Katrina. The work included base repair, asphalt and concrete patching, mill, asphalt overlay, concrete road, concrete curbs, granite curbs, driveways, sidewalks, handicap ramps, drain line repairs and catch basin repairs. The construction estimate of all Task Orders under the second phase, Paths to Progress, was **$29M.**
01/18-Present	**Holmes Boulevard Rehabilitation (Browning Lane to Behrman Highway), Jefferson Parish.** Project Engineer for the Holmes Boulevard Rehabilitation Project. The project consists of **removing and replacing the existing two (2) lane undivided concrete roadway** and adding a six (6') foot continuous shoulder/bike lane on either side of Browning Lane to Behrman Highway. The existing twenty-eight (28') foot wide concrete roadway will be removed; the base regraded and compacted, and a new nine (9") inch concrete roadway will be installed. The six (6') foot continuous shoulder on each side which will serve as a bike lane will be constructed using a 10" pervious concrete section four and a half (4.5) feet wide with a one and a half (1.5) foot wide barrier curb and gutter of standard concrete for a total width of six (6') feet. A three (3') foot mountable curb island is to be used to separate the bike lane from the automobile travel lanes. Construction Cost: $5.8M (EST)

16. Staff Experience:

Firm employed by **Meyer Engineers, Ltd.**					
Name	**Mark A. Schutt, P.E.**		Years of relevant experience with this employer		21
Title	Civil Engineer		Years of relevant experience with other employer(s)		1
Degree(s) / Years / Specialization			M.S. Civil Engineering, 1999, Tulane University B.S. Civil Engineering, 1997, Tulane University		
Active registration number / state / expiration date			30528 / LA / 03-31-2023		
Year registered	2003	Discipline	Civil Engineering		
Contract role(s) / brief description of responsibilities			Lead Design Civil Engineer / Lead Project Engineer		
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).				
Mark A. Schutt will be the ***Lead Civil Engineer/Designer*** on this project. His experience includes client contact, cost estimates, design, construction administration, preparation of reports, plans and specifications. While with other firms, he conducted extensive research on pile-supported approach slabs. He has designed projects in accordance with ***DOTD's "Roadway Design Manual"***, ***"Hydraulics Manual"***, "Bridge Manual", AASHTO's "Green Book", and the "Louisiana Standards and Specifications for Roads and Bridges". Mr. Schutt is a member of the Louisiana Engineering Society, the American Society of Civil Engineers, and the National Society of Professional Engineers. Mr. Schutt attended DOTD's Designing Pedestrian Facilities for Accessibility, CADconform, and Control CAD Indexter Seminars. He has completed Local Public Agency Qualification for Core Training; Construction Engineering & Inspection; Project Planning; Feasibility & Application Development Workshop; and Project Design and Delivery Training. He completed LTAP's Local Road Safety Program Crash Data Workshop II. He is currently in the process of renewing his certification for ***Traffic Control Supervisor and Flagger.***					
04/19-Present	**S.P. No. H.011310: Ford Street Extension, East Baton Rouge Parish:** Lead Project Engineer for preparing Preliminary Plans to **extend Ford Street** from LA 67 (Plank Road) to Howell Place Road. The **extension** will be an urban collector with a design speed of 30 MPH and will consist of two (2) 11' lanes, 30' raised grass median, curb and gutter with subsurface drainage and sidewalks. Water and sewer will also be included in the design.				
06/13-02/19	**State Project No. H.010184: LA 59: Curve Realign and Tunnel at Trace, St. Tammany Parish:** Lead Project Engineer who designed the road, geometry, and drainage for LA 59: Curve Realign and Tunnel at Trace project. Improvements included flattening the radius of LA 59 at the existing dangerous "S" curve as the road crosses the trace, and construction of a pedestrian tunnel under LA 59. Work included a new roadway section as well as widening an existing section of LA 59. Other **road improvements** included drainage, utility relocations, and raising the grade of the road two feet under the tunnel. Construction Cost: $3.6M				
06/10-05/18	**State Project No. H.009770: St. John Mississippi River Trail – Phase I-IV, St. John the Baptist Parish:** Lead Project Engineer on **all four (4) phases** of this project. A 10' wide asphalt trail on the Mississippi River Levee from the St. Charles Parish line to the St. James Parish line. The work also includes drainage, a ramp, a pedestrian crossing on River Road, signage, and striping. Construction costs of all four (4) phases is $7.2 Million.				

10/00-12/11	**State Project No. 742-26-0044: Harvey Boulevard (Wall Boulevard to Engineers Road), Jefferson and Plaquemines Parishes:** Assisted with design of roads, geometry and drainage for preliminary and final plans and construction support services for Harvey Boulevard from Wall Boulevard to Engineers Road (approximately 4,800 LF), located in Jefferson Parish and Plaquemines Parish. The new asphaltic concrete **roadway** included four (4) 12' lanes, concrete curbs, new traffic signals and subsurface drainage. The project also included two (2) 250-feet long girder span bridges, drainage outfalls, backfilling a major canal, and bulkheading around an existing 30-inch gas line. The work also included a 180’ long pile supported approach slab over a backfilled canal to avoid future settlement problems. Construction Cost: $8.9M
01/16-07/19	**State Project No. H.011835: Washington Parish Sidewalk Improvements, Washington Parish:** Project Engineer for the design and construction administration for the Washington Parish Sidewalk Project. The project consists of 4,000 linear feet of 6-foot-wide decorative concrete sidewalks along Cleveland Street, Main Street (LA 25), Ellis Street, Washington Street (LA 10), Pearl Street and Jackson Street. The sidewalks provide a non-motorized transportation link in the community and will tie into the Safe Routes to School Project around the Franklinton Junior High School. Future phases to extend the path along Main Street (LA 25) and along Boat Ramp Road are in conceptual design phase. The project provides connectivity between residential neighborhoods and established commercial areas and government services. This project is being funded in part by DOTD through the Transportation Alternatives Program. Meyer is **coordinating with DOTD** as well as Washington Parish. Construction Cost: $345K (EST)

16. Staff Experience:

Firm employed by: **Meyer Engineers, Ltd.**					
Name	**James Papia, AIA, NCARB, CSI**		Years of relevant experience with this firm/employer	11	
Title	Director of Architecture		Years of relevant experience with other firm(s)/employer(s)	28	
Degree(s) / Years / Specialization			B.S. Architecture, 1981		
Active registration number / state / expiration date			3423 / Louisiana / 12-31-2022		
Year registered	1984	Discipline	Architecture		
Contract role(s) / brief description of responsibilities			Design & Inspection of Operating & Machine Houses		

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).
06/07 – 12/09	Lafitte Multipurpose Facility | Jefferson Parish: Lead Architect for the Architectural Design Services a multipurpose facility that incorporated a library, auditorium, civic center, and museum. Mr. Papia was the lead architect on the project which included preparation of the design schedule and cost estimates. Mr. Papia also directed the Meyer architecture staff and the engineering consultants during the schematic design, design development and construction document phases. Throughout the course of the project Mr. Papia provided quality control services to ensure that the project was delivered on time and under budget. After publicly advertised bids were opened, Mr. Papia assisted The Town of Jean Lafitte in negotiating with the apparent low bidder to a more reasonable price. Mr. Papia assisted the Contract Administration Department during the construction period by reviewing shop drawings and product data. Construction Cost: $4.8M
09/11 - 07/13	Port of South Louisiana Guard/Scale House | St. John the Baptist Parish: Project Manager for the Architectural Design and Construction Services for the design of the new Guard and Scale House for the Port of South Louisiana. Mr. Papia was the primary designer for the building, prepared all construction details and specifications for the construction documents. Mr. Papia also prepared the project schedule and cost estimates. Mr. Papia also prepared all contracts for the project including the Owner/Architect Agreement, Agreements between Architect and Consultants and Owner / Contractor agreement. Mr. Papia reviewed all shop drawings and submittal data, assisted in Construction Administration and Construction Closeout. Mr. Papia also helped cut the ribbon at the grand opening of the Scale House. Construction Cost: $159K
10/12 – 07/15	Regional Transit Authority Carrollton Streetcar Facility Renovation and Upgrade | Orleans Parish: Lead Architect for the Architectural Design Services for the historic building that was built in the late 1800's to serve as a streetcar maintenance and storage facility. Meyer Engineers was the consulting Architect and structural engineer to Royal Engineers for this project. Mr. Papia managed the project for Meyer for the architectural and structural engineering department. Mr. Papia directed the research necessary to preserve this historic structure. Mr. Papia delegated the restoration work to several architectural staff members and supervised development of the construction documents. Mr. Papia coordinated the work between Meyer and the MEP and structural

	consultants for the projects including preparation of contracts and preparation of the project schedule. Construction Cost: $3M
01/16- 09/15	Slidell I-59 DOTD Rest Area | St. Tammany Parish: Lead Architect for the Architectural Design and Construction Services for the renovations and upgrades to the DOTD Rest Area in Slidell, Louisiana. Mr. Papia directed the schematic design, design development, and construction document phases of the project, including project scheduling and cost estimating. Since the rest areas are widely used by the public, accessibility was of paramount concern. Mr. Papia, a certified ADA expert, conducted extensive research regarding ADA accessibility to the facility to ensure that all parts of the entire rest area was accessible. Mr. Papia was the Quality Control manager for the project and reviewed all drawing and specifications prior to public bidding. During construction, Mr. Papia made several visits to the site to ensure that the project was being constructed in accordance with the construction documents. Construction Cost: $2.1M
07/16 - Present	Port of South Louisiana Administration Building | St. John the Baptist Parish: Lead Architect for the Architectural Design and Construction Services for the new 30,000 square feet facility located on the Mississippi River in Reserve, Louisiana. For the Port, Mr. Papia developed the project and established the budget for the project. Mr. Papia directed the programming team in the development of a good, solid, working program describing in detail the spatial and functional needs of the Port Authority. After programming, Mr. Papia supervised the design team in creating an exciting building image that the Port Authority desired. In addition to managing the overall preparation of the construction documents, Mr. Papia assisted in developing extensive details of the building in the construction documents phase. Mr. Papia was the Quality Control manager for the project and reviewed all drawing and specifications prior to public bidding. Mr. Papia is also assisting the Port Authority with the selection of Furniture, Fixtures and Equipment (FF&E). Now that construction is in progress, Mr. Papia is assisting in reviewing shop drawings, product data and material and color selections. Throughout the entire project process, Mr. Papia regularly attended Port Authority Board Meetings to report on the status of the project. Estimated Construction Cost: $9M

16. Staff Experience:

Firm employed by: **Meyer Engineers, Ltd.**				
Name	**Adrianna Gernon Eschete, LEED AP**		Years of relevant experience with this firm/employer	10
Title	Architect		Years of relevant experience with other firm(s)/employer(s)	10
Degree(s) / Years / Specialization			B.S. Architecture, 2000	
Active registration number / state / expiration date			6719 / Louisiana / 12-31-2022	
Year registered	2007	Discipline	Architecture	
Contract role(s) / brief description of responsibilities			Design & Inspection of Operating & Machine Houses	

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).
10/16 - Present	St. John Sheriff's Office Indoor Range & Training Facility | St. John the Baptist Parish: Project Architect and Construction Services for the demolition of the existing structure and foundation and the construction of new facility. Adrianna prepared the drawings and specifications and is currently handling the processing of shop drawings and conducts site visits. She also handles all coordination with Owner, Contractor and subconsultants. Construction Cost: $7M
07/16 - Present	Port of South Louisiana Administration Building | St. John the Baptist Parish: Project Architect and Construction Administration for a new 20,000 square feet facility three level administration buildings. Adrianna prepared the drawings and specifications and is currently handling the processing of shop drawings and conducts site visits. She also handles all coordination with Owner, Contractor and subconsultants. Construction Cost: $9M
08/12 – 10/16	Lusher Elementary School | Orleans Parish: Project Architect for the Architectural Design and Construction Services of the renovations to the historic elementary school Lusher Elementary located in New Orleans, Louisiana. Adrianna prepared the drawings and specifications and completed the processing of shop drawings and conducted site visits. She also handled all coordination with the Owner, Contractor and subconsultants. Construction Cost: $4.7M

16. Staff Experience:

Firm employed by: **Meyer Engineers, Ltd.**					
Name	**Alfonso Romero, NCARB**			Years of relevant experience with this firm/employer	1
Title	Architect			Years of relevant experience with other firm(s)/employer(s)	34
Degree(s) / Years / Specialization			B.S. Architecture, 1985		
Active registration number / state / expiration date			9367 / Louisiana / 12/31/2022		
Year registered	2020	Discipline	Architecture		
Contract role(s) / brief description of responsibilities			Project Architect		

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).
01/22 - Present	Causeway Bridge Bascule Bridge Tender's House | Jefferson Parish: Project Manager for the rehabilitation of the upper two levels of the Bridge Tender's House. The work consists of removing and replacing all existing windows at the operator's level with new impact resistant glazing, reconfiguring one of the windows into an impact resistant, operable door to allow direct access to the catwalk outside, painting all interior surfaces, removing and replacing existing flooring, removing and replacing all furniture/millwork with new construction, providing better lighting, upgrading the air conditioning, recovering the existing roof surface, repairing the access ladder to the roof and installing new safety railings, and patching and repairing any structural damage. Construction Cost: $226K
02/21 – Present	Skelly Rupp Stadium Repairs | Orleans Parish: Project Manager responsible for review of the conditions of the facility and investigated the required scope of work to make the entire stadium and sports facility to be operational, compliant with building codes, and LSHAA standards due to damage from Hurricane Katrina. The work included parking lot resurfacing, striping, stormwater drainage, signage, repair and prevent soil subsidence, compliance with ADA, lighting, and perimeter fencing with entry gates. The stadium improvements consist of repair and replacement of the aluminum bleacher/stand, press box, handicap ramps, bleacher entry steps, roof, structural repairs, improved lighting and sound system, electrical controls to the sports facility and restoring connections and operations of the score board, air conditioning in the press box. Also renovate and refurbish all restrooms, concession stand, ticket booth, offices, including repairs to roof and roofing, masonry repairs and cleaning, interior refinishing, replacing code compliant drinking water fountains, exterior grounds and facilities. The project is FEMA funded. Construction Cost: $1.7M
02/21 – Present	Frederick Sigur Civic Center Roof Replacement – Ballroom | Orleans Parish: Project Manager for completion of the Roof Site Observation Report on the current conditions of the existing roof on the building that was caused by Hurricane Zeta in October 2020. The project consists of removing the 22,900 SF existing modified bitumen roofing assembly over the ballroom at the Frederick Sigur Civic Center. The work includes the installation of modified bitumen roof assembly over lightweight insulating concrete metal deck. In addition to addressing the roof leaks, the project includes various work that is or may be required to correct damage to the existing structure due to the long-term effects of the roof leaks. The project is FEMA funded. Construction Cost: $403K
07/21 – Present	Jackson Barracks 141st Roof Replacement | Jefferson Parish: Project Manager responsible for preparing a site assessment of the facility to propose what direction is required for the existing roof. The project consists of 3,500 SF of retrofit roof to repair water leakage into the building. Construction Cost: $276K

16. Staff Experience:

Firm employed by **Meyer Engineers, Ltd**.				
Name	**Don Mauras, RA**		Years of relevant experience with this firm/employer	6
Title	Architect		Years of relevant experience with other firm(s)/employer(s)	32
Degree(s) / Years / Specialization			B.S. Architecture, 1981	
Active registration number / state / expiration date			3759 / Louisiana / 12-31-2022	
Year registered	1986	Discipline	Architecture	
Contract role(s) / brief description of responsibilities			Design & Inspection of Operating & Machine Houses	

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).
06/18 - Present	Louisiana National Guard Armories Renovation of Indoor Firing Ranges | Statewide: Project Manager for the Architectural Design and Construction Services for the renovation of firing ranges at 32 National Guard Armories Facilities throughout 24 parishes in Louisiana. Don is responsible for the preparation of the construction documents, scope of work, probable construction cost estimate and writing the specifications. Don is responsible for meeting the strict deadline imposed by the Owner therefore he was responsible for coordinating with the Owner and subconsultants. Construction Cost: $2.5M
10/17 – 10/20	Repair Balconies and Stairs at Historic Garrison Residences – Jackson Barracks | Orleans Parish: Project Manager for the Architectural Design Services and Construction Services for the replacement of damaged structural framing, decking and stairs on the balconies at fifteen (15) historic residences at Jackson Barracks in New Orleans. Don was responsible for preparation of the scope of work, probable construction cost estimate, construction documents and writing the specifications. Don was responsible for meeting the strict deadline imposed by the Owner therefore he was responsible for coordination with the Owner and subconsultants. Don also performed the Construction Administration services by making site visits, taking progress photos, coordination with Contractor, Subconsultants and Owner during the duration of the project. He also processed change orders and pay application and review and approval of shop drawings. Construction Cost: $685K
03/15 – 05/17	Lamar Dixon Expo Center Gymnasium Renovations | Ascension Parish: Project Manager for the Architectural Design and Construction Services for the upgrade and expansion to the gymnasium at Lamar Dixon Expo Center in Gonzales, Louisiana. He was responsible for the preparation of the construction documents, scope of work, probable construction cost estimate and writing specifications. He was responsible for site visits, processing change orders, pay applications, review and approval of shop drawings and resolving any construction issues. He coordinated with the Contractor, Subconsultants, and Owner during the duration of the project. Construction Cost: $339K
09/12 – 02/16	Cleary, Bright and Lakeshore Gymnasium HVAC | Jefferson Parish: Construction Administrator for the Construction Services for the replacement and updating of the HVAC systems in three (3) east bank existing Jefferson Parish gymnasiums. He was responsible for site visits, processing change orders, pay applications, review and approval of shop drawings and resolving any construction issues. He coordinated with the Contractor, Subconsultants, and Owner. Construction Cost: $1.7M.

16. Staff Experience:

Firm employed by **Meyer Engineers, Ltd.**					
Name	**Elena Anderson, IIDA, NCIDQ**		Years of relevant experience with this employer		18
Title	Interior Designer/Project Manager		Years of relevant experience with other employer(s)		0
Degree(s) / Years / Specialization			B.S. Interior Design, 2003		
Active registration number / state / expiration date			1353 / Louisiana / 12-31-2022		
Year registered	2009	Discipline	Interior Design / ADA Compliance		
Contract role(s) / brief description of responsibilities			ADA Inspection & Compliance		

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).
07/05 – 07/07	Westbank Recreation Complex – Phase I | St. John the Baptist Parish: Draftsman and assisted Designers for this project. Drafting included marking redline corrections and plotting plans for review. During construction she made proposed material and color selections to present to the Owner; making a materials and color board for them to review and approve. Construction Cost: $1.3M
01/05 -10/07	Pelican Park Expansion | Jefferson Parish: Assisted with the Project Management reviewing and revising the Probable Construction Costs as well as calculating and determining project additive Alternates. During the construction document phase, she assisted the project architect by drafting and making redline corrections and performing quality control tasks. Mr. Anderson also conducted Construction Administration tasks including the review of door frame, hardware, and steel frame submittals. Construction Cost: $216K
04/02 – 11/07	Northshore Toll Plaza Renovation | St. Tammany Parish: Assisted with the design and drafting for the miscellaneous renovations to the toll plaza facility. She conducted Construction Administration services during the construction phase by reviewing submittals, made color and material finishes sections and prepared a material selections color board and presented it to the Owner. Construction Cost: $4.5M
08/17 – 10/20	McCormick-Zatarain's Gretna Facilities Upgrade | Jefferson Parish: Project Manager, Interior Designer, and performed Construction Administration Services for this project. Mrs. Anderson designed the aesthetic concept and coordinated with the Owner and consultants to provide a new office space and upgraded facility amenities for employees that included open, clean, and accessible modern spaces. The design included facility signage and large format wall graphics. During construction Mrs. Anderson performed the review of submittals, coordinated with the site superintendent and the construction project manager. Additionally, she was responsible for material and color selections to coordinate with the McCormick and Zatarain's brands. Construction Cost: $2.2M (EST)
07/16 – Present	Port of South Louisiana Administration Building | St. John the Baptist Parish: Interior Designer for a new 20,000 square feet three level administration building. She assisted with the architectural design and drafting for the project. Mrs. Anderson performed the Interior Design services by selecting and writing specifications for inferior materials and finishes. Construction Cost: $9M

07/16 – Present	Children's Hospital of New Orleans Expansion │Orleans Parish): Assisting the Project Engineer by providing ADA consulting and reviewing for general accessibility in compliance with the ADA Guidelines for the expansion of Children's Hospital (Henry Clay Ave. & State Street) Campus for the new hospital, and behavioral health hospital site roadwork, pedestrian access walkways and parking. Estimated Construction Cost: $255M
07/17 - Present	Mid-Barataria Sediment Diversion Facilities │East Baton Rouge Parish: Project Manager for the design of a new building. She is drafting construction documents and writing specifications.

16. Staff Experience:

Firm employed by **C. H. Fenstermaker & Associates, L.L.C.**					
Name	**Travis Bodin, MBA, PLS, PMP**		Years of relevant experience with this employer		17
Title	Vice President, Survey and Mapping		Years of relevant experience with other employer(s)		1
Degree(s) / Years / Specialization			B.S. / 2004 / Industrial Technology		
Active registration number / state / expiration date			PLS.0005067 / LA / 3.31.2024		
Year registered	2011	Discipline	Professional Land Surveyor		
Contract role(s) / brief description of responsibilities			Professional Land Surveyor		

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).
Mr. Bodin currently serves as Vice President of Survey at Fenstermaker and has over 17 years of surveying, management, and coordination experience. He is currently responsible for directing and overseeing the daily activities within the Survey Division for all offices and 33 survey crews working across multiple states. He has served as the Lead Surveyor for projects across Louisiana and Texas. His responsibilities have included the management of surveying/ROW services, utility relocation coordination, coordinating with parish, state, and federal agencies and sub-consultants, cost estimating, scoping, scheduling and planning, resource management, and construction management services. With his background in surveying and project management, Mr. Bodin has performed and participated in multi-million-dollar projects consisting of large scale topographic and boundary surveys, right-of-way maps, development of high accuracy GPS networks, setting DOTD monumentation, process and procedural development.	
06/20-ongoing	**IDIQ Contract for Louisiana Watershed Initiative (LWI) Modeling Contract – Region No. 6:** Fenstermaker is contracted as a subconsultant for this unprecedented project that will manage the future flood risk in the State of Louisiana through watershed-based solutions. Fenstermaker is responsible for assisting with various tasks including data collection, data gap analysis, surveying, drone imaging, and GIS services to successfully complete interactive, usable, and manageable hydraulic and hydrologic models for Region 6. Through Task Order 1, Fenstermaker is identifying, collecting, and analyzing available data, and stakeholder and agency coordination. Fenstermaker is acquiring channel surveys and hydraulic structure data from existing models, studies, engineering drawings, as-built drawings, and through coordination with local, regional, state, and federal agencies. Fenstermaker is responsible for converting all acquired data to the project datum and confirming the validity of information compared to current field conditions to successfully complete a data gap analysis. Mr. Bodin serves as Survey Principal on this project, providing QA/QC of all survey deliverables.
11/18-05/19	**Farm Road Multi-Bridge Replacement (Calcasieu Parish, LA):** Fenstermaker was contracted by Calcasieu Parish Police Jury to provide professional engineering services related to the replacement of two (2) bridges located on Farm Road. Mr. Bodin assisted with survey crew coordination, the review of data collection and boundary surveys.

04/10-09/18	**Lebesque Road Bridge Replacement and Road Reconstruction (Lafayette, LA):** Fenstermaker was contracted by Lafayette Consolidated Government to provide the design of the replacement of Lebesque Bridge and Lebesque Road Reconstruction. Mr. Bodin served as survey principal and provided oversight of survey crew coordination, right-way and boundary surveys, title research, utility coordination, topographic and bathymetric surveys, and the processing of survey data.
12/08-07/18	**LADOTD Permit No. 03030387: Kaliste Saloom Rd Widening, Intersection Improvements, Bridge, and CE&I (LA 3073 to LA 733) (Lafayette, LA)** Mr. Bodin served as the Surveyor PM. Fenstermaker performed the topographic survey of all cross street and road tie-ins, cross sections for the purpose of an existing elevation DTM and parcel boundaries effected by the ROW. Mr. Bodin was responsible for field crew coordination, topo/boundary surveys, ROW plats, monuments, data processing, plats, and legal descriptions.
04/12- 09/13	**Baker Canal Bridge (US 61) (East Baton Rouge Parish, LA):** As a subconsultant, Fenstermaker's responsibilities were to survey the existing project extents for the creation of an accurate DTM of the project area, create construction plans, demolition of the existing bridge, and construction of a detour bridge. Mr. Bodin served as survey technician, providing topographic and bathymetric surveying. Mr. Bodin assisted with processing survey data, providing quality control, and coordinated with field crew.
12/17-08/18	**City of Carencro 2018 Asphalt Overlay (Lafayette Parish, LA):** Fenstermaker was contracted to provide surveying, design, utility coordination, temporary traffic control and construction administration and inspection. The project was located along several different roadways within the City. The planned construction includes milling, overlay and patching along approximately 2,350-ft. of Hector Connoly Road, 1,250-ft. along W. Butcher Switch Road, and 290-ft along Guilbeau Road. The project is following LADOTD Road Design Manual and MUTCD standards and procedures. Mr. Bodin served as Survey Principal and assisted with the processing of survey data and survey crew coordination,
11/17-04/18	**I-10: Texas State Line–E. of Coone Gully – Roadway Lighting (Calcasieu Parish, LA):** As a sub, Fenstermaker provided surveying services on this project, which entailed widening 10.5 miles of I-10 to six lanes from the Texas state line to east of LA 108, replace and widen 10 bridges, and replace the eastbound weigh-in-motion system. Fenstermaker performed a utility location survey for subsurface and above-ground utilities and a Mobile LiDAR Survey to capture 3D topographic data including existing ground and hard surfaces. Fenstermaker collected data on existing drainage structures, communication towers, billboard signs, trees, other overhead structures, and on the edge of the existing roadway/pavements. Mr. Bodin was responsible for QA/QC of survey, as well as data review and reporting related to LiDAR.
05/19-03/21	**S.P. H.005967 Port of Lake Charles Rail at W. Sallier St. (Calcasieu Parish, LA):** Fenstermaker completed the topographic and boundary surveys, established control, processed data, reviewed title reports, established property boundaries, and mapped encumbrances for the ~0.75 miles Railroad Relocation. LADOTD survey feature codes were utilized for this project, and LADOTD right-of-way maps along with COGOWIN legal descriptions were created. Mr. Bodin is serving as Project Principal and providing QA/QC for this project.

16. Staff Experience:

Firm employed by **C. H. Fenstermaker & Associates, L.L.C.**					
Name	**Justin Bordelon, PLS**		Years of relevant experience with this employer		16
Title	Manager, Surveyor		Years of relevant experience with other employer(s)		0
Degree(s) / Years / Specialization			B.S. / 2009 / Business Administration		
Active registration number / state / expiration date			PLS 5271 / LA / 12.31.2022		
Year registered	2021	Discipline	Professional Land Surveyor		
Contract role(s) / brief description of responsibilities			Surveyor		

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).
Mr. Bordelon is the Survey Manger of Fenstermaker's Advanced Technology Group. He started performing underwater acoustic investigations and hydrographic surveys at Fenstermaker in 2006. As the Advanced Technology Group grew, Mr. Bordelon became the underwater acoustic investigation manager and worked on many projects including an inspection of over 100 bridges for the Louisiana Department of Transportation and Development. In 2015, he became a Survey Crew Manager and managed crews in Lafayette, Shreveport, and Midland, TX.	
03/15-05/15	**LADOTD–Harrisonburg Bridge Laser Scanning Survey:** Fenstermaker provided 3D laser scanning and high precision measurement of the in-water and land-based bridge pier supports and superstructure for LADOTD for providing critical measurements used to determine if any misalignment issues exist with the center swing span structure and the land-based approach spans. Fenstermaker also used a high accuracy 1" total station to collect positional data on monitoring targets strategically placed during a previous survey performed five years prior for comparing this data to the positional data collected on these targets during the previous survey. The dataset was critical in illustrating any movement the bridge may have encountered or misalignment issues that have occurred over the 5-year timeframe because of vessel impacts. Mr. Bordelon served as the field technician for data collection and assisted in creating deliverables for this project.
11/11-11/14	**DOTD P.O. No. 005365.5: Underwater Acoustic Imaging for Bridge Inspection Statewide:** Fenstermaker was contracted to provide and is currently providing Underwater Acoustic Imaging services for the underwater bridge inspection of pier systems for 72 state-maintained bridges. The project scope consists of an underwater acoustic inspection and evaluation of the submerged components of the piers utilizing a multi-axis, steered beam imaging and profiling remote sensing system with all acoustic data correlated to a Real Time Kinematic (RTK) GPS positioning system. The purpose of the inspection and evaluation is to identify and locate any major damage or deterioration of the pier structures along with a detailed localized inspection of any observed anomalies using both the acoustic imaging system and dive inspection; and to identify any localized scour impact or erosion of the surrounding water bottom. The data is then processed, and mosaics of the acoustic imagery are generated and included in a report that also documents the findings and recommendations resulting from the UAI and dive inspections. Mr. Bordelon was responsible for the management of all field resources and the quality and accuracy of all field data collection activities. Mr. Bordelon also processed the acoustic, hydrographic and topographic data and generated deliverables for this project.

03/10-04/10	**Almonaster Street Bridge Damage Inspection, New Orleans, LA:** Fenstermaker was contracted to perform and Underwater Acoustic Imaging investigation of the Almonaster Avenue Bridge and the fendering system for the bridge. This entailed scanning the bridge abutments as well as the fendering system and Dolphin Cells as well as documenting the disposition of debris on the water bottom. Mr. Bordelon served as survey technician, collecting images of the fender system with MS 1000 in the field and creating the Autocad mosaics.
06/13-07/13	**DOTD SP No. 700-29-0112: Leeville Pier #1, Acoustic Imaging, Lafourche Parish, LA:** Fenstermaker performed a topographic and high definition (laser scan) survey of the West Larose Vertical Lift Bridge on LA 1 in Larose, Louisiana as a subconsultant to support the bridge renovation for LADOTD. As a result of the survey, Fenstermaker established low steel vertical clearances in the bridge up and down positions, bridge pier elevations, and roadway clearances at the approaches, temporary benchmarks as a baseline for future surveys, and shoreline topographic surveys on both sides of the channel within the limits of the existing fenders and 50 feet in each direction. Mr. Bordelon served as Project Manager and provided field coordination and review of data collection.
03/20-01/21	**Calcasieu Parish (HUC 8) Watershed Modeling & Planning, Calcasieu Parish, LA:** Fenstermaker provided surveying services within the project area in support of the modeling efforts for the project. The survey task consisted of the collection of roadside ditch inverts, cross drains, high and low cords on existing bridge decks, and documentation of the existing conditions of the crossings. Mr. Bordelon oversaw field coordination, project management, and data processing for all the bathymetric surveys required for the Calcasieu Parish (HUC) 8 Watershed Modeling & Planning Project.
12/12-07/13	**Horace Wilkenson Bridge Mississippi River Bridge Inspection, West Baton Rouge Parish, LA:** Fenstermaker provided an Underwater Acoustic Imaging inspection of a damaged bridge pier fender system, for LADOTD after a ship collided with the bridge, to assist in damage assessment and debris disposition mapping. Mr. Bordelon served as the Field Team Crew Leader and lead acoustic technician on this project, managing the field crew, conducting site visits, processed data, provided QA/QC of data, and prepared the report on findings.
05/19-03/21	**S.P. H.005967 Port of Lake Charles Rail at W. Sallier St. (Calcasieu Parish, LA):** Fenstermaker completed the topographic and boundary field surveys, established control, post-processed data, reviewed title reports, established property boundaries and mapped encumbrances for the approximately 0.75-mile Railroad Relocation for the Port of Lake Charles in Lake Charles, Louisiana. LA DOTD survey feature codes were utilized for this project, and LA DOTD Right of Way maps along with COGOWIN legal descriptions were created. The maps followed the specifications set forth in the LA DOTD Location & Survey manual in conjunction with direction from LA DOTD agents. Maps went through LA DOTD's internal review process and have been accepted for final recordation. Mr. Bordelon was responsible for field coordination for this project.

16. Staff Experience:

Firm employed by **C. H. Fenstermaker & Associates, L.L.C.**			
Name	**Joe Broussard**	Years of relevant experience with this employer	7
Title	Survey Technician	Years of relevant experience with other employer(s)	11
Degree(s) / Years / Specialization		B.A. / 2003 / Creative Writing	
Active registration number / state / expiration date		2016, Remote pilot certification, Small Unmanned Aircraft System, #3909218	
Year registered	Discipline		
Contract role(s) / brief description of responsibilities		Underwater Acoustical Imaging	

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).
Mr. Broussard is a Senior Survey Technician with the Advanced Technologies Group and serves as our lead technician in data collection activities for all underwater acoustic and bathymetric survey operations. He has significant experience in operating underwater acoustic imaging sonar/profilers, side scan sonar and multi-beam systems, single beam echosounders, pipeline location devices, and other conventional surveying systems. While he has performed as a technician on several laser scanning surveys, his specialty and talent lie with the water-based survey operations utilizing the equipment mentioned above.	
07/15-04/16	**TXDOT, Aransas Pass Ferry Landings Multi-Beam Survey, Aransas Pass, Texas, Survey Party Chief:** Fenstermaker conducted a multi-beam survey of the north and south ferry landings for the TXDOT. Data was collected using an Edgetech 6205 Multi-Beam System combining bathymetry and side scan sonar technology. Also used was an Applanix POS M/V System for accurate position, heading, attitude, heave, and velocity data correlation with the multi-beam system. Mr. Broussard served as our lead technician responsible for all data collection activities and quality of data.
11/20-11/21	**Southeast La Flood Protection Authority – East. Outfall Canals Topographic & Bathymetric Surveys. Survey Technician.** Mr. Broussard assisted the on-site crew, prepared for and created the flight plan of the UAV drone flight, collected LiDAR and bathymetric and side scan data, processed collected data, and assisted with the preparation of deliverables. This was a multi-award-winning project that Fenstermaker conducted to combine topographic and multibeam bathymetric survey data for the 17th, London, and Orleans Outfaal Canals to detect and monitor erosion.
01/16-02/16	**Wax Lake Outlet Bulkhead Acoustic Survey, St. Mary Parish, LA. Survey Party Chief.** Fenstermaker was contracted by Energy Transfer to perform an Acoustic Multi-Beam Profiling and Imaging Investigation of a 1,000' reach of the Wax Lake Outlet Channel centered on the 36" Trunkline overhead pipeline crossing, with investigative emphasis on the disposition of the failed bulkhead on the west bank of the channel. Mr. Broussard served as lead acoustic technician on this project responsible for all data collection activities.
02/20-11/20	**Delacroix Marsh Creation Project (BS-0037) (St. Bernard Parish, LA). Survey Technician.** Fenstermaker performed bathymetric, topographic, magnetometer, side-scan sonar, and sub-bottom profile surveys within the proposed borrow and fill areas of Delacroix Island. Mr. Broussard was involved in preplanning, crew/field coordination, and all bathymetric, side scan, and magnetometer data processing, along with the Coastal Protection and Restoration Authority's (CPRA) Louisiana SAnd Resources Database (LASARD) deliverables.

12/15-02/16	**Cross Lake Dam Spillway and Water Intake Structure Multi-Beam Survey and Underwater Acoustic Imaging Investigation (Shreveport, LA).** Survey Technician. Fenstermaker was contracted by Denmon Engineering Co., Inc. to perform an Underwater Acoustic Imaging (UAI) Investigation of the concrete spillway and water intake structures at Cross Lake Dam in Shreveport, LA and a multi-beam survey of the dam embankment and water intake channel for the purpose of evaluating rehabilitation needs. Mr. Broussard served as lead acoustic technician on this project responsible for all data collection activities.
07/20-07/21	**Maurepas Freshwater Diversion and West Lake Shore Pontchartrain Reaches 16-19 (St. John the Baptist Parish, LA)** The Maurepas Diversion is a proposed 2,000 cubic foot per second (cfs) freshwater diversion from the Mississippi River into the Maurepas Swamp. The West Shore Lake Pontchartrain (WSLP) project will provide hurricane and storm-damage risk reduction in St. Charles and St. John the Baptist Parishes. Fenstermaker was tasked to collect survey data based on a specific survey plan developed to provide sufficient information for engineering design. Survey data collected include topographic, hydrographic (bathymetric and magnetometer), and geodetic.Real-time Kinematic (RTK) GPS technology, along with single and multi-beam bathymetric data collection (hydrographic), and aerial LiDAR surveys were all implemented to provide the survey data necessary for planning of the next phases of this project. Mr. Broussard coordinated field crews, drafted reports, and reviewed and processed data.
01/16-02/16	**McComb Spillway Railroad Bridge Erosion Monitoring Project (St. Charles Parish, LA):** Fenstermaker was contracted by Canadian National Railway Company to provide onsite support and assistance through specialized high definition underwater acoustic imaging for monitoring, via onsite display of sonar imagery, the disposition of the water bottom adjacent to and around the pile foundation trestle supports of the Canadian Nation Railway rail line bridge over the Bonnet Carrie Floodway north of the Bonnet Carrie Spillway in Saint Charles Parish. Mr. Broussard assisted with lead acoustic technician responsibilities on this project in charge of all data collection activities and client interaction with sonar imaging and viewing.
10/15-12/15	**Volkert, Inc. – Winston County Underwater Acoustic Imaging Bridge Inspections:** Fenstermaker performed Underwater Acoustic Imaging Inspections of the underwater portion of the bridge pier systems for four bridges in the Lewis Smith Lake for Winston County, Alabama, in conjunction with Volkert, Inc. Mr. Broussard served as the lead acoustic technician on a portion of this project responsible for all data collection activities and quality of work. The acoustic imagery and profiling was performed using the MS1000 Kongsberg Mesotech remote-sensing imaging sonar/profiler. Upon completion of the survey, Mr. Broussard also assisted with processing the acoustic imagery and generating the acoustic imaging plats for submittal to the client.
07/20-01/21	**Post Hurricane Laura & Delta Survey–Port of Lake Charles (Calcasieu Parish, LA).** Fenstermaker performed a side scan sonar and a bathymetric survey to determine existing water bottom depths and to show any debris or hazards to navigation after the Hurricane Laura and Delta Events. As the project's crew chief, Mr. Broussard assisted in post processing of bathymetric and side scan data and executed the last bathymetric survey post Hurricane Delta.
10/21-11/21	**Boat Terminal #1 Bathymetric Surveys, Calcasieu Parish, LA.** *Survey Party Chief.* Fenstermaker was contracted by Port of Lake Charles to perform bathymetric surveys for the Boat Terminal 1. Mr. Broussard served as Party Chief performing these surveys.

16. Staff Experience:

Firm employed by	**C. H. Fenstermaker & Associates, L.L.C.**			
Name	**Dax Douet, P.E.**		Years of relevant experience with this employer	25
Title	Director, Engineer		Years of relevant experience with other employer(s)	1
Degree(s) / Years / Specialization			B.S. / 1997 / Civil Engineering	
Active registration number / state / expiration date			PE.0030170 / LA / 9.30.2022	
Year registered	2002	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities			Roadway	

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).
	Dax Douet is an Engineering Director with over 26 years of professional experience in design, planning, and project management. He has designed highways, roadways, drainage systems (open channel, sub-surface, and large scale 1- and 2-dimensional numerical models for coastal environments), interchanges, roundabouts, standard intersections, and various site developments. Additionally, Mr. Douet managed the preparation of over thirteen Stage 0 feasibility studies for the Louisiana Department of Transportation & Development (LADOTD). These feasibility studies were conducted for a wide range of transportation projects throughout the State of Louisiana to include roadway improvements, interstate highway interchanges, and grade-separated bridge structures. Mr. Douet has also led the preparation of geometric line and grade studies to support more than five Environmental Assessment documents in accordance with the National Environmental Policy Act (NEPA) guidelines. He has managed various multi-disciplinary projects and performed roadway corridor studies, traffic safety analyses, and feasibility studies, which encompass design, right-of-way, environmental, and utility work. He has attended the ATSSA Traffic Control Supervisor and Technician courses, the NHI Course No. 142005, "NEPA & the Transportation Decision Making Process" and the LADOTD Highway Safety Manual Workshop.
05/13-09/19	**S.P. No. H.010620: US 90 (I-49 South) Albertson Parkway to Ambassador Caffery Design-Build (Lafayette Parish, LA):** Under the Design-Build Contractor, James Construction Group, Mr. Douet was the Lead Design Manager for the preparation of all engineering design components of the proposed upgrading of a portion of US 90 to a 6-lane controlled access facility to also include improvements to the existing east and westbound frontage road system, construction of a new 6-lane US 90 overpass structure over both Albertson Parkway and the existing BNSF railroad facility, and construction of all associated US 90 mainline ramps needed to connect these overpass structures and frontage roads. In this role, Mr. Douet was involved directly in every aspect of the design to include roadway, drainage, traffic, and bridge design as well as the design of Mechanically Stabilized Earth Walls (MSEW) needed to construct the US 90 mainline improvements within existing right of way. In this capacity, he was required to also review all construction related Request for Information to ensure that all responses meet the expectations of LADOTD. Mr. Douet was the Engineer of Record for the final design and construction plans for Phase III of the project's roadway and drainage improvements to include developing calculations, meeting design code, development of design exceptions, and coordination of all QA reviews. Mr. Douet was also directly responsible for the management of four engineering sub-consultants on the design-build team to ensure that all design components met the overall goals and expectations of the project.

01/17-Present	**H.011235.5 I-49 South @ Verot School Road (LA339) (Lafayette, LA):** Fenstermaker, as a sub-consultant, was selected to perform engineering design services for improvements to the existing intersection of U.S. Highway 90 (US 90) (Future I-49 South) and Verot School Road. Mr. Douet is one of the senior design engineers responsible for the widening of existing Verot School Road and improving existing U.S. Hwy. 90 to interstate standards. Mr. Douet aided in the development of a project line and grade study to help facility decision making on the future design for moving the project to preliminary plan development. Mr. Douet led the design of a multi-lane roundabout at the new Verot School Road intersection with South College Road. Mr. Douet also led the public outreach scope of the project by coordinating and hosting a public meeting which followed the procedures set forth by the Louisiana Department of Transportation and Development. primarily responsible for the preparation and hosting of the project's public meeting as part of the updating of the existing NEPA Environmental Impact Statement previously prepared in 2005, all roadway and drainage design, and temporary traffic control and sequence of construction for the project. Mr. Douet is also assisting with the temporary traffic control and sequence of construction for this project.
11/08-Present	**LADOTD Permit No. 03030387: Kaliste Saloom Rd Widening, Intersection Improvements, Bridge and CE&I (LA3073 to LA733) (Lafayette Parish, LA):** Mr. Douet is managing this $34 million project, which includes fast-tracking all real estate appraisals, plats, and construction plans. Mr. Douet is also the Lead Design Engineer for the widening of approximately 1.7 miles. The roadway is an over-capacity major arterial roadway located in the center of Lafayette. Mr. Douet was directly responsible for the development of a line and grade study that allowed the LCG to choose between alternatives and determine the optimal locations for widening based upon impacts to businesses, cost of ROW, and
01/10 - 12/14	**I-12 to Bush Environmental Impact Study (EIS) (St. Tammany Parish, LA):** Mr. Douet was Lead Design Engineer for this LADOTD project. He was responsible for all line and grade tasks associated with this EIS, which were prepared in accordance with NEPA. The goal of the line and grade study was to review previously determined alternatives, identify the least damaging and most practical alternatives for further analysis, and provide revised alternatives that met current LADOTD design guidelines. Mr. Douet managed the study, which resulted in a Record of Decision by the U.S. Army Corps of Engineers (USACE) recommending a preferred alternative. Additional tasks involved construction cost estimating that encompasses the construction cost, right-of-way acquisitions, utility relocations, and mitigation requirements.
04/17-11/20	**Cane River Bridge Church Street Route LA 1-X (Natchitoches Parish, LA):** LADOTD in conjunction with the FHWA prepared a NEPA environmental assessment for the proposed replacement of Cane River Bridge on Church Street Route LA 1-X. Mr. Douet served as the project manager and lead engineer for preparation of the environmental document. He was responsible for all public outreach, agency coordination, preparation of the project line and grade study, coordination of the project's traffic study, development of project alternatives, development of cost estimates, coordination of the noise and air analysis, coordination of historical and archeological investigations, and coordination of various other environmental analysis.
11/13-06/15	**LADOTD Permit No. 153198, 153357, 153587: Sasol LCCP-Heavy Haul Road Engineering and Construction (LA378 & LA379) (Calcasieu Parish, LA)** This is a $12.9 million contract with Fluor for engineering and consulting services which include the design of a 1.5-mile heavy haul route that will be utilized to transport oversized modules from the Calcasieu River to the proposed plant site in Westlake, Louisiana. These oversized modules were as large as 300' in length and 75' in height requiring specialized transport vehicles. Mr. Douet aided in analyzing the ability of these specialized transport modules to navigate within an existing 2-lane roadway and determined areas along this roadway corridor that needed to be widened to provide for the turning radii of these transport modules. In addition, Mr. Douet aided in the roadway design components of this project to include performing quality control of the roadway geometry and the drainage design for the project.

16. Staff Experience:

Firm employed by **C. H. Fenstermaker & Associates, L.L.C.**				
Name	**Brett Dufour**		Years of relevant experience with this employer	16
Title	Survey 360 Technician II		Years of relevant experience with other employer(s)	2
Degree(s) / Years / Specialization			A.S. / 2004 / Civil, Surveying & Mapping Technology	
Active registration number / state / expiration date			Survey Technician Certification Level 1 #804-2015 ATSSA Traffic Control Supervisor ATSSA Traffic Control Technician	
Year registered	NA	Discipline	NA	
Contract role(s) / brief description of responsibilities			Survey Support - Survey Technician	

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).
	Mr. Dufour has been employed by C. H. Fenstermaker & Associates, L.L.C. for 16 years and currently serves as a Senior Surv360 Technician II. He is responsible for processing RTK field data, preparing plat information, and assembling pre-survey data for all services provided by the Advanced Technologies Division. Mr. Dufour is proficient in all data processing aspects of high-definition laser scan survey, dimensional control surveys, topographic surveys, hydrographic surveys, route surveys, subsidence surveys, geodetic control surveys, hazard surveys, and boundary surveys. He is familiar with traditional survey methods as well as the latest, most current technologies, including Underwater Acoustic Imaging (UAI) and High Definition Surveying (HDS) and Dimensional Control (DC).
03/15-05/15	**LADOTD–Harrisonburg Bridge Laser Scanning Survey:** Fenstermaker provided 3D laser scanning and high precision measurement of the in-water and land-based bridge pier supports and superstructure for LADOTD for providing critical measurements used to determine if any misalignment issues exist with the center swing span structure and the land-based approach spans. Fenstermaker also used a high accuracy 1" total station to collect positional data on monitoring targets strategically placed during a previous survey performed five years prior for comparing this data to the positional data collected on these targets during the previous survey. The dataset was critical in illustrating any movement the bridge may have encountered or misalignment issues that have occurred over the 5-year timeframe because of vessel impacts. Mr. Dufour served as survey technician, prepared for mobilization, performed laser scanning and targeting, processed data, prepared final drawings and datasheets, and provided QA/QC of final revisions.
11/11-11/13	**LADOTD SPN. 005365.5: Underwater Acoustic Imaging for Bridge Inspection Statewide:** Fenstermaker was contracted to provide and is currently providing Underwater Acoustic Imaging (UAI) services for the underwater bridge inspection of pier systems for 72 state-maintained bridges. The project scope consists of an underwater acoustic inspection and evaluation of the submerged components of the piers utilizing a multi-axis, steered beam imaging and profiling remote sensing system with all acoustic data correlated to a Real Time Kinematic (RTK) GPS positioning system. The purpose of the inspection and evaluation is to identify and locate any major damage

	or deterioration of the pier structures along with a detailed localized inspection of any observed anomalies using both the acoustic imaging system and dive inspection; and to identify any localized scour impact or erosion of the surrounding water bottom. The data is then processed and mosaics of the acoustic imagery are generated and included in a report that also documents the findings and recommendations resulting from the UAI and dive inspections. Mr. Dufour served as Survey Technician, providing field support profiling and imaging multiple bridges and water bottoms, processing collected data, and assisting with the preparation of findings reports.
06/13-07/13	**DOTD SP No. 700-29-0112: Leeville Pier #1, Acoustic Imaging, Lafourche Parish, LA:** Fenstermaker performed a topographic and high definition (laser scan) survey of the West Larose Vertical Lift Bridge on LA 1 in Larose, LA as a subconsultant in support of the bridge renovation for LADOTD. As a result of the survey, Fenstermaker established low steel vertical clearances in the bridge up and down positions, bridge pier elevations, and roadway clearances at the approaches, temporary benchmarks as a baseline for future surveys, and shoreline topographic surveys on both sides of the channel within the limits of the existing fenders and 50 feet in each direction. Mr. Dufour served as the Lead Field Survey Technician on this project and lead the data processing.
08/17-09/17	**Port of Lake Charles: Bathymetric Survey Bulk Terminal 1, Calcasieu Parish:** Fenstermaker performed a bathymetric survey of Bulk Terminal 1. Mr. Dufour served as a survey technician creating the profile of the beneficial use of dredged material area 1 (BUDM 1) and added additional survey data to the surfaces, updated surfaces, and recomputed the cross-sections.
03/13-05/13	**Hero Canal Levee, East of Harvey Canal at the Mississippi River for New Orleans District Army Corps of Engineers, Orleans/Jefferson Parish, LA:** This project provides improved hurricane protection for the communities of Belle Chase and Gretna. The scope of the project includes repairs and upgrades to the Hero Canal 1st lift by increasing the grade elevation approximately 1.5 feet. Mr. Dufour was part of the survey team to set four permanent benchmarks were placed along the land side of the levee right-of-way. The hydrographic survey performed at Hero Canal was performed at standards that meet or exceed the USACE minimum accuracy standards, quality control, and quality assurance requirements for Navigation and Dredging support surveys for a soft bottom material classification.
05/07-11/07	**Port of New Orleans: Poland Street Under Wharf Acoustic Survey (New Orleans, LA):** Fenstermaker performed an under wharf acoustic survey to provide bathymetric contours and image visualization of the under wharf conditions at the Poland Street wharf. The underwater imaging utilized both vessel mounted and tripod deployments with a multiple number of setups and rotating sensor deployments. This method is necessary to achieve more effective coverage and varying perspectives of the area. One additional scan was included at an area of possible scour. Profiling was performed at 20' intervals down the wharf face. The deliverables were explained in a presentation to the New Orleans Port Authority, the USACE, New Orleans District, and the New Orleans Levee Board. Mr. Dufour assisted the Underwater Imaging team by importing images into AutoCAD, creating plats, and exporting 3D polylines from Cyclone.

16. Staff Experience:

Firm employed by **C. H. Fenstermaker & Associates, L.L.C**.				
Name	**Lance Fontenot**		Years of relevant experience with this employer	16
Title	Survey 360 Technician II		Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization			A.S. / 2006 / Survey & Drafting	
Active registration number / state / expiration date			2016, Remote pilot certification, Small Unmanned Aircraft System #3934546	
Year registered		Discipline		
Contract role(s) / brief description of responsibilities			Survey 360 Technician	

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).
Mr. Fontenot is a Senior Survey 360 Technician in the Advanced Technologies Division. Mr. Fontenot serves as the lead Unmanned Aerial Vehicle (UAV) and High-Definition Scanning (HDS) / Dimensional Control survey technician and oversees all field HDS/DC operations for the project to ensure corporate QA/QC guidelines and procedures are being utilized on projects. He also provides the day-to-day technical guidance and has final say in submission of all data to project managers. Mr. Fontenot has performed UAV Surveys, HDS Scanning, Dimensional Control support, Boundary/Right-of-Way, Pipeline, Topographic, Roadway, Construction, Oil & Gas, Geodetic, Hazard, and Accident Surveys primarily across the Gulf Coast Area.	
03/15-04/15	**LADOTD–Harrisonburg Bridge Laser Scanning Survey:** Fenstermaker provided 3D laser scanning and high precision measurement of the in-water and land-based bridge pier supports and superstructure for LA DOTD for providing critical measurements used to determine if any misalignment issues exist with the center swing span structure and the land-based approach spans. Fenstermaker also used a high accuracy 1" total station to collect positional data on monitoring targets strategically placed during a previous survey performed five years prior for comparing this data to the positional data collected on these targets during the previous survey. The dataset was critical in illustrating any movement the bridge may have encountered or misalignment issues that have occurred over the 5-year timeframe because of vessel impacts. Mr. Fontenot served as lead technician in processing the laser scan data and generating the deliverables for this project.
11/13-12/13	**DOTD P.O. No. 005365.5: Underwater Acoustic Imaging for Bridge Inspection, Louisiana Statewide:** Fenstermaker was contracted to provide Underwater Acoustic Imaging (UAI) services for the underwater bridge inspection of pier systems for 72 state-maintained bridges. The project scope consists of an Underwater Acoustic Inspection and evaluation of the submerged components of the piers utilizing a multi-axis, steered beam imaging and profiling remote sensing system with all acoustic data correlated to a Real Time Kinematic (RTK) GPS positioning system. Mr. Fontenot served as Lead Survey Technician.
06/13-07/13	**DOTD SP No. 700-29-0112: Leeville Pier #1, Acoustic Imaging, Lafourche Parish, LA:** Fenstermaker performed a Topographic and High Definition (Laser Scan) Survey of the West Larose Vertical Lift Bridge on LA 1 in Larose, Louisiana for Modjeski & Masters in support of the bridge renovation effort for LADOTD. As a result of the survey, Fenstermaker established low steel vertical clearances in the bridge up and down positions, bridge pier elevations, and roadway clearances at the approaches, temporary benchmarks as a baseline for future surveys,

	and shoreline topographic surveys on both sides of the channel within the limits of the existing fenders and 50 feet in each direction. Mr. Fontenot served as the Lead Field Survey Technician on this project and lead the data processing effort.
05/18-01/19	**Driftwood LNG Master ALTA Survey, Calcasieu Parish, LA:** Fenstermaker was contracted by Driftwood LNG to generate an overall ALTA survey for the proposed site. Mr. Fontenot was responsible for flying the UAV for the project, data processing, quality control and assisting with producing deliverables.
04/17-02/20	**Lafayette Consolidated Government–Kaliste Saloom Widening, Lafayette, LA:** Fenstermaker's Engineering Division was contracted to provide engineering services in design of the Kaliste Saloom widening between LA 733 and Ambassador Caffery. In support of this effort, Fenstermaker provided aerial mapping services of the alignment using UAV technology. Mr. Fontenot served as the lead UAV field technician responsible for operation of the drone system, and production of the topographic plats generated from the photogrammetric data.
07/13-12/13	**West Larose Bridge Survey, Larose, LA:** Fenstermaker provided 3D laser scanning of the West Larose Bridge carrying LA1 over Bayou Lafourche. Using our laser scanning technology, Fenstermaker was tasked to provide critical measurements of specific structural elements for the purposes of engineering design in the renovation of the bridge. Mr. Fontenot served as our lead laser scanning technician responsible for all aspects of data collection in the field and was instrumental in processing the laser scan data in the office.
06/10-10/12	**Inner Harbor Navigation Canal, GIWW Barge, and Bayou Bienvenue Lift Gate Projects, Orleans Parish, LA:** Fenstermaker was contracted to provide a rapid response on call survey service for performing high order surveys along with high speed laser scanners to report deviation in alignment and location of the interfaces between constructed features, design documents and components being fabricated offsite in support of the construction of the Inner Harbor Navigation Canal Sector Gates, the GIWW Barge Gate, and the Bayou Bienvenue Lift Gate Monolith. Fenstermaker linked the survey data and laser scanner data to allow the generation of a visual representation of the areas being surveyed. Mr. Fontenot served as our lead field survey technician on this project.

16. Staff Experience:

Firm employed by **C. H. Fenstermaker & Associates, L.L.C**.				
Name	**Nicholas Gaspard, M.S., PMP**		Years of relevant experience with this employer	9
Title	Manager, Environmental Specialist		Years of relevant experience with other employer(s)	7
Degree(s) / Years / Specialization			B.S. / 2006 / Marine Biology M.S. / 2008 / Marine & Environmental Biology	
Active registration number / state / expiration date				
Year registered		Discipline		
Contract role(s) / brief description of responsibilities			Environmental and Permitting 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 time specified in the applicable MPR(s).
Mr. Gaspard's experience primarily consists of regulatory and environmental compliance. He has performed Phase I Environmental Site Assessments, Wetland Delineations, Threatened and Endangered Species Surveys, Biological Oyster Assessment, and has applied for and obtained numerous permits for Oil/Gas, commercial, and private development clients. Mr. Gaspard completed the PADI Open Water Diver certification in 1999, the U. S. Army Corps of Engineers Wetland Delineation Training Course in 2009 and the Hydric Soils Workshop in 2011.	
07/16-03/18	**Fluor/Lyondell Basell – CVO/BLO Pipeline Matrix (Harris and Chambers Counties, TX):** Mr. Gaspard is currently providing environmental consulting services for both field work and regulatory compliance for a pipeline client. These projects involve Wetland Delineations and regulatory compliance for numerous pipelines and facilities near Harris and Chambers Counties. The regulatory compliance tasks Mr. Gaspard completed ranged from utility crossings to local governing bodies such as drainage districts and municipalities, all the way up to the federal Army Corps of Engineers permitting.
12/15-01/16	**Henry Hub to Weeks Island Pipeline Project (Enlink Midstream) (Vermilion, Iberia, and St. Mary Parishes, LA)** Mr. Gaspard provided environmental consulting services for both field work and regulatory compliance for a pipeline client. This project involved a Wetland Delineation, Threatened and Endangered Species Surveys, Oyster Assessments, and Army Corps of Engineers permitting for the project. The pipeline was a 20" pipeline from the Henry Hub to Weeks Island, LA. The pipeline traversed through the Vermilion Bay Oyster Seed Ground.
09/15-10/15	**U.S. Army Corps of Engineers & Texas Parks and Wildlife Permitting for Removal of Wells, Structures, and Flowlines (Calhoun County, TX):** Fenstermaker performed an oyster assessment and seagrass survey within Keller's Bay for two of the well locations and associated flowline rights-of-way in navigable waters regulated by Section 10 of the Rivers and Harbors Act. An oyster and seagrass report of findings was submitted to the USACE and the TPWD for review and approvals. The reported impacts to exposed shell/reef and seagrass played a role in project planning for all removal activities. Additionally, Fenstermaker conducted a wetland delineation and prepared a report of findings along a portion of the flowline right-of-way that traversed emergent wetlands regulated by Section 404 of the Clean Water Act. Mr. Gaspard served as Oyster Biologist for this project.

16. Staff Experience:

Firm employed by **C. H. Fenstermaker & Associates, L.L.C**.				
Name	**Christopher Guidry**		Years of relevant experience with this employer	24
Title	Manager, Environmental Specialist		Years of relevant experience with other employer(s)	2
Degree(s) / Years / Specialization			B.S. / 1996 / Environmental and Sustainable Resources	
Active registration number / state / expiration date				
Year registered		Discipline		
Contract role(s) / brief description of responsibilities			Environmental and Permitting 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 time specified in the applicable MPR(s).
	Mr. Guidry's experience primarily consists of environmental compliance and securing federal, state, and local permits. A member of Fenstermaker's Due Diligence Team, Mr. Guidry's duties include overall project manager and field investigation support for Environmental Due Diligence projects. He also manages Phase I Environmental Site Assessment projects for commercial and private development clients. Mr. Guidry has prepared Storm Water Pollution Prevention Plan manuals and conducted inspections for construction activities associated with pipeline projects as required by the Environmental Protection Agency's National Pollutant Discharge Elimination System (NPDES) Storm Water Multi-Sector General Permit. Mr. Guidry also has experience in Wetland Delineations, Wetland Characterization, Wetland Damage Assessment, Wetland Permitting, and Environmental Project Management. He has secured mitigation contracts from approved Wetland Mitigation Banks, which offset wetland impacts because of wetland permits that are issued by the U.S. Army Corps of Engineers and the Department of Natural Resources Coastal Management Division. Software & Training: Mr. Guidry completed the ASTM Phase I Environmental Site Assessment Certification Program in 1997 and a refresher course in 2008. Mr. Guidry completed the USACE Wetland Delineation Certification Program in 1996. He has also taken the FHWA-NHI Course No. 142005- "NEPA and Transportation Decision Making."
04/15-04/18	**Coach Williams Boulevard Extension (Calcasieu Parish, LA):** Mr. Guidry's responsibilities included overall environmental project management, QA/QC of collected wetland delineation data, report preparation, and permit agent. Permits acquired include securing USACE Jurisdictional Determination and USACE Permits for jurisdictional wetland and water impacts.
02/15-05/17	**LADOTD Permit No. 153198, 153357, 153587: Sasol LCCP-Heavy Haul Road Engineering and Construction (LA378 & LA379) (Calcasieu Parish, LA):** Mr. Guidry's responsibilities included overall environmental project management and Permit Agent for Fenstermaker's $11.4 million engineering and consulting contract with Fluor. Permits acquired include securing railroad, State Highway, and Parish Road Crossing Permits.
04/12-10/12	**S.P. No. H.000758.2 US 84 from LA 772 to East of Hair Creek Bridge EA (LaSalle Parish, LA)** Mr. Guidry directed the field wetland delineation, report production, data organization and processing, and wetland boundary map development for this environmental assessment under NEPA standards.
01/09-09/09	**S.P. No. 700-55-0122: LADOTD LA 311 Environmental Assessment & Line & Grade Study (Terrebonne, LA):** Mr. Guidry's responsibilities included field wetland delineation, project management and wetland report production, data organization and processing, and wetland boundary map development.

06/14-11/15	**Lake Charles LNG Traffic Impact Analysis and Road Improvements (LA384 & LA385): LADOTD Permit No. 153351, 153352, 153353 (Calcasieu Parish, LA):** Mr. Guidry was the environmental project manager for this proposed road improvement project (Calcasieu Point Development) for W Lincoln RD and LA385 located in the Coastal Zone of Louisiana, south of Lake Charles. Mr. Guidry's responsibilities included overall environmental project management, QA/QC of collected wetland delineation data, report preparation, and permit agent. Permits acquired include securing a US Army Corps of Engineers (USACE) Jurisdictional Determination, USACE Permit, and LDNR Office of Coastal Management (OCM) permit for jurisdictional wetland and water impacts.
07/18-03/20	**S.P. No. H.009932 US 80 Widening: Vancil Rd to Well Rd EA (Ouachita Parish, LA):** Mr. Guidry served as the Wetland Analysis Lead for this Environmental Assessment to improve the corridor by widening the existing roadway and implementing intersection improvement principles along a 1.4-mile portion of US 80. He has coordinated wetland and threatened and endangered species field delineations and analyzed impacts associated with the project. He developed a report for approval to LADOTD, in accordance with National Environmental Policy Act (NEPA), summarizing the findings of the analyses.
3/18-01/19	**S.P. No. H.001271 Cane River Bridge Church Street EA (Natchitoches Parish, LA):** Mr. Guidry served as the Wetland Analysis Lead for this Environmental Assessment for the replacement of the Cane River Bridge. He was responsible for all aspects of the wetland and threatened and endangered species analyses. He coordinated all field activities and developed a report summarizing the impacts of the project to wetlands and threatened and endangered species. Mr. Guidry also assisted with the preparation of the Phase I Environmental Site Assessment and USACE permits.
08/10-05/15	**Kaliste Saloom Road Widening, Intersection Improvements, Bridge and CE&I (LA3073 to LA733) (Amb. Caffery to E. Broussard Rd) (Lafayette Parish, LA):** Fenstermaker was selected to perform engineering design services for the roadway construction of approximately 2 miles of a 5-lane concrete roadway, a 5-lane bridge over the Isaac Verot Coulee, and a multilane modern roundabout at the intersection of E. Broussard Road and Kaliste Saloom Road. Fenstermaker provided construction administration, including contractor payments and necessary change orders, and inspection services were provided daily. Additionally, Fenstermaker performed engineering design services for the relocation of all water and sewer utilities within a 2-mile section of Kaliste Saloom Road. This section of roadway was considered a densely populated, high traffic project site. Fenstermaker prepared construction drawings for three phases which consisted of widening the road to a multi-lane roadway section, utility relocation, and drainage outfalls. Mr. Guidry reviewed the wetland delineation report, permitting maps, and permit applications.

16. Staff Experience:

Firm employed by	**C. H. Fenstermaker & Associates, L.L.C.**		
Name	**Diane Hammonds, P.E., PTOE, RSP$_1$**	Years of relevant experience with this employer	3
Title	Senior Engineer	Years of relevant experience with other employer(s)	17
Degree(s) / Years / Specialization		B.S. / 2002 / Civil Engineering	
Active registration number / state / expiration date		PE.0040749 / LA / 9.30.2022; PTOE No. 4113/ 12.19.2022; RSP$_1$ #789 / 03.14.2025	
Year registered	2016	Discipline	Civil Engineering
Contract role(s) / brief description of responsibilities		Roadway/Traffic 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 time specified in the applicable MPR(s).
Ms. Hammonds is a Professional Engineer and Professional Traffic Operations Engineer (PTOE) with 20 years of experience specializing in Traffic/Transportation Engineering and Transportation Planning projects including traffic impact assessments, traffic signal design systems, traffic simulation modeling, access management reviews, safety studies, roundabout analysis, and design as well as permit reviews and coordination. Diane has successfully completed hundreds of successful traffic & transportation projects. Her unique skills bring both the client and reviewing agency to agreement on the final product is an asset to the projects she is involved in. Software & Training: She has successfully completed the LADOTD Traffic Engineering Process and Report Training as well as numerous others in her career including, but not limited to HCS, Synchro, Roundabouts and the HSM. She is proficient in Synchro, SimTraffic, HCS, VISTRO, SIDRA, CRASH 1, CRASH 3 and Microstation.	
02/19-Present	**Farm Road Multi-Bridge Replacement Project (Calcasieu Parish, LA):** Fenstermaker was contracted by Calcasieu Parish Police Jury to provide professional engineering services related to the replacement of two (2) bridges located on Farm Road. Ms. Hammonds is providing traffic engineering services, including the preparation of temporary traffic control plans.
11/19-04/20	**2019 Asphalt Overlay Project (Carencro, LA):** Fenstermaker was contracted to provide surveying, design, utility coordination and construction administration and inspection. The project was located along several different roadways within the City. Ms. Hammonds provided coordination with LADOTD and reviewed plans and documentation for approximately 12.9 miles of roadway in the City of Carencro.
08/19-Present	**S.P. No. H.002297 LA 37 (Sullivan Road to Liberty Road) (East Baton Rouge Parish):** Ms. Hammonds is currently serving as the Lead Traffic Engineer and is responsible for managing and reviewing all submittals by the traffic sub-consultant. Fenstermaker is serving as the prime consultant for this Stage 0 feasibility study and environmental inventory. Ms. Hammonds ensures quality control and is assisting in the development of the Stage 0 Feasibility Study, Environmental Inventory, and conceptual plans.
08/19-Present	**S.P. No. H.009932 US 80 Widening: Vancil Rd to Well Rd EA (Ouachita Parish):** Ms. Hammonds is serving as a traffic engineer for this Environmental Assessment to improve the corridor by widening the existing roadway and implementing intersection improvement principles along a 1.4-mile portion of US 80. She has assisted in the existing/no-build, safety, and alternatives capacity analysis reports, which have been approved by LADOTD. She analyzed project impacts by coordinating and assisting in developing the line and grade study, cost estimates, and conceptual plans.
08/19-Present	**Stage 0 Feasibility Study of Modern Roundabouts (Lafayette, LA):** Fenstermaker is responsible for the Stage 0 Feasibility Studies being performed on many conceptual roundabout locations throughout Lafayette Parish for the Acadiana

	Metropolitan Planning Organization. Ms. Hammonds is serving as the Transportation Engineer, and she is responsible for developing the roundabout reports and analyses.
05/18-8/19	**Lakeshore Drive Mixed Use Development Traffic Impact Study (Slidell, LA):** Ms. Hammonds served as the Project Manager, Engineer of Record, and Analyst for a ± 1,083-acre mixed use development which at full buildout will contain residential houses, a school, and small commercial retail. The study included 2 interstate interchanges with state highways as well as a 1.7-mile segment of Parish owned roadway including 4 roundabout evaluations and a J-turn corridor. She performed approval coordination with both the LADOTD and St. Tammany Parish.
01/18-08/19	**Hayden Roundabout Interchange Modification Report (Hayden, AL):** As a result of the statewide Wrong Way Ramp Study, the Interchange of I-65 and Al-160 was further evaluated for improvements. Ms. Hammonds served as the Technical Director and Lead Analyst in the analysis and report documentation to modify the interchange ramps to roundabouts as well as 2 adjacent intersections. In addition, Ms. Hammonds provided Design Assistance for the plans to modify the interchange and adjacent intersections.
08/19-Present	**LA-93 (Westgate Road) at Eraste Landry Road (Scott, LA):** Ms. Hammonds served as the Technical Lead, Analyst and Design Engineer for the modification of the intersection to add a traffic signal. The temporary traffic signal at the intersection was needed to accommodate traffic during construction which resulted in an adjacent roadway closure. Ms. Hammonds prepared the volume forecasting and capacity analysis as well as report documentation, and signal design. The approval coordination included the LADOTD District 03 staff as well as Headquarters and the Lafayette Consolidated Government.
05/20-Present	**Perrin Ferry Road Improvements (Livingston Parish):** Ms. Hammonds is serving as the Project Manager and Technical Lead for the design of approximately 850-ft. of roadway. The project will raise the elevation to provide ingress and egress for the residents along the roadway during large rain events. Ms. Hammonds is coordinating the survey, environmental study and permitting, as well as the Hydraulics & Hydrology Study for this project and associated roadway design.
05/05-06/19	**River Chase/Nor Du Lac (Covington, LA):** Ms. Hammonds served as the Project Manager, Technical Director and Analyst for the traffic impact study of the 2 million square feet of retail/residential/office space located in Covington, Louisiana. Her detailed analysis included conversion of an existing rest area into an interstate interchange with I-12 as well as the LA-21 at I-12 interchange, the LA-21 corridor and other surrounding roadways. Ms. Hammonds created a regional Synchro analysis for the Tchefuncte River Region which included over 30 intersections, both proposed and existing. In addition to the study she designed 9 traffic signals for both the upgrading of existing locations and new installations
03/20-02/22	**Apollo Rd (LA 93) Extension to Dulles Drive (Lafayette Parish, LA):** Fenstermaker was selected to provide engineering services to the City of Scott to extend Apollo Road to Dulles Drive. This $14 million dollar construction project included two miles of four-lane boulevard and eight-foot sidewalks to accommodate both bicyclists and pedestrians. The new roadway intersected LA 90 and LA 93, which were designed for a bow-tie intersection and a roundabout, respectively. Ms. Hammonds assisted with the development of the roundabout design, median opening review, signage and striping plans.

16. Staff Experience:

Firm employed by	**C. H. Fenstermaker & Associates, L.L.C.**			
Name	**Luke Hebert, P.E., CFM**		Years of relevant experience with this employer	18
Title	Director, Engineer		Years of relevant experience with other employer(s)	1
Degree(s) / Years / Specialization			B.S. / 2003 / Civil Engineering	
Active registration number / state / expiration date			PE.0034715 / LA / 9.30.2023	
Year registered	2009	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities			Roadway Design	

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).
	Luke Hebert is a Professional Engineer with over 19 years of experience in engineering design, planning, and project management. During his career, Mr. Hebert has been part of many different types of designs ranging from various roadway types (i.e., local, collector, arterial and freeway), surface and sub-surface drainage systems, water and sewer distribution system and water and sewer treatment. In 2013 Mr. Hebert was appointed by the Mayor of Carencro as the engineer for the City. One of his main focuses is working with developers on new commercial and residential developments. Since 2013 Mr. Hebert has been involved with over 20 new developments located within the City of Carencro and has managed them through planning, construction, and final acceptance. He has also provided Application Preparation, Program Management and Design Services to the City for Community Development Block Grants (CDBG), Facility Planning & Control (FP&C)–Capital Outlay, FEMA, USACE/DOTD, U.S. Dept. of Agriculture (USDA) Loan, Office of Community Development–Community Water Enrichment Fund, and Louisiana Dept. of Health. In total, Mr. Hebert has assisted the City with the acquisition and management of nearly $18 Million in Federal and State project funding and lead the City to a FEMA Community Rating System Class 7.
05/13-08/16	**SP No. H.010620: US 90 (I-49 South) Albertson Pkwy to Ambassador Caffery Design-Build (Lafayette Parish, LA):** Lead Roadway Design Engineer: Under the Design-Build Contractor, James Construction Group, Mr. Hebert was the Lead Roadway Design Engineer directly responsible for the design of all roadway improvements associated with the upgrading of a portion of US 90 to a six-lane controlled access facility to also include improvements to the existing east and westbound frontage road system, construction of a new six-lane US 90 overpass structure over both Albertson Parkway and the existing BNSF railroad facility, and construction of all associated US 90 mainline ramps needed to connect these overpass structures and frontage roads. In this role, he directly designed all horizontal and vertical roadway alignments, typical sections, sequencing of construction, geometric detailing, cross sections, erosion control, and tabulation of quantities for the contractor. Mr. Hebert was also responsible for the layout of Mechanically Stabilized Earth Walls (MSEW), concrete panels used to keep all US 90 mainline improvements within existing ROW.
03/11-10/16	**LADOTD Permit No. 03030387: Kaliste Saloom Road Widening, Intersection Improvements, Bridge and CE&I (LA3073 to LA733) (Amb. Caffery to E. Broussard Rd) (Lafayette Parish, LA):** The project commences approximately 1,500-ft. southwest of E. Broussard Rd (LA Hwy 733) and terminates near Ambassador Caffery Pkwy (LA 3073) and includes a multi-lane modern roundabout. Mr. Hebert served as an engineer on this project and assisted with the roundabout design, including geometrics and other roadway related design and waterline layout and design.

03/15-11/16	**Coach Williams Blvd. Extension (Calcasieu Parish, LA):** Mr. Hebert assisted with quality control of the preliminary and final design plans prior to moving forward with advertisement. This project consists of the design of a $18.4 million – 3-mile roadway extension of Coach Williams Blvd to connect to Houston River Rd (LA 379). The new roadway includes a two-lane open ditch typical section with a roundabout, railroad crossing, Sabine River Authority Canal crossing, and will traverse through multiple wetland areas and will likely traverse over abandoned borrow pits. Fenstermaker is the Prime on this project and is responsible for the environmental assessments prior to design, drainage design, pavement design, and the geometrics of the road.
03/13 - 05/19	**Acadiana Regional Airport Access Road (Iberia Parish, LA):** Mr. Hebert is currently serving as the Project Manager overseeing roadway and drainage design. Fenstermaker was responsible for designing a 2-lane roadway that will connect the LA 3212 and LA 675 with room for a future 4-lane roadway. Fenstermaker is also responsible for bid and contract administration, construction engineering and inspection services. Additionally, Fenstermaker assisted the city in obtaining capital outlay funding for this project.
01/05-Present	**East Pont des Mouton, Phase II Roadway Widening (Lafayette Parish, LA):** Mr. Hebert was the Lead Design Engineer for roadway widening improvements of East Pont des Mouton, Phase II commencing at the Interstate 49 for Lafayette Consolidated Government. This project entailed the widening of a 2-lane asphalt road into a 5-lane, concrete urban arterial road. Mr. Hebert was responsible for all horizontal and vertical alignments, typical sections, utility relocation, geometric detailing, intersection design, drainage design, sequencing of construction, quantity calculations, and the production of plans and specifications. Mr. Hebert also acted as the Lead Construction Engineer.
02/10-04/14	**South Dearborne Rd Bridge Replacement over Indian Bayou (Lafayette Parish, LA):** Fenstermaker, under contract with LCG, provided all engineering and land surveying required to perform topographic surveys, hydraulic studies, drainage improvements, wetland delineation, and prepared the preliminary and final roadway and bridge plans. This project included the replacement of an 18-ft wide x 100-ft long timber bridge over Indian Bayou. Mr. Hebert provided bridge design services.
06/13 - 10/16	**Nelson Road and Ham Reid Road Roundabout & Design (Calcasieu Parish, LA):** Calcasieu Parish Police Jury selected Fenstermaker to perform engineering design services for the construction of a roundabout at the intersection of Nelson Road and Ham Reid Road. Mr. Hebert was responsible for QA/QC of preliminary plans and the waterline layout.
03/16-09/17	**Apollo Rd (LA 93) Extension to Dulles Drive (Lafayette Parish, LA):** Fenstermaker was selected to provide engineering services to the City of Scott to extend Apollo Rd to Dulles. This $15 million construction project includes 2.2 miles of a four-lane boulevard and 6-ft. sidewalks to accommodate both bicyclist and pedestrians. The new roadway intersects LA 90 and LA 93, which were designed for a bow-tie intersection and roundabout, respectively. Mr. Hebert was responsible for quality control of the final design plans prior to advertisement
12/15 - 01/17	**LADOTD Permit No. 153198, 153357, 153587: Sasol LCCP-Heavy Haul Road Engineering and Construction (LA378 & LA379) (Calcasieu Parish, LA):** Mr. Hebert served as a Project Engineer for Fenstermaker's $11.4 million engineering and consulting contract with Fluor. Fenstermaker was responsible for the engineering design of the 2.4-mile heavy haul route that was utilized to transport the oversized modules from the Calcasieu River to the proposed plant site in Westlake, Louisiana. Mr. Hebert was directly responsible for design of intersection improvements at the John Stine/Sampson, Houston River Road /Beglis, and Sulphur/Sampson intersections.

16. Staff Experience:

Firm employed by	**C. H. Fenstermaker & Associates, L.L.C.**			
Name	**Jeanne Hornsby, M.S., P.E., CFM**		Years of relevant experience with this employer	16
Title	Director, Engineer		Years of relevant experience with other employer(s)	2
Degree(s) / Years / Specialization			B.S. / 2005 / Civil Engineering M.S. / 2007 / Hydraulics and Environmental Engineering	
Active registration number / state / expiration date			PE.0036717 / LA / 3.31.2024	
Year registered	2011	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities			Hydraulic Analysis and Design	

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).
Ms. Hornsby is an Engineering Director at Fenstermaker with 18 years of engineering, project management, and quality control experience. Her main responsibilities include managing, designing, and completing quality control on multi-million-dollar projects that range from roadway design and construction to coastal and storm water management for both the public and private sectors. Ms. Hornsby currently leads Fenstermaker's Water Resources Team and her expertise has developed through the successful completion of numerous numerical modeling analyses, roadway drainage designs, and stormwater master plans in Louisiana, Texas, and Florida. She has also worked closely with the LADOTD on roadway design projects and Environmental Impact Statements. This expertise and experience have made Ms. Hornsby a qualified quality control manager. She has held this role on various projects and has completed quality reviews for agencies, including Calcasieu Parish Police Jury, Lafayette Consolidated Government, CPRA, LADOTD, City of Scott, and City of Carencro. Ms. Hornsby was instrumental in generating the current quality control process for Fenstermaker's engineering division. Software & Training: Ms. Hornsby is well versed in a variety of hydrologic and hydraulic software and applications including the USACE HEC suite (HEC-HMS, HEC-RAS, HEC-DSS, HEC-METVUE, HEC-FIA), LADOTD HYDRWIN Software, Danish Hydraulic Institute (DHI) MIKE Suite, and accompanying GIS applications. Ms. Hornsby is a certified floodplain manager.	
05/13 - 08/16	**S.P. No. H.010620: US 90 (I-49 South) Albertson Parkway to Ambassador Caffery Design-Build (Lafayette Parish, LA):** Ms. Hornsby was the lead quality controller for the hydrologic and hydraulic portion of this project. Ms. Hornsby ensured that drainage design elements of this project were in conformance with the LADOTD Hydraulics Manual. She reviewed model setup and assumptions, as well as other design elements for both the final construction and sequence of construction. This review included the use of LADOTD HYDRWIN software as well as the USACE HEC Suite.
01/10 - 12/14	**SP. No. 700-52-0198: I-12 to Bush Environmental Impact Statement (EIS) (St. Tammany Parish, LA):** As a sub-consultant to Tetra Tech, Fenstermaker was responsible for the completion of a 3rd party Environmental Impact Study (EIS) for a proposed 4-lane highway that runs from Bush, Louisiana, to Interstate 12. Initiated by the LADOTD, this corridor improvement project is part of the Louisiana Transportation Infrastructure Model for Economic Development (TIMED) Program. Ms. Hornsby led the project's hydrologic and hydraulic study. She completed the H&H modeling, which was used to size the channel crossings along the four alternative alignments. Ms. Hornsby also analyzed the wetland impacts from each alternative using the 2D H&H software MIKE Flood.
03/19-05/19	**Farm Road Bridge Replacements (Calcasieu Parish, LA):** Fenstermaker is providing professional engineering services related to the replacement of two (2) timber bridges located on Farm Rd. between LA 397 and Manchester Road. Farm Road traverses a rural undeveloped area and is currently a narrow gravel street with open ditches on both sides. The bridges cross Calcasieu Parish drainage laterals (LATL5A and LATL5) and are spaced approximately a quarter mile apart. Both existing bridges have a maximum weight limit of 15 tons and are in Flood Zone A. Ms. Hornsby performed the hydrologic and hydraulic analysis, including scour analysis.

03/18-07/19	**Rossignol Road Bridge Replacement (Calcasieu Parish, LA):** Calcasieu Parish tasked Fenstermaker with providing professional engineering services to replace the bridge located on Rossignol Road. Fenstermaker utilized LaDOTD drainage design standards for bridge structures, as well as their familiarity with HEC-RAS and HEC-HMS software to analyze the effect of the proposed bridge structure, including any backwater effects. For this project, Fenstermaker analyzed drainage requirements by modeling the effect of the design storm on the surrounding topography, assessed any effects from the proposed bridge design on the water surface profile, provided recommendations on bridge deck height and scour potential, and designed drainage improvements and ditch stabilization required for related roadway work. Ms. Hornsby provided drainage design, H&H modeling, and scour analysis.
09/13 - 01/19	**LADOTD Permit No. 153198, 153357, 153587: Sasol LCCP-Heavy Haul Road Engineering and Construction (LA378 & LA379) (Calcasieu Parish, LA):** Ms. Hornsby was the Deputy Project Manager and Design Engineer on the Sasol Heavy Haul Route. She was responsible for the management of various aspects of the project including the environmental permits, right-of-way, utility relocation, design, contracting, construction administration, and inspection services. In addition, she was responsible for various design elements along the project including intersection improvements and side street design. Ms. Hornsby also performed quality reviews on the hydraulic design of the project ensuring that it followed LADOTD Hydraulics Manual.
04/15-Present	**Coach Williams Drive Extension & Roundabout (Calcasieu Parish, LA):** Ms. Hornsby was the lead quality control reviewer on this $18.4 million roadway project. She followed all project quality assurance procedures in this review process. As part of the project, she reviewed the 2D Hydraulic Model (MIKE Flood) that was setup to determine wetland impacts, the hydraulic design (HRYDWIN) of all cross drains, inlet spacing, ditches, subsurface drainage, and outfall channels. She ensured all design elements followed Calcasieu Parish, Sabine River Authority, and LADOTD hydraulic guidelines. Ensuring the design elements at the SRA canal met the standards of the permit including considerations for seepage and turbidity, Ms. Hornsby worked with the lead designer and modeler to ensure a quality design was developed that met the requirements of the permit. This included multiple iterations of review, document tracking, and compliance verification.
10/18 - 09/19	**Ham Reid Road Extension (Calcasieu Parish, LA):** As drainage quality control manager, Ms. Hornsby performed an independent technical review on the inlet spacing and ditch design completed in LADOTD HYDRWIN software, and the impact analysis and outfall channel design completed in HEC-HMS and HEC-RAS. She also was a contributor in the overall layout, design, and implementation of the low impact development elements that included bioswales and detention areas. She ensured all drainage design elements were in accordance with Calcasieu Parish, LADOTD, and the gravity drainage district.
07/10-Present	**LADOTD Permit No. 03030387: Kaliste Saloom Road Widening, Intersection Improvements, Bridge and CE&I (LA3073 to LA733) (Amb. Caffery to E. Broussard Rd) (Lafayette Parish, LA):** Ms. Hornsby was the drainage quality manager on this project. She reviewed the no-rise analysis for the bridge design which included a pre-post analysis of the bridge and channel armoring. For this project HEC-HMS and HEC-RAS were utilized. She also ensured that the drainage design followed Lafayette Consolidated Government and LADOTD Hydraulic standards.
08/18-Present	**S.P. No. H.006459 Roundabout at Churchpoint/Roddy Road (Ascension Parish, LA):** Ms. Hornsby was the independent technical reviewer of the drainage design for the roundabout. The project was reviewed following Fenstermaker's quality control processes. She reviewed the design ensuring LADOTD design standards were met, modeling and design parameters were accurate, and the drainage design was constructible.

16. Staff Experience:

Firm employed by **C. H. Fenstermaker & Associates, L.L.C.**					
Name	**Bradford Millett, PLS, EI**		Years of relevant experience with this employer		9
Title	Surveyor		Years of relevant experience with other employer(s)		0
Degree(s) / Years / Specialization			B.S. / 2014 / Civil Engineering		
Active registration number / state / expiration date			PLS.5245 / LA / 3.31.2023 | EI.32848 / LA / 9.30.22		
Year registered	2020	Discipline	Professional Land Surveyor		
Contract role(s) / brief description of responsibilities			Professional Land Surveyor		

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).
Ms. Millett is a Professional Land Surveyor in Fenstermaker's Advanced Technology Group, and has 8 years of surveying, management, and coordination experience. Her current responsibilities consist of field crew coordination, data collection and processing, layout, and design of boundary and right of way maps, ALTA surveys and Development and Planning subdivision platting process, client relations, utility coordination, cost estimating, scoping, scheduling, planning and other components associated with surveying services.	
05/13-02/20	**S.P. No. H.010620: US 90 (I-49 South) Albertson Pkwy to Ambassador Caffery Design-Build (Lafayette Parish, LA):** This project was a proposed upgrading of a portion of US 90 to a six-lane controlled access facility to also include improvements to the existing east and westbound frontage road system, construction of a new six-lane US 90 overpass structure over both Albertson Parkway and the existing Burlington Northern Santa Fe Railway facility, and construction of all associated US 90 mainline ramps needed to connect these overpass structures and frontage roads. Ms. Millett was responsible for reviewing all LADOTD right-of-way maps
10/18-05/19	**Farm Road Multi-Bridge Replacement (Calcasieu Parish, LA):** Fenstermaker was contracted by Calcasieu Parish Police Jury to provide engineering services for the replacement of two bridges located on Farm Road. Ms. Millett is the Lead Surveyor, providing survey crew coordination, boundary and right-of-way surveys, parcel revisions, construction surveys, utility coordination, reviewing survey data, and coordinating with the abstractor.
04/16-09/18	**Lebesque Road Bridge Replacement and Road Reconstruction (Lafayette, LA):** Fenstermaker was contracted by Lafayette Consolidated Government to provide the design of the replacement of Lebesque Bridge and Lebesque Road Reconstruction. Ms. Millett served as the Lead Surveyor, providing survey crew coordination, utility coordination, boundary surveys and right-of-way plats.
06/20-ongoing	**IDIQ Contract for Louisiana Watershed Initiative (LWI) Modeling Contract – Region No. 6:** Fenstermaker is contracted as a subconsultant for this unprecedented project that will manage the future flood risk in the State of Louisiana through watershed-based solutions. Fenstermaker is responsible for data collection, data gap analysis, surveying, drone imaging, and GIS services to successfully complete interactive, usable, and manageable H&H models for Region 6. Through Task Order 1, Fenstermaker is identifying, collecting, and analyzing available data, and stakeholder and agency coordination. Fenstermaker

	has acquired channel surveys and hydraulic structure data from existing models, studies, engineering drawings, as-built drawings, and through coordination with local, regional, state, and federal agencies. Fenstermaker is responsible for converting all acquired data to the project datum and confirming the validity of information compared to current field conditions to successfully complete a data gap analysis. Ms. Millett serves as Survey Project Manager on this project, providing field crew coordination, reviewing existing survey data, QA/QC of collected survey data, and is surveyor of record.
05/19-03/21	**S.P. H.005967 Port of Lake Charles Rail at W. Sallier St., Calcasieu Parish, LA** - Fenstermaker completed the topographic and boundary field surveys, established control, post-processed data, reviewed title reports, established property boundaries and mapped encumbrances for the approximately 0.75-mile Railroad Relocation for the Port of Lake Charles. LADOTD survey feature codes were utilized for this project, and LADOTD Right of Way maps along with COGOWIN legal descriptions were created. Ms. Millett served as the Project Manager for this project. She was responsible for leading the kickoff meeting, coordinating with field survey crews, the abstractor and LADOTD, providing QA/QC of survey data, legal descriptions, and processing survey data.
05/14-11/17	**LADOTD Permit No. 153351,153352,153353: Lake Charles LNG Traffic Impact Analysis and Road Improvements, Calcasieu Parish, LA** - Fenstermaker was responsible for designing road improvements at various locations to support anticipated construction traffic associated with the expansion of the Lake Charles LNG, G2X, and Magnolia Facilities. Topographic and boundary surveys associated with the planned improvements, right of way maps, as well as coordinating and managing utility relocations were performed by Fenstermaker. Ms. Millett prepared survey request, coordinated survey crews, reviewed and processed survey data, prepared right of way maps, and coordinated with utilitiy companies.
06/12-ongoing	**S.P. No. H.006459 Roundabout at Churchpoint/Roddy Road, Ascension Parish, LA** - Fenstermaker completed a roundabout study at Churchpoint Road and Roddy Rd. The study was completed in compliance with "EDSM VI.1.1.5, Roundabout Study and Approval." Following LADOTD's approval, Fenstermaker began final design of the roundabout. Safety data was collected for a three-year period and analyzed for correctible crashes at the intersection. Ms. Millett coordinated with survey crews, processed data, completed preliminary boundary layouts, and developed right of way maps for this intersection.
09/12-ongoing	**S.P. No. H.012792 LA 675 at Airport Road Roundabout, Iberia Parish, LA** - This project includes the design of a new roundabout at the intersection of LA 675, US 90 Frontage Road, and the Acadiana Regional Airport Access Road. Ms. Millett is responsible for the topographic and boundary surveys, as well as the development and review of right of way maps.
11/08-ongoing	**LADOTD Permit No. 03030387: Kaliste Saloom Road Widening, Intersection Improvements, Bridge, and CE&I (LA 3073 to LA 733) (Amb. Caffery to E. Broussard Rd) Lafayette, LA** - Fenstermaker was responsible for the widening of approximately two miles of Kaliste Saloom Road, a highly congested major arterial roadway located in the center of the City of Lafayette. The project was then split into three phases to include drainage outfall construction, utility relocations, and roadway construction. Fenstermaker is the direct responsible charge of all design components and construction management for improvements. Ms. Millett assisted with topographic and boundary surveying, utility relocation, right of way plats, drainage design, as-built surveys, drainage design, signand striping layout, and coordination of survey crews in the field for Phases 3A and 3B.

16. Staff Experience:

Firm employed by **Bridge Diagnostics, Inc. (BDI)**				
Name	**Shane Boone, PHD**		Years of relevant experience with this employer	7
Title	Vice President – Nondestructive Evaluation		Years of relevant experience with other employer(s)	13
Degree(s) / Years / Specialization			PHD / 2008 / Civil Engineering / Utah State University MS / 2005 / Structural Engineering / University of Tennessee BS / 2002 / Civil Engineering / University of Tennessee	
Active registration number / state / expiration date			N/A	
Year registered	N/A	Discipline	N/A	
Contract role(s) / brief description of responsibilities			Nondestructive Evaluation, QA/QC and Subject Matter Expert	

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).
07/16-Present	Dr. Boone has spent more than 20 years in the government, academic, and private sectors of specialized infrastructure inspection and monitoring. He specializes in the research, development and application of nondestructive testing & evaluation technologies and monitoring for civil infrastructure. Previously, Dr. Boone managed NDE programs at the Federal Highway Administration (FHWA) and Oak Ridge National Laboratory. He serves as the chair of the American Society for Nondestructive Testing's Structural Materials Technology Conference, chair of the ASNT Infrastructure Committee, and sits on TRB's Field Testing and NDE of Transportation Structures committee. He is a certified ASNT Level II inspector.
01/17 - Present	**Retainer Contract for Testing of Unknown Foundations Statewide (DOTD Contract No. 4400009224)** – Dr. Boone is the Subject Matter Expert (SME) for the NDE to determine the unknown foundations of up to 1,900 bridges in Louisiana. The project utilizes multiple methods of NDE including ultraseismic testing, parallel seismic survey, sonic echo/impulse response, and guided wave. To date, thousands of piles have been tested to determine the embedded depth for subsequent NBIS 113 scour evaluation and reporting. BDI has assisted DOTD in FHWA reporting of these items by uploading all reports into AssetWise.
01/19 - Present	**IDIQ Contract for Nondestructive Evaluation of Structures Statewide (DOTD Contract No. 4400015262) –** Dr. Boone is the SME for statewide NDE of structures for DOTD under this contract. Scope items include testing of bridge decks, concrete substructures, steel elements such as welds and pin and hanger assemblies, unknown foundations, tunnels, culverts, and other highway transportation infrastructure. Dr. Boone assists

	DOTD with identifying proper technologies for application and best methods for analysis and reporting of findings into DOTD's AssetWise.
11/19 – Present	**NDE and Remote Inspection of I-10 over the Bonnet Carre Spillway, LA –** BDI is performing NDE of the bridge deck utilizing ground penetrating radar (GPR), deck acoustic response (SounDAR), infrared thermography (IR), and high-resolution imaging (HRI) to determine the deck integrity and NBIS/NBE reporting quantities. In addition, BDI is performing the NBIS inspection of the substructure utilizing remote inspection techniques with drones and other technology to report to FHWA. Dr. Boone is the SME for this inspection.
08/19 – 07/20	**NDE of City Park Lake Bridge LA –** Dr. Boone was the principal investigator for NDE of the City Park Lake Bridge in Baton Rouge, LA. NDE technologies included ground penetrating radar (GPR), deck acoustic response (DAR), infrared thermography (IR), high-resolution video (HRV). Remote inspection was performed on the substructure utilizing visual inspection and IR.
08/19 – 12/19	**NDE of Vicksburg Bridge, LA –** Dr. Boone was the principal investigator for NDE of the Vicksburg Bridge carrying I-20 over the Mississippi River near Vicksburg, MS. NDE technologies included ground penetrating radar (GPR), deck acoustic response (DAR), infrared thermography (IR), high-resolution video (HRV).
11/19 – 02/20	**Ultrasonic Testing of the US1 Simmesport Bridge, LA –** BDI performed inspection of 4 pins of the US1 bridge that carries US1 over the Atchafalaya River near Simmesport, LA. BDI utilized ASNT certified inspectors to perform ultrasonic testing (UT) and magnetic particle testing (MT) to determine their integrity. Dr. Boone was the SME for this inspection**.**
08/19 – 12/21	**US Army Corps Evaluation of Advanced Weld Inspection Methods –** As USACE's ongoing want to improve inspection techniques, BDI was awarded a Task Order under its IDIQ to identify and determine best practices for steel weld inspection utilizing advanced ultrasonic testing (UT) methods such as phased array ultrasonic testing (PAUT) and total focus method / full matrix capture (TFM/FMC). These advanced methods improve the reliability and repeatability of weld inspection and flaw sizing for fitness for service level analysis. Dr. Boone was the subject matter expert for this project and helped develop the testing means and methods that were performed on eight lab samples and four comprehensive in-field bridge weld inspections. Based on these findings, USACE expanded the scope to scan further areas of concern on one of the bridges.

16. Staff Experience:

Firm employed by **Bridge Diagnostics, Inc. (BDI)**					
Name	**Brett Commander, PE**		Years of relevant experience with this employer		32
Title	Vice President / Principal Engineer		Years of relevant experience with other employer(s)		1
Degree(s) / Years / Specialization			MS / 1989 / Structural Engineering / University of Colorado BS / 1986 / Civil Engineering / University of Colorado		
Active registration number / state / expiration date			Professional Engineer: 35864 / LA / 3/31/2023		
Year registered	2010	Discipline	Civil Engineer		
Contract role(s) / brief description of responsibilities			QA/QC, Principal Engineer		

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).
10/89-Present	Mr. Commander has more than 30 years of experience with testing, monitoring, and evaluating measured structural responses on over 1,000 structures. He has performed/oversaw complete structural analyses and load ratings on over 500 highway and railway bridges using a variety of design codes such as AASHTO and AREMA, and many state-specific codes including Louisiana specifications. Mr. Commander also has designed/oversaw capacity testing projects of concrete and steel structures using various NDE techniques as well as implemented hundreds of structural monitoring systems.
11/12 – Present	**US-90 Bayou Ramos Bridge Load Testing and Monitoring, LA** – Due to unexpected cracking in PS concrete AASHTO beams, BDI performed load tests and load ratings to determine cause and effect of cracks in continuous multi-span PS/C girders. Load ratings were completed according to DOTD specifications. After the completion of the initial evaluation, monitoring systems were installed on the structure to monitor the state of two sections of structure. Structural Health Monitoring is still ongoing. As technical advisor/principal engineer, Mr. Commander oversaw live-load and thermal load monitoring that was performed during and after repairs to evaluate the performance of retrofit.
11/04 – 12/04 11/11 – Present	**Bonnet Carre Spillway Load Testing, Rating, and Monitoring, LA** –BDI used its Integrated Approach to determine if a 500-ton load could cross the bridge safely. BDI then installed an event-based monitoring system that helps DOTD capture weigh-in-motion data, strains induced by heavy loads, and photos of heavy load. Health Monitoring is still ongoing. Over multiple contracts, Mr. Commander was the principal-in-charge on this project in its many phases which included responsibilities such as testing program oversight, structural analysis,

	load rating of structure for atypical load configurations, on-site data interpretation, report creation and submittal, and providing recommendations for future crossings.
07/21 – Present	**NDE of the Whiskey Bay and Piot Channel Bridge Decks, LA** – NDE of 3.5M sf of bridge deck on the structure carrying I-10 over the Atchafalaya Basin between Baton Rouge and Lafayette, LA. Testing included IR/HRI, CWSF GPR and SounDAR from BDI's mobile NDE testing van. IR/HRI bridge deck data was also collected via drone. BDI also performed substructure inspection to satisfy LADOTD's NBI requirements of the structure with IR/HRI via drone. The data will be used to quantify and locate areas for repair and preservation, and to report NBE and NBI data to FHWA. Mr. Commander is providing QA/QC and PE Review.
07/19 – 01/20	**St. Claude Lift Bridge Balance and Operation Testing, LA –** Mr. Commander was project principal engineer responsible for counterweight/span balance and friction calculations as well as structural performance evaluation on a double heal trunnion Strauss Bascule Bridge. Strain gauge testing and various instrumentation tasks were performed during investigation of a bearing failure on the span to counterweight link including strain gage testing on the link frame as well as on counterweight balance procedures.
06/14 – Present	**Phinney Avenue Bridge Load Testing, Rating and NDE, WA** – As part of BDI's SDOT On-Call, BDI was contracted by Seattle DOT to perform diagnostic load tests and structural reinforcement investigation on the Phinney Ave bridge in Seattle, WA. Instrumentation, load tests, and reinforcement investigation were performed with the overall goal of these tests was to better understand the structures' load distribution, reinforcement details, and in turn provide refined load ratings. Mr. Commander acted as the principal engineer and oversaw testing plan development, field-verified model calibration, load ratings performed according to SDOT/WSDOT specifications, and reporting.
08/18 – 12/20	**Live Load Testing and Field-Verified Load Rating of 16 Bridges, VA –** As part of BDI's VDOT On-Call, BDI provided load testing and field-verified load rating of 16 structures in the Fredericksburg and Richmond districts of VDOT. BDI was responsible for the design of load testing requirements, development of instrumentation plans, execution of field work and load testing, data analysis, finite element (FE) model creation and calibration, and eventual load rating per VDOT and AASHTO requirements. Mr. Commander acted as principal engineer and subject matter expert for this project and responsibilities included overseeing testing program development.

16. Staff Experience:

Firm employed by **Bridge Diagnostics, Inc. (BDI)**				
Name	**Jesse Sipple, PHD, PE**		Years of relevant experience with this employer	8
Title	Testing, Monitoring, and Engineering Program Manager		Years of relevant experience with other employer(s)	9
Degree(s) / Years / Specialization			PHD, Civil Engineering, Tufts University, 2013 MS, Civil Engineering, University of New Hampshire, 2008 BS, Civil Engineering, University of New Hampshire, 2007	
Active registration number / state / expiration date			#41028 / Louisiana / 03/31/2023	
Year registered	2016	Discipline	Civil Engineer	
Contract role(s) / brief description of responsibilities			Testing, Monitoring, and Engineering Manager	

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).
01/14-Present	Dr. Sipple oversees the testing, monitoring, engineering, and on-going monitoring groups of BDI's Services. The projects performed by these groups range from large SHM systems on signature structures, complex testing and analysis of constructed systems, and maintenance and support of in-service systems. In addition to managerial oversight, Dr. Sipple also oversees the quality control aspects of these projects.
11/21-Present	**Off-System Bridge Ratings and Evaluation, LA (Contract 4400010099) –** BDI is preforming live-load testing of ten bridges throughout the state of Louisiana, including seven culvert and three reinforced concrete bridges of varying types to provide realistic load rating results for those structures. The process includes developing instrumentation plans, instrumenting, load testing, and load rating each bridge. Load rating reports will be provided for each of the load tested structures. Dr. Sipple is an analysis engineer and reviewer for this project.
07/18–09/18	**Collier County Bridge Load Testing, FL –** BDI performed diagnostic load tests on the FDOT Bridge 034190 which spans over a small drainage ditch in a residential area in Immokalee, Florida. The overall goal of these tests was to better understand the structure's transverse distribution, provide refined load ratings, and reevaluate the current posting levels. Load tests were performed, and the collected structural responses were used to generate a field-verified finite-element model (FEM). This field-verified FEM was then used to compute refined load ratings. Dr. Sipple acted as project manager for this project.
06/18–03/19	**Phinney Avenue Bridge Load Rating and NDE, WA –** BDI was contracted by SDOT to perform diagnostic load tests and structural reinforcement investigation on the Phinney Ave bridge that spans over North 57th St in Seattle, WA. Instrumentation, load tests, and reinforcement investigation were performed with the overall goal of these tests was to better understand the structures' load distribution, reinforcement details, and in turn provide refined load ratings. Dr. Sipple acted as the project manager for this project.

07/19–12/19	**St. Claude Lift Bridge Balance and Operation Testing, LA** – Dr. Sipple was the quality control manager for counterweight/span balance and friction calculations as well as structural performance evaluation on a double heal trunnion Strauss Bascule Bridge. Strain gauge testing and various instrumentation tasks were performed during investigation of a bearing failure on the span to counterweight link.
08/18–12/20	**Live Load Testing and Field-Verified Load Rating of 16 Bridges, VA** – BDI provided load testing and field-verified load rating of 16 structures in the Fredericksburg and Richmond districts of VDOT. BDI was responsible for the design of load testing requirements, development of instrumentation plans, execution of field work and load testing, data analysis, finite element (FE) model creation and calibration, and eventual load rating per VDOT and AASHTO requirements. Dr. Sipple acted as quality control manager for this project.
04/18-10/19	**Sunshine Truss Emergency Monitoring, LA -** In 2018, the Sunshine Truss Bridge was struck by a crane barge, significantly damaging a bottom chord member. As part of the Modjeski and Masters response team, BDI installed a laser displacement sensor within 48 hours of the event to monitor the behavior of the damage member. Once a monitoring plan was developed and approved by the team, BDI installed strain gages along nearby chord members that were used to evaluate the state of the structure before, during and after the replacement of the damaged bottom chord member. Dr. Sipple acted as project manager responsible for monitoring plan development and project oversight.
02/20-12/20	**LA507 Over I-20 ABC Span Move Monitoring, LA** - During the replacement of this bridge, accelerated bridge construction was utilized where spans were cast nearby and moved into place during short outages. Dr. Sipple was a field/analysis engineer responsible for monitoring plan implementation, instrumentation, monitoring during span moves, on-site data interpretation, and data processing and reporting.
01/22-Present	**Varina-Enon Bridge Structural Health Monitoring, VA –** Virginia Department of Transportation contracted BDI to provide a comprehensive structural health monitoring (SHM) system on the Varina-Enon bridge. The project includes the design, installation, and operation of the SHM system. Dr. Sipple is a senior engineer contributing to system design, architecture, and installation support in his current capacity on this project.

16. Staff Experience:

Firm employed by **Bridge Diagnostics, Inc. (BDI)**					
Name	**Charles Young, PE**		Years of relevant experience with this employer		4
Title	Nondestructive Evaluation Program Manager		Years of relevant experience with other employer(s)		7
Degree(s) / Years / Specialization			MS / 2017 / Structural Engineering / Drexel University BS / 2012 / Architectural Engineering / Drexel University		
Active registration number / state / expiration date			Professional Engineer: 42773 / LA / 3/31/2023		
Year registered	2018	Discipline	Civil Engineer		
Contract role(s) / brief description of responsibilities			Nondestructive Evaluation Project Manager and Engineer		

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).
05/18-Present	Mr. Young has 11 years of experience in nondestructive evaluation and testing (NDE/NDT), and structural monitoring and testing. BDI, Mr. Young is responsible for project management, analysis, and field services related to NDT of civil infrastructure. He works closely with a multifaceted group of engineers and technicians to perform NDE on bridges, dams, culverts, pavements, and other civil infrastructures. Mr. Young is heavily involved in testing and instrumentation of existing structures using NDE methods (acoustic, ultrasonic, electromagnetic, and electrochemical), performing dynamic and digital signal processing and analysis, and numerical and finite element modelling of complex structures.
05/18 – 12/21	**Nondestructive Evaluation of Unknown Bridge Foundations, LA –** This project aims at performing NDE of more than 500 bridges in the state of Louisiana to determine the unknown or undocumented depths of bridge foundation piles. A proofing step was performed on six bridges to estimate the depth of timber, concrete, and steel piles. Multiple BDI testing and analysis methods including Sonic Echo/Impulse Response (SE/IR), Ultraseismic (US), and Parallel Seismic Survey (PSS) were utilized. Mr. Young was the project manager.
10/18 – 08/19	**Sunshine Truss Emergency Monitoring, LA –** In 2018, the Sunshine Truss Bridge was struck by a crane barge, significantly damaging a bottom chord member. As part of the M&M response team, BDI quickly deployed a laser displacement sensor to monitor the behavior of the damage member. Once a monitoring plan was developed and approved by the team, BDI installed strain gages on nearby chord members that were used to evaluate the state of the structure before, during and after the replacement of the damaged bottom chord member. Mr. Young acted as an installation technician, and site supervisor for this project.

01/19 - Present	**Bonnet Carre Spillway Inspection and Nondestructive Evaluation, LA –** This project involves an NHI routine inspection of the Bonnet Carre Spillway Bridge and targeted nondestructive evaluation techniques at various critical portions of the structure. This work was performed under an IDIQ Contract for Non-destructive Evaluation of Structures for DOTD. Also included were supplemental inspection access techniques including unmanned aerial systems (UAS). Nondestructive evaluation includes a multi-technology bridge deck assessment including Deck Acoustic Response, Ground Penetrating Radar, Infrared Thermography, and High-Resolution Imagery. Mr. Young is the project engineer and lead bridge inspector for this project.
08/19 – 07/20	**City Park Lake Bridge Inspection and Nondestructive Evaluation, LA –**NHI routine inspection of the City Park Lake Bridge and targeted nondestructive evaluation. This work was performed under an IDIQ Contract for Non-destructive Evaluation of Structures for DOTD. Nondestructive evaluation included a multi-technology bridge deck assessment including Deck Acoustic Response, Ground Penetrating Radar, Infrared Thermography, and High-Resolution Imagery. Also included in the nondestructive evaluation is Infrared Thermography of the superstructure and substructure of the bridge. Mr. Young was the project manager.
08/19-12-21	**US Army Corps Evaluation of Advanced Weld Inspection Methods –** As USACE's ongoing want to improve inspection techniques, BDI was awarded a Task Order under its IDIQ to identify and determine best practices for steel weld inspection utilizing advanced ultrasonic testing (UT) methods such as phased array ultrasonic testing (PAUT) and total focus method / full matrix capture (TFM/FMC). These advanced methods improve the reliability and repeatability of weld inspection and flaw sizing for fitness for service level analysis. Mr. Young helped develop the testing means and methods that were performed on eight lab samples and four comprehensive in-field bridge weld inspections. Based on these findings, USACE expanded the scope to scan further areas of concern on one of the bridges.
06/20-09/20	**West Seattle High Bridge, WA –** BDI was contracted by Seattle DOT to provide a nondestructive testing and structural health monitoring program to help evaluate performance of the structure during first phase of retrofitted internal post-tensioning. The monitoring program helped the Seattle DOT make decisions and resulted in the next phase of strengthening to open the bridge by 2022. Mr. Young acted as the Task Order Manager and Lead Field Engineer for this project.

16. Staff Experience:

Firm employed by **Bridge Diagnostics, Inc. (BDI)**					
Name	**Brice Carpenter, PE**		Years of relevant experience with this employer		13
Title	Senior Engineer / Engineering Department Lead		Years of relevant experience with other employer(s)		2
Degree(s) / Years / Specialization			MS / 2009 / Civil Engineering / New Mexico State University BS / 2007 / Structural Engineering / New Mexico State University		
Active registration number / state / expiration date			Professional Engineer: 39341 / LA / 3/31/2023		
Year registered	2014	Discipline	Civil Engineer		
Contract role(s) / brief description of responsibilities			Senior Engineer / Engineering Department Lead		

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).
07/09-Present	During his tenure and more than 250 bridges tested and load rated using advanced techniques, Mr. Carpenter has become BDI's Engineering Lead responsible for testing plan oversight, data processing and investigation, structural analysis, load rating, and reporting. Mr. Carpenter has been involved with the testing, monitoring, and evaluation of hundreds of structures of various types (steel, reinforced concrete, prestressed concrete, in simple to complex geometry and configurations) using a variety of design codes such as AASHTO, AREMA, and many state-specific codes including Louisiana specifications. Mr. Carpenter also has years of experience in capacity testing of concrete and steel structures using various NDE techniques.
11/12-Present	**US-90 Bayou Ramos Bridge Load Testing & Monitoring, LA –** Due to unexpected cracking in PS concrete beams, BDI performed load tests and load ratings to determine cause and effect of cracks in continuous PS/C girders. After the initial evaluation, monitoring systems were installed on the structure to monitor two sections of structure. Health Monitoring is still ongoing. As lead analysis engineer, Mr. Carpenter performed field-verified load ratings and acts as the project engineer for monitoring system maintenance and troubleshooting.
11/11-Present	**Bonnet Carre Spillway Load Testing and Monitoring, LA –** In 2004, BDI used its Integrated Approach to determine if a 500-ton load could cross the bridge safely. Based on provided configurations, BDI determined the "superload" could cross with stresses below its serviceability limit. In 2011, BDI installed an event-based monitoring system that helps DOTD capture weigh-in-motion data, strains induced by heavy loads, and photos of heavy load. Mr. Carpenter performed superload load ratings and reporting for DOTD and currently acts as the project engineer for monitoring support to DOTD.

07/19–12/19	**St. Claude Lift Bridge Balance and Operation Testing, LA –** Project engineer and field/analysis engineer responsible for counterweight/span balance and friction calculations, and structural performance evaluation on a double heal trunnion Strauss Bascule Bridge. Strain gauge testing and various instrumentation tasks were performed during investigation of a bearing failure on the span to counterweight link.
08/16-05/17	**Live Load Testing of Eight Culverts and Testing, LA –** BDI worked in coordination with LSU, LTRC, and DOTD to perform comprehensive diagnostic live-load tests that allowed these structures to be better evaluated based on induced live-load effects, observed distribution, and general fixity at the culvert walls. BDI manufactured the structural testing system used for this testing based on LSU's specifications and needs. Mr. Carpenter acted as a project and testing engineer on this project.
07/09-11/12	**Load Testing and Rating of 35 Rhode Island Bridges, RI –** BDI performed field testing on 35 bridges located throughout the state of Rhode Island. For all of the structures, BDI collected and reviewed the strain, displacement, and NDE (GPR) data and provided it directly to AECOM for evaluation. For select bridges, BDI also used the field data to calibrate finite element models and develop accurate load ratings using the AASHTO Manual of Bridge Evaluation. Mr. Carpenter acted as analysis and rating engineer responsible for data processing and review, structural analysis, load rating, and reporting.
11/20-06/21	**Terminal 5 Bridge Load Testing and Rating, WA –**Terminal 5 bridge is used by heavy truck traffic to and from the Port of Seattle, WA. As part of BDI's SDOT On-call, instrumentation and load tests were performed on PSC beam and steel girder spans (curved and straight) with the overall goal of to better understand the structures' load distribution and behavior and in turn provide refined load ratings. Mr. Carpenter acted as the lead analysis/rating engineer responsible for data processing, model calibration, and load ratings and reporting according to SDOT/WSDOT specifications.
05/15 – 10/15 02/18 – 08/18	**Truss Monitoring on US 84 Over the Mississippi River, MS –** During the pin replacements on the Natchez cantilever truss over the Mississippi River, BDI performed Structural Health Monitoring (SHM) on the critical truss members and temporary load path systems during pre, during, and post construction. Mr. Carpenter acted as project field and analysis engineer in charge field prep, field installation, data analysis and reporting.

16. Staff Experience:

Firm employed by **KGC Environmental Services, Inc.**				
Name	**Kevin Guth, DrPH, CIH, PMP**		Years of relevant experience with this employer	26
Title	Principal		Years of relevant experience with other employer(s)	3
Degree(s) / Years / Specialization			**Doctor of Public Health** (DrPH) 2020 - Chemical Risk Assessment/Toxicology | University of South Florida **Master of Science in Public Health** (MSPH) - 1996 Industrial Lead Based Paint | Tulane University - School of Public Health and Tropical Medicine	
Active registration number / state / expiration date			ABIH Certification No. 10438 / 6/2024 NACE - Coatings, Level 1 23834 / 7/2024	
Year registered	2018/ 2013 / 2009	Discipline	Certified Industrial Hygienist	
Contract role(s) / brief description of responsibilities			**Environmental Project Manager (Certified Industrial Hygienist)** Kevin will provide leadership and oversight of all aspects of the environmental monitoring on the project. He will lead the environmental scope areas that include project management, coordination, and project reporting. Kevin will provide quality assurance oversight of all environmental testing to ensure legally defensible data.	
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).			
Relevant Experience for all projects reported	Kevin has worked in the field and managed over **200** painting and industrial lead-based removal projects as an environmental project manager. He has worked on **23** separate **LADOTD** repainting and rehabilitation in addition to many other Departments of Transportation, US Army Corps of Engineers, and private railroad projects since **1998** that included environmental oversight, implementation, and development of lead abatement plans for steel bridges. Kevin renewed his SSPC C-5 certificate in July of 2021. Kevin is a **recognized expert** in Industrial Lead Based Removal from complex steel structures having been certified in New Orleans Civil Court testifying on proper containment methods necessary to prevent adverse environmental impact during industrial lead-based paint removal. Kevin has **published several peer reviewed articles** regarding lead exposures and ventilation flow rates that provide utility in the management of LADOTD repainting projects. He is a regular contributor (writer) on SSPC's website Paint Square where he has discussed topics applicable to LADOTD jobs such as proper ventilation on paint removal projects and the utility of pre and post job soil samples.			

4/19- On going	**LADOTD No. H.009461, US 90 Atchafalaya River Bridge Rehabilitation** Principal/Environmental Project Manager performing the same environmental scope as this RFP.
10/20-11/21	**LADOTD No. H.011485, LA 336-1 – Bayou Teche Bridge Rehabilitation** Principal/Environmental Project Manager performing the same environmental scope as this RFP.
2/18-8/19	**LADOTD No. H.00946.6, Route I-10 Clean, Paint and Miscellaneous Repairs** Principal/Environmental Project Manager performing the same environmental scope as this RFP.
12/17-8/18	**LADOTD No.H.003263.6, I-20: Overpass Rehabilitation (Bossier City)** Principal/Environmental Project Manager performing the same environmental scope as this RFP.
8/16-10/17	**LADOTD No. H.011482, US 90 Huey P. Long Bridge Clean and Paint** Principal/Environmental Project Manager performing the same environmental scope as this RFP.
12/15-6/17	**LADOTD No. H.010636, US 90 Over Mississippi River Bridge (GNO2) Structural Repairs and Spot Painting** Principal/Environmental Project Manager performing the same environmental scope as this RFP.
5/15-1/16	**LADOTD No. H.009326, I-10 & 610: Bridge Deck Patching, Girder Painting & Misc. Repairs** Principal/Environmental Project Manager performing the same environmental scope as this RFP.
7/14-10/17	**LADOTD No. H.009943, US 190 Phase 2 – Cleaning, Painting & Repair** Principal/Environmental Project Manager performing the same environmental scope as this RFP.
8/13–8/15	**Mississippi Department of Transportation Contract No. MS-08-13, Natchez Vidalia Bridge, Natchez,** Mississippi / NACE level certified bridge coating inspector. Performed a comprehensive coatings evaluation of the entire bridge to determine the condition of the existing coatings and recommended alternatives for coating rehabilitation of this major Mississippi River Bridge crossing to provide continued corrosion protection for the structure. Scope also included comprehensive sampling of the existing coating system for the presence of heavy metals.

16. Staff Experience:

Firm employed by **KGC Environmental Services, Inc.**					
Name	**Justin Beitzel, MBA, PMP**		Years of relevant experience with this employer	12	
Title	Senior Environmental Professional		Years of relevant experience with other employer(s)	2	
Degree(s) / Years / Specialization			MBA / 2010 / McNeese State University BS / 2009 / Business / McNeese State University		
Active registration number / state / expiration date			SSPC C-3 / C-5 Expires 7/2022 NACE Level II Registration No. 46202 Expires 7/2023		
Year registered	2013	Discipline	Discipline - Senior Tech (Environmental)		
Contract role(s) / brief description of responsibilities			Justin will collect samples. He will also evaluate the protective coating material samples for determination analysis for heavy metals, procedures for treatment, handling, disposal of waste.		

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).
Relevant Experience for all projects reported	Justin has extensive LADOTD experience working as an environmental monitor/ Professional Industrial Hygienist on painting and rehabilitation projects. Justin has worked on **12** major **LADOTD** lead removal bridge repainting projects performing the same duties as requested by this RFQ since 2010. He has also worked on other Departments of Transportation, US Army Corps of Engineers, and private railroad repainting and rehabilitation projects.
4/19- On going	**LADOTD No. H.009461, US 90 Atchafalaya River Bridge Rehabilitation** On-site environmental monitor (includes paint sampling for heavy metals analysis, proper procedures for treatment, handling , disposal of wastes.)
10/20-11/21	**LADOTD No. H.011485, LA 336-1 – Bayou Teche Bridge Rehabilitation** On-site environmental monitor (includes paint sampling for heavy metals analysis, proper procedures for treatment, handling , disposal of wastes.)
2/18-8/19	**LADOTD No. H.00946.6, Route I-10 Clean, Paint and Miscellaneous Repairs** On-site environmental monitor (includes paint sampling for heavy metals analysis, proper procedures for treatment, handling , disposal of wastes.)
12/17-8/18	**LADOTD No.H.003263.6, I-20: Overpass Rehabilitation (Bossier City)** On-site environmental monitor (includes paint sampling for heavy metals analysis, proper procedures for treatment, handling , disposal of wastes.)

8/16-10/17	**LADOTD No. H.011482, US 90 Huey P. Long Bridge Clean and Paint** On-site environmental monitor (includes paint sampling for heavy metals analysis, proper procedures for treatment, handling , disposal of wastes.)
12/15-6/17	**LADOTD No. H.010636, US 90 Over Mississippi River Bridge (GNO2) Structural Repairs and Spot Painting** On-site environmental monitor (includes paint sampling for heavy metals analysis, proper procedures for treatment, handling , disposal of wastes.)
5/15-1/16	**LADOTD No. H.009326, I-10 & 610: Bridge Deck Patching, Girder Painting & Misc. Repairs** On-site environmental monitor (includes paint sampling for heavy metals analysis, proper procedures for treatment, handling , disposal of wastes.)
7/14-10/17	**LADOTD No. H.009943, US 190 Phase 2 – Cleaning, Painting & Repair** On-site environmental monitor (includes paint sampling for heavy metals analysis, proper procedures for treatment, handling , disposal of wastes.)
10/12-7/16	**LADOTD No. H.000343, US 190 Phase 1 – Cleaning, Painting & Repair** On-site environmental monitor (includes paint sampling for heavy metals analysis, proper procedures for treatment, handling , disposal of wastes.)

16. Staff Experience:

Firm employed by **KGC Environmental Services, Inc.**					
Name	**Chris Price**		Years of relevant experience with this employer	12	
Title	Senior Environmental Professional		Years of relevant experience with other employer(s)	3	
Degree(s) / Years / Specialization			BS / 2010 / Business Administration / University of Louisiana - Monroe		
Active registration number / state / expiration date			SSPC C-3/C-5 (Expires 7/2022); NACE - Coatings, Level 2/50841 / 3/2024		
Year registered	2013	Discipline	Senior Tech (Environmental)		
Contract role(s) / brief description of responsibilities Chris will collect samples. He will also evaluate the protective coating material samples for determination analysis for heavy metals, procedures for treatment, handling, disposal of waste.					

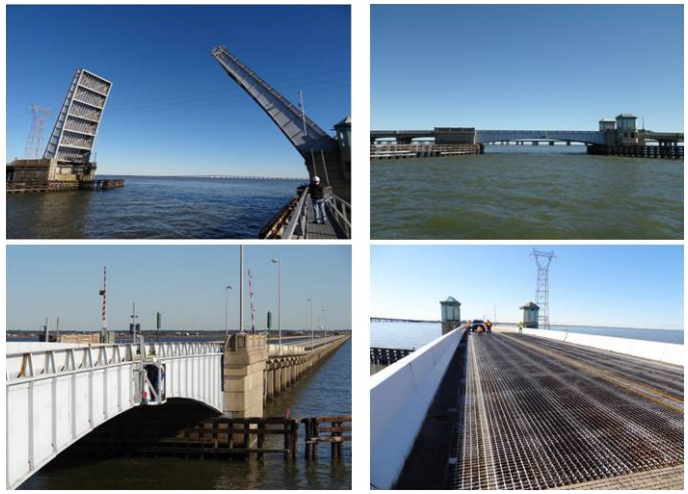
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; *i.e.*, "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the time specified in the applicable MPR(s).
Relevant Experience for all projects reported	Chris has many years of LADOTD experience working as an environmental monitor on painting and rehabilitation projects. Chris has worked on **10** major LADOTD lead removal bridge repainting projects performing the same duties as requested by this RFQ since 2010. He has also worked on other Departments of Transportation, US Army Corps of Engineers, and private railroad repainting and rehabilitation projects.
4/19- On going	**LADOTD No. H.009461, US 90 Atchafalaya River Bridge Rehabilitation** On-site environmental monitor (includes paint sampling for heavy metals analysis, proper procedures for treatment, handling , disposal of wastes.)
10/20-07/21	**St. John the Baptist Parish, Louisiana /** NACE certified bridge coating inspector. Performed a comprehensive coatings evaluation of the 16 water towers to determine the condition of the existing coatings and recommended alternatives for coating rehabilitation. Scope also included comprehensive sampling of the existing coating system for the presence of heavy metals.
2/18-8/19	**LADOTD No. H.00946.6, Route I-10 Clean, Paint and Miscellaneous Repairs** On-site environmental monitor (includes paint sampling for heavy metals analysis, proper procedures for treatment, handling, disposal of wastes.).
7/14-10/17	**LADOTD No. H.009943, US 190 Phase 2 – Cleaning, Painting & Repair** On-site environmental monitor (includes paint sampling for heavy metals analysis, proper procedures for treatment, handling, disposal of wastes.)

8/13-8/15	**Mississippi Department of Transportation Contract No. MS-08-13, Natchez Vidalia Bridge, Natchez,** Mississippi Coatings Inspector: Performed a comprehensive coatings evaluation of the entire bridge to determine the condition of the existing coatings and recommended alternatives for coating rehabilitation of this major Mississippi River Bridge crossing to provide continued corrosion protection for the structure. Scope also included comprehensive sampling of the existing coating system for the presence of heavy metals.

17. Firm Experience:

Identify the team's project experience **most relevant** to the scope in the advertisement. **The projects should be limited to a total of 20, with no more than 5 projects being represented by the prime consultant and with no more than 3 projects represented by each sub-consultant on the team. If more than 5 projects are identified for the prime consultant, all projects identified after the first 5 will not be evaluated. If more than 3 projects are identified for a single sub-consultant, all projects identified after the first 3 from that sub-consultant will not be evaluated.** Include no more than one page per project. Projects identified shall only include work performed by firms on the team. The projects identified do not necessarily need to have been DOTD projects.

Firm name	**Modjeski and Masters, Inc.**		Past Performance Evaluation Discipline(s)*	Bridge	
Project name	**US 11 Bridge over Lake Pontchartrain**		Firm responsibility (prime or sub?)	Prime	
Project number	H.010016.5	Owner's name	Louisiana Department of Transportation and Development		
Project location	New Orleans, Louisiana		Owner's Project Manager	ZhengZheng Fu, PE	
Owner's address, phone, email	1201 Capital Access Road, Baton Rouge, LA 70802, (225) 379-1321, zhengzheng.fu@la.gov				
Services commenced by this firm (mm/yy)	04/2013	Total consultant contract cost ($1,000's)		$1,631	
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)		$1,530	



This project involved the performance of structural, mechanical, electrical and architectural rehabilitation services for the two bascule spans within this five mile bridge in order to extend its life for 30-40 additional years. Constructed in 1938, this structure contains two double-leaf bascule bridges that carries US 11 across Lake Pontchartrain at New Orleans, Louisiana.

Tasks Performed:

- Evaluation of the conditions of structural, mechanical, electrical and architectural components of this bridge.
- Evaluation of existing paint system and recommendations.
- Development of Scope of Services for the rehabilitation of this bridge.
- Development of preliminary plans.
- Bridge Rating
- Construction Related Engineering Support services
- Construction Engineering and Inspection for Bridge Coatings and Shop Inspection

Personnel Involved: ***Zolan Prucz, PhD, PE, Ralph Eppehimer, PE, Dave A. Kanger, PE, Cullen J. Ledet, PE, Lance V. Borden, PE, Jeff W. Newman, PE, Michael J. Beitzel, Jon Gerhart, PE,*** Greg Taravella, PE

17. Firm Experience:

Identify the team's project experience **most relevant** to the scope in the advertisement. **The projects should be limited to a total of 20, with no more than 5 projects being represented by the prime consultant and with no more than 3 projects represented by each sub-consultant on the team. If more than 5 projects are identified for the prime consultant, all projects identified after the first 5 will not be evaluated. If more than 3 projects are identified for a single sub-consultant, all projects identified after the first 3 from that sub-consultant will not be evaluated.** Include no more than one page per project. Projects identified shall only include work performed by firms on the team. The projects identified do not necessarily need to have been DOTD projects.

Firm name	**Modjeski and Masters, Inc.**		Past Performance Evaluation Discipline(s)*	Bridge	
Project name	**4th Street Bridge Rehabilitation**		Firm responsibility (prime or sub?)		
Project number	H.010882	Owner's name	Louisiana Dept. of Transportation and Development		
Project location	Harvey, Louisiana		Owner's Project Manager	ZhengZheng Fu, PE	
Owner's address, phone, email	1201 Capital Access Road, Baton Rouge, LA 70802 (225) 379-1321, Zhengzheng.fu@la.gov				
Services commenced by this firm (mm/yy)	2013	Total consultant contract cost ($1,000's)		$1,031	
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)		$861	

The 4th Street Bridge is located on LA 18 in Jefferson Parish on the west bank side of the Mississippi River. It carries two vehicular lanes across the Harvey Canal approximately 1000 feet south of a lock connecting the canal with the Mississippi River. From abutment to abutment the 4th Street Bridge is approximately 215 feet long consisting of concrete approach slabs, steel girder spans, and the movable lift span. The main span of the 4th Street Bridge consists of two rolling bascule lift spans, each approximately 50 feet long and consisting of two main girders. The movable span's deck is an open grid deck supported on stringers and floorbeams.

Tasks Performed

- Evaluation and Inspection of the conditions of structural, mechanical, electrical, and architectural components of this bridge.
- Evaluation of the fender system and recommendations.
- Evaluation of existing paint system and recommendations.
- Development of Scope of Services for the rehabilitation of this bridge.
- Development of preliminary and final plans for structural, mechanical, electrical and architectural rehabilitation of the bridge
- Construction Related Engineering Support Services

Personnel Involved: Bruce Peterson, PE, ***Dave Kanger, PE, Jeff. Newman, PE, Geoffrey Forest, PE., Jon Gerhart, PE, Cullen Ledet, PE, Michael Beitzel***

17. Firm Experience:

Identify the team's project experience **most relevant** to the scope in the advertisement. **The projects should be limited to a total of 20, with no more than 5 projects being represented by the prime consultant and with no more than 3 projects represented by each sub-consultant on the team. If more than 5 projects are identified for the prime consultant, all projects identified after the first 5 will not be evaluated. If more than 3 projects are identified for a single sub-consultant, all projects identified after the first 3 from that sub-consultant will not be evaluated.** Include no more than one page per project. Projects identified shall only include work performed by firms on the team. The projects identified do not necessarily need to have been DOTD projects.

Firm name	**Modjeski and Masters, Inc.**		Past Performance Evaluation Discipline(s)*	Bridge	
Project name	**Houma Navigation Canal Bridge Rehabilitation**		Firm responsibility (prime or sub?)	Prime	
Project number	701-65-1541	Owner's name	Louisiana Department of Transportation and Development		
Project location	Houma, Louisiana		Owner's Project Manager	Stewart Hingle, P.E	
Owner's address, phone, email	1201 Capital Access Road, Baton Rouge, LA 70802; (225) 379-1316; Stewart.Hingle@la.gov				
Services commenced by this firm (mm/yy)	11/2010	Total consultant contract cost ($1,000's)		$603	
Services completed by this firm (mm/yy)	08/2016	Cost of consultant services provided by this firm ($1,000's)		$561	

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

This project involves the performance of a structural, architectural, mechanical and electrical rehabilitation of this bridge in order to extend service life for a minimum of thirty years. Constructed in 1962, the bridge is an unequal arm swing span crossing the Houma Navigation Canal. It was constructed relatively low and is regularly submerged to varying degrees during high water events.

PROJECT FEATURES:

- Development of Scope of Services for the rehabilitation of this bridge.
- Development of rehabilitation plans and specifications for structural, mechanical, electrical and architectural components of this bridge.
- Evaluation of existing paint system and recommendations.
- Design and final plans and specifications for the operator house developed by subconsultant
- Design and development of plans for replacement fender system.
- New hydraulic power system
- New electrical system
- Maintain operation of bridge during rehabilitation work.
- Provided Construction Engineering Services by reviewing shop drawings, responding to RFI's, and other submittals during the construction phase of the project.

Personnel Involved: ***Jeffery W. Newman, P.E., Mechanical, Michael J. Beitzel, Paint, Jonathan Gerhart, PE***, Greg Taravella, PE

17. Firm Experience:

Identify the team's project experience **most relevant** to the scope in the advertisement. **The projects should be limited to a total of 20, with no more than 5 projects being represented by the prime consultant and with no more than 3 projects represented by each sub-consultant on the team. If more than 5 projects are identified for the prime consultant, all projects identified after the first 5 will not be evaluated. If more than 3 projects are identified for a single sub-consultant, all projects identified after the first 3 from that sub-consultant will not be evaluated.** Include no more than one page per project. Projects identified shall only include work performed by firms on the team. The projects identified do not necessarily need to have been DOTD projects.

Firm name	**Modjeski and Masters, Inc.**		Past Performance Evaluation Discipline(s)*	Bridge	
Project name	**Mermantau Street Swing Bridge**		Firm responsibility (prime or sub?)	Prime	
Project number	H.003985 S.P. 700-12-0106	Owner's name	Louisiana Department of Transportation and Development		
Project location	Grand Chenier, LA		Owner's Project Manager	Stewart Hingle, PE	
Owner's address, phone, email	1201 Capital Access Road, Baton Rouge, LA 70802, (225) 379-1316, stewart.hingle@LA.GOV				
Services commenced by this firm (mm/yy)	06/2009	Total consultant contract cost ($1,000's)		$778	
Services completed by this firm (mm/yy)	05/2011	Cost of consultant services provided by this firm ($1,000's)		$733	

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

PROJECT FEATURES:

This project involved the performance of an in-depth inspection of this structure, a two-lane, pony truss swing span bridge crossing the Mermantau River at Grand Chenier, LA. Inspection findings led to the preparation of plans and specifications for the repair/replacement of bridge components damaged, worn or deteriorated from corrosion (structural, electrical and mechanical).

Modjeski and Masters, Inc. provided the following services for this project:

- In-depth inspection of structural, mechanical and electrical components
- Recommendations for repair/rehabilitation
- Developed plans and specifications
- Technical provisions for structural repairs, electrical and mechanical upgrades
- Paint system evaluation
  Shop drawing review/approval
- Construction related engineering services for rehabilitation

Personnel involved: ***Ralph J. Eppehimer, P.E., Michael J. Beitzel, Paint, Jeffrey W. Newman, Mechanical***

17. Firm Experience:

Identify the team's project experience **most relevant** to the scope in the advertisement. **The projects should be limited to a total of 20, with no more than 5 projects being represented by the prime consultant and with no more than 3 projects represented by each sub-consultant on the team. If more than 5 projects are identified for the prime consultant, all projects identified after the first 5 will not be evaluated. If more than 3 projects are identified for a single sub-consultant, all projects identified after the first 3 from that sub-consultant will not be evaluated.** Include no more than one page per project. Projects identified shall only include work performed by firms on the team. The projects identified do not necessarily need to have been DOTD projects.

Firm name	**Modjeski and Masters, Inc.**		Past Performance Evaluation Discipline(s)*	Bridge	
Project name	**West Larose Vertical Lift Bridge**		Firm responsibility (prime or sub?)	Prime	
Project number	H.009479	Owner's name	Louisiana Department of Transportation and Development		
Project location	Larose, Louisiana		Owner's Project Manager	Stewart P. Hingle, PE	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA, (225) 379-1316, Stewart.Hingle@LA.gov				
Services commenced by this firm (mm/yy)	12/2010	Total consultant contract cost ($1,000's)		$555	
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)		$514	

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

Constructed in 1961 in Larose, LA, the West Larose Vertical lift span is a two-lane movable structure that is 153'-0" from centerline bearing to centerline bearing with each tower span being 25'-0" in length. The approach spans consist of 20'-0" concrete slab spans and steel girder spans ranging from 40'-0" to 70'-0". The total length is 2,035'-0". The project involved the performance of a structural, mechanical, electrical, and architectural rehabilitation of this bridge in order to extend the service life for a minimum of 30-40 years.

Tasks Performed:

- Development of Scope of Services for the rehabilitation of this bridge.
- Development of rehabilitation plans and specifications for structural, mechanical, electrical and architectural components.
- Evaluation of the fender system and recommendations.
- Evaluation of existing paint system and recommendations.
- Evaluation methods of improving the appearance of cornet approach spans.
- Produce plans, specifications and construction cost estimates.
- Provide Virtis/AASHTOWare load rating
- Provided Construction Engineering Services by reviewing shop drawings, responding to RFI's, and other submittals during the construction phase of the project.

Personnel Involved: ***Zolan Prucz, Yu Ouyang, Dave Kanger, Jason Miles, Anthony Schoenecker, Vanessa Storlie, Jeff Newman, Jon Gerhart, Michael Beitzel, Greg Taravella***

17. Firm Experience:

Firm name	**Arcadis**	Past Performance Evaluation Discipline(s)*	Bridge / Hanson Canal
Project name	North Bayou Black Drive Bridge / Hanson Canal	Firm responsibility (prime or sub?)	Prime
Project number	H.011533.5	Owner's name	Louisiana Department of Transportation and Development
Project location	Terrebonne Parish, LA	Owner's Project Manager	Mr. Gary Pentek
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802		
Services commenced by this firm (mm/yy)	10/15	Total consultant contract cost ($1,000's)	$71
Services completed by this firm (mm/yy)	04/18	Cost of consultant services provided by this firm ($1,000's)	$71

Firm's Role: Project Management, Site Visit, Right-of-way Determination, Preliminary Plans Preparation, Plan-in-hand Review, Hydraulic Analysis, Guardrail Modification, Bridge Design, Final Plans Preparation, Cost Estimation

Firm Members Involved: Garrett Keller, Greg Badon, Jason Morrell

Arcadis provided all engineering and related services required for developing plans for the replacement of a two-lane bridge in Terrebonne Parish under the auspices of LADOTD's Off System Bridge Rehabilitation and Replacement Program.

Project Information - With a posted speed limit of 45 mph, the bridge runs parallel to Bayou Black and crosses Hanson Canal right at the juncture of the two tributaries. Arcadis performed a topographic survey utilizing the services of the subconsultant firm Gotech Inc. Based on the survey, a drainage map was developed for Hanson Canal at the site of the bridge. A detailed hydraulic analysis was performed to formulate the best possible alternatives for the bridge replacement, which was an 80-footlong, concrete slab span bridge.

Wetland Delineation / Environmental Evaluation- A wetland delineation study following USACE and LADOTD guidelines was performed, and Solicitation of View (SOV) packets were sent to all regulatory and stakeholder parties with sketches of the proposed bridge replacement. A final **Wetland Finding Report** using the latest FHWA criteria was submitted with SOV packet and their responses along with **an Environmental Checklist**.

Bridge Design Plans - Arcadis **prepared preliminary plans of the proposed bridge** that included plan and profile sheets, typical roadway sections and quantities, general bridge plan, road closure and relevant signing plan and channel cross-sections. Arcadis took part in a Plan-in-Hand review at the bridge site, which included review teams from both the Parish and the LADOTD. Arcadis was tasked to **prepare Final Plans**, **special specifications**, and **estimates**. Arcadis also performed detailed QA/QC on the final submittal and addressed all comments received from the LADOTD.

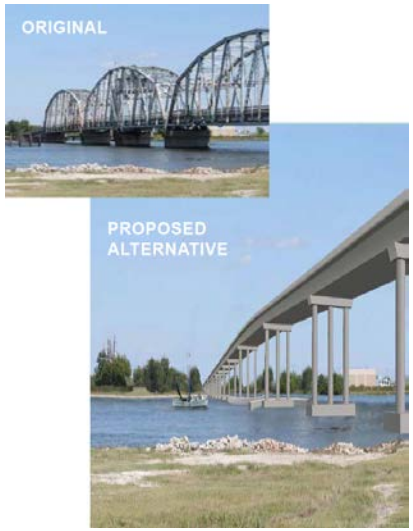
"The deliverables were clear, concise and of sufficient detail ... They demonstrated their strong knowledge when it came to developing the final footprint and project alignment. ... I found them a pleasure to review. They delivered the package of 1/4/2017 and it was due on 1/11/2017. The deliverables were of top quality. They always strive to be at the tip of the sword in coming up with solutions; they provided two alignments to consider. They are problem solvers ..." – ***Gary Pentek, LADOTD Off System Bridge Program Manger | Project: North Bayou Black Drive Bridge / Hanson Canal***

17. Firm Experience:

Firm name	**Arcadis**		Past Performance Evaluation Discipline(s)*	Bridge, Road, Traffic, Env	
Project name	**Chef Menteur Bridge and Approaches, Route US 90**		Firm responsibility (prime or sub?)	Prime	
Project number	H.000263.2	Owner's name	Louisiana Department of Transportation and Development		
Project location	Orleans Parish, LA		Owner's Project Manager	Nikki Leon / Irina Sorset	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802, 225 242 4514, nikki.leon@la.gov (irina.sorset@la.gov)				
Services commenced by this firm (mm/yy)	08/11	Total consultant contract cost ($1,000's)	$1,118		
Services completed by this firm (mm/yy)	11/14	Cost of consultant services provided by this firm ($1,000's)	$879		

Firm's Role: Bridge and roadway design, roundabout evaluation, complete streets analysis, bridge type / lifecycle cost assessment; typical sections, bridge and road line and grade, horizontal and vertical design services, local access connections, roadway approach design, alternatives development, visual imagery, USCG navigable waterway permit assessment, preliminary construction cost estimate based on LADOTD pay items and unit cost prices.

Firm Members Involved: Akhil Chauhan, David Fulks, Greg Badon



Arcadis was contracted by LADOTD to complete preliminary **design layouts to replace the existing US 90 swing- span bridge** over Chef Menteur Pass in Orleans Parish as part of an **environmental assessment**. Both movable- and fixed-span designs were considered along with three preliminary alignments. **LADOTD Design Guidelines and EDSMs** along with the **LADOTD Road Design and Bridge Design Manuals** were utilized.

Key Challenges - The challenges were to minimize impacts to abutting Venetian Isles subdivision, while also avoiding or minimizing effects to the Fort Macomb structure and state parkland, terrestrial and submerged archaeological sites, and the Bayou Sauvage National Wildlife Refuge. From an engineering perspective, the project site posed notable challenges. The Chef Pass experiences swift tidal flow and has resulted in substantial scour and higher potential for vessel collisions.

Project Approach - The approach identified the schedule's critical path, including a post-Katrina vessel height study update, a remote sensing of Chef Pass to identify submerged cultural resources and to ascertain bathometric data, and **early coordination and approval of the design criteria** to adequately address the mixed-use in the vicinity of the bridge. In accordance with the **LADOTD Complete Streets Policy**, this project queried and incorporated comments from New Orleans bicycle representatives, who recognize US 90 as the only bicycle route between New Orleans and the state line. Arcadis followed good **access management principles to address local mobility needs**. Private access connections (driveways) were minimized by providing interconnectivity and shared driveways among residential, commercial, and park properties. With nearly **10 stakeholder and agency meetings over the first two months** of the contract, the team was aggressive with **early outreach and continuous coordination with both agencies and the public**.

17. Firm Experience:

Firm name	**Vectura Consulting Services, LLC**		Past Performance Evaluation Category(ies)*	Traffic - TM	
Project name	I-10 ITS Scott to Lake Charles		Firm responsibility (prime or sub?)	sub	
Project number	H.013256.5	Owner's name	DOTD		
Project location	I-10 (District 07)		Owner's Project Manager	Roy Esteven, PE	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802, 225-379-2527, Roy.Esteven@LA.gov				
Services commenced by this firm		01/21	Total consultant contract cost ($1,000's)		unknown
Services completed by this firm		03/21	Cost of consultant services provided by this firm ($1,000's)		$20,162

Vectura performed a Level 2 **Traffic Management Plan** (TMP) for the construction of ITS equipment along I-10. The plan included the following activities:

- safety strategy that included a CAT Scan,
- LOS determination utilizing Citrix data,
- lane closure recommendations based on a queue analysis,
- cost estimate,
- and public information strategies.

Personnel Utilized on this project: Laurence Lambert, Prasanth Malisetty, Reece Rodrigue, & Kristen Farrington (100% performed in Louisiana)

17. Firm Experience:

Firm name	**Vectura Consulting Services, LLC**		Past Performance Evaluation Discipline(s)*	Traffic & CE&I	
Project name	Belle Chasse Bridge & Tunnel Replacement PPP			Firm responsibility (prime or sub?)	sub
Project number	H.004791	Owner's name	DOTD		
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)	current	Cost of consultant services provided by this firm ($1,000's)		211.890	

Vectura is providing the traffic engineering services for the Belle Chasse Bridge & Tunnel Replacement Project for improvements along LA 23. Vectura is responsible for the following tasks:

- Preliminary and final traffic studies
- Temporary and final traffic signal plans
- Assist the Prime with Traffic Management Plan (TMP)
- Response to request for information (RFI's)
- As-built plans for the traffic signals

Personnel Utilized on this project: Brin Ferlito, Laurence Lambert, and Reece Rodrigue (100% performed in Louisiana)

17. Firm Experience:

Firm name	**Marrero, Couvillon & Associates, LLC**		Past Performance Evaluation Discipline(s)*	Bridge	
Project name	**US 11 Lake Pontchartrain Bridge Rehab**		Firm responsibility (prime or sub?)	Sub	
Project number	4400002538 Task order H.010016	Owner's name	Louisiana Department of Transportation		
Project location	Orleans and St. Tammany Parishes		Owner's Project Manager	Justin Guilbeau	
Owner's address, phone, email	LA DOTD District 02, 504.253.6120, Justin.Guilbeau@la.gov				
Services commenced by this firm (mm/yy)		11/13	Total consultant contract cost ($1,000's)		Unknown
Services completed by this firm (mm/yy)		2021	Cost of consultant services provided by this firm ($1,000's)		$151

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)
The US. 11 bridge crossing the east end of Lake Pontchartrain in Orleans and St. Tammany Parishes, near the City of Slidell, was constructed in 1938. The bridge structure has two double-leaf movable bascule spans known as "North Draw" and "South Draw." The purpose of the project was to comprehensively rehabilitate the structure.

MCA was engaged to evaluate the condition of the Operator's House for both architectural and mechanical systems, make recommendations for repair/replacement, and to undertake the design for this work. Design must be sensitive to the historic nature of the bridge and operator's houses. The scope of services includes:

a. Site inspection to identify all architectural and mechanical systems to be rehabilitated, including modifications needed to meet codes and regulations, or to improve functionality and reliability.
b. Prepare a scope of work document with associated costs
c. Preliminary plans
d. Final plans and specifications
e. Construction cost estimate
f. Construction related engineering support.

Key Personnel:

Greg DeCoursey, AIA – Project Manager
Brian Miller, P.E. – Sr. Mechanical Engineer
Tom Johnson, P.E. – Sr. Mechanical Engineer

17. Firm Experience:

Firm name	**Marrero, Couvillon & Associates, LLC**		Past Performance Evaluation Discipline(s)*	Bridge	
Project name	**Harvey Canal LA 18 Bridge @ 4th Street Rehab**			Firm responsibility (prime or sub?)	Sub
Project number	4400002538 Task order H.010882	Owner's name	Louisiana Department of Transportation		
Project location	Jefferson Parish		Owner's Project Manager	Kurt Brauner	
Owner's address, phone, email	LA DOTD, 225.379.1933, kurt.brauner@la.gov				
Services commenced by this firm (mm/yy)		10/13	Total consultant contract cost ($1,000's)		Unknown$ $87
Services completed by this firm (mm/yy)		05/16	Cost of consultant services provided by this firm ($1,000's)		

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)
* If there is more than one past performance evaluation discipline included in the proposal, then indicate which past performance evaluation discipline(s) this project is being used to represent.

The LA18 Bridge crossing Harvey Canal in Jefferson Parish was constructed in 1975. It is a hydraulic cylinder driven, double, rolling leaf Bascule Bridge. The bridge operates about 600 times per month. The purpose of this project is a comprehensive rehabilitation of the structural, architectural, mechanical, and electrical components that will allow the bridge structure to remain in service an additional 30-40 years with routine maintenance.

MCA was engaged to evaluate the condition of the Operator's House for both architectural and mechanical systems, make recommendations for repair/replacement, and to undertake the design for this work. The scope of services includes:

a. Site inspection to identify all architectural and mechanical systems to be rehabilitated, including modifications needed to meet codes and regulations, or to improve functionality and reliability.
b. Prepare a scope of work document with associated costs
c. Preliminary plans
d. Final plans and specifications
e. Construction cost estimate
f. Construction related engineering support.

Key Personnel:

Greg DeCoursey, AIA – Project Manager
Brian Miller, P.E. – Sr. Mechanical Engineer

17. **Firm Experience:**

Firm name	**Fugro USA Land, Inc.**		Past Performance Evaluation Discipline(s)*	**Geotechnical**	
Project name	**Kansas Lane, Garrett Road Connector and I-20 Improvements**		Firm responsibility (prime or sub?)	Sub	
Project number	H.004774 & H.007300.6	Owner's name	State of Louisiana, DOTD		
Project location	Ouachita Parish, Louisiana		Owner's Project Manager	Unknown	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802, 225-379-1387, Kristy.smith2@la.gov				
Services commenced by this firm (mm/yy)	09/17	Total consultant contract cost ($1,000's)		2,853	
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)		279	

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

The Louisiana Department of Transportation and Development (LADOTD) is planning to widen Garrett Road and provide a connection from I-20 to Kansas Lane in the City of Monroe, Ouachita Parish. The project includes widening Garrett Road to four lanes from the intersection with Huntington Drive, north to Millhaven Road. The existing overpass along Garrett Road over I-20 will be straightened. A second overpass will be added south of I-20 and extending across the I-20 interchange. Garrett Road improvements includes a second two-lane bridge beginning south of Millhaven Road, passing over Millhaven Road and the Kansas City Southern (KCS) railroad (KCS) and ending north of Millhaven Road. The southern bridge approach will consist of an embankment, mechanically stabilized earth wall (MSEW) structure.

Fugro provided a geotechnical study that included a field study, laboratory testing, engineering analysis and data reporting to assist Lazenby & Associates, Inc., the prime design consultant, in the design of the new additions. Fugro's specific scope of work included the following:

- Developed a traffic plan and implemented traffic control for the field
- Drilled 22 pavement borings for a subgrade soil survey program
- Drilled 26 soil borings ranging from 70 to 120-ft each using LADOTD protocols
- MSE wall considerations
- Embankment settlement and slope stability calculations for various fill heights and surcharge evaluations
- Performed deep foundation engineering analysis and developed pile order lengths using AASHTO LRFD specifications

Project Team: Sam Bryant, PhD, PE, PG, Eric Marx, PE, Jack Koban, PhD, PE, PG, Mike Allen, Deborah Meyer-Sayer

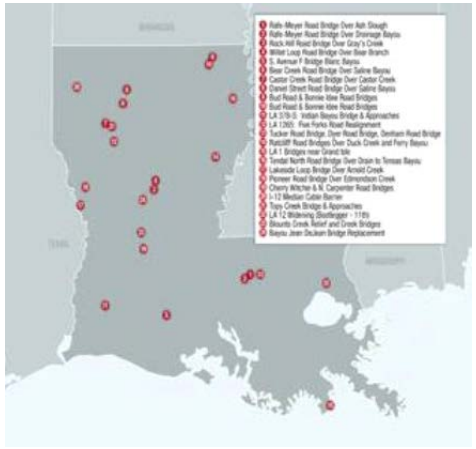
17. **Firm Experience:**

Firm name	**Fugro USA Land, Inc.**		Past Performance Evaluation Discipline(s)*	**Geotechnical**	
Project name	**LA DOTD Statewide Geotechnical Retainer IDIQ Contract (multiple)**		Firm responsibility (prime or sub?)	Prime	
Project number	700-66-0507	Owner's name	State of Louisiana, DOTD		
Project location	Statewide, Louisiana		Owner's Project Manager	Kristy Smith	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802, 225-379-1387, Kristy.smith2@la.gov				
Services commenced by this firm (mm/yy)	07/10, 01/20	Total consultant contract cost ($1,000's)		N/A	
Services completed by this firm (mm/yy)	05/17, 01/23	Cost of consultant services provided by this firm ($1,000's)		6,000	

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)
As part of a Statewide Geotechnical retainer contract awarded multiple times, Fugro performed geotechnical exploration and engineering related services for statewide projects under individual Task Orders for DOTD. The contracts have included over 25 task orders have covering a wide geographical area of Louisiana. The geotechnical investigations, sampling, and testing services provided for this contract include:

Field reconnaissance for equipment access	Drafting of subgrade soil surveys
Land clearing for equipment access	Instrumentation installation – LA 70 (Bayou Corne sinkhole)
Deep and shallow soil borings	Exploration location survey
ECPT soundings	Laboratory testing
Drafting of boring and ECPT logs	

Mr. Marx served as principal-in-charge for this program which included performing over 20 task orders for bridge structures across Louisiana with a total program cost of over $4M. The scope of work included soil borings (on land and in water), laboratory testing, engineering analysis, and design recommendations. Fugro was also retained to install geotechnical instrumentation. Mr. Marx negotiated and oversaw completion of task orders. Work was performed in accordance with DOTD protocols.

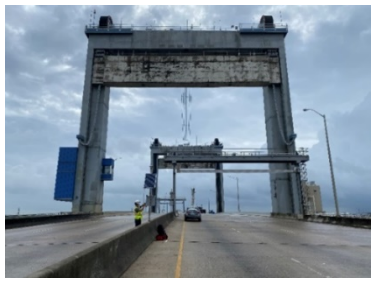


Fugro was once again selected for this contract in 2020 and has been awarded 4 task orders between 2021 and 2022 the largest of which included over 70 borings.

Project Team: Eric Marx, PE; Jack Koban, PhD, PE, PG; Sam Bryant, PhD, PE; Deborah Meyer-Sayer; Mike Allen, PG; Mike Hollier, PE; Viet Le, EI; Andrew Bull ,EI; Sheldon Collins

17. Firm Experience:

Firm name	**Wiss, Janney, Elstner Associates, Inc.**		Past Performance Evaluation Discipline(s)*	Bridge	
Project name	**Danziger Lift Bridge Repair**		Firm responsibility (prime or sub?)	Prime	
Project number	Contract 4400009424, H.000303	Owner's name	Louisiana Department of Transportation and Development		
Project location	New Orleans. LA		Owner's Project Manager	Mark Bucci	
Owner's address, phone, email	1201 Capitol Access Rd., 6th floor, Baton Rouge, LA 70802; (225) 379-1321; ZhengZheng.Fu@LA.GOV				
Services commenced by this firm (mm/yy)	07/19	Total consultant contract cost ($1,000's)	$1,386		
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)	$1,347		



The Danziger Lift Bridge is an electro-mechanical, tower drive vertical lift bridge that opened to vehicular traffic in 1984. The bridge was reportedly experiencing operational issues, which included the movable span no longer fitting into the available space between the towers as well as one corner of the bridge not seating properly. WJE was tasked with performing an inspection of relevant portions of the main span contributing to the reported operational issues, an in-depth inspection of the lift bridge machinery and electrical systems, and development of repairs to restore the long-term functionality and reliability of the bridge. WJE installed instrumentation and monitoring equipment during the field investigation to evaluate the bridge's operations over an extended period. Based on the findings from our investigation, WJE prepared emergency repair plans and specifications to address some of the operational issues with the bridge. Significant findings and the associated remedies included the following.

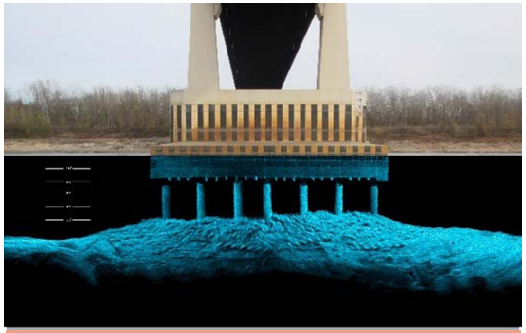
- Improving the lift span riding surface on the steel orthotropic deck with the installation of polyester polymer concrete repairs.
- Identification of pinion shaft bearing damage and the subsequent restoration of the pinion shafts and bearings.
- Addressing the contact of the lift span during warm temperatures with the approach spans by monitoring the joint movements and identifying that daily thermal movements of the approach spans were causing the issue, and that by cleaning the expansion joints, the issue was alleviated.
- Design of a new lift span skew control system after existing components were removed from the bridge and could not be relocated or replaced in kind.
- Design of electrical controls for the clutches associated with the span drive differentials.
- Strain gage testing to measure span balance and implementation of counterweight changes to improve seating of the span.
- Strain gage testing also showed that the span drive differentials on both towers were not functioning properly requiring coordination with the manufacturer to properly adjust the clutches in the differentials.
- Inspection of trunnion bearings and the installation of an automated acoustic monitoring system to assess bearing performance until scheduled replacements are required.

Members involved: J. McGormley (Project Manager), S. Lauer (Project Engineer), M. ElBatanouny (Project Engineer), J. Williams (Project Mechanical Engineer), G. Rees (Project Electrical Engineer).

17. Firm Experience:

Firm name	**Moffatt & Nichol**		Past Performance Evaluation Discipline(s)*	Bridge	
Project name	**2017 Retainer Contract for Underwater Bridge Inspections, Statewide**		Firm responsibility (prime or sub?)	Prime	
Project number	4400009104	Owner's name	Louisiana Department of Transportation and Development		
Project location	Louisiana		Owner's Project Manager	Haylye Brown, PE	
Owner's address, phone, email	1212 East Highway Drive, Baton Rouge, Louisiana 70802 / 225.379.1500 / haylye.brown@la.gov				
Services commenced by this firm (mm/yy)	06/17	Total consultant contract cost ($1,000's)		$1,346	
Services completed by this firm (mm/yy)	12/21	Cost of consultant services provided by this firm ($1,000's)		$980	

In June 2017, Moffatt & Nichol (M&N) began a four-year statewide retainer contract with LADOTD to provide Levels I, II, and III NBIS underwater bridge inspections throughout Louisiana. All inspections were completed in accordance with current FHWA, CFR, AASHTO, and LADOTD standards and guidelines. M&N has performed over 215 underwater bridge inspections under this contract and over 900 inspections total. For each inspection, M&N provided a detailed inspection report within 30 days and entered inspection data into LADOTD's asset management tool (AssetWise). As part of M&N's quality control process, each inspection report was reviewed a minimum of three times, with subsequent reviews performed by team members with increasing levels of experience/ qualifications.

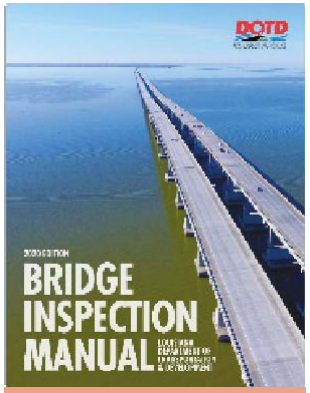


M&N provide Levels I, II, and III NBIS underwater bridge inspections throughout Louisiana

Of particular note, Moffatt & Nichol was tasked with the development of the first comprehensive Bridge Inspection Manual (BIM) for LADOTD Bridge Program. Chace Hulon, PE, was Chief Editor. The BIM is designed as a single, centralized reference manual and aligns the goals of the Bridge Inspection Office Headquarters with all nine DOTD districts. It also allows for better communication and quality management between the DOTD project managers, their local bridge owners, and their consultants.

The BIM was designed to be used electronically on tablets as a reference file accessible to all DOTD bridge inspection team leaders. It includes nine chapters intuitively ordered in a systemic fashion with hyperlinks throughout for quick referencing to vital documents. It also allows for documented annual revisions or critical updates following federal policy changes.

Moffatt & Nichol compiled all DOTD reference material, outlined the BIM, held routine (weekly) progress meetings with DOTD PM, FHWA representative, & subject matter experts on the committee, provided statewide programmatic guidance with a national perspective, verified compliance with FHWA's 23 National Bridge Inspection Program Metrics, & presented BIM at a DOTD statewide conference. 9840.00



M&N developed LADOTD's first comprehensive Bridge Inspection Manual

Nature of firm's responsibility: Prime Consultant; Overall responsibility for entire contract.
Firm members involved include: Chace Hulon, PE; Steven Armstrong, PE; Joshua Martinez, PE; Jeffrey Gazarek

17. Firm Experience:

Firm name	**Meyer Engineers, Ltd.**		Past Performance Evaluation Discipline(s)*		Facilities/Landscape Management (Not Rated)
Project name	**Causeway Bridge Bascule Bridge Tender's House**			Firm responsibility (prime or sub?)	Sub
Project number		Owner's name	Greater New Orleans Expressway Commission sub to GEC		
Project location	Jefferson Parish		Owner's Project Manager	Mr. Cary A. Bourgeois, P.E.	
Owner's address, phone, email	8282 Goodwood Blvd., Baton Rouge, LA 70806 | P: (225) 405-9513 | E: cbourgeois@gecinc.com				
Services commenced by this firm (mm/yy)		01/22	Total consultant contract cost ($1,000's)		$25
Services completed by this firm (mm/yy)		On-Going	Cost of consultant services provided by this firm ($1,000's)		$25

The project includes the rehabilitation of the upper two levels of the Bridge Tender's House located on the Causeway Bridge, Lake Pontchartrain, Louisiana. ***Meyer Engineers, Ltd. (Meyer)*** reviewed the existing conditions of the structure, and in conjunction with Gulf South Engineers & Consultants have determined that the Scope of Work is as follows:

- Removing and replacing all existing windows at the operator's level with new, impact resistant glazing. All new glazing will be tinted or have interior shading devices installed to minimize heat gain into the tender's work environment.
- Reconfigure one of the tender's windows into an impact resistant, operable door to allow direct access to the catwalk outside.
- Paint all interior surfaces.
- Remove and replace all finish flooring with new material.
- Remove and replace all furniture/millwork with new construction to facilitate a more efficient layout for tenders.
- Provide better lighting for nighttime operations.
- Reduce ambient noise by installing acoustical absorbent materials.
- Upgrade existing air conditioning units and ventilation.
- Remove and replace stair tread anti-slip strips.
- Recover existing roof surface with new seamless waterproofing membrane.
- Repair access ladder to roof and install new roof safety railings.
- Patch and repair any structural damage within the scope of work.

The lower level holds the critical electronic equipment vital to the operation of the bridge. Even though the room is provided with adequate air conditioning, the dispersal of tempered air from this room percolates into the upper two floors. This adds to the imbalance in the ambient air temperature making it uncomfortable for the tenders. This imbalance will be investigated and will be rectified as part of this project.

Team Members: ***James Papia \| Alfonso Romero***

100% of the work for this project was performed in Louisiana. ***Construction Cost: $226K***

17. Firm Experience:

Firm name	**C. H. Fenstermaker & Associates, L.L.C.**		Past Performance Evaluation Discipline(s)*	Road	
Project name	**US 90 (I-49 South) Albertson Parkway to Ambassador Caffery**		Firm responsibility (prime or sub?)	Sub	
Project number	H.010620	Owner's name	Louisiana Department of Transportation and Development		
Project location	Lafayette Parish, LA		Owner's Project Manager	Peggy Jo Paine, P.E.	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802-4438, (337) 475-4287, Peggy.Paine@la.gov				
Services commenced by this firm (mm/yy)	02/13	Total consultant contract cost ($1,000's)		$4,939	
Services completed by this firm (mm/yy)	01/20	Cost of consultant services provided by this firm ($1,000's)		$3,082	

Describe the project including the firm's role and members involved. (Highlight staff to be used in this proposal.)
* If there is more than one past performance evaluation discipline included in the proposal, then indicate which past performance evaluation discipline(s) this project is being used to represent.

US 90 (I-49 SOUTH) was a $69.4 million award-winning construction project to widen U.S. Highway 90 from four lanes to a six-lane, control-of-access facility designed to interstate standards. Fenstermaker was the lead design firm through a joint venture with James Construction Group (Primoris) for this high-profile design-build project. The design included geometric improvements to several miles of frontage roads; construction of a grade separated, six-lane overpass structure over the existing BNSF railroad facility; a grade separated, six-lane overpass interchange over Albertson Parkway; associated mainline entry/exit ramps to connect overpass structures and frontage roads; new signalized intersections; intersection design; Mechanically Stabilized Earth Retaining Walls (MSEW); and drainage structures.

STAFF TO BE USED IN THIS PROPOSAL
Travis Bodin, PLS, PMP
Dax Douet, P.E.
Luke Hebert, P.E.
Bradford Millett, PLS, EI

17. Firm Experience:

Firm name	**Bridge Diagnostics, Inc. (BDI)**		Past Performance Evaluation Discipline(s)*	Bridge	
Project name	**Advanced Inspection of City Park Lake Bridges**		Firm responsibility (prime or sub?)	Prime	
Project number	H.009730.5	Owner's name	Louisiana Department of Transportation and Development		
Project location	Baton Rouge, Louisiana		Owner's Project Manager	Wei Peng	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802, (225) 379-1486, wei.peng@la.gov				
Services commenced by this firm (mm/yy)	08/19	Total consultant contract cost ($1,000's)		$86	
Services completed by this firm (mm/yy)	07/20	Cost of consultant services provided by this firm ($1,000's)		$61	

BDI performed a NHI visual inspection of bridges 052690 and 052680 carrying I-10 over City Park Lake, which was supplemented by a comprehensive multi-technology nondestructive evaluation (NDE). 052690 and 052680 are a set of sister bridges that each carry 7 spans of I-10. The superstructure is a continuous steel multi-girder design with pin and hanger details and built-up members. Both the EB and WB structures consists of three built-up continuous girders spaced at 20' with WF diaphragms and ST Lateral Wind Bracing. The substructure of the bridge consists of cast in place reinforced concrete bents on round cast-in-place concrete piles and precast concrete piles. NHI visual inspection encompassed the entirety of the structure, while NDE was focused on the reinforced concrete bridge deck and substructure units. The NDE of the substructure included infrared thermography to locate and quantify square footages of delaminations of the piers and pier caps. The NDE of the bridge deck included Infrared Thermography (IR), High-Resolution Imagery (HRI), Deck Acoustic Response (DAR), and GRP, all at highway speeds, to locate and quantify square footages of shallow delaminations and rebar cover of the bridge deck. The visual inspection was conducted using a 360 camera and remote imaging techniques. Footage was collected of the entirety of the substructure and superstructure and reviewed per NHI procedures for any notable deficiencies or maintenance items. The final deliverables of the NDE and visual inspection included the following:

- Stitched High-Resolution images of the entirety of the bridge decks, with overlaid IR, GPR, DAR, and GPR results
- Total quantities of patching, spalling, and delaminations of the bridge decks
- Findings of the visual inspection with all photos, descriptions, and locations of any notable deficiencies and/or maintenance items.
- Synthesis of the visual inspection and NDE to obtain AASHTO Element Level Condition states quantities for the deck and superstructure, which were then uploaded into the owner's asset management program.

Scopes of Work Relevant to the contract:
LADOTD PROJECT INSTRUMENTATION
NONDESTRUCTIVE TESTING

Key Members: Shane Boone, Subject Matter Expert; Charlie Young, Project Manager and Lead Bridge & NDE Inspector

17. Firm Experience:

Firm name	**Bridge Diagnostics, Inc. (BDI)**		Past Performance Evaluation Discipline(s)*	Bridge	
Project name	**IDIQ Contract for Complex Bridge Load Rating Services Task 5 – Off-System Bridge Ratings and Evaluation Statewide**		Firm responsibility (prime or sub?)	Sub	
Project number	4400010099	Owner's name	Louisiana Department of Transportation and Development		
Project location	Various, Louisiana		Owner's Project Manager	Wei Peng	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802, (225) 379-1486, wei.peng@la.gov				
Services commenced by this firm (mm/yy)		10/21	Total consultant contract cost ($1,000's)		Unknown
Services completed by this firm (mm/yy)		Present	Cost of consultant services provided by this firm ($1,000's)		$456

As part of the scope of Task Order 5 of this contract, BDI performed live-load testing and field-verified load ratings on ten (10) off-system structures. These structures were selected from a list of structures that were determined to require load posting based on load ratings previously performed in this contract and included three (3) reinforced concrete slab bridges and seven (7) metal culverts of various types/configurations. These selected structures are intended to be representative of a larger sample set of similar structures that the results are intended to make broader assumptions about the group of bridges as a whole.

Live load tests were performed to aid in evaluating the structures in their current condition. The overall goal of these tests was to better understand the structure's behavior and in turn provide field-verified load ratings for each structure. To achieve this goal, the collected structural responses were used to generate a field-verified finite-element model (FEM) of the structure.

This field-verified FEM was then used to compute field-verifed load ratings according to the AASHTO Manual for Bridge Evaluation (MBE) and the LADOTD Bridge Design and Evaluation Manual (BDEM).

Key Members: Brett Commander, Principal Engineer; Brice Carpenter, Lead Analysis/Rating Engineer; Jesse Sipple, QC Engineer/Project Manager

Scopes of Work Relevant to the contract:

- LADOTD Project
- Assessment of Instrumentation Needs
- Instrumentation Plan Preparation
- Field Instrumentation Installation
- Data Acquisition and Communication
- Instrumentation maintenance and Problem Resolution
- Load Testing, Data Analysis, and Load Rating

17. Firm Experience:

Firm name	**KGC Environmental Services, Inc.**		Past Performance Evaluation Discipline(s)*	CE&I / OV	
Project name	**US 90 Atchafalaya River Bridge Rehabilitation**		Firm responsibility (prime or sub?)	Sub	
Project number	H.009461	Owner's name	LADOTD		
Project location	Morgan City, Louisiana		Owner's Project Manager	Nicholaus Ray	
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802, 337-278-5340, Nicholaus.Ray@la.gov				
Services commenced by this firm (mm/yy)	04/19	Total consultant contract cost ($1,000's)		$2,324	
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm ($1,000's)		$1,050	

100% of the work was completed and performed by our Louisiana office.

The project consisted of the cleaning and painting of the US 90 Atchafalaya River Bridge main span.

KGC's scope was the same as requested by this RFP:

- ✓ Ambient air monitoring for tsp-lead
- ✓ Visual emission and visible accumulations assessments
- ✓ Oversight of storage, labeling, sampling, and transportation of spent material (waste)

generated

- ✓ Reviewed environmental plans and permits for compliance with applicable federal, state

and local regulations.

Members Involved: Kevin Guth, Justin Beitzel, Chris Price and Sammy Phillips

18. Approach and Methodology:

Modjeski and Masters has extensive experience in LADOTD movable bridge design projects and is well versed in the tasks required during both design and construction. Typical design and construction project schedules are shown in the tables below.

Design Project Task List
Notice To Proceed (NTP) Issued
Design Kickoff Meeting (virtual)
Initial Site Visit (Scoping Inspection)
30 & 60% Design Submissions
Site Visit (Detail Confirmation)
95, 98 & 100% Design Submissions
Bid Support
Bid Analysis
Project Closeout

Construction Project Task List
Notice To Proceed (NTP) Issued
Pre-Construction Meeting
Submittal Review / RFI Response
Site Visit #1 – Shop Inspections (Struct/Mech/Elec)
Site Visits #2 & #3 – 30 & 60% Progress Inspections
Site Visits #4 & #5 – Initial Startup Testing & Operational/System Testing
Site Visits #6 & #7 – Pre-Final (Punch List) & Final Acceptance Inspections
Review O&M & As-Builts
Project Closeout

1.1.a. Bridge Design Services (non-emergency): Upon receipt of a task order, our team will submit a proposal delineating sub tasks with hours and direct costs. Upon NTP, we will review the documentation available and arrange a Kickoff meeting (virtual) to discuss the task to make certain we understand the work to be performed and desired outcomes. Invitations will be sent to all stakeholders in the project which typically consist of LADOTD Headquarters and District personnel, representatives from the affected Parish/Local Government, USCG / waterway users, as well as any required subconsultants. Personnel will be selected to perform a site visit Scoping Inspection to assess current conditions related to the task order (note that this is normally different than Bridge Inspection item 4). During the Scoping Inspection we have found it very beneficial to include discussions with those that operate and maintain the bridge to get their unique input. A brief report will be developed with any recommended scope adjustments identified. A virtual meeting will be held to review the Scoping Inspection report, recommendations, and finalize the scope of work. Preliminary design will provide basic rehabilitation concepts that are developed to the 30% level. This will be submitted for department review along with a listing of all anticipated drawings for final design. Upon receipt of comments, design calculations and concepts will be fully developed with drawings progressed to the 60% level and submitted for review. We will perform a second site visit at this time to verify design concepts and details will interface properly with existing field conditions. We will request to have DOTD personnel present to walk through the site with the 60% plans. Design details and constructability can be addressed at this time. A cost estimate will be prepared for each submission beginning at 60% plans. Cost estimates will be organized by LADOTD standard pay items. The 95% submission is considered Pre-Final and the 98% submission is considered Final. The 100% submission will include packaging requirements of the Contract Documents ready for bidding. Prior to all submissions, design and production documents will be thoroughly checked in accordance with the M&M QC/QA policy and the LADOTD Bridge Design Section policy on QA/QC. During the bidding phase M&M will provide support and assistance by responding to contractor questions posted in Falcon. If a plan revision is required, M&M will create revised plans per LADOTD standards, marking all plan changes with a revision bug, and update affected items and cost estimate. M&M will perform a bid analysis comparing all contractor bid prices per pay item to the design cost estimate and inform the DTOD project manager of any significant discrepancies. Once the

bid analysis is complete, the design project will be closed out and final invoicing will occur. Construction Related Engineering Services (CRES) would be separately negotiated. The typical milestones for movable bridge CRES were provided previously in our Construction Project Task List.

1.1.b. Bridge Design Services (emergency): These situations can occur due to natural disasters or component failure from everyday use and environmental exposure. When a movable bridge is inoperable in any position, we understand that the owner needs immediate assistance. M&M will immediately dispatch local movable bridge engineers to the site. Simultaneously, we will work the problem over the phone or video chat with the owner. If the problem is not resolved prior to arrival on-site, we will assess the field conditions and evaluate if a temporary solution is safe and feasible which could include drifting a bridge closed, a temporary operating mode, safely bypassing a control system interlock (i.e., false limit switch indication), etc. After the emergency is resolved, design services to restore reliable operation resort back to non-emergency (1.1.a).

1.2. Sampling, Instrumentation, and NDT: SAMPLING: On occasion, data on bridge component properties is not known and requires sampling. Commonly sampled items include air, asbestos, steel, concrete, lubricants, and paint (adhesion and lead). We have teamed with Bridge Diagnostics, Inc. to perform any required Sampling. INSTRUMENTATION: M&M has extensive in-house Instrumentation capabilities including: strain gaging (structural and bridge balancing), accelerometers, high-precision displacement, angle/tilt meters, thermal scanning, and current/power/resistance testing. For diagnosing operational characteristics of movable bridges, a very effective tool is dynamic strain gaging of the machinery. It is like an EKG of the movable bridge that can be incredibly beneficial to our experienced personnel that know how to interpret the data. Information that can be obtained includes motor loading over time, acceleration and deceleration characteristics, braking loads, system friction, cyclical loading (sometimes due to bent shafting), starting loads (related to static friction), torque limiting (or lack thereof) of the drive motors/control system, seating loads, load sharing of main pinions (effectiveness of differential), and imbalance condition. We have performed dynamic strain gaging on bridges for over 30 years on hundreds of movable bridges. M&M also has decades of experience structural monitoring, including targeted, long-term (health monitoring), and load distribution (usually for load rating). We maintain all strain gages and testing equipment in-house so we can utilize any of the mentioned testing methods at any time. Furthermore, we maintain several instrumentation data collection systems, including wireless systems. NDT: M&M regularly utilizes several NDT methodologies, including ultrasonic testing (6 UT Certified persons), mag-particle testing, thickness (d-meters), and dye-penetrant. All UT testing equipment is maintained in-house and is ready for immediate deployment.

2. Geotechnical: Fugro will conduct soil borings and subsequent laboratory testing in general accordance with LADOTD 2016 Standard Specifications for Roads and Bridges Manual and applicable Geotechnical Guidelines. We anticipate this including:

- A detailed site visit to evaluate accessibility of proposed exploration locations and mark with flagging for one-call clearance.
- Identify all exploration locations in the field using a handheld GPS or similar with accuracy equal to or less than ten (10) feet.
- Borings will be sampled continuously from existing grade to a depth of 16-ft, then at 5-ft intervals to 100-ft or completion whichever comes first. Data will be logged in general accordance with the *Standard Practice for Description and Identification of Soils (Visual-Manual Procedures)* (ASTM D2488).
- Cohesive soils will be sampled using a thin-wall tube sampler in general accordance with the *Standard Practice for Thin-Walled Tube Sampling of Soils for Geotechnical Purposes* (ASTM D1587). Minimum 3 inches and sample length will be 24-inches.

- Granular soils will be sampled using a split-spoon sampler in general accordance with the *Standard Test Method for Standard Penetration Test and Split-Barrel Sampling of Soils* (ASTM D1586). Split-spoon samples will be collected for 18-inch sample length unless SPT indicates refusal to be defined as greater than 25 blows per 6 inches or 100 total blows per 18 inches.
- Estimate cohesive soil shear strengths in the field using a pocket penetrometer and/or Torvane.
- Record SPT N-values in granular soils.
- Measure short-term depth-to-water in open boreholes during drilling.
- Backfill the borings with cement-bentonite grout upon completion of drilling and sampling activities.
- Undisturbed samples will be capped and sealed to preserve natural moisture conditions and will then transported to our lab for extrusion and laboratory testing.

The laboratory testing program will be developed to establish adequate information on soil strength and classification parameters to facilitate our analyses. The actual laboratory testing to be performed will be developed once the field logs have been reviewed. At this time, we anticipate performing the following laboratory work:

- Soil classification tests, including but not limited to, natural moisture contents & unit weights (ASTM D2216), liquid and plastic limits (ASTM D4318), grain-size analyses (ASTM D1140/D6913/D422), and organic content (ASTM D2974) (if necessary);
- Strength tests including unconsolidated-undrained triaxial compression tests (ASTM D2850) and unconfined compression tests (ASTM D2166). 75% of cohesive samples will be tested for strength, index properties, and classification in accordance with Louisiana DOTD Geotechnical Guidelines. Grain size testing will be conducted at a rate sufficient to classify soils.
- One-dimensional consolidation tests (ASTM D2435), if necessary.

3. Road Design and Traffic: M&M will perform preliminary and final roadway design with support provided as needed from Arcadis, Meyer Engineers, and/or Fenstermaker. The projects will be designed to PRR, 3R, or new construction standards following AASHTO and LADOTD requirements. Services to be provided may include but are not limited to roadway horizontal and vertical alignment, pavement geometrics, drainage design, alternatives analysis as required, erosion control, ADA design compliance, guardrail layout, utility coordination, and quantity calculations. Temporary traffic control plans will be developed to ensure traffic safety for workers and roadway users during construction activities. Early in the design process, the design criteria to use for a project will be developed, with input from LADOTD, prior to initiating design activities. Roadway Engineers will assist in managing the flow of information between survey, roadway, utility, and right-of-way design. Roadway engineers` will also work in conjunction with the bridge engineer of record and other disciplines to ensure that all issues relating to the project are evaluated successfully. Plan preparation will adhere to LADOTD's drafting and software standards. Bentley Inroads and MicroStation software will be used for roadway design. ProjectWise will be used as the document management software for plan development to ensure integration with LADOTD and foster collaboration between different disciplines. Any required Traffic Engineering Services will be provided by Vectura Consultants with support provided as required by Arcadis and/or Fenstermaker. All required traffic studies and/or analysis will be conducted in accordance with the Traffic Engineering Process and Report (TEPR) guidelines. Traffic data collection and analysis will be used to identify operational and safety needs of the project and to develop and evaluate the effectiveness of potential alternatives. The consultant team is experienced with a wide range of traffic study applications and preferred tools including HCS, SIDRA, and Synchro. Our team will work closely with LADOTD to develop a traffic scope that meets the specific needs of the project and facilitates a data-driven approach to alternative development and evaluation. Similarly, the consultant team is experienced with a wide range of traffic design applications including permanent

signing, signal design, and permanent striping. Traffic design services will be conducted in accordance with associated state and federal guidelines including the LADOTD Sign Manual, LADOTD Signal Manual, LADOTD Standard and Special Details, Manual on Uniform Traffic Control and Devices, etc. The consultant team will develop a Transportation Management Plans (TMP) as applicable to each task order in accordance with EDSM VI.1.1.8. The level of TMP will be determined based on the project's location and impact to the roadway network. Determining the TMP level prior to project scoping is imperative to ensuring that all TMP requirements are included in the scope and that all necessary traffic data is collected to support any required analysis. The Consultant Team will coordinate closely with the LADOTD DTOE and District Staff to ensure a mutual understanding of local needs and that proposed mitigation measures are appropriate for the area.

4. Bridge Inspection: Movable Bridge inspections will include an overall Team Leader that will be responsible for inter-discipline coordination and interface with DOTD. Inspection will typically require multiple bridge operations so the Team Leader will coordination with local agencies to minimize traffic interruptions. For safety, M&M will submit a "Lock-out / Tag-out" procedure customized for each movable bridge prior to arrival on site. The procedure will be reviewed by all personnel at the bridge before work each day and again if there is a change in the bridge operator. Depending on the type of inspection, representative mechanical components may require disassembly for inspection which could impact operational availability for marine traffic. Any such projected marine interruptions will be coordinated with the USCG. To minimize traffic and marine impacts, M&M can implement: technical (rope) access, use of "bucket boat", night-time or off-peak hrs, or increase the number of personnel. All inspections shall be in accordance with the AASHTO Movable Bridge Inspection Manual with the type (level) of inspection desired by DOTD. Structural inspections shall be NBIS In-Depth and may include element-level and coating system inspection by one of our certified NACE inspectors. Any required underwater inspection shall be performed by team member Moffatt Nichol. A detailed inspection report will be submitted with condition assessment, photos, sampling/testing reports, repair/rehabilitation/replacement recommendations with ballpark costs.

5. Environmental Permitting: Arcadis and/or Fenstermaker will perform any required Environmental services. For each task order, the Consultant Team's ecologists and environmental professionals will complete a desktop review of available GIS databases to identify previously recorded environmental resources in the project area, including but not limited to scenic streams, wetlands and other waters of the U.S., navigable waters, levees, protected species habitat, and cultural resources. Field investigations will then be initiated to delineate the extent of environmental resources present within project limits and obtain GPS locations for inclusion in design plans. Environmental staff will then work with the design team to identify impacts to environmental resources and associated permitting requirements based on preliminary design. Our first priority will be to design the project to avoid and minimize resource impacts to the maximum extent practicable while still meeting the project need and purpose in a cost-effective manner. For complex project, pre-application meetings will be scheduled with lead and participating agencies to identify all project concerns and required information early in plan development and ensure all concerns are addressed and all required information is provided in permit applications. It has been our experience that this approach can streamline the permit process by reducing agency comments and associated delays. Once the project has progressed to final design and required permits have been identified, our environmental team will work with design to prepare necessary permitting exhibits and supporting information required for complete permit applications. Upon permit application submittal, we will continue to coordinate with resource agencies throughout the review process to ensure all information has been received for timely reviews.

19. Workload:

For all contracts where a firm on the team is a prime consultant or sub-consultant and where a) the consultant selection was made by DOTD, and b) a contract was executed by the consultant and the contracting entity by the date the advertisement for this proposal was posted, list all work meeting the following criteria:

1) one of the team's firms is responsible for the performance of the work;
2) authorization to perform the work has been provided, as provided in the contract between the consultant and the contracting entity;
3) the work has not yet been performed and invoiced; and
4) the work is not currently suspended for an indefinite period of time.

For indefinite delivery/indefinite quantity (IDIQ) contracts, list open Task Orders individually.
List only the portion of the fees attributable to firms on the team.

Firm(s)	Past Performance Evaluation Discipline(s) *	State project number	Project name	Remaining Unpaid Balance**
Modjeski and Masters, Inc.		S.P. 700-66-0461 H.005358.5	Bridge Scour Analysis Statewide	
		S.P. 700-66-0486	Engineering Services for Bridge Preservation Retainer 440000668 Statewide	
	Bridge	H.009479	West Larose Vertical Lift Bridge Rehabilitation - Supplement No. 2	$6,352
	Bridge	JN 3144	Expert witness services in bridge design, construction, repair and forensic analysis	$274,617
		Retainer Contract 4400002538	**Engineering Services for Bridge Preservation Retainer Statewide**	
	Bridge	H.010882.5	LA 18: 4th Street Bridge Rehabilitation (Supplement No. 2) Construction Services Jefferson Parish	$44,810
	Bridge	H.010882.6	4th Street Bridge Rehabilitation Paint (Supplement No. 3) Route LA 18	$7,400

Modjeski and Masters, Inc.	Other	H.003014.6	I-10: LA 347 to Atchafalaya Fldwy Bridge (Const. Svcs.)	$16,430
		Retainer Contract 4400005395	**Construction Engineering and Inspection with Painting Statewide**	
	CE&I/OV	H.011705.6	US 11 Lake Pontchartrain Bridge Rehabilitation - Phase 2	$8,238
	CE&I/OV	H.011494.6	US 90 Atchafalaya River Bridge Rehabilitation	$101,223
		Retainer Contract 4400004921	**Complex Bridge Rating (on-system trusses and other complex bridges) Statewide**	
	Bridge	H.009859.5	Ten Truss Bridges - Load Rating and Evaluation	$63,337
	Bridge	H.009859.5	Sunshine Bridge Load Rating after Collision Repair - Task Order 4	$13,605
	Bridge	H.012485.1	Load Rating of 354 Off-System Bridges - Task Order 6	$0
	Bridge	H.009859.5	Load Rating of 14 Complex Bridges	$314,038
		Retainer Contract 4400005774	**Retainer Contract for Bridge Preservation Statewide**	
	Bridge	H.001234.5	Port Allen Canal Bridge	$64,231
	Other	H.010601.6	I-10: LA 328 to LA 347 - CRES	$47,334
	Other	H.011137.5	I-12: LA 1077 to US 10 Roadway and Navigation Lighting	$38,177
		IDIQ Contract 4400012382	**ID/IQ for Bridge Preservation Statewide**	
	Bridge	H.011705.6	US 11: Lake Pontchartrain Bridge Rehab Phase 2 (HBI)	$3,015
	Bridge	H.012343.6-1	LA 70: Mississippi River Bridge Phase III	$25,598
	Bridge	H.013179.6	LA 1064: Little Natalbany River Bridge Replacement - Construction Svcs.	$14,727
	Bridge	H.013183.6	LA 16: Tangipahoa River Bridge Replacement - Construction Svcs.	$33,963
	Bridge	H.013193.6	US 61: Thompson Creek Bridge - Construction Svcs. Rehabilitation and Replacement	$804
	Bridge	H.013829.5	I-10 and LA 47: Overhead Sign Upgrade	$0
	Bridge	Task Order 2	LG Bridge Design Example and Parametric Studies	$74,644
	Bridge	H.012343.6	LA 70: Mississippi River Bridge Phase III – Legal	$13,830

Modjeski and Masters, Inc.	Bridge	H.000303.6	Danzinger Bridge Rating and Repair	$54,259
	Bridge	H.009859.5	Strengthening of US 90 Bridge 201810	$81,310
	Bridge	H.003144.6-2	Luling Bridge Cable Stay Replacement Project	$463,624
	Other	H.011235	Subconsultant: I-49 South at Verot School Road - Lighting	$32,989
		H.004791	Subconsultant: Belle Chasse B7T Replacement P3 - Electrical and Structural	$52,786
		IDIQ Contract 4400017263	**ID/IQ for Bridge Preservation Statewide**	
	Bridge	H.010603.6	I-20 Mississippi River Bridge at Vicksburg - Monitoring	$11,093
	Other	H.013866.6	I-12: LA21 to US190 Navigation & Roadway Lighting	$74,626
	Other	H.003184.6	I-10: Texas State Line - E. of Coone Gully - CRES	$71,589
	Bridge	H.011485.6	LA336-1: Bayou Teche Bridge Rehabiliation	$119,553
	Other	H.012889.5	I-20 Rehabilitation - Roadway Lighting (Pines Road to I-220)	$120,034
	Bridge	H.000263.5	Chef Menteur Pass Bridge & Approach	$27,466
	Bridge	H.011965.5	LA 47: IWGO Bridge Rehabilitation (HBI) LA 47: Over the Intercoastal Waterway Gulf Outlet (IWGO)	$15
	Bridge	H.009859.5	Prien Lake Bridge Structural Rating	$18,639
	Bridge	H.004420.5	Barataria Preliminary Fender Design	$2,120
	Bridge	H.014280.5	Bayou Ramos Bridge Girder Study	$46,373
	Bridge	H.014673.5	I-49 US 165 Debonded PPC Girder Rehab	$178,849
	Bridge	H.014587	LA 302: Kerner Ferry Bridge Repairs PH 2 - Constr Support	$91,090
	Bridge	H.013946.6	Sunshine Bridge Fender Construction - 2021	$77,934
	Bridge	H.009859.5-2	Load Rating of two existing bridges	$211,691
	Bridge	H.004420.5	Bayou Barataria Bridge at Jean Lafitte - Supp 1	$681
	Bridge	H.014406.6	Houma Navigation Canal Swing Bridge - Electrical Repair CRED	$27,968
	Bridge	H.004100	Subconsultant: LA 415 to Essen Lane on I-10 and I-12 CMAR RCP Plans	$1,793,611
	Bridge	H.001234.6	LA 1: Port Allen Canal Bridge Replacement - Phase 1 CRES	$274,676
		IDIQ Contract 4400020063	**ID/IQ for Electrical Services Statewide**	
	Bridge	H.014212.6	I-10 Atchafalaya Bridge Navigational Lights Repl	$87,288

Arcadis	Environmental	H.002397.2	LA 16 (Pete's Hwy) Interstate 12 Interchange Route	$20,109
		H.011328.2	I-49 South (Ricohoc to Berwick)	$828,788
		4400019338	Rural Bridge Replacement Initiative Phase II – Multiple State Project Numbers – Districts 02, 03 ,07, 61, and 62	$395,228
	Traffic	H.011328.2	I-49 South (Ricohoc to Berwick)	$176,056
		H.003370	I-220/I-20 Interchange IMP & BAFP Access Design Build	$15,000
		H.004100.5	I-10: LA 415 to Essen Lane on I-10 and I-12	$597,523
		H.005121	LA 1/LA 415 Connector	$108,947
		H.972419.1	SHSP Update /Regional SHSP Marketing/Advertising Support	$16,635
		H.012018.6	Adaptive Traffic Signal Design and Implementation	$12,608
		H.014305.1	US 61: Cardinal Drive to Bert Street	$24,808
		H.013322.1	LA 3040 Feasibility Study	$56,672
		H.013797	LA 30: EBR PL – I-10	$493,720
	Road	H.011328.2	I-49 South (Ricohoc to Berwick)	$353,273
	ITS	H.013868.5	ITS Program Management and Operations (2021)	$108,591
		H.013868.6 (A)	ITS Routine Maintenance Engineering and Inspection (ME&I) (2021)	$15,897
		H.013868.6 (B)	ITS Responsive/Emergency Maintenance Engineering and Inspection (ME&I) (2021)	$21,401
		H.013868.5	ITS Program Management and Operations (2022)	$668,651
		H.013868.6 (A)	ITS Routine Maintenance Engineering and Inspection (ME&I) (2022)	$674,471
		H.013868.6 (B)	ITS Responsive/Emergency Maintenance Engineering and Inspection (ME&I) (2022)	$154,105
			PO No. 2000588785 Scott Tower Cable and Grounding Repair, PO No. 2000634027 I-20 @ I-220 CCTV Repair For The Site in Shreveport, LA, PO No. 2000644636 I-10 @ LA 22 DMS CCTV Install	$14,700
		H.004100.5	I-10: LA 415 to Essen Lane on I-10 and I-12	$231,299
	CE&I/OV	H.011220.6-1	I-10 CBD2 Carrollton-Lafitte Ave and Supplement No. 1	$80,338
		H.012876.6	US 90Z (I-10 Magnolia Street) Supplement No. 1	$26,829

Arcadis	CE&I/OV	H.013710.6	I-10: US 61 to Laplace ITS Deployment	$534,514
		H.012901.6, H.010634.6	US 90Z (Bodenger Blvd. – Stumpf Blvd.)	$339,654
	Bridge	H.004100.5	I-10: LA 415 to Essen Lane on I-10 and I-12	$1,098,670
Vectura Consulting Services, LLC	Traffic	H.010616	I-20: LA 544 Overpass Replacement	$4,959
	Traffic	H.005168.2	New Orleans Rail Gateway Jefferson Highway EA	$52,436
	Traffic	H.005168.2	New Orleans Rail Gateway Avondale EA	$228,799
	CE&I	H.007160	EBR Computerized Traffic Signal, Ph VB	$61,450
	Traffic	H.004791	Belle Chasse Bridge & Tunnel Replacement PPP	$21,999
	Traffic	H.012030.5	KCS RR Overpasses HBI	$28,026
Marrero, Couvillon & Associates	Bridge	H.011705.6	US 11: Lake Pontchartrain Bridge Rehab – CA Services Orleans and St. Tammany Parishes	$9,276
Fugro USA Land, Inc.	Environmental	440006176	IDIQ Contract for Corrective Action Plan Development and Implementation (Most Recent Task Order Complete)	$0
	Geotechnical	H.012032.5	LA 2 Colewa Bayou and Delmar Bayou Bridges	$111,122.83
	Geotechnical	H.012071.5	US 51: Yellow Water Bridge	$20,984.38
Wiss, Janney, Elstner Associates, Inc.	Bridge	Contract 4400009424 H.000303.6	Contract 4400009424, Task Order No. H.000303.6, Danziger Bridge Repair	$38,315
	Bridge	Contract 4400009424, Task Order 5	Contract 4400009424, Task Order No. 5, Elastomeric Bearing Pad Testing	$44,646
	Bridge	H.014280	Contract No. 4400017263, H.014280 Bayou Ramos	$142,599
	Bridge	H.014673	I-49, US 165: Debonded PPC Girder Rehab I-49/US165, Rapides Parish	$24,498
	Bridge	H.012617.6	I-310: I-10 to US 90, Hale Boggs Memorial (Luling) Bridge, Deck Overlay Repair Consultation, Instrumentation Services	$221,747
	Bridge	Contract 4400001762, H.014899.6	I-10/310 Bonnet Carré Fire Damage Repair	$37,618

Moffatt & Nichol	Bridge	H.009730.5	In-Depth Inspection of Complex Bridges, Task Order 4	$252,121
	Bridge	H.009730.5	In-Depth Inspection of Complex Bridges, Task Order 5	$654,279
	Bridge	H.009730.5	IDIQ Contract for Underwater Bridge Inspection, Statewide	$726,212
	Bridge	H.011331.5	LADOTD Inventory and Inspection of Sign Trusses	$420,203
	Bridge	H.009730.5	LADOTD In-Depth Bridge Inspection, Task Order 3	$473,944
	Data Collection	H.971294.1	LADOTD RIMS	$79,996
Meyer Engineers, Ltd.	CE&I/OV	H.001498	LA 24 & LA 316 Company Canal Bridge	$377,489
	CE&I/OV	H.007331.6	Pakenham Drive (LA 46 – LA 39)	$4,783
	CE&I/OV	H.007175	Lapalco (Victory – Westwood)	$77,014
	Road	H.004727	Howard Avenue Extension (Loyola Avenue – LaSalle Street)	$5,693
	CE&I/OV	H.014048	S. Tangipahoa Roads Pavement Rehab	$707,683
C. H. Fenstermaker & Associates, L.L.C.	Data Collection, Planning, Survey	Contract No. 4400017090	IDIQ Contract for Louisiana Watershed Initiative (LWI) Region 4 (Task Order No. 2) Acadia, Allen, Beauregard, Calcasieu, Cameron, Sabine, and Vernon Parishes, LA	$1,486,566
	Data Collection, Planning, Survey	Contract No. 4400017090	IDIQ Contract for Louisiana Watershed Initiative (LWI) Region 4 (Task Order No. 3) Allen, Beauregard, Calcasieu, Cameron, DeSoto, Natchitoches, and Vernon Parishes, LA	$3,580,753
	Survey	Contract No. 4400017091	IDIQ Contract for Louisiana Watershed Initiative (LWI) Region 5 (Task Order No. 2) Acadia and Evangeline Parishes, LA	$91,206
	Survey	Contract No. 4400017092	IDIQ Contract for Louisiana Watershed Initiative (LWI) Region 6 (Task Order No. 2) Terrebonne Parish, LA	$153,532
	Survey	Contract No. 400017092	IDIQ Contract for Louisiana Watershed Initiative (LWI) Region 6 (Task Order No. 3) Assumption Parish, LA	$1,050,046

C. H. Fenstermaker & Associates, L.L.C.	Road	Contract No. 4400020291 S. P. No. H.012869	LA 182 (Univ) @ LA 723 (Renaud) Roundabout Lafayette Parish, LA	$323,697
	Road	Contract No. 4400005673 S.P. No. H.0011235	I-49 South @ Verot School Road Lafayette Parish, LA	$2,450
	Road	Contract No. 4400020016 S.P. No. H.011833.5	St. Mary Street Sidewalks Lafayette Parish, LA	$164.347
	Planning	Contract No. 4400020960	Discovery NFIP CTP Statewide	$19,974
Bridge Diagnostics, Inc.	Bridge	H.009730.5 44 17163	IDIQ Non Destructive Evaluation of Structures via SounDAR Whiskey Bay and Pilot Channel – Task Order 10	$47,869.90
	Bridge	H.014703.5 44-17163	IDIQ for Non-Destructive Evaluation of Structures Calcasieu Parish – Task Order 9	$24.50
	Bridge	H.009730.5 44-17163	IDIQ I-10 for Non Destructive Evaluation of Structures Atchafalaya Floodway and I-10 over Whiskey Bay Pilot Channel Bridge decks – Task Order 8	$69,198.38
	Bridge	H.012280.1 44-09224	IDIQ for testing of Unknown Foundations, Statewide – Task Order 3 – 1802005	$0.00
	Bridge	H.009730.5 44-17163	Retainer for Non Destructive Evaluation of Structures Task Order 1 General Services BDI1904004	$3,679.00
	Bridge	H.009730.5 44-17163	Retainer for Non Destructive Evaluation of Structures Task Order 7 Bonnet Carre Spillway 2006002	$94,864.07
	Bridge	H.009859.5 44-02791	Bonnet Carre & Bayou Ramos Monitoring System Maintenance	$0.00
	Bridge	H.010603.6 44-02538	Mississippi Bridge at Vicksburg GPS Monitoring – 150901	$2,933.50

Bridge Diagnostics, Inc.	Bridge	H.012485.1 44-10099	IDIQ for Bridge Load Rating Services Statewide	$0.00
KGC Environmental Services Inc.	CE&I/ OV	H.009461	US 90 Atchafalaya River Bridge Rehabilitation	$ 100,000.00

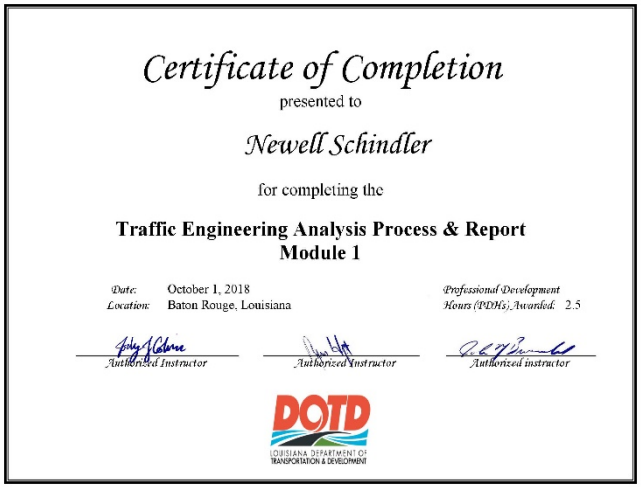
(Add rows as needed) DO NOT SUM

* 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. 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, place N/A in the Remaining Unpaid Balance column. LEAVING THE "REMAINING UNPAID BALANCE" COLUMN BLANK IS NOT ACCEPTABLE.

20. Certifications/Licenses:

If the advertisement requires submission of licenses and/or certificates, include them here. Otherwise, leave this section blank.



Certificate of Completion

presented to

Newell Schindler

for completing the

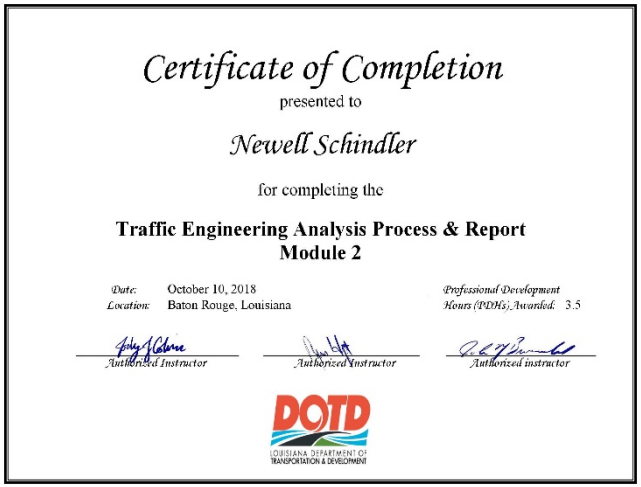
Traffic Engineering Analysis Process & Report
Module 1

Date: October 1, 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

Newell Schindler

for completing the

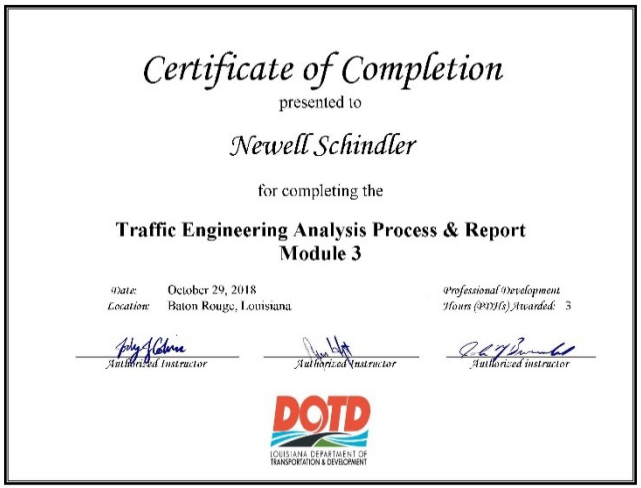
Traffic Engineering Analysis Process & Report
Module 2

Date: October 10, 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

Newell Schindler

for completing the

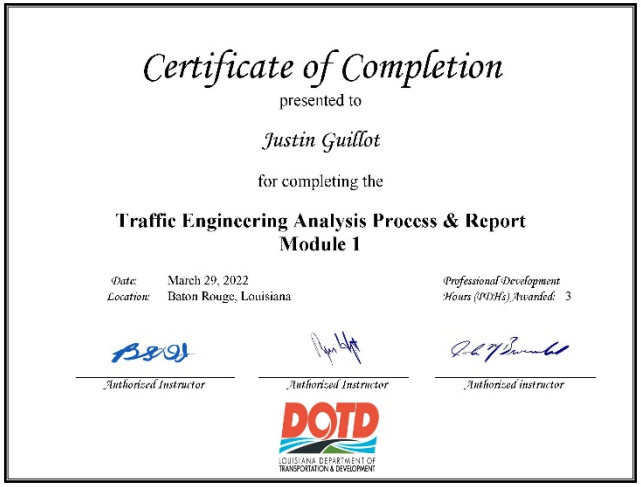
Traffic Engineering Analysis Process & Report
Module 3

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



Certificate of Completion

presented to

Justin Guillot

for completing the

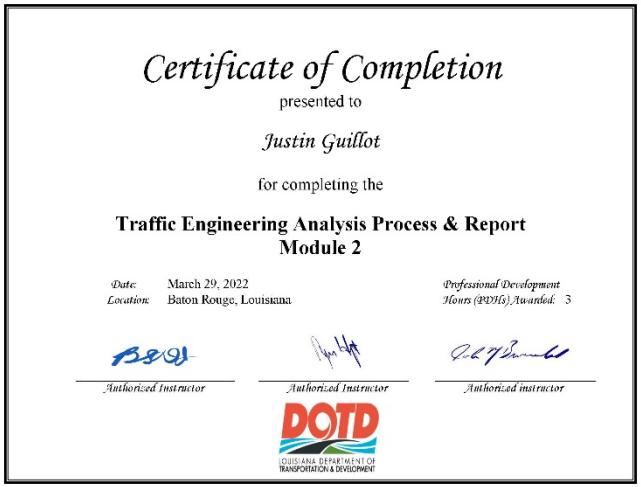
Traffic Engineering Analysis Process & Report
Module 1

Date: March 29, 2022
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

Justin Guillot

for completing the

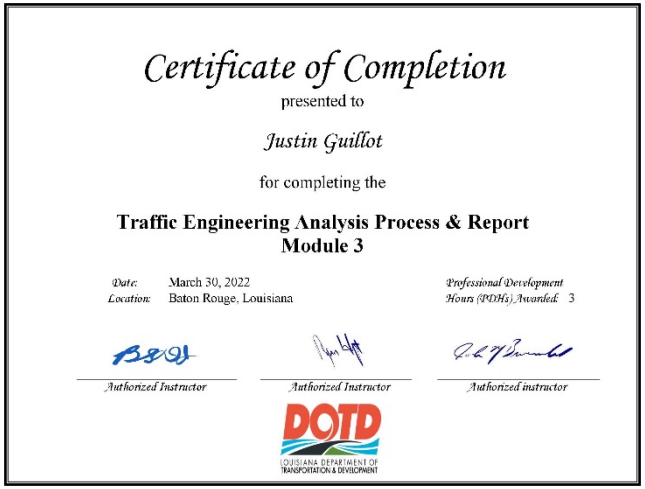
Traffic Engineering Analysis Process & Report
Module 2

Date: March 29, 2022
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

Justin Guillot

for completing the

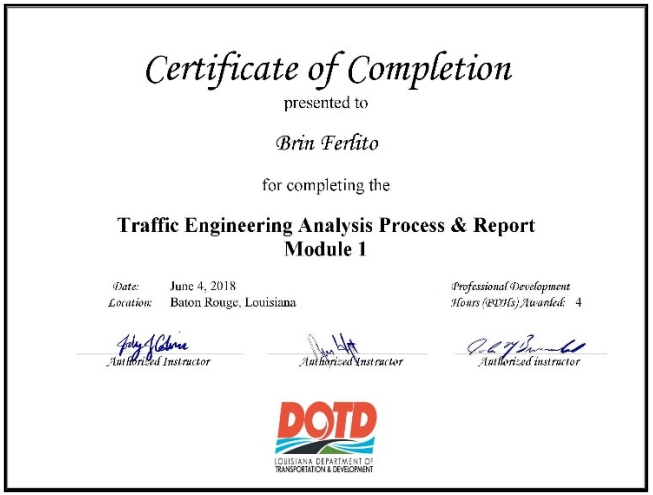
Traffic Engineering Analysis Process & Report
Module 3

Date: March 30, 2022
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

Brin Ferlito

for completing the

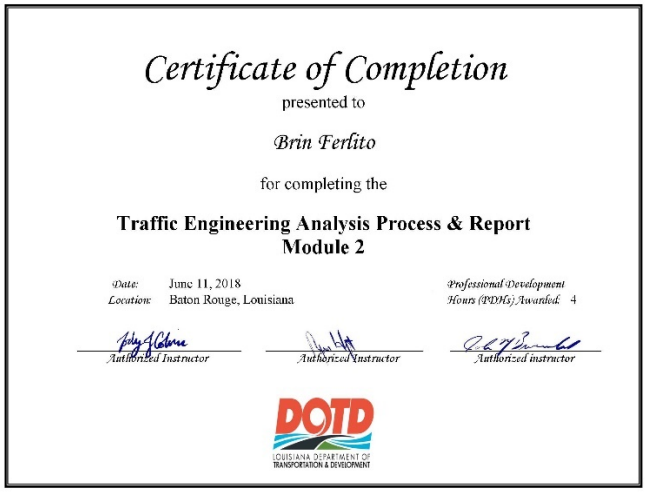
Traffic Engineering Analysis Process & Report
Module 1

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

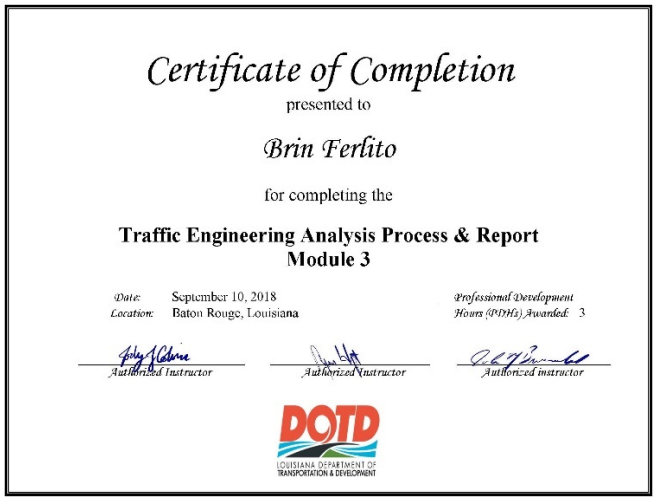
Traffic Engineering Analysis Process & Report
Module 2

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

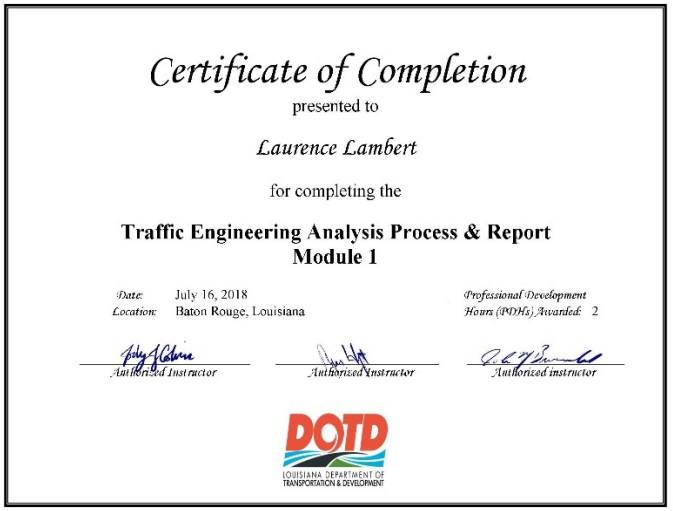
Traffic Engineering Analysis Process & Report
Module 3

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



Certificate of Completion

presented to

Laurence Lambert

for completing the

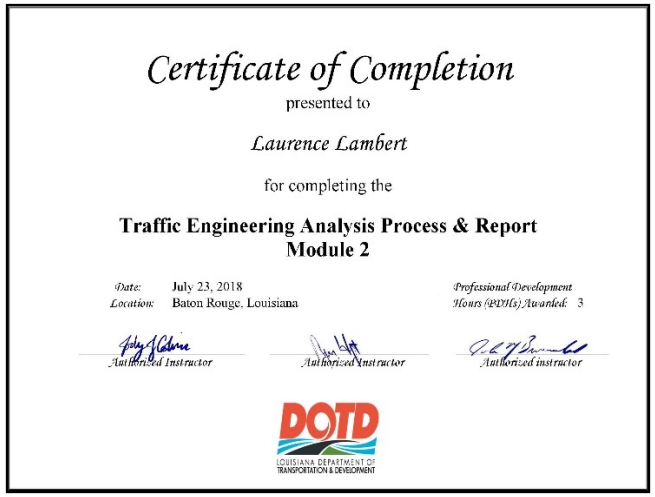
Traffic Engineering Analysis Process & Report
Module 1

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

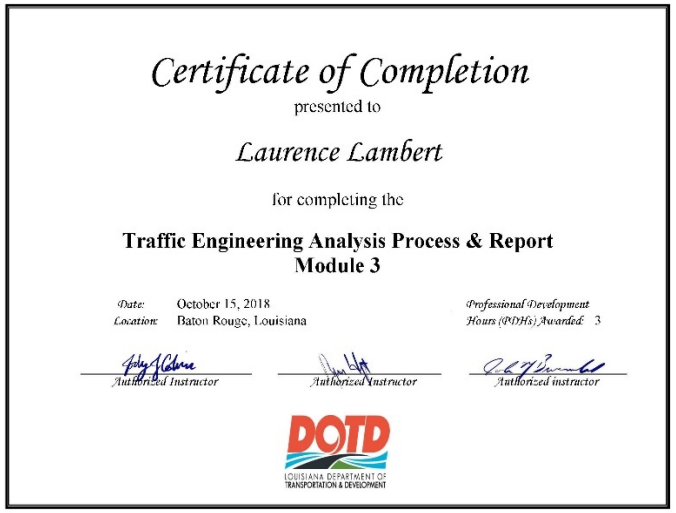
Traffic Engineering Analysis Process & Report
Module 2

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

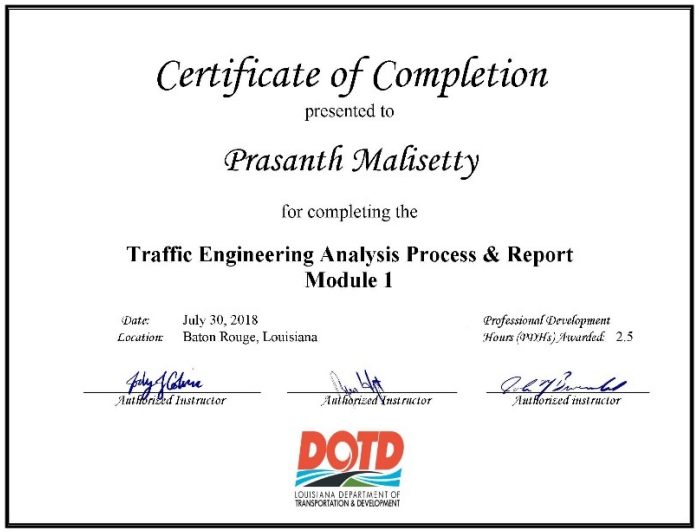
Date: October 15, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor | Authorized Instructor | Authorized Instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

 Prime consultant name: **Modjeski and Masters, Inc.**



Certificate of Completion

presented to

Prasanth Malisetty

for completing the

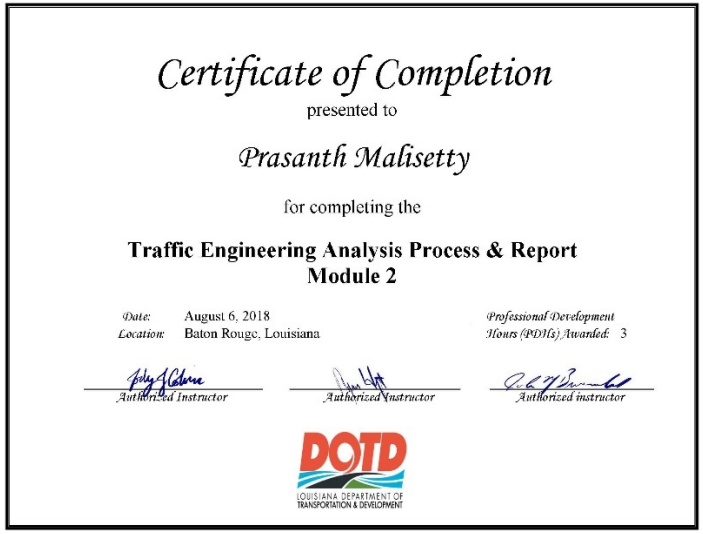
Traffic Engineering Analysis Process & Report
Module 1

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

Prasanth Malisetty

for completing the

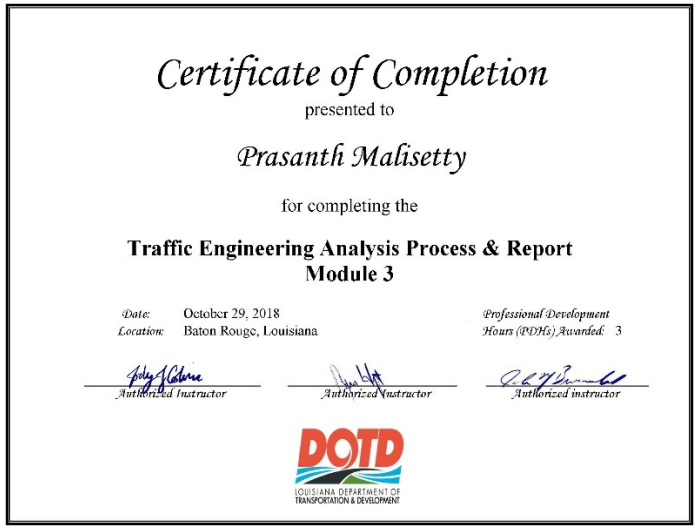
Traffic Engineering Analysis Process & Report
Module 2

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

Prasanth Malisetty

for completing the

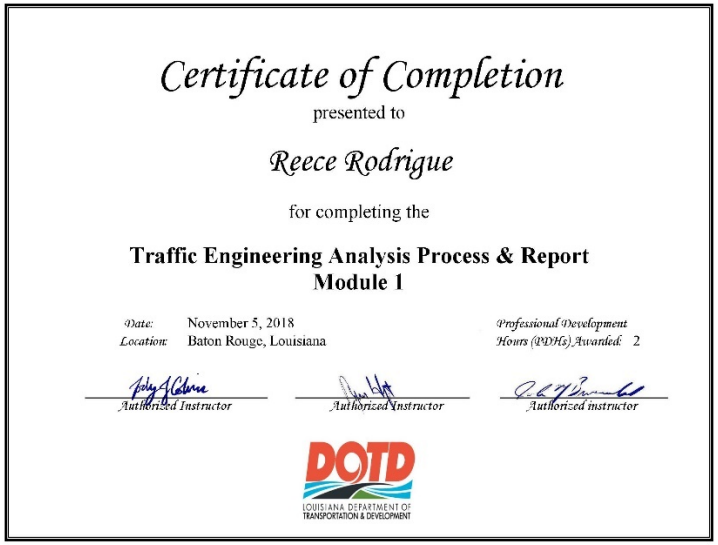
Traffic Engineering Analysis Process & Report
Module 3

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



Certificate of Completion

presented to

Reece Rodrigue

for completing the

Traffic Engineering Analysis Process & Report
Module 1

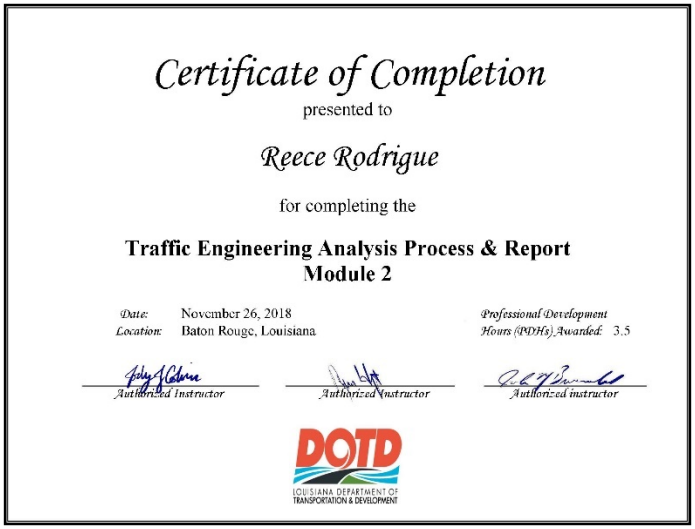
Date: November 5, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 2

Authorized Instructor | Authorized Instructor | Authorized instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

 Prime consultant name: **Modjeski and Masters, Inc.**



Certificate of Completion

presented to

Reece Rodrigue

for completing the

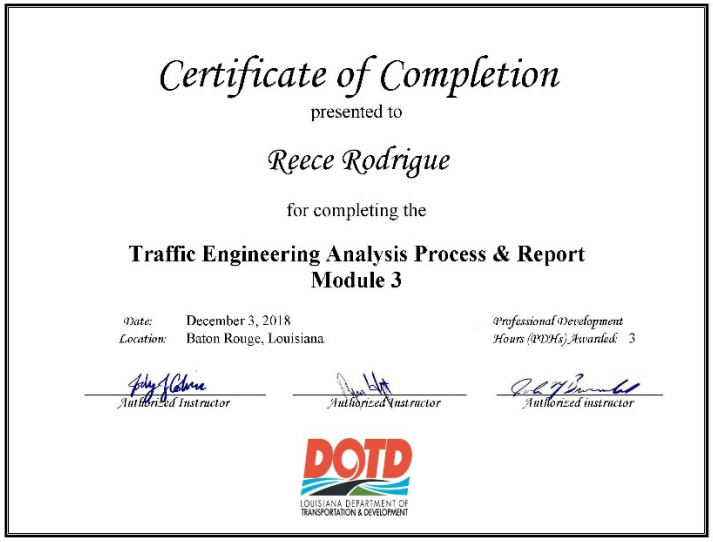
Traffic Engineering Analysis Process & Report
Module 2

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

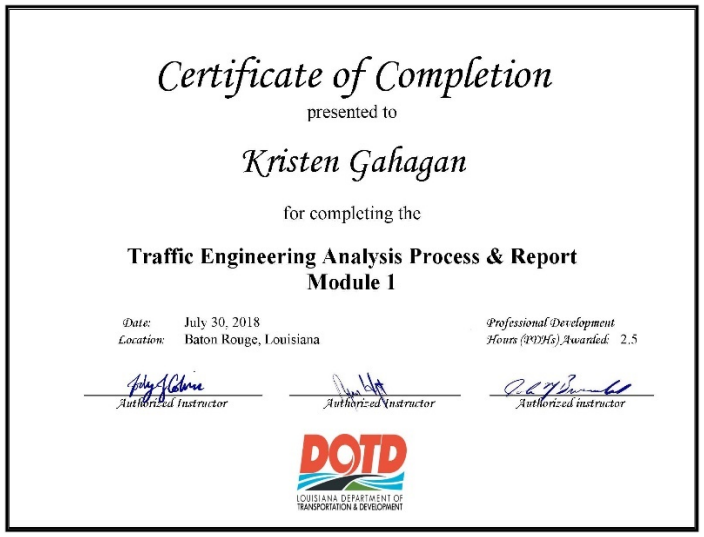
Traffic Engineering Analysis Process & Report
Module 3

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



Certificate of Completion

presented to

Kristen Gahagan

for completing the

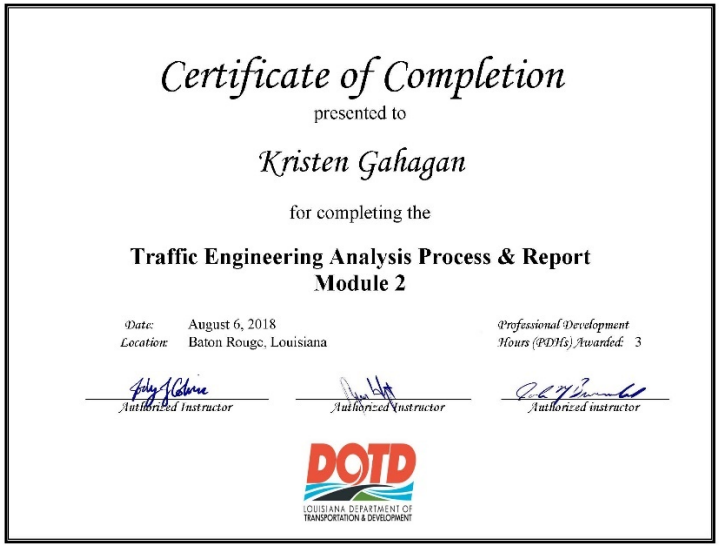
Traffic Engineering Analysis Process & Report
Module 1

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

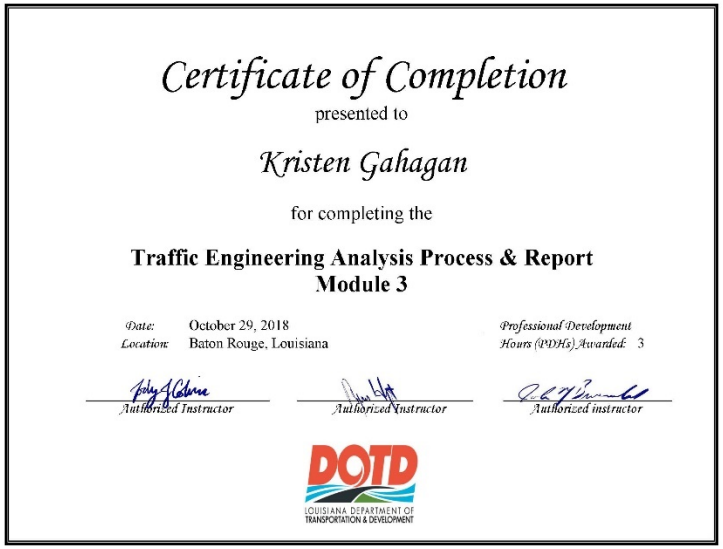
Date: August 6, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor | Authorized Instructor | Authorized Instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Prime consultant name: **Modjeski and Masters, Inc.**



Certificate of Completion

presented to

Kristen Gahagan

for completing the

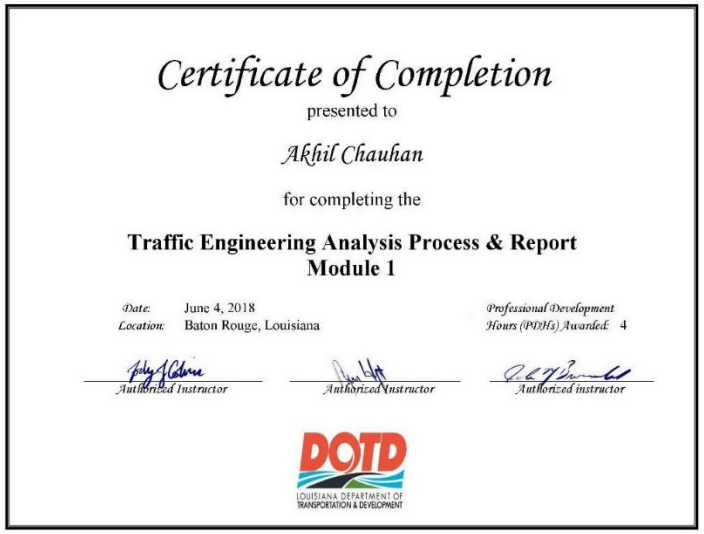
Traffic Engineering Analysis Process & Report
Module 3

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



Certificate of Completion

presented to

Akhil Chauhan

for completing the

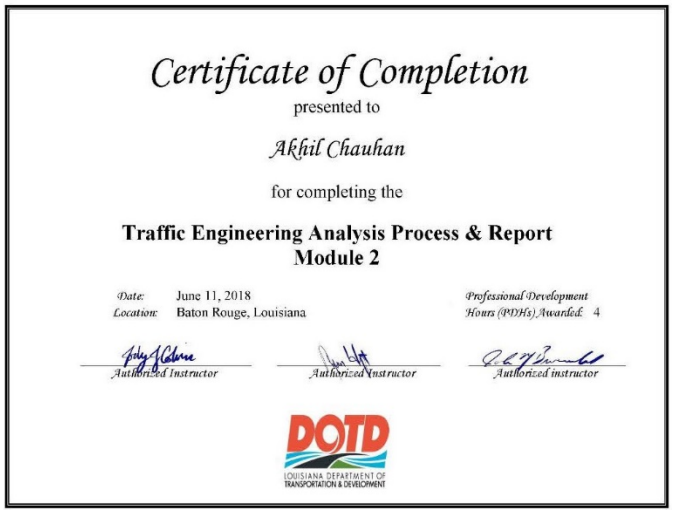
Traffic Engineering Analysis Process & Report
Module 1

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

Akhil Chauhan

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

Akhil Chauhan

for completing the

Traffic Engineering Analysis Process & Report
Module 3

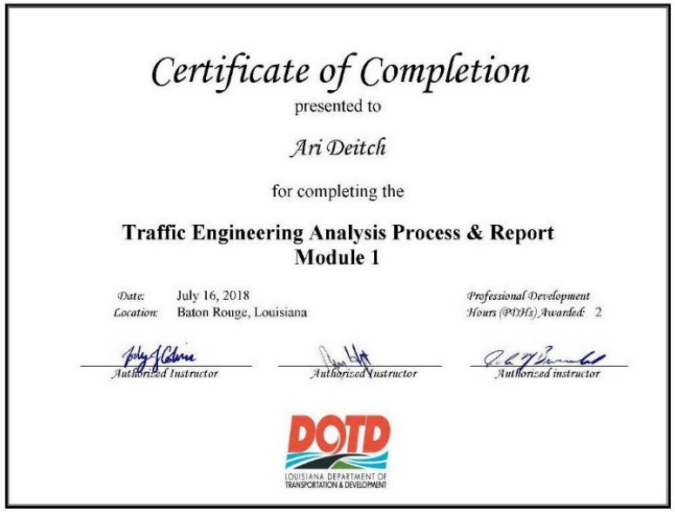
Date: September 10, 2018
Location: Baton Rouge, Louisiana

Professional Development Hours (PDHs) Awarded: 3

Authorized Instructor | Authorized Instructor | Authorized instructor

DOTD
LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

 Prime consultant name: **Modjeski and Masters, Inc.**



Certificate of Completion

presented to

Ari Deitch

for completing the

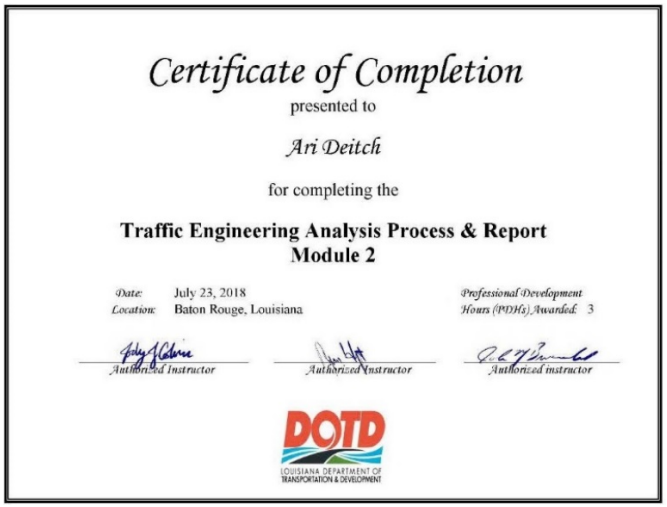
Traffic Engineering Analysis Process & Report
Module 1

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

Ari Deitch

for completing the

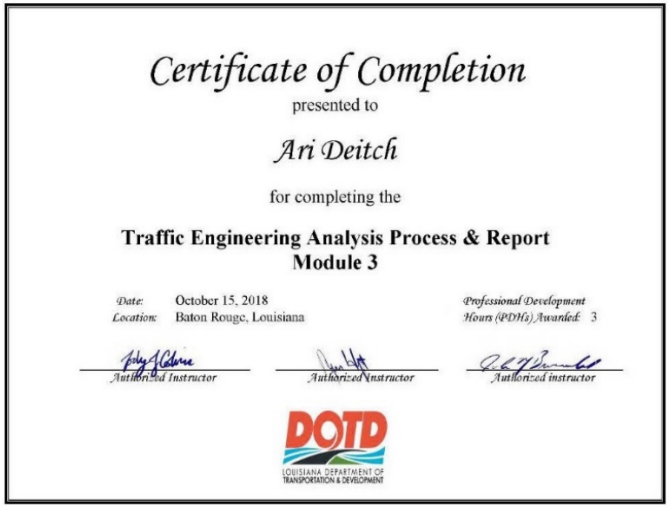
Traffic Engineering Analysis Process & Report
Module 2

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

Ari Deitch

for completing the

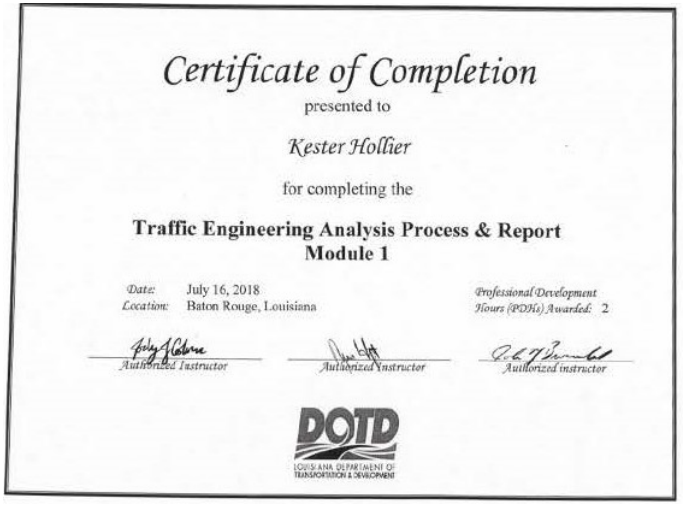
Traffic Engineering Analysis Process & Report
Module 3

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



Certificate of Completion

presented to

Kester Hollier

for completing the

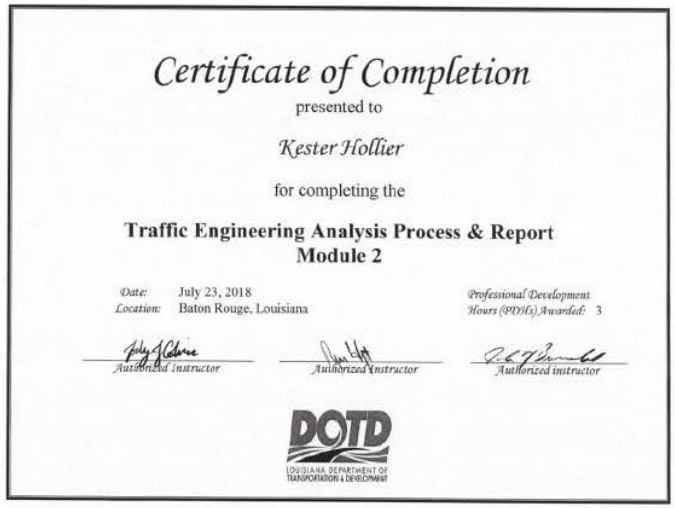
Traffic Engineering Analysis Process & Report
Module 1

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

Kester Hollier

for completing the

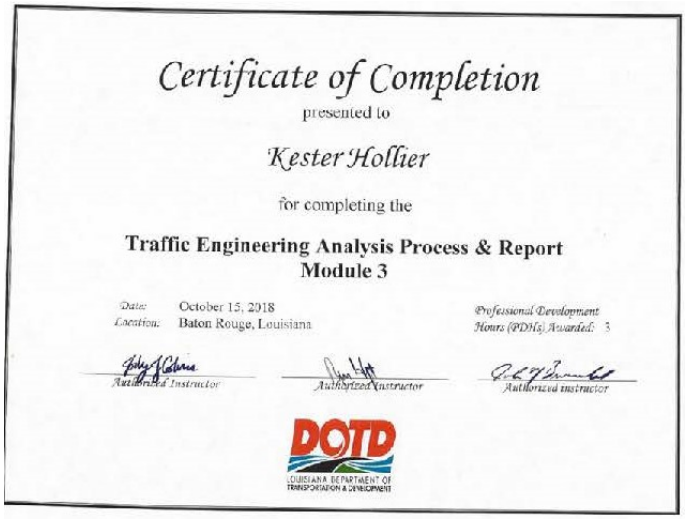
Traffic Engineering Analysis Process & Report
Module 2

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

Kester Hollier

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

Certificate of Completion

presented to

Jose M. Rodriguez

for completing the

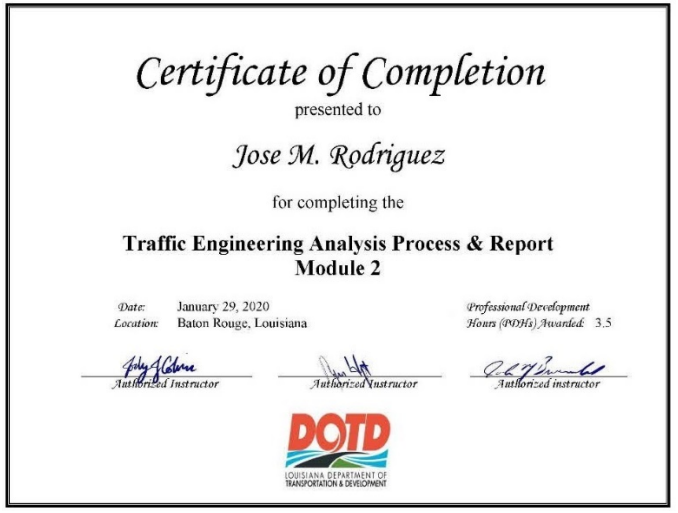
Traffic Engineering Analysis Process & Report
Module 1

Date: January 29, 2020
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

Jose M. Rodriguez

for completing the

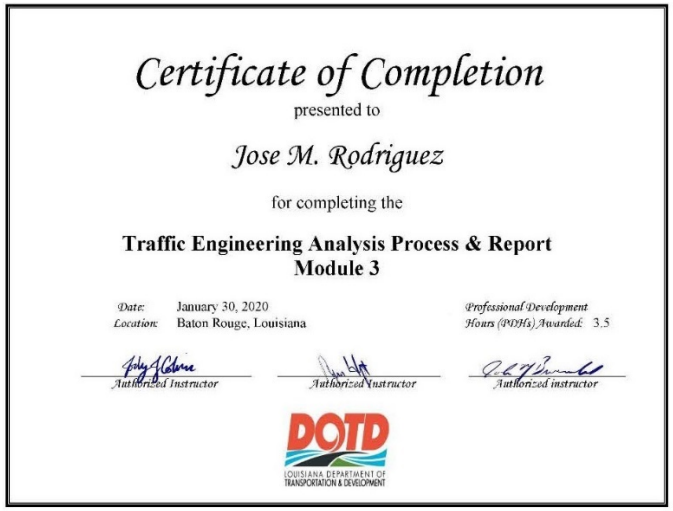
Traffic Engineering Analysis Process & Report
Module 2

Date: January 29, 2020
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

Jose M. Rodriguez

for completing the

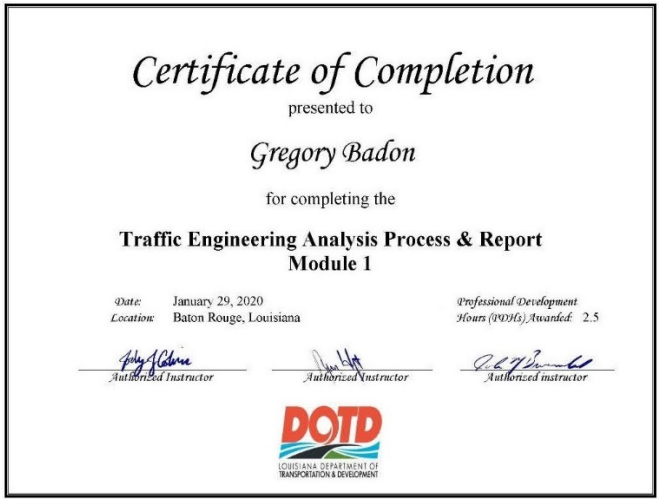
Traffic Engineering Analysis Process & Report
Module 3

Date: January 30, 2020
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

Gregory Badon

for completing the

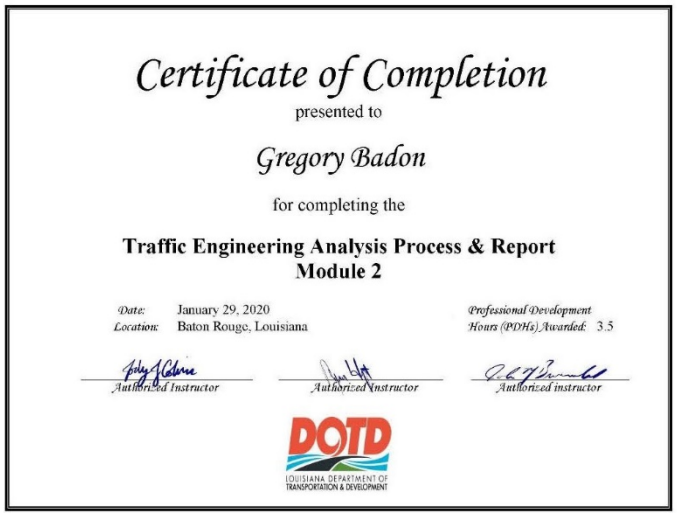
Traffic Engineering Analysis Process & Report
Module 1

Date: January 29, 2020
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

Gregory Badon

for completing the

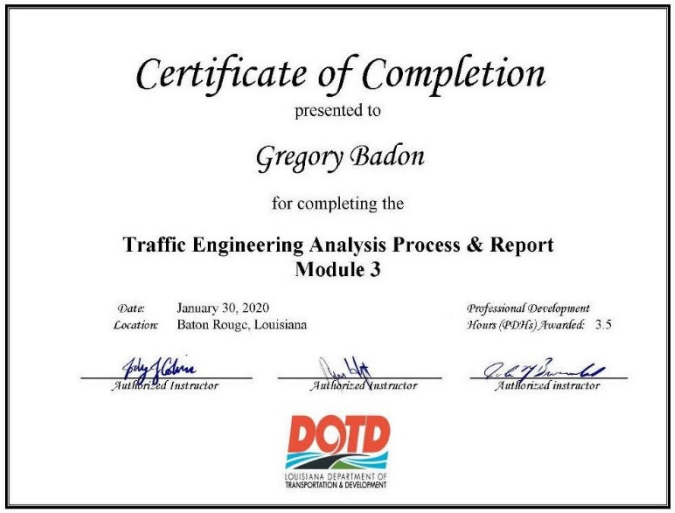
Traffic Engineering Analysis Process & Report
Module 2

Date: January 29, 2020
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

Gregory Badon

for completing the

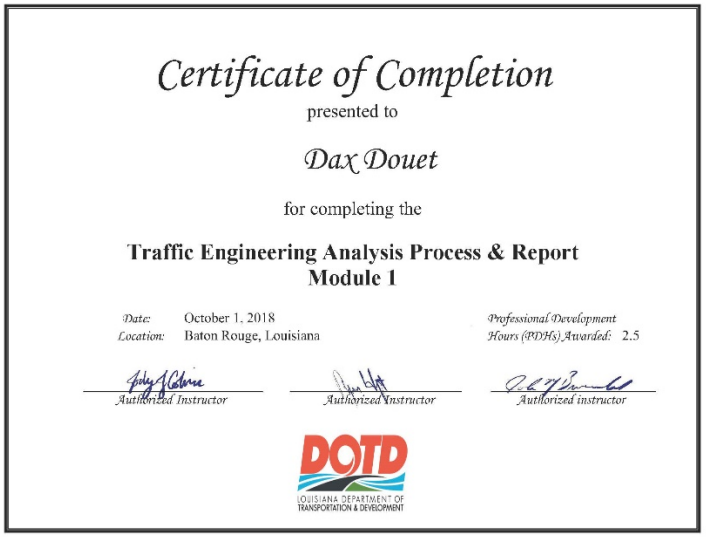
Traffic Engineering Analysis Process & Report
Module 3

Date: January 30, 2020
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

Dax Douet

for completing the

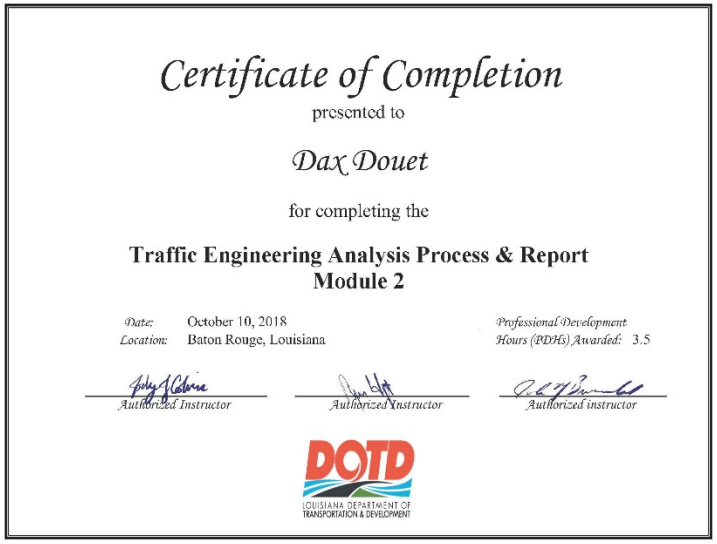
Traffic Engineering Analysis Process & Report
Module 1

Date: October 1, 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

Dax Douet

for completing the

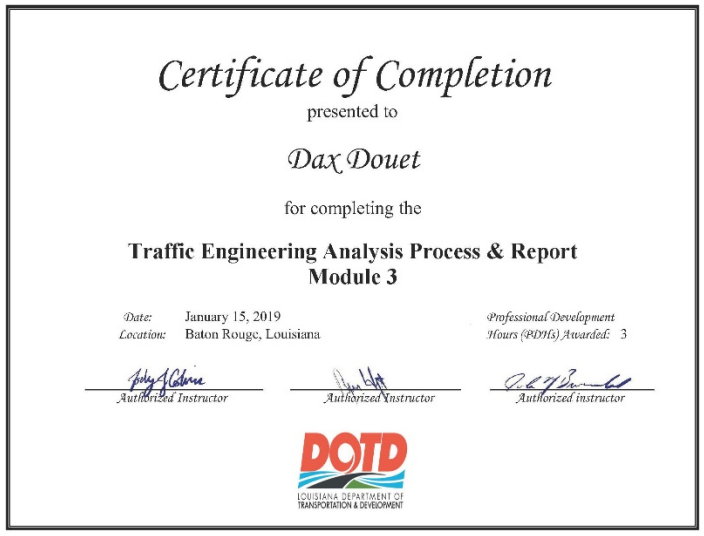
Traffic Engineering Analysis Process & Report
Module 2

Date: October 10, 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

Dax Douet

for completing the

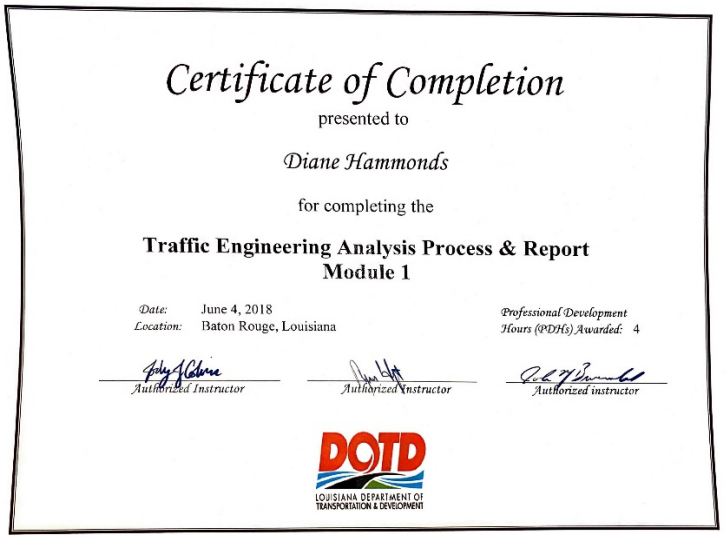
Traffic Engineering Analysis Process & Report
Module 3

Date: January 15, 2019
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

Diane Hammonds

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

 Prime consultant name: **Modjeski and Masters, Inc.**

Certificate of Completion

presented to

Diane Hammonds

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

Diane Hammonds

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

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

If the advertisement requires submission of a QA/QC plan or Work plan, include them here. Otherwise, leave this section blank.

CONTRACT NO. 4400023909
IDIQ CONTRACT FOR MOVABLE BRIDGE PRESERVATION
STATEWIDE

QUALITY CONTROL / QUALITY ASSURANCE PLAN FOR BRIDGE DESIGN

Prepared For:

LOUISIANA DEPARTMENT OF TRANSPORTATION & DEVELOPMENT

Prepared By:

MODJESKI and MASTERS

May 10, 2022

M&M QUALITY CONTROL / QUALITY ASSURANCE PLAN

GENERAL

Quality is obtained when design and/or rating calculations, plans, specifications and reports, correspondence, invoices and oral communication, related to a particular project, are delivered to the owner in an accurate, error-free, professional, and timely manner, and in a presentation consistent with the owner's requirements.

Modjeski and Masters Quality Management Plan relates to both the technical and administrative aspects of the full engineering service life cycle of a project, including proposal preparation, staffing, design activities, field activities, internal and external communication, project review, field operations, including inspection and construction observation, and document storage. The plan is applicable to all engineering services offered by the firm including: bridge design, bridge rating, highway design, bridge rehabilitation, bridge inspection, mechanical design, electrical design, instrumentation, geotechnical investigations/design, construction consultation, inspection of construction, research and code development. Checklists and forms are often developed to monitor special needs of the owner and/or a specific engineering activity.

PROJECT

M&M will provide the following scope of engineering services and will perform task orders for individual services for specialized work.

1. Bridge Design Services

1.1 General Bridge Engineering Services
Provide bridge engineering services for fixed and movable bridges. Bridge project types may include, but are not limited to, new bridges, bridge replacements, bridge rehabilitation, bridge preventive maintenance and repair, and roadway lighting. Bridge engineering services include, but are not limited to, structural, mechanical, electrical, and architectural feasibility, design, and plan development and the following:

- Bridge/structural inspection and evaluation of existing bridges or other structures (sign trusses, fender systems, etc.). Associated reports shall be provided as required
- As-designed, as-built, and condition bridge ratings
- Design peer review of developed plans or conceptual designs to verify concept, constructability, and accuracy of designs along with associated reports, conclusions, calculations, and recommendations as needed
- Construction engineering support including construction drawing review, shop drawing review, request for information support, contractor proposals, etc.

1.2 Sampling, Instrumentation, and Non-destructive Testing
Provide sampling, instrumentation, and non-destructive testing services. These services may include, but are not limited to, collection of samples of materials from existing structures for evaluation, diagnostic and/or proof testing to determine specific structure response characteristics and/or to determine the causation of observed distresses, instrumentation, and the following:

Sampling

- Collection of samples
- Evaluation of protective coating material samples for determination of compatibility with proposed coatings, analysis for heavy metals, proper procedures for treatment, handling, disposal of waste, etc.

Instrumentation

- Design of instrumentation plans. Installation of instrumentation, data acquisition, analysis, and evaluation of structure based on instrumentation plan
- Provision and installation of instrumentation, including all materials required to mount the instrumentation
- Provision of data acquisition systems, software updates, power supplies, communication to data servers, data hosting services, maintenance, and data access to DOTD

- Calibration services for instrumentation systems and sensors
- Maintenance services to repair and/or replace sensors, data acquisition systems, and power supplies
- Analysis and evaluation of accumulated data and final assessments and development of corresponding reports based on data and associated calculations

Non-destructive Testing

- Proof loading
- Estimation of concrete strength
- Assessment of reinforcement condition, cover, location, and diameter
- Detection of cracks, voids, and delamination in concrete
- Assessment of steel member condition

2. Geotechnical Services

Provide all geotechnical services necessary to perform geotechnical investigations, analysis, and design. These services may include, but are not limited to, the following:

- Geotechnical field investigations including both shallow and deep soil borings
- Geotechnical laboratory testing and analysis
- Preparation of soil boring logs
- Geotechnical analysis and design based on obtained data or data furnished by the DOTD
- Construction related engineering services

3. Road Design and Traffic Services

Provide all services necessary to perform hydraulic, road, and traffic investigation, analysis, and design. These services may include, but are not limited to, the following:

- Preliminary and final roadway design and plan development
- Hydraulic analysis and design
- Traffic engineering, traffic control design, and data collection
- Transportation Management Plan (TMP) development

4. Bridge Inspection Services

Provide all services required to perform Statewide NBIS In-Depth Inspections of complex structures. These services may include, but are not limited to, the following:

- Detailed in-depth field inspection on all bridge components, including an element level inspection. An NBIS underwater bridge inspection may be required for submerged elements.
- Assessment of the coating system, conducted by a certified SSPC Protective Coating Specialist or a certified NACE Bridge Coating Inspector
- In-depth inspection report outlining recommended repairs, rehabilitation, and corrections.

5. Environmental and Permitting Services

Provide all environmental and permitting services necessary to obtain project permits. Required permits may include, but are not limited to, the following:

- Coastal Use permits (CUP) from the LA Department of Natural Resources
- Wetland permits (404 and Nationwide) and Section 10 permits from the US Army Corps of Engineers
- Water Quality Certification from the LA Department of Environmental Quality
- Scenic Stream permits from the LA Department of Wildlife and Fisheries
- Bridge permits from the US Coast Guard
- Levee permits from various levee boards

All work will be performed in accordance with all applicable DOTD policies, procedures, and manuals. Design criteria will be developed and submitted to the Bridge Task Manger for review and approval prior to proceeding with design.

Project submittals, associated schedule, and format will be established in each Task Order. At minimum, all bridge plan submittals will be submitted in pdf format and the 100% signed final plans will be submitted both in full size paper and in pdf format. Design and rating calculations will be submitted in pdf format no later than 30 days after the 100% final plan submittal.

QC/QA POLICY

Modjeski and Masters' Team QC/QA policy is to meet or exceed the QC/QA requirements of the following documents, in addition to those described in this document.

1. AASHTO Standards
2. AASHTO – A Policy on Geometric Design of Highways and Streets
3. AASHTO – LRFD Bridge Design Specifications
4. AASHTO – LRFD Moveable Highway Bridge Design Specifications
5. AASHTO – Manual for Bridge Evaluation
6. AASHTO – Manual for Maintenance Inspection for Bridges
7. AASHTO – Roadside Design Guide
8. AASHTO – Standard Specifications for Structural Supports of Highway Signs, Luminaires, and Traffic Signals
9. AASHTO – Standard Specifications for Transportation Materials and Methods of Sampling and Testing
10. AREMA – Manual for Railway Engineering
11. ASTM Standards
12. DOTD – "A Guide to Constructing, Operating, and Maintaining Highway Lighting Systems"

13. DOTD – Bridge Design and Evaluation Manual (BDEM)
14. DOTD – Bridge Design Technical Memoranda
15. DOTD – Complete Streets
16. DOTD – Construction Contract Administration Manual
17. DOTD – Consultant Contract Services Manual
18. DOTD – Geotechnical Engineering Services Document
19. DOTD – Guidelines for Bridge Rating and Evaluation
20. DOTD – Hydraulics Manual
21. DOTD – Location and Survey Manual
22. DOTD – Addendum "A" to the Location & Survey Manual
23. DOTD – Louisiana Standard Specifications for Roads and Bridges
24. DOTD – Maintenance Directives
25. DOTD – Materials Sampling Manual
26. DOTD – Minimum Design Guidelines
27. DOTD – Off-System Highway Bridge Program Guidelines
28. DOTD – Roadway Design Procedures and Details Manual
29. DOTD – Stage 1 Planning/Environmental Manual of Standard Practice
30. DOTD – Testing Procedures Manual
31. DOTD – Traffic Engineering Manual
32. DOTD – Traffic Engineering Process and Report
33. DOTD – Traffic Signal Manual
34. e-CFR – Electronic Code of Federal Regulations (all applicable)
35. CFR 23 National Bridge Inspection Standard
36. FHWA – Bridge Inspector's Reference Manual (BIRM)
37. FHWA – Inspection of Fracture Critical Bridge Members
38. FHWA-IF-09-014 Load Rating Guidance and Examples for Bolted and Riveted Gusset Plates in Truss Bridges, February 2009
39. FHWA – Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD
40. National Electrical Safety Code (NESC)
41. NFPA 70 – National Electrical Code (NEC)
42. NEPA – National Environmental Policy Act

QC/QA requirements for bridge design and preparation of plans and specifications are described in detail in the LADOTD Bridge Design and Evaluation Manual and the LADOTD Bridge Design Section QC/QA, and these policies will be fully adhered to by all team members. This document is consistent with and complements the LADOTD Bridge Design and Evaluation Manual and the LADOTD Bridge Design Section QC/QA.

A Quality Assurance Certification will be provided at the completion of each task using the Department's QC/QA Certification Form (LADOTD BDEM Chapter 3, Appendix D) and Certification Form (LADOTD BDEM Chapter 3, Appendix I). See Attachments 5 and 3, respectively.

DEFINITIONS

Quality Control (QC): A process of applying systematic procedures to ensure accuracy and consistency during electrical design calculation, electrical inspections, analyses and ratings and their documentations. It includes procedures for checking the accuracy of the calculations and consistency of design drawings, detecting and correcting design omissions and errors before the drawings are finalized, and verifying the design criteria have adequately been applied, and any past changes to the electrical system have been considered. QC is to be applied to all stages of the electrical analysis, design, including plan and document reviews related inspections and instrumentations. QC is to be applied also to verifying the specifications for the electrical service equipment are adequate for the service and operations loads.

Quality Assurance (QA): A systematic process aimed to ensure that the quality control process was followed during the development of electrical design plans, specifications, inspection and instrumentation reports. It includes procedures of reviewing the work to ensure that quality control is in place and effective in preventing mistakes and providing consistency in the development of electrical design plans, specifications and reports.

Supervisor or Team Leader: Project Manager or task assignee, responsible for overseeing the project and the personnel assigned to the project.

Design Engineer: Engineer, licensed by the State of Louisiana as a professional engineer or certified as an engineering intern, directly responsible for the development of design calculations, reports, drawings and other related documents with a level of technical skills and experience commensurate with the complexity of the subject structure.

Detailer: Engineer or technician directly responsible for the creation and development of CAD drawings.

Design Checker: Engineer responsible for performing a full technical review of the electrical analyses, design calculations, reports, drawings, specifications and cost estimate with a level of technical skills and experience commensurate with the complexity of the subject structure. If the information being checked was developed by an engineering intern, the design checker shall be an engineer licenses by the State of Louisiana as a professional engineer.

Detail Checker: Engineer or technician responsible for performing a full review of the CAD drawings ensuring that the drawings are in accordance with the design information and CAD standards.

Reviewer: Engineer, licensed by the State of Louisiana as a professional engineer, responsible for performing QA procedures for assuring that QA procedures have been performed as outlined in this policy and in accordance with LADOTD Bridge Design practices, policies and procedures. The Reviewer must have substantial technical skills and experience in the design of similar electrical systems and be independent of production.

Engineer of Record: The Engineer of Record, licensed by the State of Louisiana as a professional engineer, is responsible for the design shown on the plans and/or other deliverables and whose seal appears on the title sheet of the plans and/or deliverables. He typically ensures that the QC/QA certifications are signed by all parties, all design calculations and reports are included, and the names of all personnel are correctly shown.

Independent Technical Reviewer: Engineer who completes an independent review of the design calculations and is part of the consultant team. Independent Technical Reviewer must have experience reviewing tasks that meet or exceed those of the designer and or checker.

Peer Review: Engineering group with no prior involvement in the project, performing an independent check of the design calculations and results. Peer reviewers may not be employed by the same consultant.

RESPONSIBILITY AND AUTHORITY

Modjeski and Masters (M&M), as the Prime Consultant, will be fully responsible for QC/QA of their work as well as the work of all Sub-consultants. All project submittals will include a QC/QA certification that the submittals meet the requirements of the QC/QA plan document. The LADOTD shall not perform QC/QA of the consultant's work and the responsibilities of the LADOTD for consultant projects shall be limited to those listed in the LADOTD Bridge Design and Evaluation Manual.

The Principal-In-Charge (PIC) and Project Manager (PM) assigned to the Retainer will be responsible to ensure that the requirements of this QC/QA Plan are met by all members of the M&M Team. M&M will be assisted by ten (10) Sub-consultants for this work:

Sub-Consultant	Services Provided
ARCADIS	Structural Design, Traffic Services, Road & Drainage Design, Environmental & Permitting
VECTURA CONSULTING SERVICES, LLC	Traffic Services
MARRERO COUVILLON & ASSOCIATES Engineering & Construction	Mechanical Design, Architectural
FUGRO	Geotechnical Services

Sub-Consultant	Services Provided
WJE Wiss, Janney, Elstner Associates, Inc.	Electrical Design, Mechanical Design, Structural Design, Sampling, Instrumentation and Non-Destructive Testing
moffatt & nichol	Underwater Bridge Inspection
Meyer Engineers, Ltd. ENGINEERS & ARCHITECTS	Architectural, Road & Drainage Design
BDI Bridge Diagnostics, Inc. (BDI)	Sampling, Instrumentation and Non-Destructive Testing
FENSTERMAKER	Traffic Services, Road & Drainage Design, Environmental & Permitting
kgc Environmental Services inc.	Evaluation of Coatings

Principal-In-Charge (PIC) in consultation with the Project Manager (PM) will assign a Supervisor/Team Leader, Design Engineer, Detailer, Design Checker, Detail Checker and Reviewer to each task order, with a level of technical skills and experience commensurate with the complexity of the structures included.

A specific organizational structure will be developed for each task order outlining responsibilities for every role of the project. See Attachment 1 for the overall organization structure.

Sub-consultants are required to follow the same QC/QA Plan. Modjeski and Masters will assist the Sub-consultants with their QC/QA activities by:

- Meeting with each Sub-consultant to go over this QC/QA Plan and its implementation
- Conducting technical meetings
- Providing and coordinating technical assistance
- Providing training materials
- Developing checklists and standard forms specific to each task order
- Performing quality audits

QC/QA PROCESS CONTROLS

a. Project Initiation

During the initial identification and proposal phase of each task order the Principal-in-Charge (PIC) and Project Manager (PM) determine the personnel that will be assigned to the project and their responsibilities. When possible, these individuals will participate in the initial conceptualization of the project and manpower estimating, as these initial activities identify the path to project completion. Design tasks shall be assigned to engineers qualified by virtue of education and/or experience commensurate with the complexity of the subject project.

At the immediate initiation of the project, the PM will prepare a project schedule indicating the major milestone dates and deliverable dates on the project and, if required, submit it to the LADOTD for approval.

The staff assigned to the project will include an appropriate Supervisor/Team Leader, Design Engineer, Detailer, Design Checker, Detail Checker and Reviewer. Additional senior staff with experience related to the project will be assigned where appropriate. As additional staff joins the project, they will have a designated mentor among the senior staff to act as the first source for advice and counsel on technical and administrative matters. The technical scope of work contained in the Agreement will be made available to all individuals working on the project.

b. Project Design Criteria

Design criteria specific for each project will be developed by the PM prior to initiating the design process and will be submitted to the LADOTD for review and approval. Any design assumptions made or design exceptions obtained will be listed in the design criteria and referenced in the design calculations and drawings as appropriate. A design criteria checklist as developed by the LADOTD is included in Attachment 7.

c. Development of Designs and Plan Details

During the design phase, the design engineer will follow the design criteria established for the project. Electrical/Photometric analyses and preliminary plans will be developed first and approved by the PM prior to proceeding with the design of structural components. The design calculations will be organized and maintained in a standard calculation book format. The calculation book checklist as developed by the LADOTD is included in Attachment 8. The design engineer will communicate and coordinate with the detailer and supervise the detailing work to ensure that the drawings adequately and accurately present the design information.

d. Quality Control of Designs and Plan Details

All work will be checked in order to minimize errors. If the design engineer is an engineer intern, the design checker will be a professional engineer registered in the State of Louisiana. The design checker will verify the accuracy of the designer's calculations, pay items, quantities, special provisions including Non-Standard Items, and cost estimate and will also ensure that the drawings adequately and accurately present the design information. The designer's calculations are considered the calculations of record and will be updated to correct any errors or omissions discovered by the design checker.

The detail checker will ensure that the drawings are in accordance with the design information and CAD standards. In addition, all dimensions and quantity calculations will be verified.

After the completion of the design and detail check (which shall be completed no later than the 95% Final Plans stage), the designer will prepare and provide to the Reviewer a QA information package which includes the following:

- QA information package check list (see Attachment 9)
- Calculation Book(s)
- Plans
- Special provisions including Non-Standard Items
- Cost Estimate
- Any other relevant documents (checklists, review comments, etc.)

e. Quality Assurance of Designs and Plan Details by the Reviewer

The Reviewer for M&M will perform a cursory review of all documents in the QA information package focusing on the following items:

- Constructability of the Plan Details
- Areas of Critical Importance
- Areas where mistakes are typically found
- Areas that are new to the design practice

After all issues discovered during the QA process are rectified, the design calculations, plan details, special provisions and cost estimate shall be considered as final and the QC/QA certification (see Attachment 5) shall be signed by the designer, design checker, detailer, detail checker, and reviewer.

f. Peer Review

When requested by the LADOTD Bridge Design Engineer Administrator, M&M will conduct peer reviews by team members or engage the services of a Sub-consultant licensed by the State of Louisiana as a professional engineer to perform a peer review. The Sub-consultant chosen for the peer review will have no prior involvement in the project but will have substantial

experience in the design of similar structures. All peer review comments will be submitted to the LADOTD and the design team for evaluation and resolution. All resolutions agreed upon by the designer, peer reviewer and the LADOTD will be incorporated into the final design. A Peer Review Resolution agreement (see Attachment 10) will be signed by the peer reviewer, the PM and an LADOTD representative.

g. Sealing of Design Calculation Book and Plans by the Engineer of Record (EOR)

In addition to the previously defined requirements for the Engineer of Record, the Engineer of Record shall be responsible for the following tasks:

- Ensure the QC/QA certification is signed by all responsible parties.
- Ensure the geotechnical design information shown on the plans is co-stamped by a Geotechnical Engineer and the hydraulic information shown on bridge plans is co-stamped by a Hydraulic Engineer. When more than one engineering stamp is required on a sheet, the responsibilities for each engineering stamp shall be clearly defined.
- Assemble design calculations from all designers including the final geotechnical analysis report and the hydraulic report from the geotechnical engineer and the hydraulic engineer, finalize the calculation book, and seal the cover sheet of the calculation book.
- Ensure the names of the designer, design checker, detailer, detail checker, and reviewer are correctly shown on the title block of each plan sheet.
- Stamp all plan sheets or designate a designer, design checker, or reviewer who shall be licensed by the State of Louisiana as a professional engineer to stamp the sheets developed under their supervision.
- The EOR must stamp the general notes sheets.
- Ensure all special provisions are accurately shown on the construction proposal. The special provisions are typically stamped by the Specification Engineer as part of the construction proposal; however, if the Specification Engineer is not qualified or not willing to stamp the special provisions, the EOR will stamp these provisions.
- Archiving all bridge design files including calculation books, plans, special provisions, cost estimate and other pertinent documents in accordance with the LADOTD Bridge Design Section records retention policy.

i. QC/QA for Design Activities after Final Plans are Signed by the Chief Engineer

The same QC/QA process above shall be applied to all design activities such as plan revisions, change orders, etc. occurring after the final plans are signed by the Chief Engineer.

j. Archiving Electrical Design Files

The PM will deliver all electrical design files to the LADOTD Bridge Task Manger no later than 30 calendar days after the stamped final plans are delivered. Any revisions made to these documents due to plan revisions and change orders will be delivered with the signed plan

revisions or change order sheets. The final calculation book and other final design documents for all projects including in-house and consultant projects will be uploaded to the archiving location designated in the record retention policy within 30 calendar days after the stamped final plans are delivered.

k. Project Monitoring and Coordination

The PM will monitor the state of the project's progress, any unique technical issues that need to be resolved, and anticipated needs for increased or decreased staffing and report to the PIC.

The PM will be responsible to see that M&M internal minutes are kept at meetings with the LADOTD, Sub-consultants, and in-house project meetings. All the technical information in the minutes will be made available to all individuals working on the project. Where action is required, an individual will be identified as having been assigned that responsibility and a place shall be provided for the PM to indicate when that action has been completed.

All telephone contacts with the LADOTD, fellow design team members or Sub-consultants which lead to decisions or assignments will be recorded on a telephone log sheet. The telephone log sheet will be circulated to all individuals involved, and will become part of the correspondence file for the project (See Attachment 2 for an example telephone log). The log's project title and task order number will be edited as required for each project.

The PM will be responsible for establishing and maintaining a task list, which will identify the anticipated tasks, the team leaders, design engineers, detailers, design checkers, detail checkers and reviewers.

The PIC and the PM are responsible for being current with the project as it develops and for resolving all comments made by the LADOTD and document the resolution.

The PM, or his/her discipline reviewer designee, is responsible for overall quality assurance of the project deliverables.

All calculations and reports, which become superseded during the course of the project, will be clearly identified as being superseded and will be filed separately from the current work. Superseded work will not be discarded until the end of the project.

State-of-the-art computer hardware and software will be used to monitor and track the project development process. The software packages to be used are Microsoft Excel and Deltek Vision.

l. Communication Plan

All project team communication will flow through the PM or his/her team leader designee. This includes all communication with the LADOTD and Sub-consultants.

The methods of communication to be used, listed in order of decreasing preference, include: face to face (not feasible in many cases), telephone, e-mail, express mail and regular mail.

m. Electrical Related Inspections and Instrumentations

All field activities will be conducted by certified inspectors and will be supervised by a Registered Professional Engineer. The PM will identify one member of a field party to serve as a Safety Officer. It will be the Safety Officer's responsibility to:

- Identify local emergency services prior to the start of field work
- Review inspection and field safety requirements of the client, OSHA and Modjeski and Masters, Inc. with the field crew prior to the start of work,
- Verify that safety equipment is being properly used, and
- Supervise any accident reporting that may be necessary.

All field activities will be summarized in a report. Depending on the type of project, this report may be a memorandum to the files or a formal report to be submitted to a client. All reports will contain sufficient descriptions, measurements, sketches, or photographs to document conditions found and will undergo QC/QA reviews.

n. Construction Support Phase

All design activities in the construction support phase will also adhere to the requirements and policies described in this document. These activities include but are not limited to the following:

- Providing responses to Requests for Information (RFI)
- Reviewing Shop Drawings
- Development of Plan Changes/Change Orders

M&M will ensure timely responses to RFIs submitted by the Contractor and/or the LADOTD. M&M will also ensure that the design engineers and/or design checkers from the design phase will participate in the RFI response process.

M&M will ensure that the design engineers and/or design checkers from the design phase will participate in the shop drawing review process. Shop drawings will be reviewed to ensure compliance with design details and project requirements included in the plan drawings. M&M will also review the submitted shop drawings for compliance with the requirements set forth in the Louisiana Standard Specifications for Roads and Bridges. All comments will be returned to the Contractor for agreement, resolution and drawing revisions. Stamps to be applied to shop drawings during the intermediate and final review will adhere to the policies set forth in Bridge Design Technical Memorandum No. 75 and the Louisiana Standard Specifications for Roads and Bridges, Latest Edition.

M&M will also distribute the final shop drawings according to the distribution list provided by the LADOTD Project Manager or LADOTD Bridge Task Manager. Shop drawing distribution letters as provided in BDTM.75 will be used for each distribution.

Plan changes will adhere to all requirements and policies set forth in this document including the CAD Standards and Electronic Deliverables Policy.

SUB-CONSULTANTS

The Sub-consultants for a given task order and their general responsibilities under the contract are to be listed in Attachment 4 of this document.

Upon receipt of Notice-To-Proceed from the LADOTD, the PM will provide and confirm with each Sub-consultant, the scope of services and upper budget limit for the work. Invoicing procedures will be provided to expedite the billing process.

Each Sub-consultant will be asked to provide monthly status reports, which will include a summary of the progress to-date, and which will identify any issues encountered with its work during the period, any decisions or information from M&M that is delaying completion of its work, and the anticipated work for the next reporting period. Each Sub-consultant will be asked to provide interim results of their work, so that M&M can assess the information completed to-date, and either confirm that the task is being completed as scoped, or make the necessary adjustments to ensure that the work is being performed as scoped. All results provided by the Sub-consultants will be reviewed by the appropriate M&M staff prior to the information being used for preparation of deliverables to the LADOTD.

Internal team meetings will be held on a routine basis, and may or may not include all Team members, depending on the major tasks underway at that point in the schedule. Meeting minutes will be recorded and distributed by M&M to the Sub-consultants as deemed appropriate.

Information provided by the LADOTD will be assessed by M&M, and forwarded to the Sub-consultant as necessary for information and action.

ELECTRONIC DELIVERABLES

M&M will produce all electronic deliverables in conformance with the DOTD Software and Deliverables Standards for Electronic Plans document (see Attachment 11). In addition, M&M will ensure that all Sub-consultants submit their electronic deliverables in conformance with the same standards.

M&M and all Sub-consultants will upload or check-in electronic deliverables directly into the LADOTD ProjectWise repository at each plan delivery milestone. In addition, M&M will perform the following operations at each milestone:

- Upload or check in CAD plan deliverables to the discipline "Plans" folder
- Apply and maintain indexing attributes to CAD plans (and other deliverables as needed)
- Publish to PDF format plan submittals in ProjectWise using automated publishing tools
- Digitally sign PDF format plan submittals in ProjectWise according to LADOTD standards and procedures. Signatures will be applied in the appropriate signature blocks with electronic seals and Title Sheets.
- Provide ControlCAD reports in ProjectWise and utilize these reports to correct indexing attributes and CAD standards of all electronic .DGN files.

M&M will apply patches to CAD Standard Resources and install updates to software as needed. In addition, M&M will install major updates to software versions and CAD Standard Resources in a timely manner or as directed by the LADOTD.

IDENTIFYING NON-CONFORMING WORK

The Project Manager or his/her designee will monitor day-to-day activities of the Design Team to confirm that the work is being performed as described in the scope of services and maintains the quality level expectations for the project, and it is within the established budget constraints. Discipline team leaders and reviewers will conduct quality control reviews at regularly scheduled intervals between and up to major milestone submissions throughout the course of the project. The schedule for these reviews will be established at the beginning of each major phase of the project by the Project Manager and the quality assurance reviewers based upon the agreed upon task schedule. Regular staff meetings will be held to discuss interim results, and to quickly identify work that may be considered non-conforming to the requirements of the project. Meeting minutes will indicate the extent of the non-conforming work, and action taken to correct the work and prevent re-occurrence for the remainder of the project. The impact of any non-conforming work on external parties will be assessed, and affected parties will be notified as required. Corrected information will be provided to the affected parties as soon as practical. The results of non-conforming work will be sent to a "dead" file, and disposed of at the completion of the project. With day-to-day monitoring of activities, and regular staff meetings, the potential for, and associated costs of, non-conforming work will be minimized.

M&M's Sub-consultants will also be asked to monitor their activities for non-conforming work in a similar fashion, either identified internally, or through reviews of their work by M&M.

SCHEDULES / DELIVERY DATES / BUDGETS

The Project Manager will establish accounting phase codes for the project that follow the task designations included in the technical and price proposal. The associated budget for each phase based on negotiated man-hours will also be developed. Task codes will be established for each subtask within a particular designated proposal task. This information is then provided to the Accounting Department in order to track project man-hours used and job costs.

In addition, when deemed expedient by the Project Manager, project specific progress spreadsheets will be used to monitor efforts, and provide a second weekly means to track progress and project percent complete.

Quality assurance reviews will be conducted at regular intervals within each major phase of the project. Milestone submission dates will be used to develop the quality assurance review schedule to provide quality deliverables, and to ensure that sufficient time is included to perform the review, as well as permit the design team to respond and/or correct non-conforming work without compromising the overall submission schedule.

M&M will provide a project schedule to the LADOTD for record that identifies key deliverables and their milestone dates. This schedule will conform to the milestone dates established by the LADOTD at the project's start unless a revised schedule has been agreed upon by the LADOTD subsequent to the project start date. The schedule will be updated on a monthly basis to confirm that the project is proceeding as originally anticipated.

In the event a task order falls behind the projected schedule, an assessment will be made by the Project Manager or his designee on how to correct the issue. Potential corrective actions will include more staff added to the task, re-assignment of more specialized staff to the task, or perhaps a re-assessment of the schedule to determine if adjustments can be made to accommodate the delay in the task under concern, without impacting future project milestones.

ADMINISTRATIVE QUALITY MANGEMENT PROCEDURES

The PIC and PM are responsible for the preparation of the technical and price proposals for the project, including both the original agreement and subsequent supplements/work orders. The PIC will review all proposals prior to submission to the LADOTD. A copy of the executed agreement(s) is kept on file in the Accounting Department. This file is readily available to management staff.

Estimation of percent completion and invoice costs will be performed by the PM, with assistance from the discipline team leaders. Using project specific progress tracking spreadsheets, and input from senior staff on completion of work for the various tasks performed for the period under consideration, a project percent complete will be established.

This information will be compared against the projected percent compete per the design schedule at that time to determine if the project is on or ahead of schedule, or what corrective actions are necessary to get back on schedule.

DOCUMENT CONTROL

a. Input

Project specific files are to be established at the beginning of the project. Information is to be filed using the project number as the primary element followed by numerals set up for the project (for example 3000-1 with 3000 being the job number and the numeral 1 being general correspondence and so on) or in accordance with a file numbering system established by the LADOTD.

Information received by the PM is assessed and a copy forwarded to appropriate staff primarily responsible for the task. All senior staff will be provided with the file copy for review and information purposes, in order to keep them aware of associated tasks being performed in conjunction with their work. Electronic documents, including e-mail, are kept on our secure server that all staff can access using the same file naming convention.

All staff will be provided access to current design codes, and addendums which are provided by the Firm when available. Staff will be notified of project specific design criteria and standards, either at staff meetings, or by receipt of memorandum, or by e-mail.

Comments received from the LADOTD or Sub-consultants are reviewed by the PM or his designee, and the appropriate staff made aware of the comments for their response. If a date of response is not included with the comment document, the Project Manager will establish a date, and follow-up with the appropriate staff to make certain that resolution is occurring in a timely manner. The PM will provide M&M's response to the LADOTD and await a follow-up reply.

b. Output

The PM or his designee will confirm that the design staff have been supplied and are using the most current project information, project specific design criteria, design specifications and standards during the course of the project. Staff will be notified either through face-to-face meetings, inter-office mail or electronic mail of updates to information/specifications/criteria that will impact their work.

Quality assurance reviews will be conducted to confirm that the assigned project staff is using the correct project information, design criteria, specifications and standards for completion of their work.

TECHNICAL QUALITY MANAGEMENT PROCEDURES

Specific design procedures for this QC/QA Plan include the following:

- The PM or his team leader designee will identify the design criteria established for each task order, and ensure that the staff is kept updated on any changes or additions to the criteria as the project progresses. Project specific exceptions to standard design specifications discussed with the LADOTD will be documented. Reports and technical documents will be reviewed by the PM or his team leader designee to confirm that the results and/or recommendations utilize the current criteria. Reports and documents will be provided to the quality assurance reviewer to assess the results and recommendations of the design team.

- Continuing training is part of M&M's culture. M&M Design Engineers are constantly being trained by the more senior staff and by attending relevant courses and conferences, and these efforts shall continue. The training materials and references collected are readily available in the office, and will also be made available to the Sub-consultants.

- Design Engineers shall perform self-checking as the work progresses using in-house developed self-checking guidelines. They shall also perform cross checking as needed as the work progresses, when any team member is unsure of the results.

- Design engineers shall provide calculations for formal checking that include assumptions, design criteria and all reference material used to develop the calculations. Calculations shall be in a neat and orderly format. Individual sheet (or sheets) considered as trial designs, or no longer valid, shall be marked to prevent checking of preliminary or superseded work. All formal design calculation sheets will be checked, initialed and dated by the originator and the checker. The quality assurance reviewer will confirm that the established checking procedures and Quality Review Color Codes contained in Attachment 6 have been followed, and that the calculations are complete.

- Any and all LADOTD approved computer programs to be used for a project will have been checked independently by M&M as part of the approval process. Program input is checked to confirm that the appropriate geometry, section properties and material properties have been used, and the output assessed to make certain that the results are trending in the right direction, based on both the current project, as well as past experience, prior to the results being used to complete the design. It is of utmost importance that the designer understands when computer results are reasonable. Checks are made using hand calculations or different computer programs used in parallel. Two engineers working in parallel may be needed when using software that requires a high degree of accuracy and detail. Spreadsheets are checked to confirm that the appropriate design criteria and specifications are being utilized, and that the results of the analysis programs are being transferred correctly and appropriate load factors are being applied.

- Drawings for the design will be developed by qualified technicians and reviewed and checked by engineers or qualified technicians and will meet the requirements of the LADOTD. Drawings will be initialed and/or signed, as applicable, by the originator and the checker. Drawings marked up with changes and/or corrections resulting from the review process are returned to the designer for action. Upon completion of the revisions, the team leader will compare the revised drawings with the marked up review drawings to ensure that all comments have been incorporated into the plans. The completed drawings and mark up's will be provided to the quality assurance reviewer to confirm that the necessary corrections have been completed, the Quality Review Color Codes contained in Attachment 6 have been followed, as well as assess the drawings for overall completeness and clarity.

- Special provisions for non-standard items will be reviewed by the PM or discipline lead for clarity, as well as consistency with the contract plans. Conformance to the LADOTD's standard specifications (content and format) will also be checked. The quality assurance reviewer will assess the special provisions for completeness and compatibility with contract plans.

- Construction cost estimates will be developed based on estimated quantities for the various pay items associated with the design and in accordance with the LADOTD's requirements. An in-house cost estimate will be determined based on M&M plan details. In addition, industry experts (suppliers, fabricators and contractors) may be consulted in development of the estimates. Current bid price (averages) and similar recently bid and/or completed projects will also be reviewed to confirm that the estimate is reasonable. The PM will review the information used to create the cost estimate. The completed cost estimate will be provided to the quality assurance reviewer to assess if the costs appear reasonable for the work included in the contract plans and specifications.

- The PM or a qualified reviewer designee will review all calculations, drawings and specifications to determine that work is being completed in accordance with applicable specifications and the requirements of the LADOTD. This is not to be a number-by-number, line-by-line review, but is to be sufficiently in-depth to identify significant shortcomings in content or presentation, and to determine that the intent of design specifications is being met. This review also includes checking the constructability of the project.

- Completed LADOTD quality assurance certification forms will be submitted for the project. A copy of the certification forms are attached (see Attachments 3 and 5.)

- The PM will be responsible to determine that the project is successfully and completely finalized. This will include:
  - the filing and indexing of design calculations and record copies of drawings,
  - confirmation that the correspondence file and accounting files are in their proper locations,
  - confirmation of the delivery of all required drawings, calculations, reports, correspondence and other documentation to the LADOTD., and

- confirmation that quality assurance records and certification forms have been filed.

- Records will include the following items:
  - non-conformance and corrective action reports
  - drawings, procedures and the QA/QC plan
  - design input, output and verification
  - certification records

- All files, storage boxes or other containers shall be clearly identified with the proper name of the project, the colloquial name, if applicable, the year completed, the LADOTD's project identification number and M&M's project number. These will be transmitted to the LADOTD if required. The accounting office will be notified that the project is complete and that final invoicing may take place.

INTERNAL QUALITY AUDITING

An internal QA audit schedule for each project will be developed. The schedule will be a function of the length of the Task order; shorter task orders will require more frequent audits versus longer projects. Individuals named by the PIC will be performing quality assurance reviews, and will be primarily responsible for confirming that the QC/QA plan is being implemented by the PM on the project. The results of these quality assurance audits will be provided to the PM. If any deficiencies are noted, the PM will be responsible for taking corrective action, follow-up and providing documentation of the actions taken.

Frequency of review meetings for the following items is anticipated to be as follows:

- Schedules – monthly
- Scope – monthly
- Budget – monthly
- Team organization adjustments – bi-weekly (max), or as needed by the project schedule
- Approvals – as needed
- Coordination – at the discretion of the Design Team

During the course of the project, periodic reviews of the policies and procedures in QC/QA Plan will be reviewed by the PM and the quality assurance reviewers to ensure usability and compatibility with interfacing procedures.

Assigned project staff and new staff as they are assigned to the project will be made aware of the specific QA/QC controls established for the project by the PM or his designee. Senior staff will mentor new staff on policies and procedures used to ensure a quality deliverable. The quality assurance reviewers will also monitor the staff to confirm that the quality management plan has been properly communicated to the assigned staff, and that modifications to the plan are communicated to all staff throughout the course of the project.

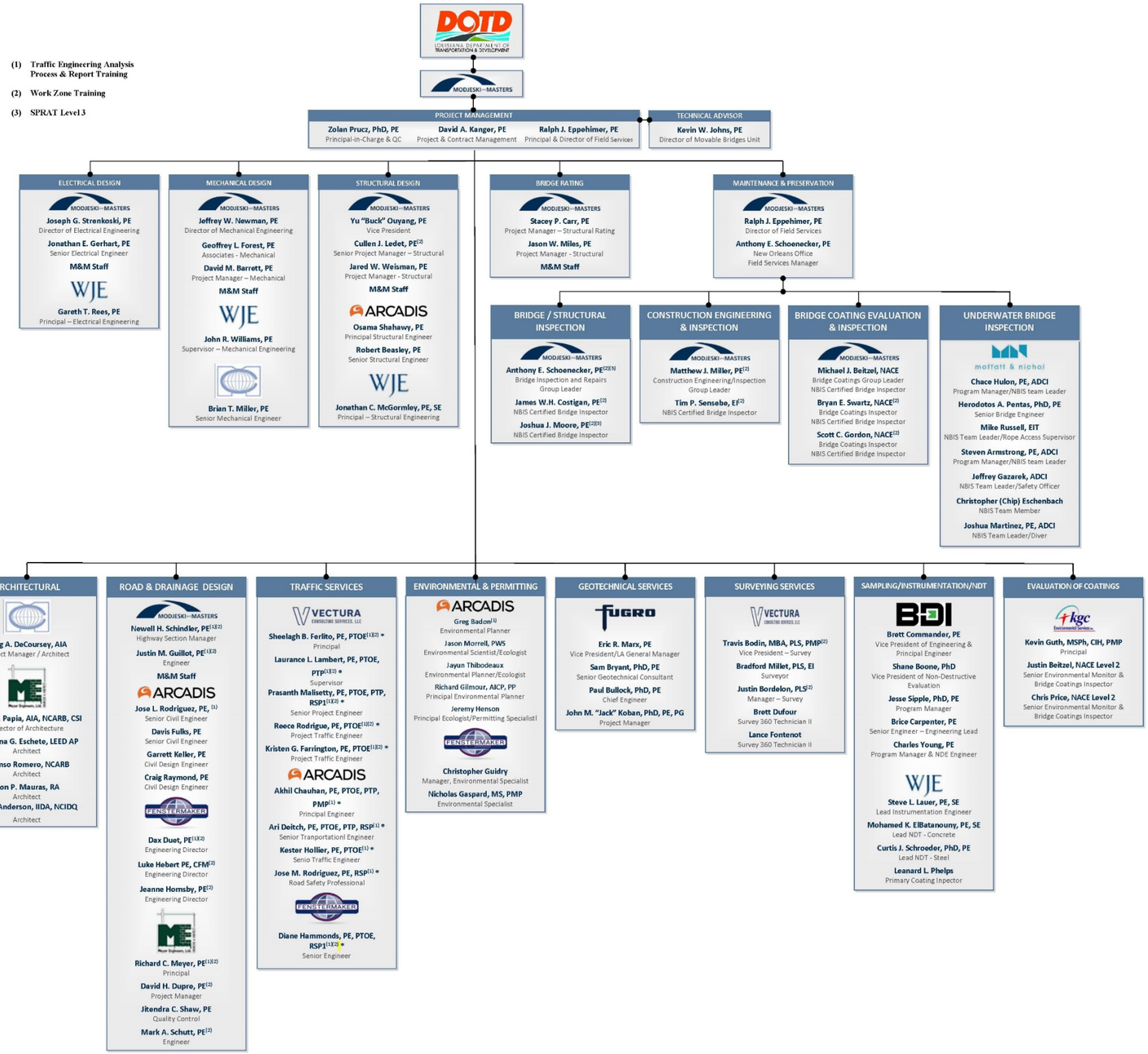
EXTERNAL AUDITS

M&M will accommodate and facilitate LADOTD audits at various times throughout the duration of the project if required.

QC/QA CERTIFICATION

At the end of each project the Department's QC/QA Certification Form (LADOTD BDEM Chapter 3, Appendix D) will be completed and submitted along with the Certification Form (LADOTD BDEM Chapter 3, Appendix I). See Attachments 5 and 3 respectively.

ATTACHMENT 1 - QUALITY CONTROL / QUALITY ASSURANCE PLAN ORGANIZATION CHART



ATTACHMENT 2 – TELEPHONE LOG

TELEPHONE LOG

DATE:	TIME:	☐	URGENT	☐	OUTGOING CALL
		☐	INCOMING CALL	☐	RETURNING YOUR CALL

YOUR NAME:
CALLER/PERSON CALLED:
PHONE NO:
PN: **XXXX**
PROJECT: **XXXXX** **Bridge Task Order #: XXXXXXX**

SUBJECT DISCUSSED	ACTIONS TO BE TAKEN

ATTACHMENT 3 – CERTIFICATION FORM

Appendix I

Consultant Submittal QC/QA Certification

Project No.:

Project Name:

I, the undersigned Supervisor or Team Leader for this project, certify that the information included in this submittal has been prepared in accordance with the QC/QA plan documents and LADOTD Bridge Design Section policy on QC/QA and the information presented is accurate and meets the requirements of this submittal. All CAD drawings meet LADOTD CAD standards.

_____

Submittal Description

_____	_____	_____
Supervisor or Team Leader Name	Signature	Date

ATTACHMENT 4 – LIST OF SUB-CONSULTANTS AND FUNCTION

Sub-Consultant	Services Provided
ARCADIS	Structural Design, Traffic Services, Road & Drainage Design, Environmental & Permitting
VECTURA CONSULTING SERVICES, LLC	Traffic Services
MARRERO COUVILLON & ASSOCIATES Engineering & Construction	Mechanical Design, Architectural
FUGRO	Geotechnical Services
WJE Wiss, Janney, Elstner Associates, Inc.	Electrical Design, Mechanical Design, Structural Design, Sampling, Instrumentation and Non-Destructive Testing
moffatt & nichol	Underwater Bridge Inspection
Meyer Engineers, Ltd. ENGINEERS & ARCHITECTS	Architectural, Road & Drainage Design
BDI Bridge Diagnostics, Inc. (BDI)	Sampling, Instrumentation and Non-Destructive Testing
FENSTERMAKER	Traffic Services, Road & Drainage Design, Environmental & Permitting
kgc Environmental Services inc.	Evaluation of Coatings

ATTACHMENT 5 – QC-QA CERTIFICATION

Appendix D
QC/QA Certification

Project No.:
Project Name:

We, the undersigned designers, raters, detailers, checkers and reviewers for this project, have reviewed and accepted the calculations, plans, quantities, special provisions, and cost estimate prepared for the project. We certify that the work for which we are responsible has been completed in accordance with the LADOTD Bridge Design Section policy on QC/QA.

Team Members	Name	PE Registration No.	Responsible Plan Sheets	Responsible Special Provisions	Construction Cost Estimate	Signature
Designers						
Design Checkers						
Detailers						
Detail Checkers						
Reviewers						
Peer Reviewer						
Geotechnical Engineer						
Hydraulic Engineer						
EOR						

ATTACHMENT 6 – QUALITY REVIEW COLOR CODE

The originator will generate printed or copied reports, calculations, drawings, or other similar originals.

The checker will:

Highlight in YELLOW everything that is correct.

incorrect
Strike in RED everything that is incollect or needs to be deleted.

Write all additions and corrections in GREEN.

The originator will then:

Back-check in BLUE.

All comments that do not require edits are to be made in BLACK ink or pencil.

ATTACHMENT 7 – EXAMPLE OF DESIGN CRITERIA CHECKLIST

(This is an illustrative example as provided by the LADOTD. Specific checklists and forms will be developed for each bridge type and task order)

Design criteria for each project shall include, but not limited to, the following sections:

__ **Cover sheet**

The following information must be included on the cover sheet:

- LADOTD project number
- Project name
- Revision date
- The Supervisor or Team Leader's signature and date

__ **Governing Design and Construction Specifications and Other References**

A list of governing design and construction specifications and other references used for the project shall be included in this section. The edition number, interim revisions, and/or publication date must be specified for each reference.

__ **Design Assumptions and Design Exceptions**

All design assumptions and design exceptions received must be included in this section along with supporting documents.

__ **General Information**

The general information as listed below should be included in this section:

- Bridge information (no. of bridges, bridge clear width, length, no. of lanes, lane width, shoulder width, etc.)
- Road information (roadway classifications, design speed, traffic data, etc.)
- Vertical datum
- Vertical and horizontal clearances
- Other relevant information

__ **Hydraulic Design Criteria**

All hydraulic design criteria (design year, design water elevations, scour depth and scour elevation, etc.) shall be included in this section and the information shall be provided by the Hydraulic Engineer.

__ **Design Factors**

The ductility factor η_D, redundancy factor η_R, and operational importance factor η_I shall be listed in this section.

__ **Design Loads**

All design loads (dead load, live load, wind load, thermal loads, vessel collision loads, seismic load, wave loads, etc.) used for the project shall be included in this section.

__ **Limit States**

All applicable limit states for this project shall be listed in this section.

__ **Bridge Barrier**

The design criteria, types, and test levels for bridge barriers shall be listed in this section. Standard plans and special details should be listed if they are utilized.

__ **Guardrail**

The design criteria, types, and test levels for guardrails shall be listed in this section. Standard plans and special details should be listed if they are utilized.

__ **Approach Slab**

Design criteria for approach slab shall be included in this section. Standard plans and special details should be listed if they are utilized.

__ **Deck and Deck Drainage**

All design criteria for deck and deck drainage design shall be included in this section. Standard plans and special details should be listed if they are utilized.

__ **Bearing**

All bearing types and design criteria for each bearing type shall be included in this section. Standard plans and special details should be listed if they are utilized.

__ **Joint**

All joint types and design criteria for each type shall be included in this section. Standard plans and special details should be listed if they are utilized.

__ **Superstructure**

All superstructure types and design criteria for each type shall be included in this section. Standard plans and special details should be listed if they are utilized.

__ **Substructure**

All substructure types and design criteria for each type shall be included in this section. Standard plans and special details should be listed if they are utilized.

__ **Piles and Drilled Shafts**

All pile types, sizes, and structural design criteria shall be included in this section. Standard plans and special details should be listed if they are utilized.

__ **Geotechnical Design**

All geotechnical design criteria shall be included in this section and the information shall be provided by the Geotechnical Engineer. Standard plans and special details should be listed if they are utilized.

__ **Mechanical Design**

All mechanical design criteria shall be included in this section if applicable. Standard plans and special details should be listed if they are utilized.

__ **Electrical/Lighting Design**

All electrical design criteria shall be included in this section if applicable. Standard plans and special details should be listed if they are utilized.

__ **As-Designed Bridge Rating Criteria**

All as-designed bridge rating criteria shall be included in this section.

__ **Software**

All software used for design and check shall be included in this section.

ATTACHMENT 8 – FINAL CALCULATION BOOK CHECKLIST

The final calculation book for each project shall include, but not limited to, the following sections:

__ **Cover Sheet**

The following information must be included on the cover sheet:

- LADOTD project number
- Project name
- The title of "Final Calculation Book"
- The EOR's seal with signature and date

__ **Final Calculation Book Check List**

__ **QC/QA Certifications**

__ **Peer Review Resolution Agreement (if peer review is performed)**

__ **Design Criteria**

__ **Photometric Analysis Report**

__ **Final Hydraulic Analysis Report from Hydraulic Engineer**

__ **Final Geotechnical Analysis Report from Geotechnical Engineer**

__ **Electrical Design Calculations**

__ **Superstructure Design Calculations**

__ **Substructure Design Calculations**

__ **Quantity Calculations**

__ **Special Provisions/NS-Items**

__ **Construction Cost Estimate**

__ **As-Designed Rating Report**

__ **List of All Final Electronic Design Files and File Locations (ProjectWise directory name)**

Consultants shall submit the final calculation book to LADOTD bridge task managers; the submittal shall be on a CD or Flash Drive or placed to a designated ProjectWise folder including the following information:

__ **A PDF File of the Calculation Book (Including the As-Designed Rating Report)**

__ **All Electronic Design Files**

__ **A PDF File of the As-Designed Rating Report Only**

The final calculation book for in-house projects shall include the same files listed above for consultant projects. The final calculation book and other final design documents for all projects including in-house and consultant projects shall be uploaded to the archiving location designated in the record retention policy within 30 calendar days after the stamped final plans are delivered.

ATTACHMENT 9 – QUALITY ASSURANCE INFORMATION PACKAGE CHECKLIST

Project No.:

Project Description:

_____ Calculation Book

_____ Plans

_____ Special Provisions

_____ Cost Estimate

_____ Other Documents _____

ATTACHMENT 10 – PEER REVIEW RESOLUTION AGREEMENT

Project No.:

Project:

Name:

We, the undersigned Peer Reviewer, Supervisor or Team Leader of the design team, and LADOTD Representative for this project, have reviewed and accepted the attached peer review resolutions. We certify that the peer review has been performed in accordance with the LADOTD Bridge Design Section policy on QC/QA.

Team Members	Name	Signature
Peer Reviewer		
Supervisor or Team Leader		
LADOTD Representative		

ATTACHMENT 11 – LADOTD SOFTWARE AND DELIVERABLES STANDARDS FOR ELECTRONIC PLANS

LaDOTD Software and Deliverable Standards for Electronic Plans

Revised May 2018

Function	LaDOTD Software Standards	Consultant Software Standards	Deliverables	Comments
CAD Drafting	Bentley MicroStation V8i V8.11.07.443 (SS2) or V8.11.09.832 (SS4)	Bentley MicroStation V8i V8.11.07.443 (SS2) or V8.11.09.832 (SS4)	MicroStation DGN	• Consultants must upload MicroStation plan submittals directly into the ProjectWise discipline "Plans" folder.
CAD Standards Management	Altiva CADconform V8.00.70 (MicroStation)	Altiva CADconform V8.00.70 (MicroStation)	MicroStation DGN (with valid CADconform certification stamp)	• Certify the DGN files as DOTD CAD Standard Compliant (indicated by valid compliance stamp) using CADconform running on MicroStation.
CAD Standards Quality Authentication	Altiva DMSconform "Check CAD Standards" (Administered by LaDOTD in ProjectWise)	Altiva DMSconform "Check CAD Standards" (Administered by LaDOTD in ProjectWise)	Aproved ControlCAD Microsoft Excel report	• DOTD reviewers use the DMSconform "Check CAD Standards" function to check for valid CADconform certification stamps and for several other compliance factors. • Status reports must reflect 100% compliance by 60% Final Plans (or sooner if specified by the Project Manager). Substandard deliverables must be approved and documented (as to reason) by the Project Manager.
CAD Attributes Quality Authentication	Altiva DMSconform "Check Attributes" (Administered by LaDOTD in ProjectWise)	DMSconform "Check Attributes" (Administered by LaDOTD in ProjectWise)	Aproved ControlCAD Microsoft Excel report	• DOTD reviewers use the DMSconform "Check Attributes" function to check for completed indexing attribute values. • Status reports must reflect 100% compliance by 60% Final Plans (or sooner if specified by the Project Manager). Substandard deliverables must be approved and documented (as to reason) by the Project Manager.
CAD Plotting	Bentley ProjectWise InterPlot Organizer V8i V8.11.11.XX (SS4)	Bentley ProjectWise InterPlot Organizer V8i V8.11.11.XX (SS4)	Paper format drawings (InterPlot can also be used to create PDFs)	• Full Size Submittals: Full size submittal sheets shall have an outside edge measuring 22" X 34". Provide a 0.50" margin on the top, bottom and right hand side of the sheet and a 2" margin on the left hand side of the sheet. • Half Size Submittals: Half size submittal sheets shall have an outside edge measuring 11" X 17". Drawings shall be an exact 50% reduction of the full size scale drawing. Provide a 0.25" margin on the top, bottom and right hand side of the sheet and a 1" margin on the left hand side of the sheet. • Letter Size Submittals: Letter size submittal sheets shall have an outside edge measuring 8.5" X 11".
Electronic Plans Publishing	Bentley Publish to PDF (Integrated with ProjectWise)	Bentley Publish to PDF (Integrated with ProjectWise)	PDF drawings in ProjectWise	• PDF format drawings are the formal electronic deliverable. • Consultants must import (managed refresh) MicroStation format drawings into the appropriate ProjectWise discipline "Plans" folder (for each plan delivery milestone) in order to be able to publish PDF plan submittals. • A **.MSI** setup file is needed to use the Publish to PDF tool. ProjectWise External PDF Publishing Downloads For Consultants
Road Design	Bentley Inroads V8i V8.11.07.615 (SS2)	Bentley Inroads V8i V8.11.07.615 (SS2)	InRoads DGN graphics, ALG, DTM	• DOTD only allows InRoads that runs on the MicroStation platform. • InRoads SS4 and OpenRoads Designer are not supported at this time.
Hydraulic Design Drafting (Optional)	Bentley Inroads Storm & Sanitary V8i V8.11.07.615 (SS2)	Bentley Inroads Storm & Sanitary V8i V8.11.07.615 (SS2)	Hydraulics DGN Graphics	• Bentley Storm and Sanitary is recommended for generating graphics only. • DOTD only allows InRoads Storm & Sanitary that runs on the MicroStation platform. • The current design standard is HYDR, which is used to check hydraulic designs.
Electronic Survey	Bentley Inroads Survey V8i V8.11.07.615 (SS2)	Bentley Inroads Survey V8i V8.11.07.615 (SS2)	Survey DGN Graphics, FWD, DTM, ALG, TXT	• Any data collection tool and method that produces the required deliverable content and accuracy are acceptable. • DOTD feature codes must be used during data collection to enable output of CAD survey graphics and associated Tag Data. •DOTD only allows InRoads Survey that runs on the MicroStation platform.
PDF Plan Reader	Adobe Acrobat Reader	Adobe Acrobat Reader	N/A	
Digital Signatures	N/A (New Process In Development)	N/A (New Process In Development)	N/A (New Process In Development)	N/A (New Process In Development)
Collaboration Platform	Bentley ProjectWise Explorer V8i V8.11.11.XXX (SS4)	Bentley ProjectWise Explorer V8i V8.11.11.XXX (SS4)	Project plans and associated documents	• Consultants are required to manage their plan submittals within DOTD's ProjectWise system. • Use the managed Export>Export (Locks File) and managed Import functions to manage CAD development between PDF submittals. This prevents unauthorized changes and loss of attribute indexing. • The ProjectWise Explorer application is provided free of charge for consultants working on LA DOTD projects. The Bentley Passport License required to run ProjectWise will be the Consultant's responsibility to purchase.

Software versions posted herein are the latest supported version as of this document publishing. We will seek to keep this document as up to date as possible as we move forward.

Contact Ryan Felder at ryan.felder@la.gov (225-379-1366) for general information and assistance regarding LaDOTD electronic standards, ProjectWise workflow and electronic plan delivery, authentication and publishing.

Contact David Ringuette at david.ringuette@la.gov (or call 225-379-1880) for general information and assistance regarding ProjectWise .PDF publishing setup.

Browse to http://www.dotd.la.gov and then select Doing Business with LaDOTD > Electronic Standards for Plans for links to all DOTD electronic standards and software downloads.

Browse to http://www.altivasoft.com/downloads/CADconform for the latest CADconform software downloads and related CAD/OS platform compatibility information.

Contact support@altivasoft.com (or call 281-395-2254) for information and assistance regarding installation of LaDOTD CAD Resources and Altiva CADconform software.

Contact Altiva Software to purchase CADconform. **Contact Bentley Systems** to purchase MicroStation, ProjectWise InterPlot Organizer and Inroads products.

Louisiana Department of Transportation and Development
Bridge Design Section
Pre-Approved Software List
Updated: March 10, 2021

Developer	Software Name
AASHTO, Inc.	AASHTOWare Bridge Design
AASHTO, Inc.	AASHTOWare Bridge Rating
AASHTO, Inc.	AASHTOWare PS Design Tool
Acuity Brands Lighting, Inc.	Visual
Bentley Systems, Inc.	CONBOX
Bentley Systems, Inc.	CONSPAN
Bentley Systems, Inc.	CONSPLICE
Bentley Systems, Inc.	GEOMATH
Bentley Systems, Inc.	Microstation
Bentley Systems, Inc.	OPEN Bridge Modeler
Bentley Systems, Inc.	RCPier
Bentley Systems, Inc.	RM Bridge
Bentley Systems, Inc.	STAAD
Bentley Systems, Inc.	STAAD Beava
Bentley Systems, Inc.	STAAD Section Wizard
Bridge Software Institute	FB-Pier
Computers and Structures, Inc.	CSiBridge
Computers and Structures, Inc.	CSiCOL
Computers and Structures, Inc.	SAP 2000
CSI, Ltd.	DDM
DOTD In-House	COMPSTIL
DOTD In-House	TimberC
Drive Systems Technology, Inc.	Power Gear
Elite Software	CHVAC 8
Ensoft, Inc.	L-Pile
Finite Element Analysis, Ltd.	LUSAS
LARSA, Inc.	LARSA 4D Bridge Plus
Lighting Analysts, Inc.	AGi32
MDX Software, Inc.	MDX
MIDASoft	Midas Civil
Operating Technology, Inc.	ETAP
PTC, Inc.	MathCAD

Smart Bridge Technology	Smart Bridge Suites
SolidWorks Corporation	SOLIDWORKS
Structure Point, LLC	spColumn
University of Maryland	Sabre
Vista Data Vision	VDV
Wyoming DOT	BRASS-Culvert

Notes:

1. If any other software is required for unique applications for which pre-approved software cannot be used, a synopsis of the software shall be submitted to the Bridge Design Engineer Administrator for approval prior to use. The synopsis shall include the name of the software and the developer, a general description of the functions, a certification from the software developer stating that it is maintained in accordance with the latest AASHTO LRFD Bridge Design Specifications, and an account of the requester's experience and the experience of other organizations or agencies that use the software. Data/results from in-house software will not be accepted as part of the deliverable.

2. The cost of software shall be included in the overhead cost of the firm and not a direct expense for the projects.

22. Sub-consultant information:

If one or more sub-consultants will be used, provide the name, address, point of contact and phone number for each. Otherwise, leave this section blank.

Firm Name (as registered with Louisiana's Secretary of State)	**Address**	**Point of Contact and email address**	**Phone Number**
Arcadis U.S., Inc.	10352 Plaza Americana Drive Baton Rouge, LA 70816	Akhil Chauhan, PE, PTOE, PTP, PMP Senior Vice President akhil.chauhan@arcadis.com	(225) 368-6563
Vectura Consulting Services, LLC	8000 Innovation Park Drive, Baton Rouge, LA 70820	Brin Ferlito, bferlito@vecturacs.com	(225) 223-6685
Marrero, Couvillon & Associates, LLC.	4354 S. Sherwood Forest Blvd., Suite D200 Baton Rouge, LA 70816	Greg DeCoursey, AIA gdecoursey@mca-llc.com	(504) 834-3448
Fugro USA Land, Inc.	4233 Rhoda Dr, Baton Rouge, LA 70816	Jack Koban, PhD, PE, PG jkoban@fugro.com	(225) 292-5084
Wiss, Janney, Elstner Associates, Inc.	330 Pfingsten Road, Northbrook, IL 60062	Jonathan McGormley, PE jmcgormley@wje.com	(847) 753-7234
Moffatt & Nichol, Inc.	301 Main Street, Suite 800 Baton Rouge, LA 70801	Chace Hulon chulon@moffattnichol.com	(225) 610-1932
Meyer Engineers, Ltd.	4937 Hearst Street, Suite 1B Metairie, LA 70001	David Dupre, P.E. ddupre@meyer-e-l.com	(504) 885-9892
C. H. Fenstermaker & Associates, L.L.C.	135 Regency Square Lafayette, LA 70508	Dax Douet, P.E. dax@fenstermaker.com	(337) 237-2200
Bridge Diagnostics, Inc.	740 S. Pierce Ave, Unit 15 Louisville, CO 80027	Scott Aschermann scotta@bditest.com	(303) 494-3230
KGC Environmental Services Inc.	344 Black River Drive Madisonville, LA 70447	Kevin Guth kmguth@kgces.com	(225) 936-3456

23. Location:

If location is an evaluation criterion for this advertisement and the prime consultant intends to establish a local presence, describe the plan for doing so. Otherwise, leave this section blank.