REQUEST FOR QUALIFICATIONS

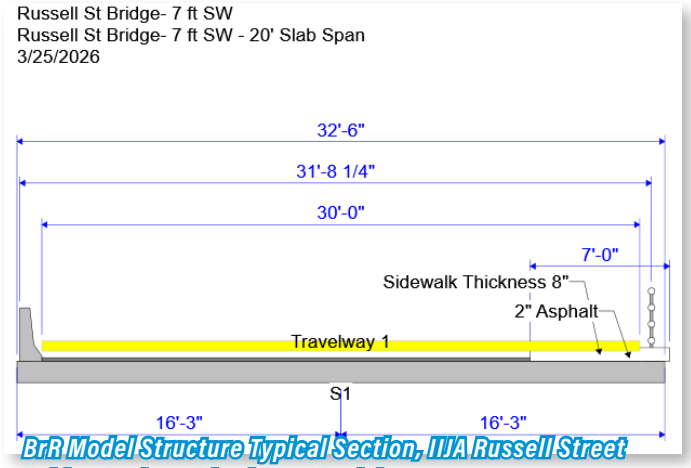
IDIQ CONTRACTS FOR BRIDGE LOAD RATING SERVICES

STATEWIDE, LA



Pecue Lane / I-10 Interchange, Baton Rouge, Louisiana
Source: WAFB 9News


NODPW Bridge Load Ratings, New Orleans, Louisiana



BrR Model Structure Typical Section, IIJA Russell Street Bridge Project, District 07, Louisiana

CONTRACT NOs. 4400036211, 4400036212, 4400036213, & 4400036214 | AUGUST 2026

Michael Baker INTERNATIONAL | *We Make a Difference*

SUBMITTED TO
LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

DOTD FORM: 24-102

(Revised August 1, 2026)

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.

1. Contract Name as shown in the advertisement	IDIQ Contracts for Bridge Load Rating Services Statewide
2. Contract Number(s) as shown in the advertisement	4400036211, 4400036212, 4400036213, and 4400036214
3. State Project Number(s), if shown in the advertisement	N/A
*4. Prime consultant name **(name must match exactly as registered with the Louisiana Secretary of State (SOS) where such registration is required by law; including punctuation; include screenshot from SOS at the end of Section 20)***	Michael Baker International, 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.0000062 V.F. 0000010
6. Prime consultant mailing address	2600 Citiplace Drive, Suite 450, Baton Rouge, LA 70808
7. Prime consultant physical address (existing or to be established, if location is used as an evaluation criteria)	2600 Citiplace Drive, Suite 450, Baton Rouge, LA 70808
8. Name, title, phone number, and email address of prime consultant's contract point of contact	Daniel Thornhill, PE | Associate Vice President & Office Executive 225-218-2846 (office) | 205-908-8026 (mobile) | daniel.thornhill@mbakerintl.com
9. Name, title, phone number, and email address of the official with signing authority for this proposal	Daniel Thornhill, PE | Associate Vice President & Office Executive 225-218-2846 (office) | 205-908-8026 (mobile) | daniel.thornhill@mbakerintl.com

BY PARTNERING WITH THE MICHAEL BAKER TEAM, DOTD WILL BENEFIT FROM:



Trusted local leaders who know DOTD's structures, standards, & staff

✓ Recent in-house load ratings experience for DOTD ✓ Additional local staff provided by trusted subconsultants



National expertise in bridge load ratings for both simple and complex structures

✓ Experience load rating groups of hundreds of bridges simultaneously ✓ Major structures ✓ Movable bridges

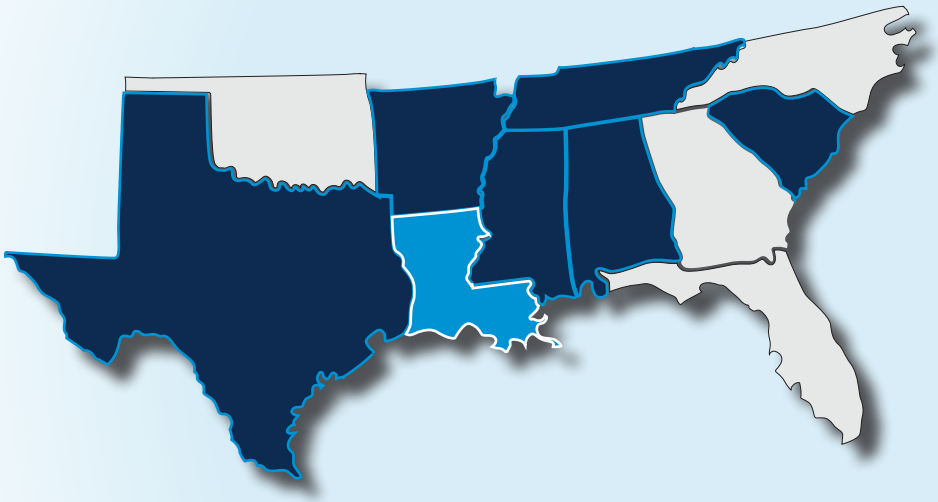


Proven IDIQ delivery apporach for peer agencies across the Southern U.S.

✓ Rapid Mobilization ✓ Lessons Learned ✓ Seamless workshare across regional offices

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. ***Pursuant to Act No. 581 of the 2024 Louisiana Legislature Regular Session, proposer further certifies that it does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association based solely on the entity's or association's status as a firearm entity or firearm trade association. In addition, proposer certifies it will not discriminate against a firearm entity or firearm trade association during the term of the contract based solely on the entity's or association's status as a firearm entity or firearm trade association.***	*Signature above shall be the same person listed in Section 9:* *08/25/2026* *Date:*
11. If a Disadvantaged Business Enterprise (DBE) goal has been set for this advertisement, indicate which firm(s) will be used to meet the DBE goal and each firm(s)' percentage	*Firm(s):* N/A *Firm(s)' %:* N/A

MICHAEL BAKER IS PERFORMING ON-CALL, STATEWIDE LOAD RATING SERVICES FOR DOT CLIENTS ALL ACROSS THE SOUTHERN U.S.

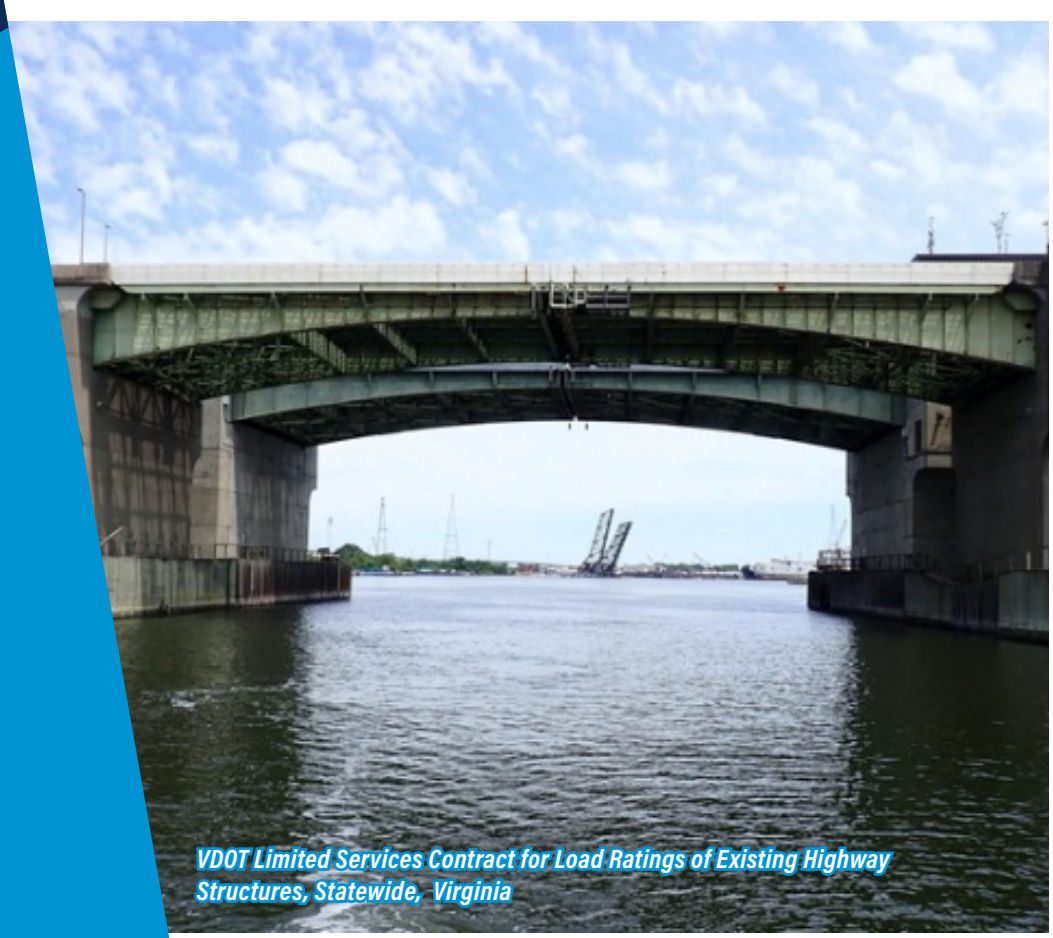


Extensive Load Rating Experience Throughout the Southern U.S.

- ✓ ***Louisiana:*** *numerous as-designed load ratings on the "U.S. 371 Railroad Overpasses", as well as load ratings for "Pecue Lane / I-10 Interchange", "IIJA Off-System Bridges", and "Structural Load Rating of 250 Bridges Statewide" contracts for DOTD.*
- ✓ ***Mississippi:*** *1,700+ load ratings for simple and complex bridges, including movable bridges, over 15+ years of recurring OSARC Bridge Inspection and Load Ratings contracts.*
- ✓ ***Alabama:*** *numerous load ratings under our Statewide Transportation Services contract*
- ✓ ***Texas:*** *2,000+ load ratings for simple and complex bridges, including truss bridges, over 12+ years of recurring TxDOT Bridge Inspection and Load Ratings contracts.*
- ✓ ***Arkansas:*** *review of ARDOT's "Load Rating & Posting" maual, and development of a standalone Load Rating Manual under our Bridge Program Evaluation contract.*
- ✓ ***Tennessee:*** *numerous load ratings for simple and complex bridges for TDOT.*
- ✓ ***South Carolina:*** *completed over 6,600 load ratings, QA Consultant Statewide, developed 3-day AASHTOWare BrR training, completing major technical and SNBI updates for the Load Rating Guidance Document.*

In addition, subconsultants Moffat & Nichol and Neel-Schaffer bring identical on-call load rating experience from contracts with DOTD, MDOT OSARC, and TDOT.

DISCIPLINE TABLE | TEAM SIZE | ORGANIZATIONAL CHART | MINIMUM PERSONNEL REQUIREMENTS



VDOT Limited Services Contract for Load Ratings of Existing Highway Structures, Statewide, Virginia



Hernando De Soto Bridge Emergency Repair, Memphis, TN



I-26 Bridge Emergency Assessment & Repair, Spartanburg, South Carolina

Michael Baker offers DOTD a deep bench of experts in all aspects of bridge load ratings, from rating large groups of simple, fixed-span bridges to focused ratings for individual complex bridges.

12. Discipline Table:

Discipline(s)	*% of Overall Contract*	*Michael Baker International, Inc.*	*Moffat & Nichol Inc.*	*Neel-Schaffer, Inc.*	*Each Discipline must total to 100%*
Bridge	**97.00%**	83.00%	10.75%	6.25%	**100%**
Traffic	**3.00%**	50.00%	-	50.00%	**100%**
*Identify the percentage of work for the **overall contract** to be performed by the prime consultant and each sub-consultant.*					
Percent of Contract	**100%**	**82.01%**	**10.43%**	**7.56%**	**100%**

PROVEN APPROACH TO DELIVER EFFICIENT, ACCURATE, & RELIABLE LOAD RATING SERVICES

Data Review & Records Research → **Condition Verification** → **Structural Modeling** → **Load Rating & Documentation** → **QA/QC Review** → **Final Recommendations**

BENEFITS OF APPLYING THIS APPROACH

- *Complete review of available bridge data*
- *Proven methodology consistent with AASHTO and DOTD requirements*
- *Use of advanced modeling tools when warranted*
- *Independent QA/QC by certified Louisiana PEs*
- *Minimize unnecessary load posting recommendations*

PROVEN SUCCESS APPLYING THIS APPROACH TO DOT ON-CALL CONTRACTS ACROSS THE U.S.



South Carolina DOT Statewide Bridge Load Rating and Inspection Contracts

Load rating / evaluation for 6,600+ bridges | Custom AASHTOWare Bridge Management programs and QA reviews for 9,400+ bridges | Delivered training session incorporating the LRGD and AASHTOWare BrR



Montana DOT Bridge Inspection and Load Rating Quality Assurance Contract

QA reviews of 150 inspection reports | Field reviews of 60 field inspections | Updates to MTDOT's Bridge Inspection and Rating Manual (BIRM)



Missouri DOT On-Call Routine Structures Load Rating Contract

Load rating for 100 prestressed concrete double tee girder bridges | Load rating for 200+ additional bridges, including 116 prestressed I-beam bridges | Creating BrR models of the state's bridge inventory



Iowa DOT BrR Program for Rating Iowa Bridges

Developing BrR template files for standard bridge types | Includes policies and training materials for Local Public Agency staff and other consultants | Developing truss and gusset plate models for 169 structures

13. Team Size:

SCALABLE RESOURCES TO ENSURE APPROPRIATE COVERAGE & AMPLE REDUNDANCY

We have structured the Michael Baker team to offer DOTD ***ample personnel, ensuring redundancy and providing the ability to ramp up staffing*** *to accommodate* ***two or more concurrent task orders,*** *accounting for unexpected complexities or expedited schedules. We assume one of these task orders would focus on a large group of simple fixed-span bridges (approximately 10 bridges), while another would focus on a small group of complex bridges (potentially a truss bridge & a mechanical bridge). With that in mind, it is not anticipated that the total available staff shown below will be assigned concurrently. Our approach and methodology details our plan to work with DOTD's Project Manager to scale staffing up or down* ***to best meet the needs of the contract.***

Firm name	*DOTD Job Classification*	***Number of personnel committed to this contract***	*Total number of personnel available in this DOTD Job Classification (if needed)*
Michael Baker International, Inc.	CADD Technician	1	2
	Clerical	1	3
	Engineer	6	25
	Engineer Intern	1	12
	Engineer-Other	2	8
	Principal	1	1
	Senior Technician	1	2
	Supervisor - Eng	2	6
	Supervisor - Other	1	4
Moffat & Nichol Inc.	Administrative	1	2
	CADD Technician	1	3
	Engineer	2	12
	Engineer Intern	2	6
	Principal	0	2
	Supervisor - Eng	2	8
Neel-Schaffer, Inc.	Engineer	3	12
	Engineer - Other	2	8
	Principal	0	1

14. Organizational Chart:

DOTD PROJECT COORDINATOR



PRINCIPAL-IN-CHARGE
Daniel Thornhill, PE

PROJECT MANAGER
Shalin Sheth, PE [1 & 3]



TECHNICAL ADVISOR
Tim Armbrecht, PE, SE [1 & 2]
Herodotos Pentas, PhD, PE (M&N) [1]
Charles "Tony" Hunley, PhD, PE, SE

DEPUTY PROJECT MANAGER
Gabriel Rice, PE [3 & 4]



QA/QC MANAGER
Philip Quillin, PE, PMP [1]

Team Members
Michael Baker International
Moffat & Nichol (M&N)
Neel-Schaffer (NS)

Certification Legend
Personnel fulfilling an MPR role.
1 Completed the " NHI Load and Resistance Factor Rating of Highway Bridges" course.
2 Instructor for "Load and Resistance Factor Rating of Highway Bridges" course for NHI/FHWA.
3 FHWA Certified Bridge Inspector.
4 ATSSA Traffic Control Certifications.

TASK 1: PLAN & DOCUMENT RETRIEVAL & REVIEW; TASK 2: SITE VISITS

Lead - Gabriel Rice, PE [3 & 4]
Alexis Harrouch, PE [4]
Jacob Rish, EI

SPRAT SUPPORT (IF NEEDED)
Luke McMahen, PE, SPRAT I

TRAFFIC CONTROL (IF NEEDED)
Alexis Harrouch, PE [4]
Mai Nguyen, PE (NS) [4]
Daniel Thornhill, PE
Nicholas Castille, PE (NS)

TASK 3: ANALYSIS & LOAD RATING; TASK 5: OVERWEIGHT PERMIT REVIEWS; TASK 6: REVIEW, UPDATE & CORRECT AASHTOWARE BrR FILE TASK 7: BRIDGE RATING REVIEW

Lead - Shalin Sheth, PE [1 & 3]

FIXED BRIDGE SUPPORT
Jeffrey McRae, PE [3]
Gabriel Rice, PE [3 & 4]
Layton Breithaupt, PE [1 & 3]
George Manning, PE, SE
Petrina Butler, PE [1]
Fred Harper, PE
Stephen Fowler, PE
Wesley Phillips, PE (NS) [1]
Isabella Mejdrech, PE, SE (M&N) [1]
David Wolfe, PE (M&N) [1]
Eric Vugteveen, PE (M&N)
Herodotos Pentas, PhD, PE (M&N) [1]

MOVABLE BRIDGE SUPPORT
Iris Leoncio, PE, SE [1]
Christopher Dorman, PE [1]
Ling Zhao, PhD, PE [1]
Kashfia Billah, PE [1]
Hamid Ikram, PE [1]

TASK 4: TRAINING

Lead - Tim Armbrecht, PE, SE [1 & 2]
Daniel Baxter, PE, SE [1 & 2]
Vinacs Vinayagamoorthy, PE [1]
Philip Walker, PE [1]

BRIDGE ENGINEERING SUPPORT POOL

Available to support all tasks
Jason Stith, PhD, PE, SE [1]
Jenny Raines, PE [1]
Kevin Frank, PE, CBI
Hratch "Rich" Pakhchanian, PE [1]
Jason Sadowski, PE, SE, CBI
James Beatty, PE [1]
Megan Land, PE
Chace Hulon, PE (M&N)
Richard Withers, PE (NS) [1]

TASK 8: MISCELLANEOUS RATING WORK

All Personnel for Tasks 1-7 will be available for miscellaneous work.

15. Minimum Personnel Requirements:

MPR No. Do not insert wording from ad	*Personnel being used to meet the MPR (Individual(s) may not satisfy more than one MPR unless specifically allowed by Attachment B of the advertisement)*	*Firm employed by*	*Type of license and discipline meeting MPR/ certification & number (Ex: PE # - Civil)*	*State of license*	*License/certification expiration date*
1	Daniel Thornhill, PE	**Michael Baker International, Inc.**	PE No. 32367 - Civil	Louisiana	09/30/26
2	Daniel Thornhill, PE	**Michael Baker International, Inc.**	PE No. 32367 - Civil	Louisiana	09/30/26
3	Jeffrey McRae, PE	**Michael Baker International, Inc.**	PE No. 34554 - Civil	Louisiana	09/30/27
4	Stephen Fowler, PE	**Michael Baker International, Inc.**	PE No. 48230 - Civil	Louisiana	03/31/28
	Iris Leoncio, PE	**Michael Baker International, Inc.**	PE No. 47438 - Civil, Structural	Louisiana	09/30/27
	Jason Stith, PhD, PE, SE	**Michael Baker International, Inc.**	PE No. 50186 - Civil, Structural	Louisiana	09/30/27
	Eric Vugteveen, PE	**Moffatt and Nichol Inc.**	PE No. 38667 – Civil	Louisiana	09/30/26
5	Shalin Sheth, PE	**Michael Baker International, Inc.**	PE No. 48337 - Civil	Louisiana	03/31/28
	Layton Breithaupt, PE	**Michael Baker International, Inc.**	PE No. 48097 - Civil	Louisiana	03/31/28
	Petrina Butler, PE	**Michael Baker International, Inc.**	PE No. 39597 - Civil	Louisiana	09/30/27
	Herodotos Pentas, PhD, PE	**Moffatt and Nichol Inc.**	PE No. 24660 – Civil	Louisiana	09/30/28
	Isabella Mejdrech, PE, SE	**Moffatt and Nichol Inc.**	PE No. 48259 – Civil	Louisiana	03/31/28



SECTION 16

STAFF EXPERIENCE



DOTD 2023 Load Ratings IDIQ, Statewide, LA



SH 16 over Llano River Truss Bridge, Llano County, Texas



OSARC Bridge Inspections & Load Ratings, Statewide, Mississippi

DOTD will benefit from the Michael Baker Team's depth of experience and redundancy of staff. Our local experts can draw on the national resources of the team, ensuring the Department works with familiar faces who are equipped with the latest innovative techniques and technologies to streamline this project.

KEY PERSONNEL

PROJECT MANAGEMENT TEAM & STAFF FULFILLING MPRs

16. Staff Experience:



Firm employed by	Michael Baker International, Inc.		
Name	**Shalin Sheth, PE**	*Years of relevant experience with this employer*	4
Title	Project Manager - Bridge	*Years of relevant experience with other employer(s)*	4
Degree(s) / Years / Specialization	MS / 2019 / Civil Engineering (Structural); BTech / 2016 / Civil Engineering		
Active registration number / state / expiration date	PE No. 48337 / LA / 03/31/2028		
Year registered	2023	*Discipline*	Civil
Contract role(s) / brief description of responsibilities	**MPR #5;** Project Manager; Task 3, 5, 6, & 7 Lead		

Shalin is a licensed Professional Engineer with experience in bridge and structural engineering, including the design of new bridges and rehabilitation of existing structures. As a Project Manager, he leads multidisciplinary teams through all project phases, from preliminary design to load rating, final plans and construction support. Shalin's technical experience includes performing finite element analysis, bridge structural design and load rating, and preparation of detailed bridge plan sets. He has managed and contributed to rehabilitation projects involving structural repairs and preservation in accordance with the governing code requirements across Louisiana and multiple other states. His additional experience includes bridge inspections, bridge load testing, GPR surveys, cost estimating, and mentoring junior engineers.

- ✓ ***Meets MPR #5:*** LA PE (Civil) with 8+ years of bridge rating experience
- ✓ Well-versed in DOTD bridge design guidelines
- ✓ Performed hundreds of load ratings for DOTD structures, including movable bridges
- ✓ Highly proficient in a wide range of bridge design and load rating software, and in instructing others in its use

Experience dates (mm/yy–mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
11/21 – Ongoing	**US 371: KCS RR Overpasses HBI, Webster Parish, LA.** *DOTD.* **Deputy Project Manager / Bridge Engineer.** Responsible for developing project schedule, budgeting and scoping, rehabilitation concept plan and alternatives comparison report (rehabilitation vs. phased construction) and leading plan set development. Michael Baker is currently developing rehabilitation plans for the US 371 bridge site over KCS railroad at Sibley. For the twin bridge replacement project at Minden (skewed prestressed concrete girder bridge), responsibilities included computation of engineering design calculations, determining structural feasibility of bridge geometry, structural design of all bridge components, computation of bridge quantities, ***load rating using AASHTOWare BrR and ouput from LEAP Bridge design file,*** and plan production at various preliminary and final submittal stages/milestones. Ensured that bridge plans meet both DOTD and KCS Railroad Design Guidelines.
11/22 – Ongoing	**Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program, Statewide, LA.** *DOTD District 07.* **Deputy Project Manager / Bridge Engineer.** Responsible for coordination with DOTD, various parishes and subconsultants, reviewing final plan submittal packages, developing engineering design calculations, bridge geometry, bridge quantities, ***load ratings,*** and design plans. Michael Baker was selected by DOTD to provide bridge, roadway and environmental services for the replacement of off-system bridges in the five parishes located in DOTD District 07. Structures replaced by this program include numerous culverts, box culverts, and slab span bridges. Currently, Michael Baker has submitted stamped final plans for four projects (six bridges/culverts), while four other projects are at various final submittal stages. There are a total of 12 bridges and culverts among the eight projects under this contract.
10/23 - 07/25	**Load Ratings for OSARC based on 2023 & 2024 Bridge Inspection Recommendations.** *Mississippi OSARC.* **Bridge Engineer.** Responsibilities include performing load rating evaluation for various types of bridges (concrete slabs, steel girders, steel and timber girder/stringer/floor-beam systems, steel railcar bridges) using AASHTOWare BrR for superstructure analysis and an in-house spreadsheet developed for substructure analysis, preparing load rating summary reports and critical finding recommendations if applicable, and providing guidance to engineer interns.
07/19 – 02/21	**Load Rating of 311 Bridges, LA.** *DOTD.* **Engineer Intern.** Responsible for load rating 51 bridges of various types such has concrete slab bridges, reinforced concrete girder bridges, prestressed girder bridges, prestressed and reinforced channel bridges, reinforced concrete culverts, and timber beams/timber trestle bridges. For a typical bridge, the load rating process involved developing and analyzing the superstructure structural model in AASHTOWare BrR, substructure structural model in RC Pier (now LEAP Bridge Concrete), and post processing the analysis results using Mathcad to effectively determine the load carrying capacity of the bridge (load rating factors) and accordingly recommending the posting load to DOTD. This project's scope was initially the load rating of 311 bridges located across Louisiana, however later another 300+ bridges and culverts were added to the scope.

05/21 – 08/21	**Mermentau River Swing Span Truss Bridge Repairs at Grand Cheniere, LA.** *DOTD.* **Engineer Intern.** Responsible for preparing a structural rehabilitation solution to repair a steel truss member with structural deficiency, along with repair solutions for floorbeams and stringers using steel cover plates. I***mplemented the structural modifications in AASHTOWare BrR to ensure that the bridge does not need to be posted.*** Drafted and redrew the fender system plans and railing repair plans and reviewing overall bridge repair quantities and the plan set. Assisted with bridge inspection and load rating services in the preliminary stage, and later prepared repair and rehabilitation plans and procedures for the entire superstructure and substructure along with the fender system for the movable bridge span.
07/22 – 08/22	**Load Rating of 176 Bridges, LA.** *DOTD.* **Engineer Intern.** Responsible for performing load rating for a total of 43 culverts out of 176. The typical process mainly involved developing and analyzing the structural model for concrete box culverts in AASHTOWare BrR, and then preparing reports with load posting recommendations, if applicable.
07/22 – 08/22	**Load Rating of 114 Bridges, LA.** *DOTD.* **Engineer Intern.** Responsible for performing load rating for a historic steel beam bridge, and a prestressed concrete girder bridge. The typical load rating process involves modeling the superstructure and substructure in AASHTOWare BrR and LEAP Bridge Concrete respectively, along with compiling the load rating report. Also reviewed over 40 concrete slab bridges to be load rated by three junior engineer interns.
08/25 - 10/25	**TDOT General Engineering Services 2022-2026, Agreement No. E2452, Statewide, TN.** *TDOT.* **Bridge Engineer.** Responsible for performing superstructure load rating analysis for a curved concrete girder bridge and a steel girder bridge in AASHTOWare BrR. Michael Baker is serving a four-year on-call contract to provide bridge repair services across the state of Tennessee. The team is responsible for a variety of assignments including contract documents, tunnel inspection plan revision, NSTM inspection, truss bridge inspection with maintenance recommendations, and railroad flat car inspection.
09/23 – 09/24	**Bridge Inspections.** *Mississippi OSARC.* **Assistant Team Lead.** Responsibilities included performing a preliminary study of previously available inspection reports, filling out inspection forms as required by OSARC both prior and after inspections, conducting in-depth inspections of bridges (concrete channels, concrete slabs, reinforced concrete girders, steel girder bridges), noting defects in both superstructure and substructure, documenting photographs and measurements, assigning condition ratings to bridge elements, and recommending bridge closures based on critical findings if applicable, for 43 bridges.
03/25 - 11/25	**SR 25 Spur over Mackay River.** *GDOT.* **Bridge Engineer.** Responsibilities included developing a finite element model in MIDAS of the replacement structure in conjunction with the PG-Splice model to finalize the structural design. The proposed replacement structure consists of a 600 ft main span with post-tensioned concrete segmental girders, with approach spans consisting of prestressed concrete girders. Also responsible for performing vessel collision risk analysis for substructure using FDOT methodology.
03/23 - 03/24	**I-2/I-69C Interchange Construction Support (Design-Build).** *Texas DOT.* **Bridge Engineer.** Responsibilities include addressing RFIs, FDCs (Field Design Change), NDCs (Notice of Design Change) by performing structural analysis, making changes to the construction plan set sheets using Microstation as required, reviewing changes and drawings by other engineers, ensuring conformance to TXDOT construction specifications, coordinating with subconsultants and prime contractor DPJV (Dragados-Pulice Joint Venture), working with Bentley and Axiom to prepare custom drawing configuration files to prepare record drawings in accordance with TxDOT's requirements for 19 bridges (steel, prestressed concrete, concrete slab bridges).
07/19 – 08/22	**Macarthur Interchange Completion Phase II at US90-Z Eastbound, Jefferson Parish, LA.** *DOTD.* **Engineer Intern.** Responsible for structural analysis and girder capacity verification of prestressed concrete girders, developing spreadsheets and Mathcad files for computing development lengths and splice lengths, and deck reinforcement design. Also developed computing bridge quantities, girder riser elevations, riser thicknesses, deck elevations for the bridge, along with drafting CAD sheets in MicroStation for framing plans, pier cap details, and deck reinforcement plans in compliance with DOTD standards. This project consisted of demolition of an off-ramp and an on-ramp, along with reconstruction of both at different locations in addition to new construction to facilitate bridge widening.

16. Staff Experience:

Firm employed by	Michael Baker International, Inc.		
Name	**Daniel Thornhill, PE**	*Years of relevant experience with this employer*	6
Title	Office Executive/Associate Vice President	*Years of relevant experience with other employer(s)*	22
Degree(s) / Years / Specialization	BS / 1997 /Civil Engineering, Louisiana State University and A & M College		
Active registration number / state / expiration date	PE No. 32367 / Louisiana / 09/30/26		
Year registered 2006	*Discipline*	Civil Engineering	
Contract role(s) / brief description of responsibilities	**MPR 1 & 2;** Principal-in-Charge		



Daniel has more than 25 years of consulting experience focusing on bridge and roadway design, corridor/traffic operation concept analysis, hydraulics and subsurface drainage design, and sidewalk beautification projects. He has served as Project Manager/Senior Engineer in the Greater Baton Rouge area since 2006, serving as the responsible-in-charge for Roadway/Transportation Design and Corridor Studies for DOTD, East Baton Rouge Parish, Lafayette Consolidated Government and St. Tammany Parish Department of Public Works. Daniel will support Shalin in the management of this project by leveraging our regional and national resources to appropriately staff the contract, balancing the fluctuating personnel needs of concurrent task orders to maintain DOTD's schedule and budget goals.

- ✓ ***Meets MPR 1 & 2:*** LA PE (Civil) & Principal of Michael Baker
- ✓ 25+ years of Louisiana-focused design experience
- ✓ 10+ years of bridge engineering experience
- ✓ Familiarity with DOTD staff, procedures, and projects will streamline communication and enhance technical oversight
- ✓ Served as Project Manager, Principal-in-Charge, or Senior Engineer on 75+ transportation projects across Louisiana

Experience dates (mm/yy–mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
11/21 – Ongoing	**US 371: KCS RR Overpasses HBI, Webster Parish, LA.** *DOTD Headquarters.* **Principal-in-Charge & Project Manager.** Responsible for the design and development of construction plans for the replacement of three bridges at two locations along US 371. Project includes the replacement of the twin bridges for the site at Minden with a single wider structure. The new bridge will be prestressed concrete girder-type and uses LG 63 and LG 36 girders and fulfills KCS/CPKC crash-wall requirements. Michael Baker is currently developing rehabilitation plans for the US 371 bridge site over KCS railroad at Sibley.
10/22 – Ongoing	**IIJA Off-System Bridge Program – District 07.** *DOTD District 07.* **Principal & Project Manager.** Responsible for the oversight of the development of a Preliminary Bridge Matrix and Final Structure Recommendation for the off-system bridge program for five parishes in District 07. Project is broken into Initial Phase and Final Design Phase. Matrix developments were part of the initial phase that started in October 2022 and was finished and submitted in December 2022. District 07 was given $30.3 million dollars with allocations for each parish. Additional responsibilities included meeting with each Parish engineer/Policy Jury to determine priority for which bridges needed replacement. Based on priorities, environmental screening was done to determine any mitigation requirements along with determining if additional rights-of-way may be required along with utility relocations. The Final Structure Recommendation determined how many bridges could be replaced on program with allocated funds that also included design and inspection cost. Currently, Michael Baker has submitted stamped final plans for four projects (six bridges/culverts) while four other projects are at various final submittal stages. There are a total of 12 bridges and culverts among the eight projects under this contract.
04/14 – 08/16	**Bridge Replacement Program - Cuyhanga Parkway and Pecos Drive, Baton Rouge, LA.** *East Baton Rouge DPW.* **Project Manager.** Responsible-in-charge for the replacement of Cuyhanga Parkway Bridge over Jones Creek and Pecos Road Bridge over Shoe Creek. Project included development of construction plans, sizing of bridge opening with HEC-RAS hydraulic model, and relocation of local sewer lines in conflict with new construction. Both bridges were cast-in-place decks with sidewalks resting on concrete bent caps on driving PCC Piles.
03/20 - 12/21	**Pecue Lane / I-10 Interchange.** *DOTD.* **Project Manager.** Responsible for handling all Requests for Information (RFIs) or Shop Drawings from the contractor. Project involved a two0span bridge over I-10 for a new interchange that abutment earthwork was being supported by retaining walls.
03/21 - 03/22	**Pearl River Truss Replacement, Pearl River, LA.** *Norfolk Southern Corporation.* **Senior Engineer.** Worked with CE&I Field Engineer in regards to allocations and/or re-allocation of resources for the duration of the project. Michael Baker acted as part of the project team for replacement of the Lindbergh Norfolk Southern Bridge crossing the East Pearl River in Louisiana. Tasks included traffic maintenance, protection of environmental areas, and lead-based coatings demolition.

03/15 – 01/16	**Espasie Drive Bridge Replacement, Lafayette Parish, LA.** *Lafayette Consolidated Government.* **Project Manager & Design Lead.** Responsible for overseeing design for the replacement of an existing bridge on concrete bents and timber piles with a Pre-Cast Arch Span Bridge. Responsibilities included overall management of project along with hydraulic design for sizing the replacement structure for the channel along with all roadway horizontal and vertical alignments and roadway drainage. Led the development of plans, prepared bid documents, and assisted the Parish with letting of the project. After letting, Mr. Thornhill was responsible for the oversight of the construction of the project to ensure the structure was being built per the plans and coordination between the inspectors and Parish engineers. Mr. Thornhill reviewed and approved all pay request and change orders requested by the contractor.
04/02 – 02/04	**Garvee Amendment Bridge Replacement Program, Various Locations, AL.** *ALDOT.* **Project Engineer.** Responsible for the design and development of construction plans for bridge replacement projects. Responsibilities included design of bridge superstructure and substructure and the road improvements to match new bridge elevations. Bridges substructures were either drilled shafts socketed in rock bed or shallow foundations with driven steel "H" piles. Bridge projects were in Jefferson County, Marshall County, Culman County and Marion County. Mr. Thornhill was also responsible for all road improvements for the approaches for each bridge.
03/13 – 04/14	**US 190 Traffic Study for LA DOTD and Line & Grade Study, Covington, LA.** *New Orleans Regional Planning Commission.* Project Engineer. Responsible for the geometry layout of corridor improvements to aid in traffic operations along US 190 (Collins Blvd.). Project included multiple roundabouts at various intersections ***and new bridge structures over Bogue Falaya waterway***.
01/11 – 12/11	**LA 3234 (E. University Avenue) Extension, Hammond, LA.** *DOTD.* **Project Engineer.** Responsible for the geometric layouts of three alternatives, including multiple roundabouts, to extend a multi-lane state highway to provide access to the Hammond Airport (approximately 2 miles). ***This project included bridge improvements over Ponchatoula Creek.***
12/06 – 06/10	**Green Light Plan.** *East Baton Rouge Parish.* **Project Manager.** Responsible for the design and construction of 7 projects in East Baton Rouge Parish. ▪ Siegen Lane - Highland Road to Perkins Road *(in conjunction with DOTD Roadway)* ▪ Highland Road - Old Perkins Road to Airline Highway *(in conjunction with DOTD Roadway; **included new bridges**)* ▪ Jones Creek Road – Coursey Blvd to South Harrell's Ferry Road *(in conjunction with DOTD Roadway; **included new bridges**)* ▪ South Harrell's Ferry Road – Millerville Road to O'Neal Lane ***(Included new box culvert bridge)*** ▪ O'Neal Lane – South Harrell's Ferry Road to just south of I-12 *(in conjunction with DOTD Roadway)* ▪ Lobdell Avenue – Government Street to Florida Blvd ▪ Ford Street – Plank Road to Mickens Road
08/97 – 11/00	**Off-System Bridge Replacement, Rapides Parish, LA.** *DOTD.* **Engineer Intern.** Responsible for the development of hydraulic design for six (6) off-system bridges in Rapides Parish. Hydraulic design included the delineation of drainage basins, calculation of hydraulic flows, sizing of channel opening through both WSPRO and HECRAS and setting the low chord for each bridge structure.
04/99 – 09/99	**Baton Rouge Metropolitan Airport Entrance Road Improvements.** *East Baton Rouge Parish.* **Project Engineer.** Responsible for hydraulic/hydrology study for the design of subsurface drainage for the realigned entrance roads for the airport and the sizing of the bridge structure over Monte Sano Bayou based on hydraulic analysis. Project included a series of road realignments to tie into new parking garage and improved terminal entrance.
08/20 - Ongoing	**New Orleans Rail Gateway Program (NORG), Jefferson and Orleans Parishes, LA.** *DOTD.* **Lead Corridor Designer & QA/QC Reviewer.** Leading corridor improvements for the NORG at Avondale and at Jefferson. NORG is the fourth-largest freight rail gateway in the United States. Projects included corridor improvements with ***the addition of bridge railroad overpasses*** to improve traffic operations ***while decommissioning at-grade RR crossings.*** Michael Baker is providing environmental and engineering services, GIS development, mapping, rail and roadway travel demand modeling, alternatives analyses, rail and roadway conceptual design, cost estimates, document preparation, stakeholder and agency coordination including FRA, FHWA, DOTD, NORPC, six Class 1 railroads, Amtrak, NOPB, City of New Orleans, Jefferson Parish, the Port of New Orleans and federal/state resource agencies, and extensive public and minority community outreach. The study built upon a "Program of Projects" and two feasible alternatives identified in a 2007 Infrastructure Feasibility Assessment that identified 52 individual projects along two rail corridors to improve the entire 35-mile Gateway. The FRA rescinded the EIS NOI during alternatives development due to strong public opposition, lack of local elected officials support, and insufficient funding to conduct comprehensive studies necessary to re-evaluate projected passenger train service and re-evaluate possible alternatives that could garner community support.

16. Staff Experience:

Firm employed by	Michael Baker International, Inc.		
Name	**Jeffrey McRae, PE**	*Years of relevant experience with this employer*	29
Title	Technical Manager - Bridge	*Years of relevant experience with other employer(s)*	0
Degree(s) / Years / Specialization	BS / 1996 / Civil Engineering		
Active registration number / state / expiration date	PE No. 34554 / LA / exp. 09/30/2027; PE No. 15153 / MS / exp. 12/31/2027		
Year registered	2001 (MS); 2009 (LA)	*Discipline*	Civil
Contract role(s) / brief description of responsibilities	**MPR #3;** Task 3, 5, 6, & 7: Fixed Bridge Support		



With nearly 30 years of experience focused on a wide range of bridge design projects, Jeff is responsible for overseeing the completion of contract plans from the conceptual stage through final design on numerous bridge projects, generation of bridge quantity calculations, checking of concrete and steel bridge shop drawings, and generation of substructure and superstructure design calculations. He has extensive experience leading the development of bridge inspection, load rating, preservation, and repair projects.

- ✓ ***Meets MPR #3:*** LA PE (Civil) with 25+ years in responsible charge of bridge projects using DOTD standards, specifications, manuals, and the AASHTO Manual for Bridge Evaluation
- ✓ Bridge Design Lead on DOTD's US 371 KCS RR Overpass project

Experience dates (mm/yy–mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
03/22 - Ongoing	**US 371: KCS RR Overpasses HBI, Webster Parish, Louisiana.** *DOTD.* **Bridge Design Lead.** Responsible for checking engineering design calculations, determining structural feasibility of bridge geometry, structural design of all bridge components, and overseeing plan production at preliminary and final submittal milestones. ***Ensured that bridge plans meet both DOTD BDEM and KCS Railroad Design Guidelines.*** Project includes the replacement of the twin bridges for the site at Minden with a single wider structure. The new bridge will be prestressed concrete girder-type and uses LG 63 and LG 36 girders and fulfills KCS/CPKC crash-wall requirements. Michael Baker is currently developing rehabilitation plans for the US 371 bridge site over KCS railroad at Sibley.
03/24 - Ongoing	**IIJA Off-System Bridge Program.** *DOTD, District 07.* **Bridge Engineer.** Responsible for overseeing engineering design calculations, bridge geometry, bridge quantities, and design plans. ***Ensured that bridge plans meet DOTD BDEM design guidelines.*** Michael Baker was selected by DOTD to provide bridge, roadway and environmental services for the replacement of off-system bridges in the five parishes located in DOTD District 07. Structures replaced by this program include numerous culverts, box culverts, and slab span bridges. Currently, Michael Baker has submitted stamped final plans for four projects (six bridges/culverts) while four other projects are at various final submittal stages. There are a total of 12 bridges and culverts among the eight projects under this contract.
03/18 - 12/21	**Pecue Lane / I-10 Interchange.** *DOTD.* **Bridge Engineer.** Responsible for bridge load rating. The project involved a two-span bridge over I-10 for a new interchange that abutment earthwork was being supported by retaining walls.
05/10 - 08/13	**Structural Load Rating of Bridges, Statewide, LA.** *DOTD.* **Structural Engineer.** Led a team of engineers performing bridge load ratings. Michael Baker provided engineering services for the structural load rating of about 250 bridges using the load and resistance factor rating method. Michael Baker's services included plan and document review; structural modeling, analysis, and load rating of the bridges, and preparation of load-rating reports and recommendations.
01/99 - 12/10	**I-55/I-20/ US 49 Rehabilitation; Stack #3 Design Phase, Jackson, MS.** *MDOT.* **Bridge Technical Manager and Engineer.** Responsibilities included generation and checking of engineering design calculations, bridge quantities, and ***final design contract plans for the substructure and AASHTO beam superstructure spans,*** as well as checking curved steel girder design for Ramp G-6 over I-20 and U.S. 49. Also responsible for checking and regeneration of form grades, beam seats, etc. at four other bridge sites. Michael Baker provided engineering services (field surveys, preliminary through final design, and certain construction phase services including public relations assistance) for the rehabilitation of the interchanges of I-20 with both I-55 and U.S. Highway 49 in Jackson, MS. The total project was built through a series of four separate construction contracts all designed by Michael Baker, with this project being Stack #3. ***The project was awarded the 2010 Grand Conceptor Award for Engineering Excellence presented by the American Council of Engineering Companies of Mississippi.***

06/91 - 12/05	**Shepherdstown Bridge Replacement, Jefferson County, WV, and Washington County, MD.** *West Virginia DOT.* **Engineer.** Responsible for generation and checking of engineering design calculations, and for assisting with design and development of preliminary and final bridge plans for the replacement of this historical bridge structure over the Potomac River. Michael Baker was selected by the WVDOT to provide all environmental and engineering services for the replacement of the James Rumsey Bridge. The bridge is a historic structure of Wichert Truss design originally constructed in 1937. It is listed on the National Register of Historic Places. The James Rumsey Bridge carries WV Route 480 and MD Route 34 vehicular traffic over the Potomac River. The bridge currently has sidewalks on both sides that carry pedestrians and bicyclists. The bridge also crosses over the C&O Canal National Park and National Register listed C&O Canal on the Maryland side. The replacement of the bridge is necessitated by its rapidly deteriorating condition. ***The AASHTO LRFD Bridge Design Specifications were used for this bridge design.***
02/97 - 12/03	**S.R. 25 Widening, SR 19 to Louisville, Winston County, MS.** *MDOT.* **Assistant Engineer.** Responsible for generation and checking of engineering design calculations, bridge quantities, and final design contract plans. ***Also responsible for checking of all design and quantity calculations on two AASHTO beam bridges.*** Michael Baker provided professional engineering services for the widening of 18 miles of SR 25 from two to four lanes, from SR 19 to Louisville, MS.
12/00 - 01/04	**S.R. 22 / Nissan Roads, Madison County, MS.** *MDOT.* **Assistant Engineer.** Responsible for generation and checking of engineering design calculations, bridge quantities and final design contractplans. Also responsible for ***generating all bridge design calculations and contract plans for an AASHTO beam bridge*** located at Nissan Drive over the Illinois CentralRailroad. This project was for the development of contract plans for three access roads to the site of the Nissan Plant.
10/00 - 12/04	**Pleasant Valley Road Overpass Bridge Replacement, WV.** *West Virginia DOT.* **Engineer.** Responsible for generation and checking engineering substructure design calculations. Michael Baker provided complete design calculations, plans, specifications and estimate for a three-span steel girder bridge carrying I-79 over Pleasant Valley Road. We also provided post-design services during construction. ***The AASHTO LRFD Bridge Design Specifications were used for this bridge design.***
02/21 - 05/21	**5 OSARC Bridge Inspections, Statewide, MS.** *MDOT.* **Bridge Engineer.** Michael Baker provided engineering services under multiple contracts for bridge safety inspection, ***load rating,*** and reporting of locally owned bridges of varying types throughout the state. Services included project management; inspection plan development; routine and in-depth condition, appraisal, and fracture-critical inspections; load ratings; and preparation of inspection and load-rating reports.
09/17 - 09/17	**Bridge Load Ratings, Statewide, MS.** *MDOT.* **Assistant Engineer.** Responsibilities included generation and checking of bridge rating calculations ***and bridge rating software input and output.*** Michael Baker performed ***superstructure load ratings for 391 bridges of various superstructure types located throughout Mississippi.*** Michael Baker's services also included ***development and implementation of a load rating QA/QC plan.*** Deliverables provided by Michael Baker included scanned copies of the complete MDOT standard load rating summary sheet and the associated xml rating file from the AASHTOWare BrR program for each bridge.
03/98 - 07/05	**Statewide Evaluation (Load Rating) of 412 Box Bridges, Statewide, MS.** *MDOT.* **Assistant Engineer.** Responsibilities included generation and checking of bridge rating calculations and bridge rating software input and output. Michael Baker provided professional engineering services related to computing inventory and operating ratings for approximately 412 box bridges (Group G). All ratings were performed in accordance with FHWA procedures for load factor design.
09/97 - 02/98	**Bridge Rating - 578 Bridges (Group F), Statewide, MS.** *MDOT.* **Assistant Engineer.** Responsible for ***generation and checking of bridge rating calculations and bridge rating software input and output.*** Michael Baker provided professional engineering services for this assignment covering the computation of inventory and operating ratings for approximately 578 bridges of various types. All ratings were performed in accordance with current FHWA procedures for load factor design.
05/14 - 04/16	**U.S. 49 Florence to Scales Construction Engineering and Inspection, Rankin County, MS.** *MDOT.* **Assistant Engineer.** Responsible for generation of bridge design calculations and final contract plans, as well as QA/QC. Michael Baker provided engineering servicesfor the construction of U.S. 49 from Florence to the Scales Area. Working as an extension of client staff, Michael Baker provided construction management, Phase C Design (RFI/submittals), utility coordination, scheduling review (Primavera P6), material testing, erosion control, surveying, traffic control, and public relations support, for the construction of U.S. 49 from Florence to the Scale Area.
10/11 - 10/13	**S.R. 4 Bridge Replacement over Burlington Northern Railroad, Holly Springs, MS.** *MDOT.* **Bridge Engineer.** Michael Baker prepared preliminary bridge plans and final right-of-way plans for the replacement of the S.R. 4 bridge over the Burlington Northern Railroad. The existing bridge, which was constructed in 1950, is a three span steel girder bridge with spans of 50 feet, 50 feet, and 43 feet. ***The new bridge structure is composed of prestressed AASHTO girder spans*** with spans of 65 feet, 110 feet, and 65 feet, on drilled-shaft bents, which span the railroad right-of-way.
04/07 - 10/08	**Reunion Parkway Over I-55 Interchange, Madison County, MS.** *Madison County.* **Project Manager.** Responsible for managing the generation of engineering design calculations, bridge geometry, bridge quantities, and conceptual through final design contract plans. This project includes bridge and retaining wall design, as well as surveying for a Single Point Urban Interchange (SPUI) located at the intersection of I-55 and Reunion Parkway. The bridge is a curved steel box girder design.

16. Staff Experience:

Firm employed by	Michael Baker International, Inc.		
Name	**Stephen Fowler, PE**	*Years of relevant experience with this employer*	3
Title	Regional Technical Manager - Bridge	*Years of relevant experience with other employer(s)*	15
Degree(s) / Years / Specialization	BS / 2008 / Civil Engineering, University of Florida		
Active registration number / state / expiration date	PE No. 48230 / Louisiana / exp. 03/31/28; PE No. 75431 / Florida / exp. 02/28/27		
Year registered	2013 (FL); 2023 (LA)	*Discipline*	Civil
Contract role(s) / brief description of responsibilities	**MPR #4;** Task 3, 5, 6, & 7: Fixed Bridge Support		



Stephen is responsible for the design and management of complex and non-typical bridge projects, and the preparation of design calculations, plans, and contract documents. He has over 15 years of experience in the design and analysis of bridges, retaining walls, and miscellaneous transportation and infrastructure related structures. He has worked on projects throughout Florida, Georgia, Illinois, North Carolina, Tennessee, and Texas.

- ✓ ***Meets MPR #4:*** LA PE (Civil) with 15+ years in responsible chage of design & ratings for complex bridges
- ✓ Extensive structural design experience across the Southern U.S.

Experience dates (mm/yy-mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
01/25 - Ongoing	**Highway 49 over Mississippi River Bridge Rehabilitation, Phillips County, AR.** *ARDOT.* **Bridge Engineer.** Provided guidance for the ***load rating and repair options*** effort, as well as oversight of junior engineers for the repair design and plans. Michael Baker is providing design and engineering services for the rehabilitation of a bridge on Highway 49, Section 11, in Phillips County, AR. The project scope includes a ***comprehensive bridge inspection, load rating analysis, and the development of repair strategies*** aimed at extending the service life of the superstructure. In addition, the work involves planning for traffic maintenance and staging. Rehabilitation efforts will consist of structural steel repairs and replacements, the application of a polymer overlay on the approach spans, deck replacement for the main truss spans, and various other structural and safety-related repairs.
11/23 - 01/24	**Rehabilitation of Bridge No. 02475 Route 130 Over Pequonnock River, Bridgeport, CT.** *Connecticut DOT.* **Bridge Engineer.** Responsible for providing quality control review of the bridge rehabilitation plans. Michael Baker provided design services for the rehabilitation of the movable Stratford Avenue lift bridge over the Pequonnock River, bridge no. 02475, which carries Route 130 over the Pequonnock River in the city of Bridgeport. ***The 10-span, 525-foot movable bridge included nine approach spans and one vertical lift span supported by varied superstructure types and foundations.*** The rehabilitation addressed mechanical, electrical, structural, deck, railing, control house, utility, and fender systems. Michael Baker's services included permitting, bidding, and construction-phase support.
11/23 - Ongoing	**U.S. 51 Cairo Bridge Replacement, Wickliffe, KY and Cairo, IL.** *Kentucky Transportation Cabinet.* **Technical Advisor.** Responsible for developing a technical memorandum regarding the potential for use of lightweight concrete on the project. Provided quality control review and technical advice on various topics, including the use of corrosion resistant alternative materials in the bridge deck and constructability of drilled shaft foundations in deep water. Michael Baker is providing preliminary engineering and environmental services to replace the National Register-eligible, 82-year-old U.S. 51 Cairo Bridge. ***This vital connection, which stands at over a mile long with a cantilever truss and approach spans,*** is located between Wickliffe, Kentucky, and Cairo, Illinois, near the confluence of the Ohio and Mississippi Rivers. The goal of the project is to provide a constructible and affordable structure that will improve safety and the substandard load capacity of the geometrically deficient historic bridge caused by narrow lane widths, lack of shoulders, and tight curve of the existing bridge and its approaches.
04/13 - 09/18	**S.R. 9 (I-95) Overland Bridge Replacement Design-Build, Jacksonville, FL.** *Archer Western Contractors, LLC.* **Engineer-of-Record.** This project was Northeast Florida's most significant and largest design-build project at the time - the replacement of Overland Bridge and reconstruction of I-95 in downtown Jacksonville. The project added capacity, increased mobility, and improved safety along 2.56 miles of the city's most heavily traveled section of I-95, which also serves as a main hurricane evacuation route. After the project was awarded, the team continued to collaborate with FDOT and other stakeholders on additional innovations that saved FDOT approximately $30 million in right-of-way costs and $1 million in utility reimbursement expenses. Responsible for the design of multiple bridge components and miscellaneous structures, including the project's namesake Overland Bridge, ***a continuous, curved steel plate girder superstructure,*** high-level hammerhead piers, barrier-mounted non-standard overhead sign and DMS structures, and permanent and temporary retaining walls.

08/17 - 04/23	**Shands Bridge and St. Johns County Design-Build Support, Various Locations, FL.** *FDOT - District Two.* **Lead Structural Engineer.** Responsible for leading the structures design and plans production effort; coordinating with the geotechnical, survey, and hydraulics subconsultants; obtaining the USCG bridge permit; developing the design-build RFP package; and assisting with project management duties. ***The Shands Bridge is a two-lane, 2-mile steel stringer/multi-beam bridge*** over St. Johns River in St. Johns County, FL.
12/24 - Ongoing	**Load Rating MoDOT Routine Structures On-Call, Statewide, MO.** *MoDOT.* **Bridge Engineer.** Michael Baker is providing bridge engineering services under a three-year contract to load rate state-owned routine structures. The first task involves load rating 100 prestressed concrete double tee girder bridges. The second task is to load rate 205 additional bridges: 79 are prestressed concrete double tee girder bridges, 116 are prestressed I-beam bridges, and 10 are combined prestressed or post-tensioned concrete beam and steel beam bridges.
07/23 - Ongoing	**I-2 / I-69 Design-Build, Pharr, TX.** *TxDOT.* **Technical Advisor.** Responsible for providing technical direction on modelling footings using the strut-and-tie method and ***QC review for the load rating*** of a precast concrete girder bridge.
07/24 - 07/24	**TDOT Gay Street Bridget W013.** *TDOT.* **Technical Advisor.** Responsible for providing technical advice, developing load rating summary tables, and providing quality control review of load rating calculations for the ***emergency assessment of a steel truss bridge*** with a buckled lower chord member.
09/23 - Ongoing	**2022-11 Statewide Bridge Delivery, Statewide, KY.** *Kentucky Transportation Cabinet.* **Senior Engineer.** Responsible for performing QAQC on bridge design calculations and plans. Michael Baker is serving as a major subconsultant for one of the bridge delivery contracts under the Kentucky Transportation Cabinet (KYTC) Statewide Bridge Delivery project. The projects are full-service including project management, surveying, structures design, hydraulics and drainage analysis, roadway design, plan development, geotechnical services, environmental, right-of-way (ROW) acquisition, and utility coordination and relocation.
11/23 - Ongoing	**List 15-18 - State Bridge Rehabilitation Program, Statewide, CT.** *CTDOT.* **Technical Advisor.** Responsible for providing technical advice, quality control reviews, and bridge engineering services on task work orders. Michael Baker provided final design and construction support services for six existing structures as part of the client's statewide List 15–18 Bridge Rehabilitation Program. Typical tasks include highway geometric design, deck replacement, superstructure and bearing replacement, substructure rehabilitation, load rating, foundation design, utility relocation, environmental permitting, scour mitigation, construction staging, and maintenance and protection of traffic plan preparation.
01/24 - Ongoing	**ALDOT Statewide Transportation Support Services, AL.** *ALDOT.* **Bridge Engineer.** Responsible for providing technical advice, quality control reviews, and bridge engineering services on task work orders.
05/25 - Ongoing	**2024 Bridge Services IDIQ Master Contract Statewide, Greenville, MS.** *MDOT.* **Bridge Engineer.** Michael Baker used a hybrid of rope access and equipment (man-lifts, UAS, and UBIs (under-bridge inspection)) to perform a routine and NSTM inspection of the U.S. 82 cable-stayed bridge.
08/23 - Ongoing	**Sherman Minton Corridor Project: Phase I Design-Build Procurement Support, New Albany, IN.** *INDOT.* **Technical Advisor.** Responsible for providing technical direction and design review for temporary construction works used to tie-down an unstable superstructure during deck rehabilitation and repairs. Michael Baker is providing preliminary engineering support and environmental services for the design-build rehabilitation of the Sherman Minton Bridge, a 2,053-foot-long double-deck tied-arch structure that carries I-64 eastbound and westbound and U.S. 150 over the Ohio River and connects Louisville, KY, with downtown New Albany, IN. Services include project management, agency coordination, environmental documentation, preliminary engineering and design, and utility coordination.
12/23 - Ongoing	**U.S. 331 Bridge Lighting Task Order 2, Walton County, Florida.** *FDOT District 3.* **Bridge Engineer.** Responsible for developing a light pole bracket retrofit detail and providing quality control review of the design calculations, plans, and specifications. Michael Baker provided retrofit lighting design for 3.5 miles on U.S. 331 (S.R. 83) in Walton County, Florida. Project efforts included corridor lighting, signalized intersections and pedestrian level lighting. There are three bridges crossing Choctawhatchee Bay which required special details to retrofit light pole pedestals.
07/24 - 07/25	**U.S. 30 Over Union Pacific Railroad Bridge, Clinton County, IA.** *Iowa DOT.* **Technical Advisor.** Responsible for providing technical direction on the design of temporary support towers and superstructure jacking and for providing quality control review of the repair plans and design calculations. Michael Baker designed repairs for the columns on the U.S. 30 Bridge is a four span steel girder bridge, built in 1955, that carries two lanes of traffic over two Union Pacific Railroad (UPRR) lines in Clinton County, Iowa. Design included a temporary shoring tower to support the straddle beam during repairs, the preliminary jacking plans for transferring load to the shoring towers, and the monitoring limits used during construction.

16. Staff Experience:

Firm employed by	Michael Baker International, Inc.		
Name	**Iris Leoncio, PE, SE**	*Years of relevant experience with this employer*	<1
Title	Bridge Design Section Manager	*Years of relevant experience with other employer(s)*	18
Degree(s) / Years / Specialization	MS / 2003 / Structural Engineering; BS / 2000 / Civil Engineering		
Active registration number / state / expiration date	PE No. 47438 / LA / exp. 09/30/27; Structural Engineer No. 14930 / CA / exp. 12/31/2027		
Year registered	2023 (LA PE); 2014 (SE)	*Discipline*	Civil, Structural
Contract role(s) / brief description of responsibilities	**MPR #4;** Task 3, 5, 6, & 7: Movable Bridge Support		



Iris brings nearly 20 years of experience in the inspection, design and rehabilitation of fixed and movable bridges. She is ***responsible for load rating studies;*** 3D finite element modeling; static and dynamic analysis such as response spectrum and time history analyses; nonlinear analysis; and construction sequencing analysis. Iris has widely used these analytical tools for various bridge projects that require seismic vulnerability analysis, deck replacement, ***detailed live load studies,*** highly nonlinear components, progressive collapse analysis and vessel collision studies. She has served as an NBIS inspection team leader for various signature and movable structures in Maryland, and as a Task Manager and Bridge Engineer Lead for various VDOT bridge rehabilitation and new design projects. Iris has a strong track record of producing quality design plans, special technical specifications, and cost estimates; managing multi-disciplinary engineering teams throughout preliminary design, detailed design, and construction; and providing construction support to bridge owners.

- ✓ ***Meets MPR #4:*** LA PE (Civil/Structural) with 20+ years in responsible chage of design & ratings for complex bridges
- ✓ Movable bridge expert
- ✓ Broad-based bridge engineering background in both design and construction inspection

Experience dates (mm/yy–mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
12/20 - 06/21	**George P. Coleman Memorial Bridge (Route 17) over York River Bridge Load Rating, Yorktown, VA.** *VDOT.* **Senior Structural Engineer.** Responsible for the As-inspected load rating study of the truss spans of the 3750-ft bridge, which consists of steel girder approach spans, two fixed truss spans, two suspended truss spans and ***two swing bridges.*** A 3D finite element model is created in LARSA 4D to generate load demands on the truss members and the deck framing system. Gusset plates are checked using Whitmore sections in accordance with the AASHTO Manual for Bridge Evaluation.
10/21 - 12/24	**WBL Berkley Bridge (I-264) over the Eastern Branch of Elizabeth River Floorbeam Repairs, Norfolk, VA.** *VDOT.* **Project Manager & Engineer-of-Record.** Responsible for the Stage II inspection and repair design of floorbeams in ***the 178-ft double-leaf bascule span to improve the bridge rating,*** as well as Stage III construction phase services. ***The as-designed load rating study was performed using AASHTOWare Bridge Rating (BrR).*** Restrictions by the U.S. Coast Guard and VDOT Hampton Roads District on permissible lane and channel closures, limited work hours at night, and unscheduled bridge openings during construction added complexity to the design. The project also required careful consideration of construction sequencing and the design of temporary falsework, scaffolding, containment structures and other attachments to the bascule leafs.
03/21 - 12/23	**Route 17 over James River Bridge Beam Strengthening, Isle of Wight, VA.** *VDOT.* **Project Manager & Lead Structural Engineer.** Responsible for repairs to prestressed concrete beams to improve the load rating of the 4.4-mile bridge, which consists of ***302 approach spans and a vertical lift span for each northbound and southbound direction.*** Carbon Fiber Reinforced Polymer (CFRP) is used to improve 29 beams with significant strand losses. Various anchoring methods to delay failure due to fiber debonding that may preempt the full capacity of the repair system are assessed. Other post-tensioning repair techniques, including GRABB-IT cable splice assemblies, are also evaluated. Avoiding lane closures on Route 17, maximizing the efficient use of available construction funds, and adopting ACI guidelines and current research to manually calculate ratings outside of VDOT's standard bridge rating software are crucial to the design. ***This project was a 2024 ACI Commonwealth Award Finalist.***
04/15 - 08/15	**Savannah Road over the Lewes and Rehoboth Canal, Rehoboth, DE.** *DelDOT.* **Lead Project Engineer.** Responsible for the inspection, field assessment and preliminary rehabilitation recommendations of the ***movable double-leaf, rolling-lift bascule bridge,*** which is posted due to defects in the superstructure. Major repairs include floorbeam retrofits, rehabilitation of the center lock components and replacement of electrical equipment.

08/25 - 05/26	**Limited Services Term Contract for Design of Highway Structures and Bridges, Statewide, VA.** *VDOT.* **Deputy Project Manager.** Responsible for management and oversight of projects and supporting VDOT's leadership for on-schedule delivery, including preparation of the Scope of Work and fee proposals, workload planning and forecasting, invoicing, monitoring project progress, managing budgets, and quality reviews of project submittals. The contract provides professional engineering services for the design of highway structures and bridges on new construction, bridge replacements and repair projects throughout Virginia and is anticipated to award approximately $10M worth of projects annually.
08/15 - 03/16	**Curtis Creek Inner Loop Bridge, Baltimore, MD.** *Maryland Transportation Authority.* **Project Manager and Engineer-of-Record.** Responsible for the field investigation and structural evaluation of existing external posttensioning retrofits on the substructure of the bridge, one of a pair of parallel structures that carries the southbound traffic lanes of Interstate I-695. The bridge is over 3,500 ft long and consists of twenty-eight steel girder spans and ***a movable double-leaf bascule span.*** Retrofits are located on hammerhead-style piers that are supported on round column shafts. The as-built, as-inspected and retrofitted conditions are evaluated against serviceability requirements and the capacity of the capbeam to resist high but infrequent loads. Strut-and-tie modeling theory was employed as an alternative method for evaluating the As-built condition under flexure.
07/12 - 11/12	**Mathis Bridge, Seaside Heights, NJ.** **Senior Structural Engineer.** Responsible for a detailed live load study for the rehabilitation of the ***existing 150-ft movable bascule bridge*** over Barnegat Bay. Because the open-grid deck is supported by frame members with varying stiffnesses, a finite element analysis in SAP2000 is performed to ascertain the need for additional framing members.
12/09 - 06/16	**Inspection of Movable Bridges in Maryland, Various Locations, MD.** *Maryland State Highway Administration.* **Structural Team Leader.** Responsible for condition evaluation and safety inspection of ***several movable bascule, swing and rolling lift bridges.*** These include the Spa Creek Bridge in Annapolis, the Sassafras River Bridge in Georgetown, the US Route 50 and Main Street Bridges in Salisbury, the Chester River Bridge in Chestertown, the Weems Creek Bridge in Annapolis, the Knapps Narrows Bridge in Tilghman, the Bear Creek Bridge in Dundalk, the Miles River Bridge in Easton, and the Kent Narrows Bridge in Kent Island.
04/15 - 08/15	**Rehoboth Avenue over the Lewes and Rehoboth Canal, Rehoboth, DE.** *DelDOT.* **Lead Project Engineer.** Responsible for the inspection, field assessment and preliminary rehabilitation recommendations of ***the single-leaf trunnion-style bascule bridge with two fixed end spans.*** Repairs to the structural, mechanical and electrical systems are recommended to extend the service life and reliable operation of the bridge by 15 years. Deterioration from alkali-silica reaction in substructure concrete is also investigated.
12/09 - 08/13	**Pennington Avenue Bridge, Baltimore, MD.** *City of Baltimore.* **Lead Structural Engineer.** Responsible for final design, construction support services and construction inspection of the deck replacement project for ***the 250-ft movable bascule bridge over Curtis Creek.*** A complete replacement of purlins and selective repair or replacement of several floorbeams are also required. Fatigue details on fracture-critical bascule girders are retrofitted. Planning and coordination are crucial to the structure's immediate availability for bridge openings during the construction phase.
07/11 - 02/13	**Murray Morgan Bridge, Tacoma, WA.** *City of Tacoma.* **Senior Structural Engineer.** Responsible for seismic modeling, analysis and retrofitting of the main spans over the Thea Foss Waterway and the City Approach bridge. The mains spans, which consist of ***a 215-ft vertical lift bridge, 130-ft tall towers*** and two 190-ft fixed trusses, are retrofitted with elastomeric bearings, sliding bearings and more robust tower shoe supports. Strengthening select members and detailing highly nonlinear connections, such as counterweight and span guides, are required. At the 450-ft City Approach bridge, which consists of an upper-level steel composite deck and a lower-level car ramp, elastomeric and seismic isolation bearings replace the existing bolted connection between the superstructure and the steel bent substructure. Several substructure members also underwent strengthening or replacement. Seismic modeling and analysis for the main spans and City Approach bridge was performed in CSiBridge.
04/23 - 05/26	**Hampton Roads District Bridge Repairs for 6 Bridges, Greenville, Surry and Sussex Counties, VA.** *VDOT.* **Project Manager and Lead Structural Engineer.** Responsible for overseeing inspections and delivering Stage I preliminary design services and Stage II detailed design services for six composite steel beam ramp structures and collector roadways to repair the deck, steel composite superstructure and substructure. Stage III construction phase services and the development of As-Repaired load ratings are also included. Repairs included in-span and beam end plate repairs to address section loss, NDT and heat straightening to repair damage from vehicular impact, anchor bolt replacement, bearing replacement, concrete repairs, joint reconstruction and joint seal replacement. A month and a half into Final Design, the project was selected to be delivered under a new Turnkey Project Delivery Approach (Cradle2Grave), accelerating project advertisement by 2 months even though plan development was already underway. The accelerated schedule was equivalent to 4 weeks of project development per bridge, which included multiple internal and external reviews. After only 2 weeks from receiving comments from VDOT's quality assurance consultant, all six bridge packages were promptly delivered. ***This project became the first Turnkey project in Virginia to reach advertisement.***

16. Staff Experience:

Firm employed by	Michael Baker International, Inc.		
Name	**Jason Stith, PhD, PE, SE**	*Years of relevant experience with this employer*	14
Title	Structural Engineer	*Years of relevant experience with other employer(s)*	6
Degree(s) / Years / Specialization	PhD / 2010 / Civil Engineering / Structural Engineering; MBA / 2005 / University of Kentucky / Business Administration; MSCE / 2005 / Civil Engineering; BSCE / 2004 / Civil Engineering		
Active registration number / state / expiration date	PE No. 50186 / Louisiana / 09/30/2027; PE No. 28365/ Kentucky / 06/2026; SE No. 31863 / Oklahoma / 02/28/2027		
Year registered	2011 (KY); 2025 (LA)	*Discipline*	Civil, Structural
Contract role(s) / brief description of responsibilities	**MPR #4;** Bridge Engineering Support Pool		



Dr. Stith has experience in many phases of bridge design and inspection. This experience includes preliminary and final design of steel structures rehabilitation, as well as advance finite element analysis of the behavior of various bridge types. His expertise is in the behavior of horizontally curved I-girder bridges during construction. He is proficient in the use of MDX, CONSPAN, ANSYS, Abaqus, MIDASCivil, MicroStation, Visual Studio, Intel Fortran, as well as word processing, and spreadsheet software. Jason has made significant contributions to numerous major bridge projects touching every stage of a bridge's life cycle (design, construction, inspection, and maintenance). In addition, he has applied his Steel Bridge technical expertise as the AASHTO/NBSA Committee Chair for Steel Bridge Constructability and Erection.

- ✓ ***Meets MPR #4:*** LA PE (Civil/Structural) with 20+ years in responsible chage of design & ratings for complex bridges
- ✓ Specialist in steel bridge rehabilitation
- ✓ Design and analysis of 20+ bridges in some of the highest seismic regions of the country

Experience dates (mm/yy–mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
05/12 - 04/13	**Kentucky Lake Final Design, Western KY.** *Kentucky Transportation Cabinet (KYTC).* **Civil Engineer.** Developed barge impact study, including determining required pier capacity based on an acceptable probability of collapse. Designed the tie of this main span 550-foot basket-handled tie arch. Developed detailed shell element 3-D finite element model of the knuckle region which includes the connection of the tie, rib, and end floor beam. ***Developed a load rating tool to load rate the arch span.*** Michael Baker provided final design and plan preparation for a ***550-foot span basket-handle arch.*** Michael Baker also managed the complete final design for the o***ver 3,000-foot-long bridge crossing of US 68/KY 80 over the Tennessee River on Kentucky Lake*** in Western Kentucky. The bridge includes four lanes and a multiuse path over a navigable waterway. The crossing also includes significant causeways in the lake leading to the bridge structure.
08/14 - 05/15	**Lake Barkley Final Design and Construction, Western KY.** *KYTC.* **Civil Engineer.** Led the seismic design team including determining all seismic demands for the superstructure and substructure. Seismic demands were determined with multi-modal response spectrum analysis for preliminary design and non-linear time history analysis for the final design. In addition, responsible for the floor beam and inspection access designs, as well as the design review of the seismic isolation bearings, modular joint, articulated barrier, tie, deck, and stringers. ***Developed load rating tool to load rate the arch span.*** Michael Baker provided final design and plan preparation for a ***550-foot span basket-handle arch.*** Michael Baker also managed the complete final design for the ***more than 3,000-foot-long bridge crossing of U.S. 68/KY 80 over the Cumberland River on Lake Barkley*** in Western Kentucky. The bridge includes four lanes and a multiuse path over a navigable waterway. The crossing also includes significant causeways in the lake leading to the bridge structure.
05/21 - 09/21 04/24 - Ongoing	**Hernando de Soto Bridge Emergency Repairs, Memphis, TN to West Memphis, AR.** *TDOT.* **Technical Advisor & Lead Structural Engineer.** Engineer-of-record for rehabilitation plans of the two 900' tied arch spans and the twin box girder approach spans. Michael Baker provided emergency design and engineering services for the repair of the Hernando de Soto Bridge. The bridge includes a ***two-span continuous 1,800-foot steel tied arch structure that carries I-40 across the Mississippi River.*** As one of only two crossings of the Mississippi River in the Memphis area, the bridge is a vital transportation, commerce, and defense link, carrying approximately 60,000 vehicles daily. After observing a fracture-critical crack in the tie girder of the arch's primary navigation span, Michael Baker developed a three-phase plan for the repair of the bridge, which included temporary stabilization plating, innovative post tensioning, and repairing additional defects. The bridge was fully opened just 83 days after the fracture was discovered.

08/22 - Ongoing	**ARDOT Bridge Inspection Program Evaluation, Statewide, AR.** *ARDOT.* **Technical Advisor.** Michael Baker is working to determine the criteria for selecting a list of major bridges from ARDOT's bridge inventory. Phase I of this project involved establishing a baseline for the client's recent and current bridge inspection program by reviewing their Bridge Inspection Manual and numerous supporting documents noting areas for improvement. In Phase II, Michael Baker determined the criteria, methodology, and thresholds for prioritizing and selecting 200 bridges from the client's state-owned bridge inventory for a high-level evaluation of repair or replacement needs, including budgetary cost estimating for the next 20 years. ***Phase II also entails development of a stand-alone load rating manual.***
03/22 - Ongoing	**Bridge Inspection and Evaluation Engineering Services, Statewide, SC.** *SCDOT.* **Technical Advisor.** Michael Baker is providing bridge inspection and engineering evaluation services in support of a statewide, consultant-led, bridge inspection effort for higher priority bridges across South Carolina. The more than 9,500 bridges included in this contract encompass interstate system bridges, bridges over railroads, underwater inspections, and bridges with more challenging access needs. Tasks include asset management, National Bridge Inspection Standards inspection, ***load rating,*** repair and rehabilitation recommendations, emergency response, truck permitting, quality control, and engineering evaluation in support of the statewide bridge management program.
02/19 - 02/19	**Bridge Load Rating and Evaluation Engineering Services, SC.** *SCDOT.* **Technical Advisor.** Michael Baker provided bridge load rating and evaluation engineering services for state-owned, county-owned, and other municipality-owned structures throughout South Carolina, primarily for the 1,815 bridges in District 3. Tasks include project management, site assessments, data collection, agency coordination, quality assurance reviews, and training development. Michael Baker established this statewide program and oversees five other consultants performing bridge load ratings, assessments, load and material testing, oversize and overweight permitting, complex structure rating and maintenance manuals, ***development of custom AASHTOWare Bridge Management program,*** and quality assurance reviews.
09/16 - 04/17 06/17 - 10/19	**Statewide Load Rating Contract, KY.** *KYTC.* **Bridge Engineer.** Load ratings were performed in accordance with the Manual for Bridge Evaluation and the Kentucky Bridge Inspection Procedures Manual. Bridges were load rated using the AASHTO BrR® software package. Load ratings were performed for the Kentucky legal loads, special hauling vehicles (SU4-SU7), three superload vehicles, and the emergency vehicles (EV2 and EV3) as required by FHWA. Additional field inspection was required for bridges to document deterioration or obtain measurements where plans were not available. *Package 2:* Michael Baker performed the ***load rating for 16 curved girder bridges for KYTC.*** Having completed the project ahead of schedule and under budget, the client added seven additional bridges to the load rating contract, including one post tensioned I-beam bridge; one pin and hanger bridge; one four-span curved girder bridge; and four railroad flat car bridges. *Package 3:* Michael Baker performed the ***load rating for 17 bridges*** throughout Kentucky.
04/11 - 12/11	**Sherman Minton Bridge Fracture-Critical Inspection, Emergency Repair Design, and Construction-Phase Services, New Albany, IN, and Louisville, KY.** *INDOT.* **Civil Engineer.** Assisted with in-depth inspection of the Sherman Minton Bridge and Matthew E. Walsh Bridge. Responsible for nondestructive testing evaluation coordination after the closure of the Sherman Minton Bridge including managing technicians, equipment capacity, and subconsultant reporting. Coordinated with multiple subconsultants and provided necessary information to clients, INDOT and KYTC. Michael Baker conducted a fracture-critical inspection and provided construction management and inspection services for the rehabilitation of the ***2,053-foot-long Sherman Minton Bridge, a double-deck tied-arch structure that carries I-64 and U.S. 150 over the Ohio River*** and connects Louisville, KY, with downtown New Albany, IN. Critical defects were discovered in the fracture-critical steel-arch ties, which prompted emergency closure of the structure. Michael Baker recommended global plating of the joints, involving installation of more than 2.4 million pounds of steel reinforcement along the entire length of the bridge tie girders. This solution also provided complete structural redundancy by establishing an alternate load path. The final contract documents were developed and advertised for construction just one week later. The contractor completed the arch tie repairs in just over four months, and the bridge was successfully returned to service.
02/11 - 08/11	**District 8-0 Large Structure Inspections, PA.** *PennDOT, Central Office.* **Civil Engineer.** Performed a review of the BSDI 3-D finite element analysis input and load rating result for this series of curved steel bridges. Reviewed final load rating reports.
02/11 - 02/12	**Downtown Louisville I-65 Bridge over the Ohio River Bridge Type Selection and Final Design, Louisville, KY and, Jeffersonville, IN.** *KYTC.* **Engineer.** Responsible for design review and compliance with design specifications and contract documents as the owner's representative. Michael Baker performed a bridge type study and prepared the conceptual design for cost estimates and engineering design for a new bridge over the Ohio River. Michael Baker's services included project management, public involvement, report preparation, and design for the 3,300-foot-long bridge over the Ohio River. Michael Baker prepared a final bridge type selection report that detailed all aspects of the selection process and incorporated comprehensive data on the three recommended alternatives, including single- and three-tower cable stays and a three-span through-arch bridge.

16. Staff Experience:

Firm employed by	Moffat & Nichol Inc.		
Name	**Eric Vugteveen, PE**	*Years of relevant experience with this employer*	28
Title	Senior Bridge Engineer	*Years of relevant experience with other employer(s)*	8
Degree(s) / Years / Specialization	BS / 1990 / Civil Engineering; BS / 1990 / Architectural Engineering		
Active registration number / state / expiration date	PE No. 38667 / LA / exp. 09/30/26		
Year registered	2014	*Discipline*	Civil
Contract role(s) / brief description of responsibilities	**MPR #4;** Task 3, 5, 6, & 7: Fixed Bridge Support		



Eric is a Senior Structural Engineer with more than 30 years of experience specializing in bridge inspection, load rating, structural evaluation, rehabilitation, and design. He has. Throughout his career, Eric has managed and performed load ratings for hundreds of bridges, including statewide contracts for the VDOT, major bridge rehabilitation projects where load ratings informed repair strategies, and specialized permit load evaluations for oversized transport routes such as the Guam Ukudu Power Station heavy-haul project involving loads up to 440 tons. In addition to his load rating expertise, he has led numerous NBIS bridge inspection programs and served as project manager, inspection team leader, and quality control reviewer for bridge assessment projects across multiple states. He has completed FHWA training in bridge inspection, fracture-critical bridge inspection, and ancillary highway structures. His combination of extensive bridge rating experience, hands-on inspection knowledge, and transportation structural engineering leadership makes him exceptionally qualified to perform complex bridge load ratings, structural capacity evaluations, and posting recommendations.

- ✓ ***Meets MPR #4:*** LA PE (Civil/Structural) with 10+ years in responsible chage of design & ratings for complex bridges
- ✓ Extensive expertise in bridge load rating using AASHTOWare BrR, VIRTIS, BARS, and BRASS software
- ✓ Adept at evaluating steel, concrete, timber, prestressed concrete, curved girder, arch, and movable bridge structures in accordance with AASHTO and state DOT 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 years of experience specified in the applicable MPR(s).*
05/21 - 04/25	**VDOT Beam Blocking and Long-Term Permanent Repairs, Falling Creek, Chesterfield, VA.** *Virginia DOT.* **Task Leader and Senior Bridge Engineer.** Responsible for Route 150 WBL Bridge over Falling Creek which was a 157' long and 67' wide steel plate girder bridge with three spans. Previous recent bridge inspections observed that the deterioration of several beam bends had advanced to the point where VDOT decided to provide temporary support while long-term permanent repairs were designed. Moffatt & Nichol performed analyses of temporary blocking concepts and provided sketches for installation by one of VDOT's on-call bridge contractors. Beam repair plans were developed to restore full as-designed capacity to the beam ends. Updated bridge load ratings for the temporary beam blocking and final beam end repairs were provided.
05/14 - 10/19	**Norfolk Southern Railroad Bridge Replacement, Route 635, Southampton County, VA.** *Norfolk Southern Railroad.* **Task Leader and Engineer of Record.** Managed the overall delivery of this project, including survey, geotechnical, structural, river mechanics, roadway, and drainage design. Also served as senior bridge engineer overseeing and directing Stage I preliminary and Stage II final bridge design and Stage III construction phase support services for shop drawings and responding to contractor RFIs as requested by VDOT. Preliminary and final design for the replacement of a one-lane, three-span timber deck bridge and approaches over Norfolk Southern Railroad with a new two-lane, 115', single-span, steel plate girder bridge on the existing alignment. Fully integrated abutments were utilized behind MSE abutment walls to create a jointless bridge. The bridge was constructed under detour. This assignment also included construction phase services, including shop drawing review, consultation, and final bridge load rating.
10/22 - 05/25	**James River Bridge Approaches, Beam Strengthening, Isle of Wight, VA.** *VDOT.* **Senior Bridge Engineer.** Responsible for quality reviews and Construction Support Services. This project focused on detailed design of beam repairs/strengthening using externally bonded CFRP to improve the load carrying capacity of 29 prestressed concrete beams with significant losses to the steel strands due to corrosion. A repair strategy was developed to address the most critical beams using a fixed amount of funding and to design repairs with no disruption to vehicular traffic. Research studies on CFRP were evaluated and a case study of CFRP repairs on the Hampton Roads Bridge-Tunnel was performed. Various anchoring methods were assessed to delay failure due to fiber debonding since it may preempt the full capacity of the repair system. Post-tensioning repair techniques, including external retrofits and GRABB-IT cable splices, were evaluated. The project was the first phase of a multi-phase program to strengthen targeted beams in the 4.4-mile bridge that consists of 302 approach spans in each northbound and southbound trestle.

16. Staff Experience:



Firm employed by	Michael Baker International, Inc.		
Name	**Layton Breithaupt, PE**	*Years of relevant experience with this employer*	8
Title	Civil Engineer (Bridge)	*Years of relevant experience with other employer(s)*	0
Degree(s) / Years / Specialization	BS / 2018 / Civil Engineering; AA / 2014 / Drafting and Design		
Active registration number / state / expiration date	PE No. 48097 / LA / 03/31/2028; PE No. 29138 / MS / 12/31/26		
Year registered	2023 (LA); 2022 (MS)	*Discipline*	Civil
Contract role(s) / brief description of responsibilities	**MPR #5;** Task 3, 5, 6, & 7: Fixed Bridge Support		

Layton brings nearly a decade of bridge design, rating and inspection experience across the Southern U.S. He is skilled in 3D modeling, generating design calculations, and performing specialty inspections, and is familiar with the use of LiDAR technology. Having served in a similar role on numerous IDIQ contracts for MDOT and ALDOT, he has experience with providing similar engineering services for a wide range of structure types.

- ✓ ***Meets MPR #5:*** LA PE (Civil) with 8+ years of bridge rating experience, including AASHTO BrR software
- ✓ Extensive experience on similar IDIQ contracts for bridge inspection, design, and repair for MDOT and ALDOT,

Experience dates (mm/yy–mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
02/21 - 04/25	**OSARC Bridge Inspection Contracts, 2019, 2020, 2021, 2022, 2023, & 2024.** *MDOT.* **Civil Associate & Bridge Engineer.** Responsible for the ***generation of superstructure and substructure load ratings and creating load rating reports.*** Assisted bridge inspectors in the field, loading and unloading boat for inspectors to use, checking the safety of inspection sites, preparing documents and tools for bridge inspectors. Also responsible for routine standard and Non-Redundant Steel Tension Member (NSTM) bridge inspections and load ratings.
08/23 - Ongoing	**Bridge Inspection and Related Services IDIQ Master Contract 2023.** *MDOT.* **Bridge Engineer.** Responsible for QC of bridge inspection reports, assisting with bridge inspections, preparation of bridge inspection equipment, and load ratings.
09/22 - Ongoing	**Bridge Inspection and Related Services IDIQ Master Contract 2022.** *MDOT.* **Civil Associate.** Assisted bridge inspectors in the field, loading and unloading boat for inspectors to use, checking the safety of each inspection site, preparing documents and tools for bridge inspectors.
03/25 - Ongoing	**Bridge Data and Inventory Items Conversion Project, Salt Lake City, Utah.** *UDOT.* **Bridge Engineer.** Michael Baker supported the UDOT Structures division by managing the conversion of UDOT's data from FHWA National Bridge Inventory items to FHWA's Specification for the National Bridge Inventory (SNBI) items. Michael Baker coordinated the project between UDOT and three engineering firms, managed workflows, created processes, tracked data and status updates, and developed UDOT's SNBI manual. Additionally, the project aimed to verify and update UDOT's bridge inspection elements and their quantities, revise UDOT complex and NSTM inspection procedures, and update UDOT-specific data within the bridge inspection software, InspectX.
08/22 - Ongoing	**MDOT On-Call Services 2021, Statewide, MS.** *MDOT.* **Civil Engineer.** Responsible for generation of bridge design calculations, including superstructure and substructure design, and checking of final bridge plans. Also responsible for generation of load rating reports, quantity calculations and design computation PDF books.
09/21 - Ongoing	**MDOT 2021 Bridge Services IDIQ, Statewide, MS.** *MDOT.* **Civil Associate.** Responsibilities included the generation of superstructure and substructure load ratings and creating load rating reports.
08/18 - 12/20	**2017 Roadway Design Services IDIQ Master Contract, Statewide, MS.** *MDOT.* **Civil Associate.** Responsibilities included the generation of bridge design calculations, including superstructure and substructure design, and checking of final bridge plans. Responsibilities also included generation of load rating reports, quantity calculations and design computation PDF books.
03/24 - Ongoing	**ALDOT Statewide Transportation Support Services, AL.** *ALDOT.* **Bridge Engineer.** Responsibilities included the generation of bridge repair calculations, including superstructure and substructure repair design, and checking of final bridge repair plans.

01/25 - Ongoing	**2024 Bridge Services IDIQ Master Contract Statewide, Greenville, MS.** *MDOT.* **Bridge Engineer.** Under this IDIQ contract, Layton is assisting the Michael Baker team in the routine and NSTM inspection of the U.S. 82 cable-stayed bridge, using a hybrid of rope access and equipment (man-lifts, UAS, and UBIs (under-bridge inspection)).
07/22 - Ongoing	**Standard On-Call Contract for Engineering and Related Services, Baldwin County, AL.** *Baldwin County Commission.* **Civil Associate.** Responsibilities included the generation of bridge design calculations, including superstructure and substructure design, and checking of final bridge plans. Responsibilities also included generation of load rating reports, quantity calculations, and design computation PDF books.
02/22 - Ongoing	**IDIQ Contract for A/E IDC Bridge Design and Civil Works, Nationwide.** *USACE, Philadelphia District.* **Civil Associate.** Assisted with monitoring of ultrasonic weld inspections. Liaison between Corps of Engineers and contractors that were inspecting welds. Accommodated contractors and report back on the inspections. Michael Baker is providing engineering services in support of civil works for the Philadelphia District of the United States Army Corps of Engineers (USACE). Drawing on Michael Baker's civil and structural engineering capabilities as the primary selection criteria but relying on its full complement of engineering and architecture services, this contract provides a mechanism to support civil works projects for the Philadelphia District but more broadly for USACE as needed. Michael Baker is primarily providing bridge inspection and evaluation, as well as report preparation; traffic and highway engineering services; non-destructive testing of structures and development and NDE procedures; and assistance with protocols for Unmanned Aerial System inspections.
09/19 - 12/20	**S.R. 9 Bridge Replacements, Calhoun County, MS.** *MDOT.* **Civil Associate.** Responsibilities included the generation of bridge design calculations, including superstructure and substructure design, and checking of final bridge plans. Responsibilities also included generation of load rating reports, quantity calculations and design computation PDF books. Michael Baker provided engineering and design services for final bridge construction plans for four bridge replacements: Bridge No. 35.5 over Shutispear Creek, Bridge No. 40.7 over Yalobusha River Relief, Bridge No. 40.9 over Yalobusha River, and Bridge No. 41.2 over Yalobusha River Relief on S.R.9.
08/18 - 12/22	**Reunion Parkway Design Services Phase 3, Madison County, MS.** *Madison County Board of Supervisors.* **Civil Associate.** Responsibilities included the generation of bridge design calculations, including superstructure and substructure design, and checking of final bridge plans. Responsibilities also included generation of load rating reports, quantity calculations and design computation PDF books. Michael Baker provided design services for two bridge sites along Phase 3 of the Reunion Parkway in Madison County, Mississippi. The scope included developing Phase B Final Bridge Plans for an 880-foot-long bridge over Bear Creek and a 530-foot-long bridge over the Illinois Central Railroad.
11/22 - Ongoing	**U.S. 51 Cairo Bridge Replacement, Wickliffe, Kentucky and Cairo, Illinois.** *Kentucky Transportation Cabinet.* **Bridge Engineer.** Responsible for the preliminary cost estimate for several potential bridge alternatives. Michael Baker is providing preliminary engineering and environmental services to replace the National Register-eligible, 82-year-old U.S. 51 Cairo Bridge. This vital connection, which stands at over a mile long with a cantilever truss and approach spans, is located between Wickliffe, Kentucky, and Cairo, Illinois, near the confluence of the Ohio and Mississippi Rivers. The goal of the project is to provide a constructible and affordable structure that will improve safety and the substandard load capacity of the geometrically deficient historic bridge caused by narrow lane widths, lack of shoulders, and tight curve of the existing bridge and its approaches.
06/18 - 08/18	**I-285 & SR 400 Reconstruction Design & Review Services, Atlanta, GA.** *GDOT.* **Civil Associate.** Responsible for QC of bridge design. Michael Baker is serving as the submittal review consultant for the reconstruction of the I-285 and S.R. 400 interchange in Atlanta, Georgia. Michael Baker is responsible for reviewing all developer submittals on the project, which consists of about 4 miles of improvements on I-285 and 5 miles on S.R. 400. The project includes the construction of barrier-separated collector-distributor lanes along the roads to help reduce weaving, merging, and accelerating and decelerating conflicts, and involves the reconstruction of existing ramps and bridges in the interchange, the replacement of the bridge on Mt. Vernon Highway, and the construction of new flyover bridges.
05/25 - Ongoing	**I-10 Mobile River Bridge and Bayway Project Management, Mobile, AL.** *ALDOT.* **Bridge Engineer.** Michael Baker is providing project management with oversight responsibilities for all aspects of the Mobile River Bridge and Bayway Project. The project involves reconstruction of I-10 through downtown Mobile, Alabama, and across the Mobile Bay, with a total length of approximately 10 miles. The project includes a new two-tower cable stayed bridge over the Mobile River, and replacement of the seven-mile-long I-10 Bayway Bridge.
03/25 - Ongoing	**Washington Avenue State Highway 609 Gateway Project, Jackson County, Mississippi.** *Jackson County Board of Supervisors.* **Bridge Engineer.** Michael Baker is providing comprehensive engineering and consulting services for the Washington Avenue State Highway 609 Gateway Project in Jackson County, Mississippi. The team is delivering improvements along a 2.75-mile corridor from US Highway 90 to Interstate 10, focusing on enhancing safety, mobility, and aesthetics for motorists and pedestrians.

16. Staff Experience:

Firm employed by	Michael Baker International, Inc.		
Name	**Petrina Butler, PE**	*Years of relevant experience with this employer*	6
Title	Bridge Department Manager	*Years of relevant experience with other employer(s)*	18
Degree(s) / Years / Specialization	MS / 2008 / Structural Engineering; BS / 2002 / Civil Engineering		
Active registration number / state / expiration date	PE No. 39597 / LA / exp. 09/30/27; PE No. 26686 / SC / exp. 06/30/28		
Year registered	2008 (SC); 2015 (LA)	*Discipline*	Civil
Contract role(s) / brief description of responsibilities	**MPR #5;** Task 3, 5, 6, & 7: Fixed Bridge Support		



Petrina is a senior project manager with extensive experience in bridge design and load rating of prestressed concrete girders, steel welded plate girders, cast-in-place concrete flat slabs, prestressed cored slabs, and various substructure types. She also has experience in roadway design, right-of-way plan development and exhibit preparation, structural analysis and inspection, and management of transportation projects. Her diverse knowledge and background gives her an excellent understanding of the total project development process from project inception through construction.

- ✓ ***Meets MPR #5:*** LA PE (Civil) with 15+ years of bridge rating experience, including AASHTO BrR software
- ✓ Expert in delivering and providing quality reviews load ratings for structures of all types

Experience dates (mm/yy–mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
08/25 - Ongoing	**SCDOT BMO Load Rating & Testing.** *SCDOT.* **Bridge Design Lead.** Responsible for ***overseeing the completion of more than 75 load ratings per month*** in accordance with SNBI timeline guidelines. Coordinated directly with district engineers to provide repair and maintenance needs. Performed expedited load ratings on critical findings to determine closure and load restriction recommendations. Provided quality assurance review of load rating updates and new load ratings for all bridges in design statewide. Developed load rating technical guidance and policy with review and oversight of SCDOT and FHWA. Served as task leader for the development of the SCDOT Load Rating Guidance Document, version 2. ***Created and delivered a three-day AASHTOWare BrR training workshop for SCDOT bridge design engineers.***
03/20 - 11/22	**Bridge Load Rating and Evaluation Engineering Services, SC.** *SCDOT.* **Assistant Project Manager / Load Rating Task Lead.** Responsible for assisting the project manager to prepare for weekly client meetings, compose technical notes, and answer help desk questions to set technical procedures. Responsible as the checker and Engineer-of-Record for almost 200 bridges and quality control engineer for 50 bridges. ***Led the substructure rating evaluation for timber and steel piles and provides QA/QC review for bridges statewide*** as requested by the client. Also helped to develop and deliver a three-day BrR training workshop to South Carolina Department of Transportation bridge design engineers. Michael Baker provided bridge load rating and evaluation engineering services for state-owned, county-owned, and other municipality-owned structures throughout South Carolina, primarily for the 1,815 bridges in District 3. Michael Baker established this statewide program and oversees five other consultants performing bridge load ratings, assessments, load and material testing, oversize and overweight permitting, complex structure rating and maintenance manuals, ***development of custom AASHTOWare Bridge Management program,*** and quality assurance reviews.
2017	**Load Rating of On-System Trusses and Other Complex Bridges, Statewide, LA.** *DOTD.* **Bridge Engineer.** Contract involved load rating movable bridges and truss bridges as defined by the AASHTO Manual for Bridge Evaluation (MBE) using the Load Resistance Factor Rating (LRFR) method. Tasks under this contract included: *I-220 over Russell Road Load Rating – Caddo Parish, LA.* Responsible for review of complex load rating of the 3-span bridge widened as part of the I-49 extension from Shreveport to the Arkansas border. The bridge consists of existing continuous non-composite steel plate girders supporting a concrete deck and new steel plate girders composite with the new concrete deck. Reviewed BrR model and hand calculations of superstructure, load rating of new reinforced concrete hammerhead cap at widened portion, new hammerhead column, and influence lines for existing and new girders and hammerhead bent cap.
2015	**LA 1 over the Intracoastal Waterway, Baton Rouge, LA.** *DOTD.* **Bridge Engineer.** Assisted with preliminary approach span layout of proposed twin-span bridges that are each over 2,500 feet long and 56.5 feet wide. The approach spans consist of precast prestressed concrete girders that cross over Union Pacific Railroad, frontage roads, and driveways. The mainspan over the Intracoastal Waterway consists of a 980 foot three-span continuous unit, with steel plate girders used for the superstructure.

10/25 - Ongoing	**General Engineering Services 2022-2026, Statewide, TN.** *TDOT.* **Bridge Engineer.** Responsible for providing quality control review of load ratings for prestressed concrete bridges. Michael Baker is serving a four-year on-call contract to provide bridge repair services statewide. The team is generally responsible for contract documents, tunnel inspection plan revision, NSTM inspection, truss bridge inspection with maintenance recommendations, and railroad flat car inspection.
2017 - 2018	**Local Bridge Inspection and Load Rating, Statewide, MS.** *MDOT.* **Bridge Design Lead.** The project scope consisted of the inspection and load rating of 162 bridges on an expedited schedule (4 months), including both superstructure and substructure components. Bridge Load Rating Task Leader and Engineer of Record for all load rating work, including development of substructure calculation templates using Consys and Mathcad, review of AASHTOWare BrR® templates for the project, and QC review of the load rating calculations and reports for the project. The project was delivered on-time and within budget.
2020-2021	**Swamp Rabbit Trail Orange Line Reedy River Bridge Feasibility Study, Greenville, SC.** *Greenville County Parks & Recreation.* **Project Manager/Lead Bridge Engineer.** Led the feasibility study, which included a visual inspection of an abandoned railroad bridge over the Reedy River. Assessed whether portions of the existing bridge could be used for a new bike/ped bridge on the Swamp Rabbit Trail. A new bridge crossing in this location would reroute the SRT Orange Line and prevent trail users from having to cross the two-lane road. The existing bridge is a 31-span structure with a total length of 380 feet. The decking has steel tracks and timber railroad ties, supported by two sets of continuous timber stringers. Span lengths vary from 6 to 18 feet. A load rating was completed in AASHTOWare BrR to determine the capacity of the stringers for various span lengths. Preliminary design for repair and retrofits was completed, and associated costs were developed.
04/21 - Ongoing	**Bridge Inspection and Evaluation Engineering Services, Statewide, SC.** *SCDOT.* **Bridge Design Lead.** As lead bridge engineer, responsible for the emergency repair of two bridges and the ***QC of bridge load ratings.*** Michael Baker is providing inspection and engineering evaluation services statewide for higher priority bridges. The more than 9,500 bridges included in this contract encompass interstate system bridges, bridges over railroads, underwater inspections, and bridges with more challenging access needs. Tasks include asset management, National Bridge Inspection Standards inspection, load rating, repair and rehabilitation recommendations, emergency response, truck permitting, quality control, and engineering evaluation in support of the statewide bridge management program.
10/23 - Ongoing	**I-73 Final Plans, Cost and Schedule Risk Analysis, and Monte Carlo Simulation, Statewide, SC.** *SCDOT.* **QA/QC Engineer.** Responsible for QC review of bridge load ratings and construction plans for I-73 Dual Overpasses over CSX Railroad (three span continuous prestressed concrete BT-74 girders), ramps off I-95 NB and SB over Little Reedy Creek (five-span continuous prestressed concrete AASHTO girders), and a ramp on I-73 SB over I-95 and I-73 (2,436-foot curved continuous welded plate girder bridge). Michael Baker facilitated a cost and schedule risk analysis workshop and conducted a Monte Carlo simulation for the entire I-73 project from I-95 – S.C. 22 and for the section from I-95 to U.S. 501. The Michael Baker team developed a cost opinion, summary of quantities, and project schedule.
08/25 - Ongoing	**Savannah River Nuclear Site Bridge Inspection and Load Rating, Aiken County, SC.** *U.S. Department of Energy.* **Bridge Engineer.** Responsible for serving as load rating engineer of record for 16 bridges in accordance with the AASHTO Manual for Bridge Evaluation and DOE Order 437.1A: Bridge and Tunnel Management. Evaluated bridges for owner-specified plant vehicles. Worked with bridge types including prestressed hollow-core slabs, prestressed concrete AASHTO girders, cast-in-place flat slabs, precast concrete slab, and nested steel girders. Michael Baker is responsible for inspecting 53 roadway structures around the Savannah River Site. Duties include researching previous inspection reports and design plans, inspecting bridges and culverts around the site, and providing detailed inspection reports with repair and maintenance recommendations, as well as load ratings of structures when warranted.
05/22 - Ongoing	**U.S. 21 over Congaree Creek, Lexington County, SC.** *SCDOT.* **QA/QC Engineer.** Provided QC peview of load rating calculations and documentation. Michael Baker is providing engineering services for the replacement of the U.S. 21 Bridge over Congaree Creek. The project includes development of preliminary roadway and bridge plans; environmental studies, permitting, and documentation; right-of-way plans; final construction plans; and bridge H&H analyses, including a FEMA study.
01/22 - 06/22	**Bridge Services, Livermore, CA and Albuquerque, NM.** *Sandia National Laboratories.* **Load Rating QA/QC Engineer.** Responsible for load rating review. Michael Baker provided traffic counts, scour analysis, seismic analysis, and load rating for three bridges located at the Sandia National Laboratories sites. Structure types included prestressed CA BT girders, prestressed t-beams, steel girders, reinforced concrete flat slabs, timber beams, box culverts, corrugated metal pipes, and reinforced concrete pipes. ***All load ratings were completed to meet the requirements of the Department of Energy Order DOE O 437.1, using AASHTOWare BrR® or CANDE.***
09/20 - Ongoing	**S-472/S-45 Bridge Replacement, Horry and Georgetown Counties, SC.** *SCDOT.* **Bridge Engineer.** Responsible for QC review for load rating of two prestressed concrete cored slab bridges. Michael Baker is providing engineering services for the replacement of the S-472 Bridge over Horsepen Creek in Horry County and S-45 Bridge over Tributary to Boser Swamp in Georgetown County, South Carolina. Project services include surveys, environmental documentation and permitting, hydraulic and hydrological design, roadway design, bridge design, geotechnical design, utility coordination, right-of-way design and support, SUE, public involvement, and construction services.

16. Staff Experience:

Firm employed by	Moffat & Nichol Inc.		
Name	**Isabella Mejdrech, PE, SE**	*Years of relevant experience with this employer*	7
Title	Engineer	*Years of relevant experience with other employer(s)*	0
Degree(s) / Years / Specialization	MS / 2020 / Civil Engineering; BS / 2019 / Civil Engineering		
Active registration number / state / expiration date	PE No. 48259 / LA / exp. 03/31/28		
Year registered 2023 *Discipline*	Civil, Structural		
Contract role(s) / brief description of responsibilities	**MPR #5;** Task 3, 5, 6, & 7: Fixed Bridge Support		



Isabella is a Structural Engineer with specialized expertise in bridge load rating, structural analysis, bridge rehabilitation, and transportation infrastructure design. Since joining Moffatt & Nichol in 2020, she has led and supported numerous bridge load rating programs for state and local agencies, utilizing AASHTO BrR, LEAP, LARSA, and DESCUS software to evaluate steel, concrete, timber, and culvert structures in accordance with current AASHTO and FHWA requirements. She has perform load ratings for major facilities and programs such as the Berkley Bridge and James River Bridge in Virginia, statewide bridge load rating assignments for the Mississippi OSARC, and municipal bridge inventories in Suffolk, Virginia Beach, Norfolk, and Newport News. Her responsibilities routinely include incorporating inspection findings into analytical models, developing rating reports, assessing structural deficiencies, and providing bridge posting recommendations. She has completed specialized FHWA training in Load and Resistance Factor Rating of Highway Bridges, Safety Inspection of In-Service Bridges, and LRFD Bridge Design. Her combination of advanced technical training, hands-on load rating experience, and expertise in bridge analysis and rehabilitation makes her highly qualified to perform and review bridge load ratings and structural capacity evaluations.

- ✓ Performed load ratings for more than 140 bridges and structures, including major facilities such as the Berkley Bridge and James River Bridge in Virginia
- ✓ Experienced with a variety of bridge rating software, including AASHTOWare BrR
- ✓ Trained in NHI "Load and Resistance Factor Rating" Course

Experience dates (mm/yy–mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
02/22 - 05/24	**OSARC Superstructure and Substructure Load Ratings, Statewide, MS.** *MDOT.* **Engineer.** Led the effort to load rate the superstructures and substructures of bridges in Mississippi OSARC's inventory. Superstructure types rated include prestressed concrete single-tee beams, reinforced concrete channel beams, reinforced concrete slab, and prestressed concrete I shape beams. Substructure types rated included reinforced concrete bents with prestressed concrete piles, reinforced concrete bents with concrete encased steel H-piles, and solid reinforced concrete abutments. Analysis included incorporating findings from field work and inspection reports. In addition to the rating, a summary report was generated to provide findings and give recommendations for posting if necessary.
06/22 - 11/22	**Load Rating of 86 Structures, Virginia Beach, VA.** *VDOT.* **Engineer.** Lead the coordination of load rating 86 structures within 8 months to meet Fixing America's Surface Transportation (FAST) Act requirements. Load rate steel and concrete structures through the ***creation of AAHSTO BrR file,*** identifying bridge defects from inspection reports, developing load rating report, and giving bridge posting recommendations.
02/23 - 10/23	**Load Rating of the Holland Road Culvert Widening, Suffolk, VA.** *VDOT.* **Engineer.** Load rated both the widened segment and original segment of the reinforced concrete triple box culvert located on Holland Road. Performing two different methods for load rating: ***creating the load rating model in AASHTO BrR*** for the widened section based on As-Built plans; utilizing VDOT's Equivalent Capacity Coefficient Appendix for the existing section with no existing plans. Additionally, developing load rating report with recommendations.
03/21 - 12/21	**Load Rating of the Berkley Bridge, Norfolk, VA.** *VDOT.* **Engineer.** Load rate the approach spans and double bascule spans of east bound lanes and west bound lanes of Berkley Bridge. Consisted of the ***creation of the load rating model in AASHTO BrR,*** identifying bridge defects from inspection reports, developing load rating report, and giving bridge posting recommendations.

16. Staff Experience:

Firm employed by	Michael Baker International, Inc.		
Name	**Tim Armbrecht, PE, SE**	*Years of relevant experience with this employer*	4
Title	Senior Bridge Technical Manager	*Years of relevant experience with other employer(s)*	30
Degree(s) / Years / Specialization	MS / 1992 / Civil and Environmental Engineering/Structures; BS / 1989 / Physics and Math		
Active registration number / state / expiration date	PE No. 062-054114 / IL / exp. 11/30/27; SE No. 081005519 / IL / 11/30/26		
Year registered	1998 (SE); 2000 (PE)	*Discipline*	Civil, Structural
Contract role(s) / brief description of responsibilities	Technical Advisor; Task 4 (Training) Lead		



With over 30 years of experience, all with the Illinois Department of Transportation (ILDOT), Mr. Armbrecht brings a DOT perspective and strong technical background to our team. He has extensive knowledge and expertise in structural services, maintenance operations, bridge design, inspection, load rating, and in-house software development. He spent over 18 years in a managerial role with the Structural Services Section at IDOT, managing the state's entire bridge inventory and leading the charge to transistion from BARS/LARS to AASHTOWare BrR. This experience gives Tim a deep understanding of owner considerations and impacts of load ratings and postings and their long-term effects on IDOT's bridge system. With him on our team, we have a unique advantage in that he can determine the impact of a load rating (and posting) and, if necessary, provide mitigation options for the client to consider to ensure minimal impact to traffic while also ensuring the safety of the traveling public.

- ✓ PM developing training materials for Iowa DOT's BrR program
- ✓ Developed training materials for FHWA's Structures Program
- ✓ Panel member for several NHRCP load ratings research projects
- ✓ Extensive experience contributing to Michael Baker's nationwide load ratings and/or inspection contracts with agencies such as ILDOT, MTDOT, SCDOT, TDOT, and others

Experience dates (mm/yy-mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
05/24 - Ongoing	**Training for the FHWA Structures Program Area Project, PA.** *Federal Highway Administration.* **Instructor.** Michael Baker is developing, updating, and delivering instructor-led training (ILT), web-based training (WBT), web conference training (WCT), videoconference training (VCT), flipped classroom training, new and evolving training delivery platforms, electronic testing, and new technologies such as mobile apps, electronic workbooks, virtual simulations, and virtual world delivery under an Indefinite Deliver Indefinite Quantity (IDIQ) contract for the Federal Highway Administration's structure subject area.
1992 - 2022	**Bureau of Bridges and Structures, Structural Services Section.** *Illinois DOT.* **Chief, Structural Services Section.** Responsibilities include directing and managing four units within the BBS, including The Bridge Ratings & Permits Unit. Responsible for directing load rating and permitting policy within the BBS. Prior to that role, as CHIEF of the Ratings & Permits Unit, responsibilities included managing the unit which oversees the evaluation and rating of approximately 8,000 state-maintained structures. This includes restricting structures to carry vehicles of less than legal weight and closing structures to ensure public safety and protect structures from further damage. Initiated conversion of all 8,000 state structures modeled in BARS/LARS format to AAHTOWare BrR and developed associated policies for IDOT and Local Agency structures.
11/24 - Ongoing	**Bridge Inspection and Evaluation Engineering Services, Statewide, SC.** *SCDOT.* **Technical Advisor.** Michael Baker is providing bridge inspection and engineering evaluation services in support of a statewide, consultant-led, bridge inspection effort for higher priority bridges across South Carolina. The more than 9,500 bridges included in this contract encompass interstate system bridges, bridges over railroads, underwater inspections, and bridges with more challenging access needs. Tasks include asset management, National Bridge Inspection Standards inspection, load rating, repair and rehabilitation recommendations, emergency response, truck permitting, quality control, and engineering evaluation in support of the statewide bridge management program.
09/22 - Ongoing	**Bridge Inspection and Load Rating Quality Assurance, Statewide, MT.** *MTDOT.* **Bridge Engineer.** Responsible for review and development of the MDT load rating load rating manual. Michael Baker is providing statewide bridge inspection and load rating services under a bridge inspection and load rating program. The project includes quality assurance (QA) reviews of 150 bridge inspection reports, field reviews of 60 field inspections, review and update of the Montana DOT Bridge Inspection and Rating Manual (BIRM), review of their load rating program, scoping changes to the load rating program and manual, developing QA summary reports for individuals district-wide and statewide, generating the state bridge engineer's letter, and developing year-end training based on the QA reviews for the year.

01/24 - Ongoing	**BrR Program for Rating Iowa Bridges, Statewide, IA.** *IADOT.* **Project Manager.** Michael Baker is developing BrR template files for the Iowa Department of Transportation (DOT)'s standard bridge types with policies and training materials to familiarize local public agencies and their consultants with the templates and the BrR software. Michael Baker is creating analysis settings, system settings, and libraries, and is establishing file naming conventions.
01/23 - Ongoing	**ARDOT Bridge Inspection Program Evaluation, Statewide, AR.** *ARDOT.* **Technical Manager.** Responsible for overseeing the development of a new Load Rating Manual for ARDOT. Provides guidance to the team researching and developing the content, and also provides QA/QC before the deliverable is submitted to the client. Michael Baker is working to determine the criteria for selecting a list of major bridges from Arkansas Department of Transportation's bridge inventory. Phase I of this project involved establishing a baseline for the client's recent and current bridge inspection program by reviewing their Bridge Inspection Manual and numerous supporting documents noting areas for improvement. In Phase II, Michael Baker determined the criteria, methodology, and thresholds for prioritizing and selecting 200 bridges from the client's state-owned bridge inventory for a high-level evaluation of repair or replacement needs, including budgetary cost estimating for the next 20 years. Phase II also entails development of a stand-alone load rating manual.
01/24 - Ongoing	**Load Rating MoDOT Routine Structures On-Call, Statewide, MO.** *MODOT.* **Project Manager.** Responsible for overseeing routine and complex bridge contracts to perform load ratings for structures determined by Missouri Department of Transportation. Projects include load rating two complex truss bridges and load rating over 300 routine state-owned structures. Michael Baker is providing bridge engineering services under a three-year contract to load rate state-owned routine structures. The first task involves load rating 100 prestressed concrete double tee girder bridges. The second task is to load rate 205 additional bridges: 79 are prestressed concrete double tee girder bridges, 116 are prestressed I-beam bridges, and 10 are combined prestressed or post-tensioned concrete beam and steel beam bridges.
07/24 - Ongoing	**Load Rating and Posting of Long-Span Bridges, Washington, D.C.** *Federal Highway Administration.* **Project Manager.** Responsible for overall project management, technical direction, and quality assurance. Oversaw development of procedures and specifications for load rating, posting, and permitting of long-span highway bridges. Michael Baker is performing a NCHRP research project for which the objective is to develop procedures and specifications for load rating, posting, and permitting of highway bridges with spans greater than 200 feet in length. It shall consider all applicable load effects. In addition to the final report, the main deliverable is proposed specifications for the AASHTO Manual for Bridge Evaluation.
09/22 - Ongoing	**PTB 199-41 Various Statewide Services, Statewide, IL.** *ILDOT.* **Bridge Engineer.** Responsible for serving as a technical advisor on this Various Statewide Structural Services Work Order Contracts for the Bureau of Bridges and Structures. Work Orders for this contract have involved load ratings, bridge inspection, bridge incident inspection and evaluations, and peer review services. Michael Baker oversaw 14 work orders since June 2021; assisted with complex load rating assignments on complex bridges and culverts; evaluated the bridge damage; and peer reviewed the bridge policy development and assisting IDOT meet their NBIS plans of corrective action as well as initiate their SNBI transition. Michael Baker has been involved with 13 work orders since June 2021 with IDOT's Bureau of Bridges & Structures (BBS), assisting with complex load rating assignments on complex bridges and culverts, damage evaluation of bridges, and peer review of bridge policy development.
04/23 - Ongoing	**General Engineering Services 2022-2026, Agreement No. E2452, Statewide, TN.** *TDOT.* **Technical Advisor.** Michael Baker is serving a four-year on-call contract to provide bridge repair services across the state of Tennessee. The team is responsible for a variety of assignments including contract documents, tunnel inspection plan revision, NSTM inspection, truss bridge inspection with maintenance recommendations, and railroad flat car inspection.
10/25 - Ongoing	**HIF IDIQ Office of Infrastructure, MD.** *Federal Highway Administration.* **Senior Advisor.** Michael Baker is performing evaluation of bridge inspection, load rating, and posting for deteriorated bridges. The team is responsible for development of guidelines to document the findings.
05/23 - Ongoing	**Highway 49 Mississippi River Bridge Rehabilitation, Phillips County, AR.** *ARDOT.* **Technical Advisor.** Michael Baker is providing design and engineering services for bridge rehabilitation work on Highway 49, section 11 in Phillips County, Arkansas. The project includes detailed bridge inspection, ***load rating,*** providing repair options for the superstructure to increase its service life, and maintenance of traffic and stage planning. Proposed rehabilitation efforts include structural steel repairs and replacements, polymer overlay for the approach spans, deck replacement for the main truss spans, and miscellaneous repairs.
03/24 - Ongoing	**I-10 Mobile River Bridge and Bayway Project Management, Mobile, AL.** *ALDOT.* **Technical Advisor.** Michael Baker is providing project management with oversight responsibilities for all aspects of the Mobile River Bridge and Bayway Project. The project involves reconstruction of I-10 through downtown Mobile, Alabama, and across the Mobile Bay, with a total length of approximately 10 miles. The project includes a new two-tower cable stayed bridge over the Mobile River, and replacement of the seven-mile-long I-10 Bayway Bridge.

16. Staff Experience:



Firm employed by	Michael Baker International, Inc.		
Name	**Gabriel Rice, PE**	*Years of relevant experience with this employer*	<1
Title	Bridge Designer	*Years of relevant experience with other employer(s)*	4
Degree(s) / Years / Specialization	BS / 2022 / Civil Engineering		
Active registration number / state / expiration date	PE No. 51749 / LA / exp. 03/31/27; NHI Underwater Bridge Inspection Training; Certified NAUI Scuba Diver; NBIS Safety Inspection of In-Service Bridges Training		
Year registered	2026	*Discipline*	Civil
Contract role(s) / brief description of responsibilities	Deputy Project Manager; Task 1 & Task 2 Lead; Task 3, 5, 6, & 7: Fixed Bridge Support		

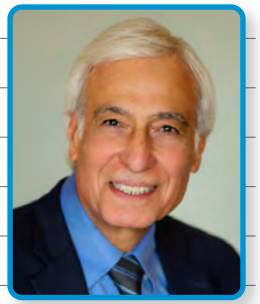
Gabriel specializes in structural engineering for transportation, marine, and public infrastructure projects. He has experience managing and designing bridge replacement, rehabilitation, and inspection projects for DOTD and local agencies, with responsibilities including structural analysis, plan development, hydraulic coordination, load ratings, structural inspection, and project management. He is committed to delivering practical, technically sound solutions that meet client objectives and project schedules.

- ✓ Experienced bridge designer capable of performing load ratings, inspections, and modeling
- ✓ Specialized experience performing underwater 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 years of experience specified in the applicable MPR(s).*
01/26 - Ongoing	**US 371: ICG Overpass HBI (Sibley).** *DOTD.* **Bridge Engineer.** Responsible for investigating available bridge data like inspection reports, as-built plans to prepare markups, plan set development, drafting changes in MicroStation. Developed crash wall analysis model in LEAP Bridge as well as cost estimate.
07/23 - 06/26	**Port of St. Bernard Wharf D Dock 2 Rehabilitation, Chalmette, LA.** *Port of St, Bernard.* **Structural Engineer Intern.** Performed structural evaluation and rehabilitation design for an existing reinforced concrete wharf supporting warehouse operations and forklift loading. Developed structural analysis models using STAADPro, developed plans, and managed construction.
07/23 - 06/26	**IIJA Bridge Program, Statewide, LA.** *DOTD.* **Structural Engineer Intern.** Performed design calculations and developed plans for multiple low ADT bridges across Louisiana. Used software such as BrR to load rate structures to ensure the safety of the traveling public.
07/23 - 06/26	**Port of New Orleans Wharf Inspection Program, New Orleans, LA.** *Port of New Orleans.* **Structural Engineer Intern.** Performed structural inspections and condition assessments of multiple marine facilities, including timber, steel, and reinforced concrete wharves. Responsible for visual inspections, underwater evaluations, ultrasonic thickness measurements, deterioration assessments, and preparation of engineering reports with repair recommendations. Performed load ratings on structures given the found defects.
04/25 – 06/25	**OSARC Bridge Inspection, Statewide, MS.** *MDOT.* **Structural Engineer Intern.** Performed inspections on multiple timber, concrete, and steel bridges. Prepared inspection reports and load ratings.
03/25 - 11/25	**CAPEX Bridge Inspection and Live Load Testing, Austin, TX.** *TxDOT.* **Structural Engineer Intern.** Performed specialized bridge inspections and live load testing to evaluate the structural performance and load-carrying capacity of existing bridges supporting industrial operations. Responsible for field inspection, instrumentation setup, data collection during controlled truck loading, coordination with the testing team, and interpretation of structural response to verify bridge behavior and support engineering evaluations and rehabilitation planning.

16. Staff Experience:

Firm employed by	Moffat & Nichol Inc.		
Name	**Herodotos Pentas, PhD, PE**	*Years of relevant experience with this employer*	4
Title	Senior Bridge Engineer	*Years of relevant experience with other employer(s)*	36



Degree(s) / Years / Specialization	PhD / 1990 / Civil Engineering; MS / 1985 / Civil Engineering; BS / 1984 / Civil Engineering		
Active registration number / state / expiration date	PE No. 24660 / LA / exp. 09/30/28		
Year registered	1992	*Discipline*	Civil, Structural
Contract role(s) / brief description of responsibilities	**MPR #5;** Technical Advisor; Task 3, 5, 6, & 7: Movable Bridge Support		

Dr. Pentas is a Senior Bridge Engineer with more than 35 years of experience in structural and transportation engineering, specializing in bridge analysis, design, inspection, and load rating. He has extensive expertise in evaluating steel, concrete, and complex bridge structures using AASHTO methodologies and industry-standard rating software, including AASHTOWare BrR, LEAP, VIRTIS, and finite element analysis tools. ***Throughout his career, Dr. Pentas has managed and led numerous bridge load rating programs, including the load rating of hundreds of bridges for DOTD and the Mississippi OSARC,*** providing posting recommendations and ensuring compliance with LRFR and LFR requirements. His qualifications include a PhD in Civil Engineering from Louisiana State University, Model Law Engineer certification, and recent FHWA training in Safety Inspection of In-Service Bridges and Load and Resistance Factor Rating of Highway Bridges. His combination of advanced technical expertise, bridge engineering leadership, and decades of hands-on rating experience makes him a recognized authority in bridge load rating and structural assessment.

- ✓ Project Manager & Lead Structural Engineer for DOTD's IDIQ Master Load Rating Services Contract
- ✓ Comprehensive understanding of load rating principles, techniques, and softwares
- ✓ Trained in NHI "Load and Resistance Factor Rating" Course

Experience dates (mm/yy-mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
07/26 - Ongoing	**IDIQ Master Load Rating Services, Statewide, LA.** *DOTD.* **Project Manager & Lead Structural Engineer.** Supervising and providing load rating analysis for ten (10) Precast Prestressed Concrete bridges using AASHTOWare BrR version 7.6.1. for primary superstructures. Services include downloading bridge information and inspection data, performing load ratings, and creating a load rating report. Load ratings incorporate all deficiencies from the most recent inspection report. Ratings are provided for inventory loads, operating loads, and legal loads. The first bridge currently rated is a three-span PPC bridge on US-167 over Coulee River in Lafayette Parish (recall no. 030045). The remaining nine bridges will be rated under a new forthcoming Notice to Proceed.
10/22 - 06/23	**IDIQ Master Contract, Bridge Inspection and Related Services, Statewide, MS.** *Mississippi DOT.* **Project Manager & Lead Structural Engineer.** Supervising load ratings of four bridges involving modeling within AASHTOWare's software for superstructures and LEAP for substructures in accordance with LRFR and LFR. Supervised the team who identified bridge defects from inspection reports, developed a load rating report, and provided bridge posting recommendations.
01/07 - 12/07	**West Drive & Lock #2 Road Bridges Inspection & Load Analysis, St. Tammany Parish, LA.** *DOTD.* **Project Manager.** Responsible for inspection, load analysis, and rating of timber bridge and concrete bridges by applying AASHTO and DOTD Standards.
08/97 - 06/99	**Assessment of Bridge Damage by Watercraft, Divisions 2, 3, and 7, LA.** *DOTD.* **Project Manager.** Responsible for baseline inspections of fender systems and substructures of 134 bridges to determine damage caused by marine vessels. Provided damage assessment, repair plan preparation, cost estimates, repair procedure, and report. Project received national attention due to its effectiveness and execution.
01/96 - 12/96	**Structural Load Ratings, Statewide, LA.** *DOTD.* **Project Manager.** Responsible for load rating of more than 100 bridges throughout the state. Many of the bridges were prestressed concrete and steel plate girder design.
02/96 - 11/96	**Bars Re-Rate, LA.** *DOTD.* **Project Manager.** Responsible 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 nearly 500 structures. Analyzed with finite element method, three structures for three super-load permit vehicles and recommended distribution factor, influence line, permit load review procedure, and examples for typical complex members (truss span, steel & prestressed girder, steel and reinforced concrete cap beam.

16. Staff Experience:

Firm employed by	Michael Baker International, Inc.		
Name	**Charles "Tony" Hunley, PhD, PE, SE**	*Years of relevant experience with this employer*	3
Title	National Director - Bridge Services	*Years of relevant experience with other employer(s)*	25
Degree(s) / Years / Specialization	PhD / Structural Engineering, University of Kentucky; MSCE / Structural Engineering, University of Kentucky; BSCE / Structural Engineering, University of Kentucky		
Active registration number / state / expiration date	PE No. 38940 / Louisiana / 09/30/2026; SE No. 081005839 / Illinois / 11/30/2026		
Year registered	2000 (PE); 2001 (SE)	*Discipline*	Civil; Structural
Contract role(s) / brief description of responsibilities	Technical Advisor		



Tony offers more than 27 years of experience leading teams of bridge engineers and directing efforts to cultivate innovation and deliver technical excellence across North America. Earlier in his career, he developed a diversified complex Bridge practice as an Owner and Principal at ENTRAN (formerly American Consulting Engineers). His vast experience with projects of different scales allows our team to assist DOTD in ensuring sound decisions are being made. He provides nationwide technical assistance to the Michael Baker Bridge Practice for complex and unusual projects. Tony can offer valuable insight into the efficient and sound design of DOTD's structures. His project delivery includes design oversight on design projects for significant alternative delivery efforts. ***Tony's vast experience will provide a holistic view of project delivery best practices, help ensure client satisfaction.***

- ✓ Louisiana PE with 25+ years designing bridges over major and/or complex bridges
- ✓ Offers valuable insight into strategies that have helped deliver multiple large, complex projects
- ✓ Extensive experience leading load rating programs for all types of simple and complex bridges

Experience dates (mm/yy–mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
02/18 – 01/22	**Bridging Kentucky Program General Engineering Consultant, Multiple Locations, Kentucky.** *Kentucky Transportation Cabinet (KYTC).* **Program Manager.** This expansive statewide bridge restoration program was launched by KYTC in 2018 with an initial mandate to address more than 1,000 bridges across the state over six years with an initial estimated budget of $700M. The program is rehabilitating, repairing, or replacing critical bridges that are either closed to traffic, weight-restricted, or rated in poor condition. The program focuses on smaller bridges across the state that have historically struggled to get the necessary funding. Tony led a team of 22 firms collaborating with several in-house divisions of KYTC to provide program management oversight, document and process management, scheduling, internal and overall program financial management, information management, and program-level communications services; screening and prioritization of bridges, preliminary and final design, environmental services, utility coordination, right-of-way acquisition, construction procurement support for design-bid-build and design-build projects, design-build owner's engineer services, and construction management and inspection support. During the 120-day kick-off phase of the program, the team established organization and communication protocols; finalized the program brand and internal/external communication strategies; developed a Program Charter in collaboration with KYTC, FHWA, and various stakeholder and oversight agencies to establish authority and critical streamlining approaches to project development design, environmental studies and approvals, right-of-way acquisition, and utility relocation coordination; established the document and progress management system; utilized e-Builder Program Management Information Software system; screened more than 1,100 bridges to determine recommended scope, preliminary cost, and critical design/schedule challenges, and initiated design of several bridges to be rehabilitated. The program is being delivered utilizing a variety of delivery methods including individual bridge construction projects, bundling of bridge projects, and a design-build bundle contract of 106 bridges.
1997 - 2000	**US 62/68 Cable-Stayed Bridge over the Ohio River, Maysville, Kentucky.** **Structural Engineer.** Responsible for construction engineering services, including developing post-tensioning and stay-cable installation verification procedures and calculations to verify the final cable stay forces. Calculations utilized a post-tension/cable tension program developed to evaluate the effects of various loss effects on final cable/strand forces. ***The bridge is a 2,100-foot long five-span cable stayed bridge featuring a 1050-foot-long channel span.*** The superstructure is supported by variable depth steel plate edge girders with a floor beam and sub-stringer system. The 332-foot-tall towers have a goal post configuration with upper and lower struts.

2000 - 2010; 2021 - 2022	**Cable-Stayed Bicycle Bridge over Navigation Lock Chambers Lock Unit, Kentucky Lock Addition, Grand Rivers, Kentucky.** *KYTC.* **Assistant Program Manager - Structures.** Responsible for preliminary design and QA/QC of final design of a 366-ft long. 155.54' – 52.92' – 157.54', ***three-span cable-stayed concrete bridge over the existing and proposed lock chambers***. The lock unit is the central feature of a 1359-ft long signature bicycle/pedestrian structure. The cable stayed bridge features two A-frame towers supporting the tail spans and connected by horizontal steel cables. Between the towers, a widened bulb-out area supported by precast outriggers post-tensioned to the main concrete beams, allows for viewing of the lock operations. Cazaly hangers are utilized to allow for precast concrete beams spliced in the air for continuity and to facilitate erection.
01/21 – 09/22	**I-49 Lafayette Connector, Lafayette, Louisiana.** *DOTD.* **Deputy Structures Lead.** Responsible for a conceptual design analysis of the multi-level Kaliste Saloom Interchange. The 3-level interchange connects the new I-49, Evangeline Thruway, and Kaliste Saloom Road. The interchange consists of nine bridges, of which several feature significant flared spans and most on curved alignments (minimum radius = 515-feet). crossing multiple roadways and a BNSF Railroad track. The conceptual design phase included type, size, and span arrangement development. Steel plate girder, trapezoidal steel box girder, and precast segmental box girder superstructure types were evaluated. Span lengths vary up to 210-feet and complex features included integral post-tensioned pier caps and integral straddle caps over the BNSF Railroad.
03/05 – 04/06	**Relocated US 25E over Cumberland River.** *KYTC.* **Construction Inspector.** Performed materials testing, fields surveying and inspection of construction activities and methods during drilled caisson and pile foundation construction, and substructure and superstructure construction. The project included two sets of twin structures during the widening and relocating of US 25E. The four structures were 10-span PC I-beam bridges with total bridge lengths of more than 1,100 feet.
04/07 – 06/09	**River Road Bridge Widening over Harrods Creek, Prospect, Kentucky.** *KYTC.* **Department Manager.** Responsible for construction phase engineering services for the widening and rehabilitation of a three-span reinforced concrete filled-spandrel arch bridge. The existing one-lane historical bridge was widened to two lanes by removing the existing concrete balustrade railings and excavating enough of the cobble infill to "hide" a new prestressed concrete beam superstructure with PPC deck panels cantilevered beyond the existing spandrel walls. The concrete arch and spandrel walls were inspected and rehabilitated. ***This project won the 2010 APWA-KY Chapter "Project of the Year" award in the Historic Preservation Category over $1 Million, the 2011 PCI Design award in the Rehabilitated Bridge Category, and the 2012 ACEC-KY Engineering Excellence Grand Award, and the ACEC Engineering Excellence National Recognition Award in the Structural Systems category.***
10/04 – 07/05	**I-75 over Rockcastle River, Laurel and Rockcastle Counties, Kentucky.** *KYTC.* **Structural Engineer.** Responsible for preliminary and final designs and plans for the widening and rehabilitation of two existing five-span structures. The structures originally consisted of two units; a three-span (160 feet, 200 feet, 160 feet) and a two-span (160 feet by 160 feet) with non-composite 96-inch welded steel plate girder framing. The new structure connects and widens the existing substructures and replaces the existing steel girder superstructures. The 258.036-meter long, five-span continuous 1,975-millimeter composite welded steel plate girder structure has a deck width of 39.01 meters and a 33-degree skew. The removal and construction of the new structure was performed in three construction stages to accommodate maintenance of traffic. The concrete multi-column piers were connected and retrofitted for the new superstructure. Drilled shafts were used on two of the pier in-fills to avoid deep excavations adjacent to the existing piers.
08/04 – 05/06	**KY 922. Newtown Pike. over UK Agricultural Station Branch, Newtown Pike Design-Build, Lexington, Kentucky.** *KYTC.* **Structural Project Manager.** Responsible for preliminary and final design and structure plans for a new three-span (14 feet, 22 feet, 14 feet) cast-in-place concrete slab bridge. Aesthetic design features incorporated into the structure include a stone veneer and concrete barrier with 4-inch KY River Marble Cut Stone lay on both faces of the barrier. The bridge is situated on a 22.9-degree right skew. Substructures for the bridge included wall piers and breastwall abutments founded on spread footings keyed into bedrock.

16. Staff Experience:

Firm employed by	Michael Baker International, Inc.		
Name	**Philip Quillin, PE, PMP**	*Years of relevant experience with this employer*	23
Title	Technical Director	*Years of relevant experience with other employer(s)*	10
Degree(s) / Years / Specialization	Master's Certificate / 2011 / Project Management; BS / 1994 / Civil Engineering		
Active registration number / state / expiration date	PE No. 36183 / LA / exp. 09/30/27; PMP No. 2069066		
Year registered	2011	*Discipline*	Civil
Contract role(s) / brief description of responsibilities	QA/QC Manager		



Philip has a strong background in the design, analysis, rehabilitation, maintenance, inspection, rating and permitting of structures; including bridges, culverts, buildings, and waterfront/marine infrastructure. He has served in all positions within structural engineering from inspector to engineer to staff and project manager and has managed and designed projects ranging from the fabrication of stop gates, culverts and boat houses to the rehabilitation of massive air craft carrier dry docks and the replacement of major bridges. Mr. Quillin has a strong background in NBIS inspection and rating of culverts and bridges on all classes of roads, having led the inspection, analysis, rating and assessment of over 1,000 bridges. He has a varied background in transportation disciplines, including traffic, roadway, and drainage design, with an emphasis on bridges and miscellaneous structures. This allows him to bring a well-rounded depth of knowledge to his quality reviews.

- ✓ High-level oversight for numerous Load Rating IDIQs across the U.S.
- ✓ Highly experienced in the design, inspection, and rating of structures of all types
- ✓ Performed thousands of bridge and structures load ratings
- ✓ Complex bridge experience includes dozens of truss and gusset plate analyses in Louisiana, Virginia, and Mississippi

Experience dates (mm/yy-mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
07/11 - 07/11	**Structural Load Rating of Bridges, Statewide, LA.** *DOTD.* **Senior Structural Engineer.** Provided senior oversight of a team of engineers performing bridge load ratings. Michael Baker provided engineering services for the structural load rating of about 250 bridges using the load and resistance factor rating method. Michael Baker's services included plan and document review; structural modeling, analysis, and load rating of the bridges, and preparation of load-rating reports and recommendations.
05/10 - 10/13	**Load Rating of Six Complex Steel Truss Bridges, Statewide, LA.** *DOTD.* **QA/QC Engineer.** Responsible for quality control. Michael Baker provided engineering services for the load rating of six complex steel truss bridges that span major rivers. Michael Baker's services included review of historic plans and documents associated with the bridges, in-depth inspections of the bridges, structural modeling and analysis, load rating, and report preparation and recommendations.
01/19 - 05/21	**Bridge Load Rating and Evaluation Engineering Services, Statewide, SC.** *South Carolina DOT.* **Project Manager.** Oversee statewide load rating program for SCDOT involving entire inventory of over 9,300 structures, including oversight of five other consultants and site assessments and ratings of over 1,700 bridges and culverts in District 3. Provide management assistance and recommendations to SCDOT for load rating and testing, material testing, oversize, overweight truck permitting, asset management, and complex structure programs. Michael Baker provided bridge load rating and evaluation engineering services for state-owned, county-owned, and other municipality-owned structures throughout South Carolina, primarily for the 1,815 bridges in District 3. Tasks include project management, site assessments, data collection, agency coordination, quality assurance reviews, and training development. Michael Baker established this statewide program and oversees five other consultants performing bridge load ratings, assessments, load and material testing, oversize and overweight permitting, complex structure rating and maintenance manuals, development of custom AASHTOWare Bridge Management program, and quality assurance reviews.
10/21 - Ongoing	**Bridge Inspection and Load Rating Quality Assurance, Statewide, MT.** *Montana DOT.* **QA/QC Manager.** Provided quality assurance and quality control support. Michael Baker is providing statewide bridge inspection and load rating services under a bridge inspection and load rating program. The project includes quality assurance (QA) reviews of 150 bridge inspection reports, field reviews of 60 field inspections, review and update of the MTDOT Bridge Inspection and Rating Manual (BIRM), review of the DOT load rating program, scoping changes to the load rating program and manual, developing QA summary reports for individuals district-wide and statewide, generating the state bridge engineer's letter, and developing year-end training based on the QA reviews for the year.

09/22 - Ongoing	**Bridge Inspection and Evaluation Engineering Services, Statewide, SC.** *South Carolina DOT.* **Assistant Project Manager.** Assisted the Project Manager in overseeing tasks. Michael Baker is providing bridge inspection and engineering evaluation services in support of a statewide, consultant-led, bridge inspection effort for higher priority bridges across South Carolina. The more than 9,500 bridges included in this contract encompass interstate system bridges, bridges over railroads, underwater inspections, and bridges with more challenging access needs. Tasks include asset management, National Bridge Inspection Standards inspection, load rating, repair and rehabilitation recommendations, emergency response, truck permitting, quality control, and engineering evaluation in support of the statewide bridge management program.
02/10 - 03/10	**Structure Ratings, North-South Freeway Mitchell Interchange, Milwaukee, WI.** *Wisconsin DOT.* **Senior Structural Engineer.** Provided minor design oversight. Michael Baker provided rating services for one curved steel box girder bridge structure as part of the North-South Freeway Mitchell Interchange reconstruction project. Michael Baker provided rating calculations using MDX software for structure B-40-834.
01/12 - 01/19	**OSARC Complex and Fracture Critical Bridge Inspections, Statewide, MS.** *Mississippi DOT.* **Senior Structural Engineer.** Provided senior oversight to a team of engineers performing bridge inspections and load ratings. Michael Baker provided engineering services under multiple contracts for the inspection of locally-owned complex bridges of varying types throughout the state on an expedited schedule. Michael Baker's services included project management; inspection plan development; in-depth condition, appraisal, and fracture-critical inspections; load ratings; and preparation of inspection and load-rating reports. The number of bridges inspected in the multiple contracts were: 1) FY 2018 & 2019 – 166 bridges; 2) FY 2016 & 2017 – 107 bridges; 3) FY 2014 & 2015 – 101 bridges; and 4) FY 2012 & 2013 – 194 bridges.
09/17 - 09/17	**Bridge Load Ratings, Statewide, MS.** *Mississippi DOT.* **Task Manager.** Responsible for overseeing team task execution. Michael Baker performed superstructure load ratings for 391 bridges of various superstructure types located throughout Mississippi. Michael Baker's services also included development and implementation of a load rating QA/QC plan. Deliverables provided by Michael Baker included scanned copies of the complete MDOT standard load rating summary sheet and the associated xml rating file from the AASHTOWare BrR™ program for each bridge.
08/09 - 01/13	**Statewide Load Ratings of Structures, Statewide, Virginia.** *Virginia DOT.* **Assistant Project Manager & Senior Structural Engineer.** Responsible for rating and senior review of bridge load rating calculations. Provided task management and bridge engineering design and quality control review. Michael Baker provided bridge load rating services for the client's implementation of the AASHTOWare Bridge Rating software by conducting a pilot project. The objective of the statewide pilot project was to determine the level of effort required to perform load ratings using AASHTOWare BrR and to establish the appropriate data entry approach to be used for the remainder of the nearly 11,240 state on-system bridges. This was accomplished by selecting 676 bridges to be load rated using the client's library of live load truck configurations. Michael Baker performed a load rating analysis on each structure based on the as-built condition and the deteriorated condition. Subsequently, Michael Baker performed bridge load rating analyses in a similar fashion as was used for the pilot project. The structure types included slabs, continuous slabs, t-beams, steel girders, continuous steel girders, P/S girders/beams, frames, and trusses. Independent computations, including computer input and output along with the load rating summary, were provided for any structures that could not be analyzed and rated using the AASHTOWare BrR software.
03/10 - 08/11	**Load and Resistance Factor Rating Planning and Implementation, Statewide, OK.** *Oklahoma DOT.* **Senior Structural Engineer.** Performed truss gusset plate ratings and reviews, and provided senior oversight. Michael Baker provided planning and implementation services for the LRFR of state-owned bridges. The bridge LRFRs supported the development of an automated truck routing and permitting system. Michael Baker's Phase I tasks included coordinating the development of an LRFR implementation plan, determining bridge load-rating software requirements for the permitting and routing system, developing a software plan, computing LRFR ratings for the gusset plates of truss bridges, and creating a pilot bridge load-rating work plan. Michael Baker's Phase II tasks involved LRFR and LFR load rating of 159 complex bridges based on the use of influence lines and influence surfaces.
09/11 - 06/12	**Bridge Safety Inspection and Load-Rating Services, Statewide, RI.** *Rhode Island DOT.* **Senior Structural Engineer.** Responsible for managing team providing load rating of bridges. Michael Baker performed inspection services for bridges throughout Rhode Island as part of the Statewide Bridge Inspection Services Master Price Agreement project. Michael Baker performed inspections on more than 800 bridges and load ratings on more than 300. Additionally, it co-authored the Rhode Island Department of Transportation (RIDOT) Bridge Inspection Manual in partnership with RIDOT bridge engineering staff and has developed repair sketches for emergency repairs of deficiencies discovered during its inspections. Michael Baker has held this contract since 2009. During its current five-year assignment, it has performed numerous investigations, including initial and routine inspections, damage inspections, in-depth inspections, and special interim inspections. Structure types include steel and concrete multi-girder, steel trusses, concrete slabs and arches, pre-stressed concrete, stone masonry arches, network tied arches, and timber bridges.

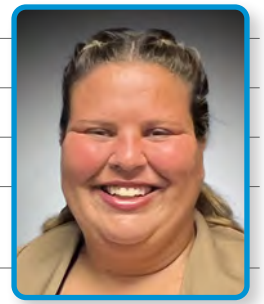
SUPPORT PERSONNEL

TASK 1: PLAN & DOCUMENT RETRIEVAL & REVIEW

TASK 2: SITE VISITS

16. Staff Experience:

Firm employed by	Michael Baker International, Inc.		
Name	**Alexis Harrouch, PE**	*Years of relevant experience with this employer*	3
Title	Highway Designer	*Years of relevant experience with other employer(s)*	2
Degree(s) / Years / Specialization	BS / 2020 / Civil Engineering, Louisiana State University		
Active registration number / state / expiration date	PE No. 51584 / LA / 09/30/26; Traffic Control Supervisor / LA / exp. 06/18/30; Traffic Engineering Process & Report Modules 1-3 / No Expiration Date		
Year registered	2020	*Discipline*	Civil
Contract role(s) / brief description of responsibilities	Task 1: Plan & Document Retrieval & Review; Task 2: Site Visits; Traffic Control (If Needed)		



Alexis will apply more than 5 years of diverse, Louisiana-focused transportation engineering experience to lead the development of maintenance of traffic (MOT) and traffic control plans. She is skilled in the development of construction plans, horizontal and vertical alignments, roadway hydraulics, and 3D design models.

- ✓ Experience working side-by-side with PM Shalin Sheth on the US 371 project
- ✓ Wide-ranging transportation design experience, from preliminary engineering to construction-phase support

Experience dates (mm/yy–mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
10/22 - Ongoing	**US 371: KCS Railroad Overpasses HBI, Webster Parish, LA.** *DOTD.* **Transportation Designer.** Responsible for the horizontal layout of US 371 for the replacement of the existing bridge at Sibley, LA. Additional responsibilities include the develop of construction plans that meet DOTD and KCS RR requirements. Performed quantity take-offs and developed quantity box sheets for Final Plans. Project includes the replacement of the twin bridges for the site at Minden with a single wider structure. The new bridge will be prestressed concrete girder-type and uses LG 63 and LG 36 girders and fulfills KCS/CPKC crash-wall requirements. Michael Baker is currently developing rehabilitation plans for the US 371 bridge site over KCS railroad at Sibley.
10/22 - Ongoing	**Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program – District 07, LA.** *DOTD.* **Transportation Designer.** Supported the development of construction plans for 12 Off-System Bridge replacement locations for the five parishes in District 07. This project program requires Michael Baker to deliver 12 bridge replacements within the $30.3 million dollars with allocated for District 07. Currently, Michael Baker has submitted stamped final plans for two projects (4 bridges/culverts) while other six projects are at various final submittal stages. There are a total of 12 bridges and culverts among the eight projects under this contract.
10/22 - Ongoing	**LA 30: EBR P/L – I-10, Iberville and Ascension Parishes, LA.** *DOTD.* **Transportation Designer.** Responsible for the layout of the existing alignment along with determining the apparent row along the corridor based off as-builts and provided GIS parcel information from both Ascension and Iberville Parishes. Project limits have been extended an additional 5 miles to include the environmental study along the corridor in East Baton Rouge Parish. Additional responsibilities include the delineation of drainage area for several cross structures (bridge/box culverts/culverts) along the corridor along with determining the existing flows for those structures.
11/22 - Ongoing	**New Orleans Rail Gateway Environmental Impact Statement, Jefferson and Orleans Parishes, LA.** *DOTD.* **Civil Associate.** Responsible for finding information related to railroad work and the standards needed to design and build a railroad. Michael Baker is providing environmental and engineering services to develop an environmental impact statement for NORG, the fourth-largest freight and passenger rail gateway in the U.S. Services include project management, review of previous studies, environmental resources investigations, geographic information system development, mapping, rail and roadway travel demand modeling, alternatives analyses, rail and roadway conceptual design, cost estimates, document preparation, stakeholder and agency coordination, and extensive public outreach.
10/22 - 05/23	**Barksdale AFB Entrance Road and Gate Complex, Design-Build, Bossier Parish, LA.** *NAVFAC.* **Transportation Designer.** Responsible for the quantity takeoff and development of construction plans for contractor on a design-build project for new entrance roads for Barksdale AFB. The project consists of the design and construction of an extension of an existing state-owned highway, LA 1267, along with a new multi-lane roundabout. The new roadway will be a 4-lane divided highway entrance into the Barksdale AFB.

11/22 - Ongoing	**New Orleans Rail Gateway - Avondale PEL Study, Jefferson Parish, LA.** *DOTD.* **Civil Associate.** Responsible for developing preliminary quantities and creating a preliminary cost estimate. Michael Baker is providing operations, engineering, and environmental studies and preparing a PEL study to evaluate the consolidation, road-over-rail grade separation, or closure of four at-grade highway-rail crossings (Live Oak Boulevard, Willswood Lane, George Street, and Avondale-Garden Road). For the project, Michael Baker is performing project management, solicitation of views, secondary-source environmental resources inventory, geographic information system (GIS) mapping, freight rail operations forecasting and crossing occupancy time analyses, roadway traffic and crash analyses, purpose and need, roadway/ bridge conceptual design, cost estimates, alternatives analyses, stakeholder and agency coordination, and public outreach.
09/24 - Ongoing	**I-10 Mobile River Bridge and Bayway Project Management, Mobile, AL.** *Alabama DOT.* **Civil Associate.** Providing roadway design support. Michael Baker is providing project management with oversight responsibilities for all aspects of the Mobile River Bridge and Bayway Project. The project involves reconstruction of I-10 through downtown Mobile, Alabama, and across the Mobile Bay, with a total length of approximately 10 miles. The project includes a new two-tower cable stayed bridge over the Mobile River, and replacement of the seven-mile-long I-10 Bayway Bridge.
06/23 - Ongoing	**Bridge Replacement on Sea Island Road over Dunbar Creek, St. Simons Island, GA.** *Georgia DOT.* **Civil Associate.** Responsible for updating linework and developing boundary lines while looking at the standard plans for GDOT. This 0.2-mile-long project is replacing the Sea Island Road Bridge over Dunbar Creek in St. Simons Island. An on-site temporary detour bridge will be used to close the existing bridge and construct a new 360-foot-long, nine-span prestressed concrete beam bridge in the current location. The roadway approaches will be reconstructed to tie into the existing road on both sides of the proposed bridge with two 12-foot lanes and rural shoulders. Right-of-way and easement will be acquired from multiple parcels. Services include survey, concept development, preliminary and final design, bridge design, traffic analysis, environmental studies, NEPA documentation, public involvement, utility coordination, and hydraulics and drainage design.
01/21 - 09/22	**I-49 Connector, Lafayette, LA.** *Lafayette Parish.* **Engineer Intern.** Responsible for the development of preliminary typical sections, cross sections and roadway models using Microstation and Inroads Select Series 2. Developed vehicle turning move layouts with the use of Transoft AutoTurn along with geometry design for the project. Also responsible for roundabout design in the core area along with the required tapers per DOTD Standards.
07/23 - Ongoing	**Mickens Road for MOVEBR, East Baton Rouge Parish, LA.** *City/Parish of Baton Rouge.* **Engineer Intern.** Responsible for the development of the preliminary surface, drainage, and hydraulics report. The drainage was designed to the latest DOTD Hydraulics Manual and City/Parish of Baton Rouge standards and criteria. A preliminary surface was created using LIDAR downloaded from LSU Atlas and The National Map Downloader from USGS. The preliminary drainage was developed using DOTD Hydrowin and Excel.
01/23 - Ongoing	**Ardenwood-Lobdell Connector for MOVEBR, East Baton Rouge Parish, LA.** *City/Parish of Baton Rouge.* **Engineer Intern.** Responsible for performing independent technical review of roadway plans at each milestone submittal for the new Ardenwood-Lobdell Connector. The connector is a 2-lane roadway with curb & gutter along with intersection improvements at Lobdell Ave. and Ardenwood Rd. Project includes accommodations for complete streets with pedestrian sidewalks and bikepaths.
01/24 - 06/24	**SR 25 - Grants Ferry to SR 471, Flowood, Mississippi.** *MDOT.* **Transportation Designer & Engineer Intern.** Michael Baker will develop final Right of Way Plans for the widening of SR-25 from Grants Ferry Road to SR 471 from 4 lanes to 6 lanes, approximately 3 miles. Our team is designing this project to the latest standards and criteria of MDOT and use the latest version of OpenRoads Designer. All unsignalized crossovers will be converted to directional crossovers. Responsible for developing vehicle turning movement layouts with the use of Transoft AutoTurn. Additional responsibilities include creating preliminary baselines, profiles, cross sections, and 3D roadway models through the use of OpenRoads Designer.
07/23 - 09/23	**SR 35 – Additional Lanes from CR-62 to CR-124 through the Town of Section, Jackson County, Alabama.** *Alabama DOT.* **Engineer Intern.** Michael Baker provided engineering services to widen and add lanes to State Route 35 through the town of Section, Alabama. Michael Baker's services included the preparation of Right of Way plans, drainage and stormwater design, floodplain studies, erosion and sediment control plans, traffic control plans, construction cost estimates, and final design. Responsible for the development of final baselines, profiles, drainage profiles, and drainage cross sections through the use of Microstation and InRoads Select Series 2. The drainage profiles and drainage cross sections were designed to the latest ALDOT standards and criteria.
10/22 - Ongoing	**Airline Highway (US 61) – North for MOVEBR, East Baton Rouge Parish, Louisiana.** *City/Parish of Baton Rouge.* **Engineer Intern.** Responsible for the delineation of drainage areas along with using the DOTD Hydraulics Manual and HYDRWIN software to develop the flows for both Jones Creek and Hurricane Creek that cross along the project limits. Additional responsibilities include checking the required hydraulics for the addition of an additional through lane in each direction and the impacts on existing parallel drainage along the corridor. The project is currently in the NEPA phase and once environmentally clear, required drainage structures will be designed for the future improvements.

16. Staff Experience:

Firm employed by	Michael Baker International, Inc.		
Name	**Jacob Rish, EI**	*Years of relevant experience with this employer*	2
Title	Engineer Intern	*Years of relevant experience with other employer(s)*	0
Degree(s) / Years / Specialization	BS / 2024 /Civil Engineering, Louisiana State University		
Active registration number / state / expiration date	EI No. 35857 / Louisiana / 03/31/27		
Year registered 2024	*Discipline* N/A		
Contract role(s) / brief description of responsibilities	Task 1: Plan & Document Retrieval & Review; Task 2: Site Visits		



Mr. Rish will serve as a designer responsible for supporting plan and document retrieval efforts, as well as performing site visits as needed.

✓ Familiar with bridge rating and design projects from his work on DOTD's US 371 KCS Railroad Overpasses and IIJA Off-System Bridges project

Experience dates (mm/yy–mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
01/24 - Ongoing	**US 371: KCS Railroad Overpasses HBI, Webster Parish, LA.** *DOTD.* **Transportation/Roadway Designer.** Responsible for the development of construction plans that meet DOTD and KCS RR requirements. Performed quantity takeoffs and worked on summary of quantity box sheets along with revising typical sections to show superelevation rate tables and profiles. Project includes the replacement of the twin bridges for the site at Minden with a single wider structure. The new bridge will be prestressed concrete girder-type and uses LG 63 and LG 36 girders and fulfils KCS/CPKC crash-wall requirements. Michael Baker is currently evaluating phase construction and rehabilitation alternatives for the existing bridge at Sibley.
01/24 - Ongoing	**Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program – District 07, LA.** *DOTD.* **Transportation/Roadway Designer.** Participated in the development of construction plans for 12 Off-System Bridge replacement locations for the five parishes in District 07. Performed quantity takeoffs for the development of summary of quantity sheets. Assisted with creating typical section sheets along with helping create the embankment widening plans for guardrail. This project program requires Michael Baker to deliver 12 bridge replacements within the $30.3 million dollars with allocated for District 07. Currently, Michael Baker has submitted stamped final plans for two projects (4 bridges/culverts) while other six projects are at various final submittal stages. There are a total of 12 bridges and culverts among the eight projects under this contract.
11/24 - Ongoing	**CR 32: Additional Lanes on Three Notch-Kroner Road, Mobile County, AL.** *Alabama DOT.* **Transportation/Roadway Designer.** Laid out drainage structures and created drainage profiles and drainage cross-sections. Michael Baker provided engineering services to widen and add lanes CR 32 in Mobile County, Alabama. Responsible for the development of construction plans that meet ALDOT standards.
11/24 - Ongoing	**SR 35 – Additional Lanes from CR-62 to CR-124 through the Town of Section, Jackson County, AL.** *Alabama DOT.* **Engineer Intern/Roadway Designer.** Michael Baker provided engineering services to widen and add lanes to State Route 35 through the town of Section, Alabama. Michael Baker's services included the preparation of Right of Way plans, drainage and stormwater design, floodplain studies, erosion and sediment control plans, traffic control plans, construction, cost estimates, and final design. Responsible for the development of final baselines, profiles, drainage profiles, and drainage cross sections through the use of Microstation and InRoads Select Series 2. The drainage profiles and drainage cross sections were designed to the latest ALDOT standards and criteria

16. Staff Experience:

Firm employed by	Michael Baker International, Inc.		
Name	**Ellis "Luke" McMahen, PE, SPRAT I**	*Years of relevant experience with this employer*	20
Title	Regional Operations Lead - Construction Services	*Years of relevant experience with other employer(s)*	0
Degree(s) / Years / Specialization	MEM / 2023 / Engineering Management & Systems Engineering; BS / 2010 / Civil and Environmental Engineering; BS / 2003 / Business Administration		
Active registration number / state / expiration date	PE No. 39510 / LA / exp. 09/30/27; Society of Professional Rope Access Tech I (SPRAT) No. 170191 / exp. 02/28/28; Mobile Elevated Work Platform Operator & Occupant No. 702024 / exp. 08/14/27; NHI Fracture Critical Inspection Certification No. 130078 / exp. 08/14/35		
Year registered	2015	*Discipline*	Civil
Contract role(s) / brief description of responsibilities	Tasks 1 & 2: SPRAT Support (If Needed)		



Luke has worked on multiple complex bridge engineering and inspection projects, most recently the completed U.S. 49 CE&I from Florence to the Scale Area. These projects have ranged in cost from $57 million to $253 million. To date, he has been a project engineer on construction projects totaling over $500 million in construction value. Additionally, he has experience in the inspection of in-service bridges. He is very familiar with various types of complex and fracture critical bridges and has performed these duties in multiple states including Louisiana, Mississippi, and Arkansas.

- ✓ Louisiana PE with 20+ years of bridge engineering and inspection experience
- ✓ Maintains specialized bridge inspection certifications for Rope Access, Mobile Elevated Work Platform Operator, and NHI Fracture Critical 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 years of experience specified in the applicable MPR(s).*
09/13 - Ongoing	**OSARC Statewide Bridge Inspection, Statewide, MS.** *MDOT.* **Team Leader.** Responsible for in-depth inspections of bridges for State Aid. Provided hands-on approach. Documented the condition of the structures with measurements, notes, and photos. Provided the client a report based on the findings with maintenance/repair options as needed. Michael Baker provided inspection and engineering services under multiple contracts for the National Bridge Inventory bridge safety inspections, load rating, and reporting of bridges with varying superstructure types. Our services included project management, inspection plan development, routine and in-depth condition and appraisal inspections, load ratings, and the preparation of inspection and load-rating reports. The bridges were located on local road systems owned and maintained by various counties, cities, and towns statewide. ***In all, Michael Baker inspected 1,322 bridges over nine years, from FY 2012 to FY 2020.***
05/17 - 06/17	**Bridge Load Ratings, Statewide, MS.** *MDOT.* **Civil Engineer.** Michael Baker performed superstructure load ratings for 391 bridges of various superstructure types located throughout Mississippi. Michael Baker's services also included development and implementation of a load rating QA/QC plan. Deliverables provided by Michael Baker included scanned copies of the complete MDOT standard load rating summary sheet and the associated xml rating file from the AASHTOWare BrR™ program for each bridge.
08/15 - 05/16	**Inspection of Locally Owned Complex and Fracture-Critical Bridges, Statewide, MS.** *MDOT.* **Team Leader.** Responsible for a number of in-depth inspections of bridges for State Aid. Provided hands-on approach. Documented the condition of the structures with measurements, notes, and photos. Provided the client a report based on the findings with maintenance/repair options as needed. Michael Baker provided engineering services for the inspection of 105 locally owned complex bridges of varying types throughout the state on an expedited schedule. Michael Baker's services included project management, the preparation of bridge inspection plans, in-depth and fracture-critical inspections, condition and load ratings, and preparation of inspection reports.
07/14 - 07/14	**Biennial Inspection of the U.S. 82 Cable-Stayed Bridge over the Mississippi River, Washington County, MS.** *MDOT.* **Bridge Inspector.** Responsible for inspection of cable stayed bridge in Greenville, MS. Helped with routine and fracture critical inspections. Took pictures and detailed notes documenting any areas of concern for the structure. Helped with writing of the technical report. Michael Baker performed routine and fracture-critical inspection of the U.S. 82 cable stayed bridge over the Mississippi River near Greenville, Mississippi. Michael Baker's services included bridge inspection using under-bridge inspection vehicles, a large man lift, and climbing by Society of Professional Rope Access Technicians-certified inspectors; traffic control; hydrographic survey; and documentation of deficiencies and report preparation, in accordance with the latest AASHTO Manual for Bridge Evaluation.

05/21 - 05/21	**Hernando de Soto Bridge Emergency Repairs, Memphis, TN to West Memphis, AR.** *TDOT.* **Civil Engineer & Bridge Inspector.** Responsible for hands-on inspection of fracture critical members in the two trusses for the MS River Bridge in Memphis, TN on I-40. Michael Baker provided emergency design and engineering services for the repair of the Hernando de Soto Bridge. The bridge includes a two-span continuous 1,800-foot steel tied arch structure that carries Interstate 40 (I-40) across the Mississippi River. As one of only two crossings of the Mississippi River in the Memphis area, the bridge is a vital transportation, commerce, and defense link, carrying approximately 60,000 vehicles daily. After observing a fracture-critical crack in the tie girder of the arch's primary navigation span, Michael Baker developed a three-phase plan for the repair of the bridge, which included temporary stabilization plating, innovative post tensioning, and repairing additional defects. The bridge was fully opened just 83 days after the fracture was discovered.
03/04 - 08/08	**"The Stack" - U.S. 49-I-55-I-20 Interchange Engineering Design and CE&I Services, Jackson, MS.** *MDOT.* **Lead Inspector.** In-charge of box culverts, simple/complex concrete beam bridges, and simple/complex steel girder bridges. Project included post tensioned concrete cap and multi-girder, superelevated steel span. Calculated all quantities and kept daily records of contractors progress. Michael Baker provided complete engineering services, including field surveys, preliminary through final design, and construction phase services, including public relations support, for the new, three-level interchange of Interstate 20 with Interstate 55 and U.S. Highway 49. Construction management services include scheduling, quantity estimates, erosion control, update of design plans, modification of alignments, traffic control, construction surveys, gradation analysis, nuclear density tests of soil and asphalt pavement, material sampling and testing, quality assurance and quality control, maintenance of construction documents, project safety, engineering design calculations, traffic control plans, contractor payments, preparation of as-built plans, and lighting plans for a high-mast lighting system.
06/16 - 08/16	**I-20/Valley St Re-inspection.** *MDOT.* **Team Leader.** Responsible for the inspection of the steel girders. Responsible for finding new cracks and monitoring old cracks. All the findings were compiled into a report and submitted to the client.
05/14 - 06/14	**U.S. Highway 49 Improvements between Florence and the Scales Area, Rankin County, MS.** *MDOT.* **Civil Engineer.** Responsible for working on the removal quantities for the construction project on 49S. Michael Baker is providing engineering services for roadway and bridge construction on U.S. 49 between Florence and the Scale Area just south of I-20. Michael Baker's services include the development of detailed design plans for bridges and roadway, including lighting, traffic control, signing, signalization, and intelligent transportation systems.
03/15 - 04/15	**Hernando de Soto Bridge Inspection, West Memphis, AR and Memphis, TN.** *ARDOT.* **Civil Engineer & Bridge Inspector.** Responsible for hands on inspection of fracture critical members in the two trusses for the MS River Bridge in Memphis, TN on I-40. Michael Baker performed a hands-on structural inspection of the two main arch truss spans of the Hernando DeSoto Bridge, which carries I-40 over the Mississippi River. Michael Baker's services included project management; document review; lane closure plans; access plans; safety plans; physical inspection, including limited nondestructive testing; and inspection report preparation.
01/11 - 06/14	**I-20 Reconstruction Construction Management and Inspection, Scott County, MS.** *MDOT.* **Assistant Engineer.** Responsible for the inspection of daily activities performed by the contractor and their subs and for collecting proper certifications of materials used on the project. Also responsible for preparing proper documentation for work done and pay quantities. Main goal is to produce a job that meets or exceeds client's specifications. Michael Baker provided construction management and construction inspection for the reconstruction of pavement and subgrade of I-20 between S.R. 481 and S.R. 501, and for the mill and overlay of I-20 between S.R. 501 and the Newton County Line. Michael Baker's services included materials testing, surveying, documentation, review of contractor submittals, staffing, stakeholder coordination, and inspection to assure compliance with plans and specifications.
10/18 - 02/19	**U.S. 84 Bridge Inspection, Natchez, MS.** *MDOT.* **Project Manager.** Responsible for routine inspection of two Mississippi River Truss Bridges in Natchez, Mississippi for MDOT. Michael Baker used a hybrid method of rope access and equipment (man-lifts, under-bridge inspection) to perform a routine and fracture critical inspection of the U.S. 84 truss bridges over the Mississippi River. Michael Baker's services included a full inspection of the bridge, traffic control, a hydrographic survey, and documentation of the deficiencies and report preparation in accordance with the latest AASHTO Manual for Bridge Evaluation.

16. Staff Experience:

Firm employed by	Neel-Schaffer, Inc.		
Name	**Mai Nguyen, PE**	*Years of relevant experience with this employer*	11
Title	Roadway Design Engineer	*Years of relevant experience with other employer(s)*	7
Degree(s) / Years / Specialization	BS / 2008 / Civil Engineering		
Active registration number / state / expiration date	PE No. 38189 / LA / exp. 03/31/28		
Year registered 2013	*Discipline*	Civil	
Contract role(s) / brief description of responsibilities	Tasks 1 & 2: Traffic Control (If Needed)		



Mai Nguyen is a roadway design engineer with nearly 20 years of experience developing MOT plans, temporary traffic control plans, construction sequencing, and Transportation Management Plans for roadway, interchange, bridge, and roundabout projects. She has served as a lead roadway designer on numerous DOTD projects involving phased construction, maintenance of traffic, detours, traffic control layouts, signing and pavement markings, and temporary traffic control strategies. Her experience includes developing and implementing MOT plans for interstate interchanges, multilane roundabouts, roadway widening projects, and urban corridor improvements. In addition, she is certified as a Work Zone Traffic Control Supervisor, Technician, and Flagger, providing a comprehensive understanding of work zone safety and traffic operations.

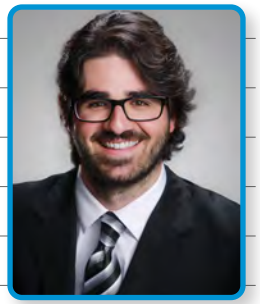
- ✓ 20+ years of MOT, traffic control, and roadway design experience
- ✓ Extensive experience on DOTD bridge and road projects
- ✓ Certified ATSSA Traffic Control Supervisor

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 years of experience specified in the applicable MPR(s).*
03/23 - Ongoing	**IDIQ for Road Design Projects, Statewide, LA.** *DOTD.* **Roadway Engineer.** Tthis contract includes five separate Task Order projects which include traffic services, road design, preliminary and final plan development. The projects include pavement preservation, constructing new roads, extend existing roads, construction of roundabouts, turn lanes and drainage improvements. Includes temporary traffic control plans. *US 90: Roundabout at LA 101 (Calcasieu).* **Project Engineer and Design Services.** This project includes the design for a roundabout with high-speed approaches. The design avoids impacts to a gas station, and other development at the intersection. It includes minimum right of way taking and detention pond design. *LA 621: Realignment at LA 73 (Ascension).* **Project Engineer and Design Services.** This project will widen LA 73 and realign LA 621 to near its existing intersection with LA 73 to relieve congestion and improve safety. This project includes the design of a multilane roundabout to provide connectivity for local roadways, traffic analysis, Transportation Management Plan, and 1 mile of mill and overlay for LA 621. *LA 16: N 2nd Street to LA 445 (Tangipahoa Parish).* **Project Engineer and Design Services.** Project includes the mill and overlay of LA 16 from N 2nd Street to east of Duncan Avenue, the in-place base rehabilitation and overlay of LA 16 from east of Duncan Avenue to LA 445. The scope of work will also include the hydraulic analysis and development of construction plans for the rehabilitation of the existing subsurface drainage system to improve drainage along LA 16 from US 51 to approximately 1000'east of Duncan Avenue. *LA 182: US 90 – Greenwood St. Overpass.* **Project Engineer and Design Services.** This project includes pavement rehabilitation along LA 182 from WB Exit Ramp to Greenwood St. Overpass, in Morgan City, LA. The work includes pavement patching, mill and overlay, roadway reinforcing mesh, curb ramps and guard rail. *LA 150 & LA 818: Roundabout.* This project will convert existing intersection to single lane roundabout intersection. Includes temporary traffic control plans.
05/18 - 03/20	**LA 73 Turn Lanes, Ascension Parish (MA-18-03).** *DOTD.* **Roadway Engineer.** This project constructed turn lanes at multiple locations along LA 73 in Ascension Parish. The roadway and drainage design were completed in accordance with DOTD guidelines.
01/20 - Ongoing	**I-20: LA 544 Overpass Replacement.** *DOTD.* **Roadway Design Lead.** Overseeing preliminary and final design services for this project, which will replace the LA 544 Overpass diamond interchange with a diamond multilane roundabout interchange on a 3% longitudinal grade. The new bridge over I-20 will include sidewalks and four multilane roundabouts. This project includes a level 2 TMP. Includes temporary traffic control plans.

08/17 - 03/19	**LA1026 (Juban Rd) Widening, Livingston Parish, LA. Roadway Engineer.** Roadway design services for this project which will widen LA 1026 (Juban Rd), construct three multilane roundabouts and two new frontage access roadways, with storm drainage sewer systems. Includes temporary traffic control plans.
09/22 - Ongoing	**E. Milton Ave Improvements, Lafayette Parish, LA. Roadway Engineer.** This project will widen an existing Roundabout at E. Milton Ave./Chemin Metairie Rd intersection from single lane to multi-lane and widen and overlay E. Milton Ave. and Chemin Metairie Rd. in Youngsville, LA. This project includes curb and gutter with sidewalks. Designing this project and assisting with plan production. Established design criteria, typical roadway sections, horizontal and vertical geometry, ID structure locations and more. Ms. Nguyen is working on the roadway design for the City of Youngsville. Project includes preliminary and finals plans. Includes temporary traffic control plans.
06/23 - Ongoing	**US 90: Roundabout at LA 101. Roadway Engineer.** Roundabout intersection preliminary and final plans, drainage, sequence of construction and TMP. Includes temporary traffic control plans.
12/22 - Ongoing	**LA 89 @ Guillot Rd Improvements. Roadway Engineer.** Existing drainage determination, proposed drainage design and plan preparation. Includes roundabouts.
02/22 - Ongoing	**W. Broussard Roundabout at Duhon Rd. (LA 724). Roadway Engineer.** This project will construct a roundabout and required drainage improvements. Review of design, assist with plan production. Preliminary plans completed. Final design ongoing. Includes temporary traffic control plans.
08/22 - Ongoing	**LA 89 at Chemin Metairie Parkway, Youngsville, LA. Roadway Engineer.** This project will provide a new two-lane connector roadway with drainage between Chemin Metairie Parkway and LA 89. Mai is working on the roadway design for the City of Youngsville. Project includes preliminary and final plans.
04/18 - Ongoing	**I-49 South at Verot School Road, Lafayette, LA (SPN H.011235). Roadway Engineer.** This project will construct 2.4 miles of mainline freeway, bridges, and an interchange at the intersection of I-49 South/US 90 and Verot School Road. Work includes a major bridge design and a roundabout at the relocated intersection of Verot Rd and South Collage Rd. NS is designing the interstate mainline and frontage roadways (drainage, preliminary and final road design and TMP) as well as the drainage along these corridors. NS is also completing the traffic design. Includes temporary traffic control plans.
09/14 - 08/15	**LA 16: Roundabout @ LA 447, Livingston, LA. Roadway Engineer.** Responsible for developing roundabout preliminary roadway plans in accordance with DOTD design guidelines, creating horizontal and vertical alignment layouts, modeling roadway to determine required right-of-way limits, developing sequence of construction, and perform hydraulic analysis. Includes Temporary Traffic Control Plans.
11/15 - 07/20	**Southcity Parkway Extension, Lafayette, LA. Roadway Engineer.** This project will construct a new 1.7-mile, four-lane median divided corridor between US 167 (Johnston Street) with Kaliste Saloom Road. It includes three multilane roundabout intersections and new bridge design. The roadway and drainage design are being completed in conformance with LADOTD guidelines. NSI provided public outreach, environmental, road design (preliminary and final plans)and traffic services. Includes Temporary Traffic Control Plans.
07/15 - Ongoing	**US 90 Pearl River Bridges Environmental Assessment, St. Tammany Parish, LA and Hancock County, MS. Roadway Engineer.** Project includes the replacement of five bridges. This project also includes roundabout intersections. Project Engineer for over 75 line and grade alternatives. Developed horizontal and vertical alignments, considering required drainage and ROW requirements were developed and analyzed for potential environmental impacts and costs. Includes a roundabout intersection.
02/17 - 06/17	**LA 6 (I-49 Interchange to LA 3278) Corridor Study in Natchitoches, LA. Roadway Engineer.** LA 6 Corridor Study Includes analysis of proposed roundabout interchange (3 roundabouts) geometry intersections. Project Engineer responsible for line and grade geometric alternatives and cost estimates supporting the study.

16. Staff Experience:

Firm employed by	Michael Baker International, Inc.		
Name	**Nicholas Castille, PE**	*Years of relevant experience with this employer*	1
Title	Project Engineer	*Years of relevant experience with other employer(s)*	4
Degree(s) / Years / Specialization	BS / 2019 / Civil Engineering		
Active registration number / state / expiration date	PE No. 48009 / LA / exp. 09/30/27		
Year registered 2023	*Discipline*	Civil	
Contract role(s) / brief description of responsibilities	Tasks 1 & 2: Traffic Control (If Needed)		



Nicholas Castille is a Professional Engineer experienced in the development and review of MOT plans, temporary traffic control plans, and construction sequencing for roadway and bridge improvement projects. His work includes preparing traffic control layouts, MOT plans, phased construction documents, signing and pavement marking plans, and sequence-of-construction plans for roundabouts, roadway widening projects, bridge replacements, and intersection improvements. He has supported DOTD and local agency projects requiring detailed coordination of work zone traffic control measures to maintain safe and efficient traffic operations during construction. His experience includes both designing and reviewing MOT plans to ensure compliance with applicable agency standards and project requirements.

- ✓ Experienced in the development of MOT and traffic control plans
- ✓ Substantial work on DOTD bridge and road projects

Experience dates (mm/yy–mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
11/25 - Ongoing	**Engineering and Technical Support Services for Critical Projects IDIQ.** *DOTD.* **Project Engineer.** Neel-Schaffer provides engineering services to assist LADOTD with the review and oversight of bridge replacement/rehabilitation projects along federal aid eligible routes in Districts 04, 05, 07, 08, 58 covering a total of 21 bridge sites. All bridge sites include road design, drainage design and sequence of construction plans. Nick is completing a review of the design plans, MOT, design reports, drainage design, and roadway design. He confirms that the design is completed in conformance will all applicable guidelines. Includes temporary traffic control plans. The projects include the following: LA 147 Over Brown Creek Tributary, LA 487 Over Brushy Bayou, LA 463 Over Boggy Branch, LA 155 Over Poplar Branch, LA 26 at Creek, LA 27 at D'Inde Bayou, LA 155 Over Keppler Creek, LA 501 Over Creek, LA 155 Over Keppler Creek, LA 501 Over Drain, LA 124 Over Bear Branch, LA 146 Over Creek, US 80 at Choudrant Creek, LA 134 at Bayou Desiard, LA 580 Over Tensas Bayou, LA 9 Over Sprawls Mill Creek, and LA 3015 Over Bayou Castor Relief, and others.
03/26 - Ongoing	**SRTPP & LRSP Program Management and Design Plan Review.** **Roadway Engineer.** This contract includes over 50 projects which will improve safety along roadways located throughout the state. Improvements include bike and ped facilities, drainage, roadway embankment, and signals. Under this program he has assisted with the review of design plans.
04/22 – 02/25	**LA 182 (University Ave) at LA 723 (Renaud) Roundabout, Lafayette Parish, LA.** **Roadway Engineer.** Coordination of survey subconsultant for original and supplemental survey efforts. Design of horizontal and vertical geometry to LADOTD standards for applicable roadway sections in MicroStation and InRoads. Drainage area delineation, runoff quantification, inlet spacing, subsurface drainage, cross-drain, side-drain, and open channel drainage design using LADOTD HYDR tools. Quantification of estimated project construction materials, and plan and profile sheet production. Sequence of construction design and plan production. Include MOT and sequence of construction plans.
05/21 – 02/25	**Verot School Road at US 90, Lafayette Parish, LA.** **Roadway Engineer.** Design of pavement markings and traffic control layouts for applicable roadway sections, preparation of sequencing of construction plan sheets, quantification of estimated project materials, and plan and profile sheet annotation in accordance with DOTD standards. Horizontal geometry and drainage modifications as necessary for constructability, design and plan sheet production of joint layout and graphical grading. Preliminary no-rise analysis using effective HEC-RAS (1D) model. Include MOT and sequence of construction plans.

05/25 - Ongoing	**E. Opelousas Street Improvements. Roadway Engineer.** Project will provide roadway, intersection, and drainage improvements from Opelousas Street west of E. Ward Line Road (LA 397) to E. Opelousas Street to accommodate commercial development north of E. Opelousas Street. Completed hydrologic and hydraulic design and analysis and assisted with plan sheet production. Generated summary of drainage structures and prepared hydraulic report. Include MOT and sequence of construction plans.
07/25 - Ongoing	**W. Broussard at Duhon Road Roundabout. Roadway Engineer.** Project will provide roundabout and drainage improvements. Assisted with review of plans and hydraulic design and plan production. Generated plan sheets based on preliminary signing and pavement markings designs. Supervised generation of geometric detail and special paved ditch detail plan sheets. Updated preliminary summary of estimated quantities and opinion of probable construction cost. Include MOT and sequence of construction plans.
07/25 - Ongoing	**Lagneaux Turn Lane Improvements. Roadway Engineer.** Project will provide left turn lanes for eastbound and westbound traffic at Ridge Road and Lagneaux in Lafayette. Review of hydraulic design with designer for constructability and conformance with governing criteria. Review of plans for quality control. Development of summary of estimated quantities and opinion of probable construction cost. Include MOT and sequence of construction plans.
07/25 - Ongoing	**Rue Du Belier Roundabout. Roadway Engineer.** Project will convert existing single roundabout to double lane roundabout with drainage improvements and lighting. Updated summary of estimated quantities and opinion of probable construction cost. Include MOT and sequence of construction plans.
08/25 - Ongoing	**S. Domingue Roundabout. Roadway Engineer.** Project will provide roundabout and drainage improvements. Assisted with hydraulic design and plan production. Generated summary of drainage structures and preliminary summary of estimated quantities and opinion of probable construction cost. Include MOT and sequence of construction plans.
12/19 – 01/21	**Apollo Road Extension Phase III, Scott, LA. Roadway Designer.** Performed hydrologic and hydraulic analysis (LADOTD HYDR) of site for open ditch and drainage structure design including application of alignment, section template, and structures database using MicroStation and InRoads. Also provided plan and profile sheet production and annotation. Derivation of estimated construction quantities and associated costs.
11/19 – 06/23	**Kaliste Saloom Roadway Expansion Phase IIIA and IIIB, Lafayette, LA. Roadway Designer.** Performed construction administration services including payment application derivation, review of inspector progress reports, attendance of construction progress meetings, and change order preparation in accordance with Lafayette Consolidated Government standards. He was also a point of contact for project updates for public involvement.
04/24 – 05/25	**US 82 Frontage Road Bridge Replacement. Roadway Designer.** Began preparation of conceptual (Phase A) plans for a bridge replacement project in coordination with the Mississippi Department of Transportation using MDOT standards and Bentley OpenRoads. Submitted preliminary right-of-way plans including horizontal and vertical alignment of proposed roadway and bridge replacement, guardrail design, and necessary modifications to intersecting side road.
02/24 – 05/25	**St. Martinville Main Street Enhancement, St. Martinville, LA. Roadway Engineer.** Development of construction plans for sidewalk widening and lighting improvements throughout LA-31 (Main Street) in St. Martinville. Meetings with and coordination with the City of St. Martinville Mayor as necessary, permitting applications with DOTD, management of electrical subconsultant and existing utility coordination.
08/20 – 12/21	**Elm Grove Garden Drive Pedestrian Improvements, Baton Rouge, LA. Roadway Designer.** Hydrologic analysis of project area and hydraulic design (LADOTD HYDR) of subsurface drainage system to replace existing open ditch system along two-lane corridor and design of sidewalk to accommodate drainage improvements in accordance with City of Baton Rouge standards. Application of design in MicroStation and InRoads for plan sheet production and annotation.
08/25 – Ongoing	**I-10 Calcasieu River Bridge (H.003931) Erosion Control Plans. Roadway Engineer.** Project will provide interstate roadway and bridge improvements along existing I-10 from I-210 to Kirkman Street including improvements at side streets and service roads. Design of erosion control measures in accordance with DOTD Standards and planned phases of construction activities of proposed improvements. Production of plan sheets for nine phases of construction spanning the proposed roadway and bridge improvements.

SUPPORT PERSONNEL

TASK 3: ANALYSIS & LOAD RATING

TASK 5: OVERWEIGHT PERMIT REVIEWS

TASK 6: REVIEW, UPDATE & CORRECT AASHTOWARE BRR FILE

TASK 7: BRIDGE RATING REVIEW

16. Staff Experience:

Firm employed by	Michael Baker International, Inc.		
Name	**George Manning, PE, SE**	*Years of relevant experience with this employer*	11
Title	Lead Structural Engineer	*Years of relevant experience with other employer(s)*	15
Degree(s) / Years / Specialization	MS / 1998 / Civil Engineering; BS / 1994 /Civil Engineering		
Active registration number / state / expiration date	PE No. 50197 / LA / exp. 09/30/27; PE No. 62055771 / Illinois / exp. 11/30/2026; SE No. 81006203 / Illinois / exp. 11/30/2026		
Year registered	2002 (IL PE); 2005 (IL SE); 2025 (LA PE)	*Discipline*	Civil, Structural
Contract role(s) / brief description of responsibilities	Task 3, 5, 6, & 7: Fixed Bridge Support		



George brings more than 26 years of comprehensive bridge design experience, including PSC beam, steel plate girder, and concrete bridges on various foundations, as well as cast-in-place retaining walls and layout of envelopes for MSE retaining walls and sound barrier walls. George offers his familiarity solving common problems of stakeholder and utility coordination, phasing, and maintenance of traffic, drawn from numerous complex bridge projects. He is familiar with the AASHTO LRFD design method and has completed several structures by this method.

- ✓ 26+ years of experience managing designs for major bridges across the Southern U.S.
- ✓ Proficient in AASHTO LRFD 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 years of experience specified in the applicable MPR(s).*
10/21 - 10/22	**S.R. 25 Over Savannah and Middle Rivers Design-Build, Port Wentworth, GA.** *Georgia DOT.* **Structural Engineer.** Structural engineer for the project and provided support to lead structural engineer. Responsible for providing quality review on final design calculations and final plans. Assisted with final quantity calculations. ***Provided guidance on AASHTO LRFD code implementation.*** Michael Baker is acting as a subcontractor for replacement of the S.R. 25 bridges over the Savannah and Middle Rivers near Port Wentworth, Georgia. The Michael Baker team is providing project management, roadway design, structural design, bridge hydraulic study, drainage, traffic engineering, and environmental permitting services for this design-build project.
09/23 - Ongoing	**General Engineering Services 2022-2026, Agreement No. E2452, Statewide, TN.** *Tennessee DOT.* **Bridge Engineer.** Provided quality reviews for bridge repair plans. Michael Baker is serving a four-year on-call contract to provide bridge repair services across the state of Tennessee. The team is responsible for a variety of assignments including contract documents, tunnel inspection plan revision, NSTM inspection, truss bridge inspection with maintenance recommendations, and railroad flat car inspection.
09/19 - 10/23	**Elachee Drive at I-985 Bridge Replacement, Gainesville, GA.** *Georgia DOT.* **Lead Structural Engineer & Engineer-of-Record.** Responsible for design and discipline management for this two span bridge replacement project over I-985. Led a team of three engineers in preparation of final bridge and wall plans. Design incorporated desired architectural elements by the City of Gainesville which included a decorative fence, decorative logo, lighting for bridge, and decorative cladding for the center wall pier. This 0.3-mile-long project replaced the existing Elachee Drive bridge which provides access to the Elachee Nature Center. The new 254-foot-long, two-span PSC beam bridge was constructed parallel to the existing structure to allow traffic to remain open during construction. The substructure had a concrete intermediate bent covered with decorative stone supported by drilled caissons. Services included survey, concept development, preliminary and final design, bridge design, wall design, traffic analysis, environmental studies, NEPA documentation, public involvement, utility coordination, and drainage design.
11/19 - 10/20	**I-16/I-95 General Engineering Consultant Task Order 4, GA.** *Georgia DOT.* **Subject Matter Expert.** Responsible for review of design-build team submittals on behalf of GDOT. Reviewed 13 bridges and four noise barriers. Provided plan reviews for conformance with GDOT policy and procedures. All reviews were performed ahead of schedule to assist contractor in schedule recovery. Michael Baker provided general engineering consultant services as part of a design-build delivery project for the Major Mobility Investment Program which included the widening and interchange reconstruction of I-16/I-95 interchange.

02/19 - 02/20	**Bell Road over Chattahoochee River Tributary Bridge Replacement, Johns Creek, GA.** *City of Johns Creek.* **Lead Structural Engineer.** Responsible for analysis and design of this bridge replacement project. Led a team of structural engineer in replacement of this structurally deficient bridge. Provided technical support and quality control review for the project. Managed the team including budget and schedule. This 0.2-mile-long project replaced an existing bridge with a new 45-foot-long, single-span prestressed concrete beam bridge that was built on the existing alignment over a Chattahoochee River tributary. Services included survey, concept development, preliminary and final design, bridge design, traffic analysis, environmental studies, NEPA documentation, utility coordination, and drainage design.
01/19 - 04/19	**S.R. 20 Widening, Gwinnett County, GA.** *Gwinnett County DOT.* **Structural Engineer.** Led design for the bridge widening over railroad tracks and local road. Managed and supervised a team of structural engineers in the analysis and design for the project. Bridge widening included additional steel beams on concrete substructures with crash walls. Project also included layout for concrete retaining walls. Michael Baker provided engineering services for the widening of Buford Drive/S.R. 20 from, which included bridge widening. This work was provided under an on-call task order arrangement.
01/19 - 01/19	**I-85 at S.R. 138/Jonesboro Road – Diverging Diamond Interchange VE Study, Union City, GA.** *Georgia DOT.* **Subject Matter Expert.** Served as structural subject matter expert for this VE study. Provided alternative bridge layouts, recommended cost saving measures, recommended functional improvements for the intent of the project. Michael Baker provided value engineering (VE) services for the I-85 and S.R. 138/Jonesboro Road interchange in Fulton County, Georgia. For the VE study, Michael Baker provided the team facilitator and structural, roadway, and constructability representatives for this five-person team. The VE team studied key project elements and developed recommendations for the bridge and roadway typical sections, traffic analysis, and improvements for the diverging diamond interchange geometric layout, access management and safety modifications, and project scoping adjustments. Overall, the VE team generated 42 ideas, with 36 being identified for additional evaluation as possible recommendations or design suggestions.
07/15 - 09/18	**S.R. 369 over Six Mile Creek Bridge Replacement, Forsyth County, GA.** *Georgia DOT.* **Senior Structural Engineer.** Responsible for structural design and review of project. Supervised two engineers in the design of one bridge and layout of two concrete barrier walls and two MSE walls. Provided quality reviews for entire project. Monitored the structural budget and schedule. Coordinated with client and Georgia DOT. This 0.7-mile-long project replaced an existing bridge with a new 600-foot-long, five-span prestressed concrete beam bridge that was built parallel to the existing structure to allow traffic to remain open during construction. The substructure has concrete intermediate bents supported by drilled caissons. Services included survey, concept development, preliminary and final design, bridge and wall design, traffic analysis, environmental studies, NEPA documentation, public involvement, utility coordination, and hydraulics and drainage design.
12/16 - 02/17	**State Bridge Road Engineering and Design, Johns Creek, GA.** *City of Johns Creek.* **Senior Structural Engineer.** Responsible for preparing concept report for the rehabilitation of two existing bridges. The first bridge added a sidewalk and decorative parapet to the existing bridge. Work for this bridge consisted of evaluating the capacity of the existing structure and providing retrofit details. The second bridge consisted of providing three concepts to add a pedestrian multi-use path across the Westbound bridge over the Chattahoochee River. Michael Baker provided design and engineering services for the widening of 0.5 miles of State Bridge Road in Johns Creek, Georgia, from two to three lanes in each direction from Camden Way to the Chattahoochee River and a pedestrian bridge over the Chattahoochee River. Services included roadway, drainage, erosion control, structures, and traffic signal design, as well as supervising subconsultant survey and geotechnical work.
06/16 - 07/17	**I-75 and I-575 Tolled Managed Lanes Design Review, Cobb and Cherokee Counties, GA.** *Georgia DOT.* **Senior Structural Engineer.** Responsible for providing review services for this design-build project. Reviewed shop drawings, RFIs, and design changes as the owner's representative. Michael Baker provided design review of all submittals for the design-build construction of nearly 30 miles of tolled managed lanes along I-75 and I-575. Michael Baker's services included providing subject-matter experts in all related disciplines and reviews of all submittals for the project using review checklists and document control software.
10/14 - 08/16	**US 27 at Custer Road, Muscogee County, GA.** *Georgia DOT.* **Structural Engineer.** Responsible for structural design and review of project. Designed one bridge, one concrete retaining wall, and two special design culverts. Supervised two engineers in design of one bridge and layout of seven MSE walls. Provided quality reviews for entire project. Coordinated with client and Georgia DOT. Michael Baker provided preliminary and final structural design support for the project. The scope included the design of two bridges, three special design culverts, and eight retaining wall envelopes. Work included construction support services and shop drawing review.
10/14 - 12/15	**Northwest Corridor Review, Cobb and Cherokee Counties, GA.** *Georgia DOT.* **Structural Engineer.** Responsible for review of structural components for the project. Provided quality review for two bridges. Michael Baker provided design review of all submittals for the design-build construction of nearly 30 miles of tolled managed lanes along I-75 and I-575. Michael Baker's services included providing subject-matter experts in all related disciplines and reviews of all submittals for the project, using review checklists and document control software.

16. Staff Experience:

Firm employed by	Michael Baker International, Inc.		
Name	**Fred Harper, PE**	*Years of relevant experience with this employer*	13
Title	Bridge Department Manager	*Years of relevant experience with other employer(s)*	8
Degree(s) / Years / Specialization	BS / 2006 / Civil Engineering, University of Arkansas at Fayetteville		
Active registration number / state / expiration date	PE No. 14501 / Arkansas / exp. 12/31/27; FHWA - NBIS Safety Inspection of In-Service Bridges Training; NHI Fracture Critical Inspection Certification		
Year registered	2011	*Discipline*	Civil
Contract role(s) / brief description of responsibilities	Task 3, 5, 6, & 7: Fixed Bridge Support		



Fred has more than 20 years of bridge design experience using AASHTO load and resistance factor design and standard codes, and specializes in the evaluation, maintenance, and rehabilitation of bridges. He has worked with DOTD and state DOTs in Arkansas, Tennessee, Oklahoma, Texas, and Mississippi, managing similar structure preservation programs for several of these clients. He has designed a wide variety of structures, including W Beam, steel plate girder, prestressed concrete girder, concrete slabs, and numerous foundation types. Fred is also a proficient NBIS certified Bridge Inspector (qualified as a Team Leader), and he offers valuable experience in construction observation related to bridge construction.

- ✓ 20+ years of bridge design and inspection experience
- ✓ Managed and supported structures maintenance and preservation programs for ARDOT, TDOT, and North Texas Tollway Authority

Experience dates (mm/yy–mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
08/22 - Ongoing	**Bridge Inspection, Maintenance, and Rehabilitation Program Evaluation, Statewide, AR.** *ARDOT.* **Senior Advisor.** Responsible for contributing local market knowledge and client experience on design and inspection projects. Participated in team collaboration meetings and client meetings with the client. Provided reviews of evaluation documents submitted to the client. Michael Baker is working to determine the criteria for selecting a list of major bridges from ARDOT's bridge inventory. Phase I of this project involved establishing a baseline for the client's recent and current bridge inspection program by reviewing their Bridge Inspection Manual and numerous supporting documents noting areas for improvement. In Phase II, Michael Baker determined the criteria, methodology, and thresholds for prioritizing and selecting 200 bridges from the client's state-owned bridge inventory for a high-level evaluation of repair or replacement needs, including budgetary cost estimating for the next 20 years. ***Phase II also entails development of a stand-alone load rating manual.***
02/25 - 05/25	**Statewide Routine Bridge Inspections and Load Ratings.** *TxDOT.* **Team Leader.** Responsible for leading the inspection of dozens of bridges and coordinating the production of inspection reports. Provided routine bridge inspection services in the Dallas and Austin Districts of Texas. Work items included advanced coordination for inspection, reporting, calculations, SNBI regulation implementation, client and subconsultant coordination, as well as database updates and maintenance module inputs for repairs or bridge closures. *Work Authorization 7, Dallas, TX.* The scope included approximately 825 bridge inspection and load ratings over seven months of various bridge types and materials. *Work Authorization 8, Austin, TX.* The scope included approximately 467 bridge inspection and load ratings over three months of various bridge types and materials.
11/21 - Ongoing	**Highway 49 over Mississippi River Bridge Rehabilitation, Phillips County, AR.** *ARDOT.* **Bridge Department Manager Engineer.** Responsible for contracting with client, inspection planning; coordination with sub-consultant, equipment and maintenance of traffic vendors, and the 18 member inspection team. Inspection access was provided by multiple aerial lifts, under bridge inspection trucks, as well as rope access methods for the highest areas of the structure. Coordinated activity of all teams and managed communication with the client during inspection. Coordinated information gathered during inspection with the load rating team. Provided senior leadership and guidance for the load rating and repair options effort. Provided guidance and oversight of junior engineers for the repair design and plans. Michael Baker is providing design and engineering services for the rehabilitation of a bridge on Highway 49, Section 11. The project scope includes a comprehensive bridge inspection, load rating analysis, and the development of repair strategies aimed at extending the service life of the superstructure. In addition, the work involves planning for traffic maintenance and staging. Rehabilitation efforts will consist of structural steel repairs and replacements, the application of a polymer overlay on the approach spans, deck replacement for the main truss spans, and various other structural and safety-related repairs.

05/23 - Ongoing	**General Engineering Services 2022-2026, Statewide, TN.** *TDOT.* **Bridge Engineer.** Responsible for performing quality assurance reviews of five NSTM inspection reports for truss bridges in western Tennessee. Michael Baker is providing on-call bridge repair services across Tennessee. The team is responsible for a variety of assignments including contract documents, tunnel inspection plan revision, NSTM inspection, truss bridge inspection with maintenance recommendations, and railroad flat car inspection.
10/20 - 05/25	**Statewide Bridge Preservation Program, AR.** *ARDOT.* **Project Manager.** Responsible for the ***design and plan production of a bridge preservation program covering the entire state of Arkansas.*** The scope included 155 structures, divided into five construction contracts. Bridge preservation measures include hydrodemolition, LMC overlay, polymer overlay, and thrie-beam guardrail retrofit. Also conducted detailed field inspections on 63 of the bridges. Michael Baker provided roadway and bridge design and engineering services for the rehabilitation of 155 bridges across the state of Arkansas. The scope of work included bridge deck rehabilitation using hydro-demolition and LMC overlay, as well as polymer overlays. This project also aimed to update the approach guardrails and end terminals to current safety standards. Michael Baker performed extensive field investigations to confirm the current conditions and verify any additional repairs that were required. Michael Baker also provided Title II phase construction services to assist with contractor submittals, RFIs, and construction-related questions.
11/21 - Ongoing	**2021-2024 On Call Engineering and Design Services, Phillips County, AR.** *ARDOT.* **Bridge Engineer.** Michael Baker is providing design and engineering services for the rehabilitation of a bridge on Highway 49, Section 11, in Phillips County, Arkansas. The project scope includes a comprehensive bridge inspection, load rating analysis, and the development of repair strategies aimed at extending the service life of the superstructure. In addition, the work involves planning for traffic maintenance and staging. Rehabilitation efforts will consist of structural steel repairs and replacements, the application of a polymer overlay on the approach spans, deck replacement for the main truss spans, and various other structural and safety-related repairs.
08/18 - 12/18	**Weyerhaeuser Bridge Inspection and Load Rating, Crossett, AR.** *Weyerhaeuser Company.* **Project Manager.** Responsible for coordination of the project team tasked with inspecting and load rating an existing precast concrete bridge located near Crossett, Arkansas. Duties include a detailed visual inspection of the existing structure, load rating all primary components, supervision of other bridge staff, and review of the bridge inspection and load rating report. Michael Baker contracted with Weyerhaeuser Company to provide structural inspection and load rating of one of its privately owned bridges located near Crossett, Arkansas. Michael Baker provided extensive visual inspection of all structural components, including precast concrete beams, substructure pile caps, and concrete piles. The project also included load rating of the primary structural components and completion of a full report and recommended future inspection cycle
05/13 - 07/13	**Retainer Contract for Design-Build Support Services, Statewide, LA.** *DOTD.* **Project Engineer.** Responsible for conceptual analysis, design, and construction cost estimate for U.S. 90 design-build procurement support. Conceptual design was in accordance AASHTO LRFD Bridge Design Specifications and LADOTD Bridge Design memos. Design aspects included preliminary bridge superstructure design using NSBA Simon steel design software to size proposed steel girders, as well as preliminary layout of proposed substructure. Bridge structures included mainline and frontage road bridges over BNSF railroad and LA 182, as well as the mainline bridges over Albertson's Parkway. Under a five-year retainer contract, Michael Baker provided construction inspection and quality assurance for statewide design-build transportation projects. Michael Baker's services included project initiation, design-build procurement support, contract administration and management, design and construction quality acceptance (owner verification), CE&I, partnering, public information support, document control, and dispute resolution.
10/22 - 10/22	**Maintenance Management Program 2022, Statewide, Texas.** *North Texas Tollway Authority (NTTA).* **Bridge Presevation Specialist.** Michael Baker provided architectural and engineering support in the operation and maintenance of its buildings and facilities as a subconsultant on the Maintenance Management Contract. The program included projects for administrative offices, toll and ramp plazas, warehouses, maintenance buildings, facilities, HVAC, mechanical and plumbing systems, electrical distribution, lighting, energy management, and emergency power systems.
11/21 - 09/22	**Districts 1, 5, 6, and 10 Bridge Preservation, AR.** *ARDOT.* **Bridge Team Lead.** Responsible for oversight of junior engineers and designers to deliver bridge preservation plans for numerous bridge structures. Participated in team coordination meetings and provided plan reviews. Michael Baker provided roadway and bridge design and engineering services for the rehabilitation of 45 bridges across the state of Arkansas. The scope of work included bridge deck rehabilitation using polymer overlays. This project updated the approach guardrails and end terminals to current safety standards. Michael Baker performed extensive field investigations to confirm the current conditions and verify any additional repairs that would be required. Michael Baker also provided Title II phase construction services to assist with contractor submittals, RFIs, and construction-related questions.

16. Staff Experience:

Firm employed by	Neel-Schaffer, Inc.		
Name	**Wesley Philips, PE**	*Years of relevant experience with this employer*	15
Title	Engineer IV	*Years of relevant experience with other employer(s)*	0
Degree(s) / Years / Specialization	BS / 2011 / Civil Engineering		
Active registration number / state / expiration date	PE No. 26965 / MS / exp. 12/31/27		
Year registered 2016 *Discipline*	Civil		
Contract role(s) / brief description of responsibilities	Task 3, 5, 6, & 7: Fixed Bridge Support		



Wesley Phillips joined Neel-Schaffer in 2011 and has more than 15 years of experience in bridge engineering, with significant expertise in bridge load rating and inspection services. He has performed load ratings for a variety of bridge types, applying AASHTO methodologies to evaluate structural capacity, determine posting requirements, and support bridge asset management programs. As a licensed Professional Engineer in Mississippi, Florida, Tennessee, and Arkansas and a certified bridge inspection team leader, Wesley combines extensive load rating experience with hands-on inspection expertise. Since 2011, he has conducted NSTM/complex, timber, and non-complex bridge inspections throughout Mississippi, providing the field data and engineering judgment necessary to develop accurate and reliable load rating assessments.

Trainings: Specifications for the National Bridge Inventory (SNBI) Training | FHWA, LRFD for Highway Bridge Superstructures (FHWA-NHI-130081) | Seismic Analysis and Design of Bridges (FHWA-NHI-130093) | Safety Inspection of In-Service Bridges (FHWA-NHI-130055) | Fracture Critical Inspection Techniques for Steel Bridges (FHWA-NHI-130078) | Load and Resistance Factor Rating of Highway Bridges (FHWA-NHI-130092) | Underwater Bridge Inspection (FHWA-NHI-130091) | Flagger Certification.

- ✓ 15+ years of bridge load rating, design, and inspection experience
- ✓ Certified Bridge Inspection Team Leader
- ✓ Trained in NHI "Load and Resistance Factor Rating" Course

Experience dates (mm/yy–mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
06/23 - Ongoing	**Bridge Load Rating, Statewide, TN.** *TDOT.* **Project Manager.** Led the Neel-Schaffer team in performing 200 bridge load ratings for TDOT. Superstructure types include simple and continuous for live load prestressed concrete AASHTO I-girders, continuous for live load concrete box beams, cast-in-place concrete simple and continuous Tee beams, simple and continuous steel multigirders, concrete continuous slabs and post-tensioned and conventionally reinforced concrete multicell box girders. Structural detailing included complex bridge features, including curved, skewed, widened and flared beams, some of which required 3D finite element analysis and integral pier modeling. Load ratings were performed utilizing LRFR methodology. Load rating models created in AASHTOWare BrR software included deterioration considerations as described in the most recent bridge inspections. Comprehensive bridge load rating reports were generated to document load rating results, assumptions and supporting calculations. Load rating reports were also created in InspectX to document load rating results and related SNBI data for the national bridge inventory.
07/15 – 11/17	**2016 & 2017 Bridge Load Rating Projects.** *New Orleans Department of Public Works.* **Bridge Engineer.** Performed Load Ratings. Neel-Schaffer provided structural engineering services to determine superstructure and substructure load ratings for 25 bridges, as well as provide plans and specifications for the repair of the South Broad Street Overpass. DOTD had previously inspected these bridges and recommended that load ratings be developed. Neel-Schaffer's structural engineers were responsible for making site visits, calculating load ratings, and providing bridge repair recommendations. Engineering services for the project included: Site visits; Calculations of load ratings for the 25 bridges; Site visit to the South Broad Street Overpass to review DOTD bridge inspection findings and identify and quantify potential bridge repairs. Load Ratings performed utilized LRFR methodology.
10/11 - Ongoing	**OSARC Nonredundant Steel Tension Member/Complex Bridge Inspections and Load Rating, Statewide, MS.** *MDOT.* **Team Leader.** Performed load ratings and bridge inspections serving as Team Leader since 2014. During each yearly cycle, Neel-Schaffer performed approximately 75 to 150 routine NSTM and repair bridge inspections and load ratings for bridges with complex and NSTM elements located across the state. Examples of NSTM bridge types included steel girders, steel through trusses, steel girder/floorbeam systems and steel RR flatcars with various unusual elements such as steel haunched box girders. Substructure load ratings included pile bents composed of timber, steel and prestressed concrete piles, along with associated timber, steel and concrete caps. Bridge inspections were performed in accordance with the National Bridge Inspection Standards. Load ratings performed utilized LRFR, LFR and ASR methodology, as required.

08/22 - Ongoing	**OSARC Timber Bridge Inspections and Load Rating, Statewide, MS.** *MDOT.* **Team Leader.** Performed load ratings and bridge inspections. During each yearly cycle, Neel-Schaffer performed approximately 125 to 200 routine and repair bridge inspections and load ratings for bridges with timber elements located across the state. The bridges that were inspected may have been built from near 1940 to the present day and are of various lengths and can have unusual configurations. Some bridges are inspected annually, and others are inspected every two years. Bridge inspections were performed in accordance with the National Bridge Inspection Standards. Load ratings were performed using both LFR and ASD.
08/22 - Ongoing	**Bridge Inspections, Pike County, MS.** *Pike County Board of Supervisors.* **Team Leader.** Performed load ratings and bridge inspections serving as Team Leader since 2014. During each yearly cycle, Neel-Schaffer performed approximately 60 to 100 routine and scour monitoring bridge inspections for bridges with steel and concrete elements across the county. Neel-Schaffer is currently responsible for the inspection of all non-complex bridges, such as prestressed concrete multigirder bridges, precast channel beams, and concrete box culverts. Some bridges are inspected annually, and others are inspected every two years. Bridge inspections were performed in accordance with the National Bridge Inspection Standards. Load ratings performed utilized LRFR and LFR.
10/19 - Ongoing	**OSARC Non-Complex Bridge Load Rating, 2019-2024, Statewide, MS.** *MDOT.* **Bridge Engineer.** Performed Load Ratings. Neel-Schaffer performed non-complex load ratings on a variety of structure types, including superstructure and substructure ratings. Superstructure types included prestressed concrete beams, precast concrete channel beams, concrete slab spans and concrete Tee beams. Substructure types included steel and concrete pile supported bents with concrete and steel caps. Bridge inspections were performed by others in accordance with the National Bridge Inspection Standards. Load ratings performed utilized LRFR, LFR and ASR methodology, as required.
04/23 – 01/26	**Mississippi Manual for Bridge Evaluation.** *MDOT.* **Quality Control/Quality Assurance Engineer.** Neel-Schaffer updated the Mississippi Manual for Bridge Evaluation to reflect FHWA 23 CFR Part 650 2022 Final Rule changes to the National Bridge Inspection Standards (NBIS) and current MDOT bridge inspection policies and procedures. This manual contains all bridge inspection policies and procedures as related to MDOT's bridge safety inspection program to ensure bridges are adequately inspected, evaluated, and maintained to maximize public safety; compliance with all requirements of the FHWA, the NBIS, and the state of Mississippi; and proper management and quality control of bridge safety inspections, bridge inventory data, scour appraisals, load ratings, and load postings.
02/15 - 01/16	**2015-2016 Bridge Load Rating Project.** *MDOT Bridge Design Division.* **Bridge Engineer.** Performed Load Ratings. Completed Load Ratings for 445 interstate bridges in the following Mississippi counties: Carroll, Clarke, Copiah, Desoto, Forrest, Grenada, Hancock, Harrison, Hinds, Holmes, Jackson, Jasper, Jones, Lamar, Lauderdale, Lincoln, Madison, Montgomery, Newton, Panola, Pike, Rankin, Scott, Tate, Warren, Yalobusha and Yazoo; Design Specifications: AASHTO Standard and LRFD Bridge Design Specifications, AASHTO Manual for Bridge Evaluation; Program Utilized: AASHTOWare Bridge Rating (BrR). Load ratings performed utilized LFR methodology.

16. Staff Experience:

Firm employed by	Moffat & Nichol Inc.		
Name	**David Wolfe, PE**	*Years of relevant experience with this employer*	27
Title	Senior Bridge Engineer	*Years of relevant experience with other employer(s)*	2
Degree(s) / Years / Specialization	BS / 1993 /Structural Engineering		
Active registration number / state / expiration date	PE No. 0402049072 / VA / exp. 07/31/27		
Year registered 1993 *Discipline*	Civil, Structural		
Contract role(s) / brief description of responsibilities	Task 3, 5, 6, & 7: Fixed Bridge Support		



David is a Structural Engineer with 27 years of experience specializing in bridge load rating, structural analysis, and bridge design for state transportation agencies and public infrastructure owners. He has Throughout his career, Mr. Wolfe has served as a rater, checker, quality control engineer, and senior technical reviewer for load ratings of more than 180 highway bridges and numerous culverts and specialty structures, including steel, concrete, timber, prestressed, post-tensioned, curved girder, truss, and arch bridges. His experience includes statewide load rating contracts for Virginia DOT, as well as load rating projects for the Hawaii DOT. David combines decades of hands-on bridge analysis experience with rigorous quality assurance expertise, making him highly qualified to perform and review complex bridge load ratings and structural capacity assessments.

- ✓ Performed, reviewed, or oversaw load ratings for 180+ highway bridges, culverts, and specialty structures
- ✓ Provided structural analysis and permit load evaluations of bridges supporting oversized loads up to 440 tons
- ✓ Extensive expertise evaluating bridge load capacity using AASHTOWare BrR/VIRTIS, STAAD.Pro, BRASS-GIRDER, BRASS-CULVERT, and finite element analysis tools in accordance with AASHTO LRFR and LFR methodologies

Experience dates (mm/yy–mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
06/22 – 12/22	**Guam Power Heavy Lift Transport Structural Analysis, Dededo, Guam.** **Senior Technical Reviewer.** Oversaw load ratings and documentation for this Guam Power Authority project. Reviewed calculations, load rating assumptions, software input and output, and load rating summary sheets for consistency and appropriateness of applied methodologies. Moffatt & Nichol provided pre- and post-transport special inspections and load ratings for nine bridges and culverts in support of an overweight permit application by Pacific Unlimited, Inc., to transport heavy power generation equipment from the Port of Guam to the construction site of the new Ukudu Power Plant in Dededo, Guam. Twenty pieces of oversized/overweight equipment were moved using16- and 22-axle self-propelled modular transport (SPMT) units with combined vehicle and equipment loads weighing up to 440 tons. The SPMTs traveled at speeds up to 3 miles per hour along a 12-miledistance from the port to the Ukudu site. BRASS-CULVERT and BRASS-GIRDER programs were used for load ratings of the larger structures. A structural analysis was also performed for 22 drainage structures and utility vaults located along the transport route
05/14 – 12/18	**Limited Services Term Contract for Load Ratings of Existing Highway Structures, Statewide, VA.** *VDOT.* **Bridge Engineer.** Also served as quality control engineer for load rating tasks using AASHTOWare's Bridge Rating program and STAAD. Pro finite element analysis software, in accordance with load and resistance factor rating and load factor rating methodologies. Responsible as a rater, checker, or quality assurance/quality control reviewer for load ratings of more than 60 bridges for VDOT, including superstructure types consisting of cast-in-place and precast concrete arches and frames, reinforced concrete slabs and tee beams, steel beams with timber and concrete decks, and curved steel plate girders.
10/11 – 05/14	**Term Contract for Load Ratings of Existing Highway Structures, Statewide, VA.** *VDOT.* **Bridge Engineer.** As part of a consultant team, served as bridge engineer and quality control engineer for bridge load rating tasks using AASHTOWare's BrR program in accordance with load and resistance factor rating and load factor rating methodologies. Responsible as a rater or checker for load ratings of more than 100 bridges for VDOT, including superstructure types consisting of reinforced concrete slabs and tee beams, prestressed beams and voided slabs, steel beams with timber and concrete decks, steel plate girders, and steel floor beam systems.
02/09 – 10/11	**Load Ratings, Culpeper County, VA.** *VDOT.* **Bridge Engineer.** Served multiple task orders for bridge load ratings for the VDOT Culpeper District. Responsible as rater or checker for load ratings of 37 bridges, including steel beam with timber deck bridges (26 bridges), steel beam with concrete deck (3 bridges), pin-connected steel truss (3 bridges), prestressed and reinforced concrete slabs (2 bridges), reinforced concrete through-girder (1 bridge), and timber beams and stress laminated timber (2 bridges).

16. Staff Experience:

Firm employed by	Michael Baker International, Inc.		
Name	**Kashfia Billah, PE**	*Years of relevant experience with this employer*	32
Title	Technical Manager - Bridge	*Years of relevant experience with other employer(s)*	7
Degree(s) / Years / Specialization	MSCE / 1988 / Structural Engineering; BSCE / 1982 / Civil Engineering		
Active registration number / state / expiration date	PE No. PE044222E / PA / exp. 09/30/27		
Year registered	1993	*Discipline*	Civil
Contract role(s) / brief description of responsibilities	Task 3, 5, 6, & 7: Movable Bridge Support		



Ms. Billah has extensive experience in bridge design, inspection, and teaching. She has provided design, engineering analysis, and in-depth inspection of various types of bridges. Her experience includes structural integrity inspections and load ratings for over 1,000 bridges for state highway agencies, railroad agencies, and toll authorities. Her academic experience includes providing instruction in structural design, soil mechanics, and computer applications. She is an active instructor of the NHI sponsored bridge inspection course nationwide for bridge inspection personnel certification. She has also worked on business development and proposal preparation and has played key roles in winning contracts.

- ✓ Nearly 40 years of bridge engineering and load rating experience
- ✓ 1,000+ inspections and load ratings performed
- ✓ Extensive experience with movable bridges

Experience dates (mm/yy-mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
09/19 - 11/19	**Movable Bridge Engineering and Inspection Services, Cape May County, NJ.** *Cape May County.* **Project Manager.** Michael Baker provided general engineering services to the Cape May County Bridge Commission, delivering technical expertise in bridge engineering. Services included emergency bridge inspections, support for bridge replacement planning and projects, and review of National Bridge Inspection Standards reports. Michael Baker managed multiple teams responsible for field inspections, report preparation, priority calls, and load ratings for multi-span bridges with movable spans.
02/15 - 04/17	**Superstructure Repairs of Three Commission Bridges, Cape May, NJ.** *Cape May County.* **Assistant Project Manager.** Responsible for managing the project for progress, staffing, scheduling, invoicing, and contact with client. Michael Baker has performed numerous NBIS biennial inspections for State and County bridges that included field inspection, load ratings, SIA/NBE updates in accordance with National Bridge Inspection Standards (NBIS), priority recommendations, and moveable bridge inspections. Michael Baker is currently performing the third consecutive cycle of biennial NBIS inspections of the Cape May County Bridges, which consist of two movable bridges. Michael Baker has provided Type I, II, and III/IIIS inspection of movable bridges in Cape May County, Atlantic County, and Monmouth County, including the Oceanic Bridge. The movable inspection scope of work included electrical and mechanical inspections of single and double leaf bascule, swing and vertical lift spans of the movable bridges.
10/14 - 05/15	**Essex County Bridge Inspections, Essex County, NJ.** *NJDOT.* **Project Manager.** Project Manager for managing NBIS inspections of bridges involving field inspection, report writing, load rating and Priority calls in accordance with NBIS and NJDOT regulations for regular and moveable bridges. Michael Baker inspected and prepared reports for 12 bridges in Essex County, in compliance with NBIS and client requirements. These bridges included three movable structures with a steel-riveted through-truss swing span, for which Michael Baker provided Type II and IIIS mechanical and electrical inspections. The inspection tasks included hands-on visual inspection of the bridges, evaluation of all bridge components, and documentation of conditions observed in accordance with NJDOT guidelines. The project also included load ratings of several structures, updates to the SIA and NBE in accordance with NBIS, and priority repair plans and recommendations.
06/13 - 10/18	**Inspection and Load Rating of Various Bridges, Statewide, NJ.** *New Jersey DOT.* **Project Manager.** Responsible for managing NBIS inspections of bridges involving field inspection, report writing, load rating and Priority calls in accordance with NBIS and NJDOT regulations including regular and movable bridges. Tasks under this contract have included: Inspection of 58 Alantic County Bridges, Phase 2; Inspection of 52 State Bridges; Inspection of 60 Salem County Bridges, Phase 2; Inspection of 105 Somerset County; Inspection of 23 Cape May Bridges, Phase 2; Inspection of 4 Monmouth County Bridges; and other similar tasks. ***The Monmouth County and Cape May tasks included complex load ratings for four movable bridges.***

01/18 - 08/18	**Load Rating of Complex Bridges.** *NJDOT.* **Project Manager.** Responsible for managing complex load rating in accordance with NJDOT regulations.
04/24 - Ongoing	**Biennial Inspections of 67 Bridges, Bergen County, NJ.** *NJDOT.* **Project Manager.** Responsibilities include managing bridge inspection teams to perform field inspection and report writing in accordance with NBIS, NJDOT standards Michael Baker is performing condition inspections of 67 National Bridge Inspection Standards bridges in Bergen County. The project involves conducting the inspections, recording the inspection data in ComBis and providing reports for each structure in the NJDOT format through ComBis.
04/23 - 02/24	**Biennial Inspections of 53 Bridges, Monmouth County, NJ.** *NJDOT.* **Project Manager.** Michael Baker conducted detailed National Bridge Inspection Standards inspections for 53 bridges in Monmouth County, New Jersey. The team documented findings in ComBis, recommended immediate repairs, and provided comprehensive reports and load ratings while implementing a project management plan for quality management.
11/18 - Ongoing	**General Engineering Services Three Year Term Agreement, Trenton, NJ.** *NJDOT.* **Task Manager.** Responsible for the complex load rating of NJDOT bridges. Michael Baker prepared preliminary and final structural drawings, which included plans, sections, and details, for emergency repair on Weldon Road due to damage to the fascia stringer from a truck collision.
11/09 - 12/11	**56 Transit Bridge Inspections, Statewide, NJ.** *New Jersey Transit Corporation.* **Project Manager.** Responsible for managing the project and the bridge inspection team including field inspection, report preparation, load rating, and QA/QC. Michael Baker is performing detailed inspections for 56 transit bridges in accordance with New Jersey Transit, National Bridge Inspection, and American Railway Engineering and Maintenance-of-Way Association standards. Michael Baker reviewed and updated load rating calculations, prepare reports, and completed data input sheets.
03/08 - 07/10	**Bridge Ratings.** *NJDOT.* **Project Manager.** Responsible for the overall management, review, QA/QC of the load ratings in Virtis software for the load and speed posted NJDOT bridges.
06/09 - 07/09	**Specialty Load Rating Analyses of Bridges for Super-Load Transport, San Clemente, CA, to Clive, UT.** *Perkins Specialized Transportation.* **QA/QC.** Michael Baker performed bridge load rating services on more than 50 Caltrans and locally owned bridges to support a super-loads transportation project. This project involved the transport of four oversize, overweight steam-generator lower assemblies. Each lower assembly was transported one at a time on a specially designed 400-foot, 33-axle transporter vehicle. The total weight of each load was 715 tons, conveyed over an 800-mile route, from the San Diego, CA to a nuclear waste depot near Salt Lake City, UT. This route included numerous bridges, old and new. To complete the unique and extensive project, Michael Baker reviewed bridge design documents, performed data collection, and developed creative analytical methods for inspecting and evaluating each structure and substructure along the project route. It also prepared preliminary recommendations for deficient structures as needed and a bridge inspection report following the final transport.
09/07 - 11/08	**Bridge Inspection and Rating of 52 Bridges, Camden, NJ.** *NJDOT.* **Project Manager.** Responsibilities included technical and cost proposal, negotiation, overall management, report review, and QA/QC. This NJDOT project consisted of bridge inspections of 52 culvert inspections over waterway. The inspections were in accordance with NJDOT standards. The inspection tasks included field inspection of the culverts to evaluate the element conditions, document the conditions in field note forms, and take photographs of the general features and defects.
06/03 - 02/06	**Inspection and Rating of 36 Off-System Bridges, Sussex County, NJ.** *Sussex County.* **Project Manager.** Responsibilities included technical and cost proposal, negotiation, overall management, report review, and QA/QC. This NJDOT project consisted of bridge inspections of 36 highway Sussex County bridges over roadway and waterway in accordance with NBIS and NJDOT standards. The duration of the project was 16 months.
09/00 - 09/01	**Inspection and Rating of 18 On- and Off-System Bridges, Statewide, NJ.** *NJDOT.* **Project Manager.** Responsibilities included technical and cost proposal, negotiation, overall management, and QA/QC. Also assisted in field inspection, load rating, report writing and review of these bridges in accordance with FHWA and NJDOT guidelines. This NJDOT project consisted of bridge inspections of 18 state bridges over roadway and waterway. The inspections were in accordance with NBIS and NJDOT standards. The inspection tasks included field inspection of the bridges to evaluate the element conditions, document the conditions in field note forms, and take photographs of the general features and defects. The project is a two cycle project where the bridges will be inspected again after two years.

16. Staff Experience:

Firm employed by	Michael Baker International, Inc.		
Name	**Christopher Dorman, PE**	*Years of relevant experience with this employer*	13
Title	Project Manager - Bridge	*Years of relevant experience with other employer(s)*	0
Degree(s) / Years / Specialization	ME / 2013 / Civil Engineering; BE / 2013 / Civil Engineering		
Active registration number / state / expiration date	PE No. 099456-01 / NY / exp. 01/31/27		
Year registered	2018	*Discipline*	Civil
Contract role(s) / brief description of responsibilities	Task 3, 5, 6, & 7: Movable Bridge Support		



Christopher leads the structural engineering group for Michael Baker's New York operations. He has extensive experience in the analysis and design of bridges including new bridge design, bridge rehabilitation design, bridge load ratings and inspections, and various other transportation structures. He is well versed with the AASHTO LRFD Bridge Design Manual, AASHTO Manual for Bridge Evaluation, and various other agency design manuals.

- ✓ 13+ years of bridge engineering experience
- ✓ Extensive experience with movable bridges
- ✓ Well-versed with the AASHTO LRFD Bridge Design Manual, AASHTO Manual for Bridge Evaluation

Experience dates (mm/yy–mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
08/21 - 09/21	**Movable Bridge Engineering and Inspection Services, Cape May County, NJ.** *Cape May County.* **Structural Engineer.** Responsible for performing the load rating for the Grassy Sound Bridge. Michael Baker provided general engineering services to the Cape May County Bridge Commission, delivering technical expertise in bridge engineering. Services included emergency bridge inspections, support for bridge replacement planning and projects, and review of National Bridge Inspection Standards reports. Michael Baker managed multiple teams responsible for field inspections, report preparation, priority calls, and load ratings for multi-span bridges with movable spans.
06/13 - 04/16	**Inspection and Load Rating of Various Bridges, Statewide, NJ.** *New Jersey DOT.* **Civil Associate.** Responsible for using LARS Bridge software to perform load ratings of bridges and culverts for projects and preparing bridge inspection reports. Wrote reports for the project in the CoMBIS system. Also, calculated the new national bridge elements for the structures. Structures include simple to complex bridges from multi steel girders, thru and deck girders and trusses, fracture critical bridges, T-beams and prestressed concrete bridges including fractural critical and moveable bridges. Tasks under this contract have included: Inspection of 58 Alantic County Bridges, Phase 2; Inspection of 52 State Bridges; Inspection of 60 Salem County Bridges, Phase 2; Inspection of 105 Somerset County; Inspection of 23 Cape May Bridges, Phase 2; Inspection of 4 Monmouth County Bridges; and other similar tasks. ***For the Monmouth County task, responsible for performing complex load ratings for four movable bridges.***
10/14 - 02/15	**Essex County Bridge Inspections, Essex County, NJ.** *NJDOT.* **Civil Associate.** Michael Baker inspected and prepared reports for 12 bridges in Essex County, in compliance with National Bridge Inspection Standards (NBIS) and client requirements. ***These bridges included three movable structures with a steel-riveted through-truss swing span,*** for which Michael Baker provided Type II and IIIS mechanical and electrical inspections. The inspection tasks included hands-on visual inspection of the bridges, evaluation of all bridge components, and documentation of conditions observed in accordance with NJDOT guidelines. The project also included load ratings of several structures, updates to the SIA and NBE in accordance with NBIS, and priority repair plans and recommendations.
02/15 - 01/17	**Superstructure Repairs of Three Commission Bridges, Cape May, NJ.** *Cape May County.* **Civil Associate.** Responsible for designing structural repairs for three county bridges. Michael Baker has performed numerous NBIS biennial inspections for State and County bridges that included field inspection, load ratings, SIA/NBE updates in accordance with NBIS, priority recommendations, and moveable bridge inspections. Michael Baker is currently performing the third consecutive cycle of biennial NBIS inspections of the Cape May County Bridges, ***which consist of two movable bridges.*** Michael Baker has provided Type I, II, and III/IIIS inspection of movable bridges in Cape May County, Atlantic County, and Monmouth County, including the Oceanic Bridge. ***The movable inspection scope of work included electrical and mechanical inspections of single and double leaf bascule, swing and vertical lift spans of the movable bridges.***

07/19 - 08/19	**Priority Repair 96th Bridge.** *Cape May County.* **Structural Engineer.** Assisted in the emergency repair for the bascule girder on this movable bridge.
07/22 - 08/22	**Biennial Inspection of 69 Bridges, Statewide, NJ.** *NJDOT.* **Structural Engineer.** Responsible for reviewing and performing load ratings. Michael Baker provided National Bridge Inspection Standards for the inspection of 69 New Jersey state bridges. The project involved conducting the inspections, recording the inspection data in CombIS, and providing reports for each structure in the New Jersey Department of Transportation format through CombIS.
10/17 - 09/18	**Load Ratings for Complex Bridges, Statewide, NJ.** *New Jersey DOT.* **Structural Engineer.** Responsible for performing and reviewing Load Ratings for complex bridges across the state.
02/21 - 03/22	**NJ Transit Undergrade Bridges Inspections, NJ.** *New Jersey Transit Corporation.* **Structural Engineer.** Responsible for performing the load ratings for the railroad bridges. Michael Baker provided engineering services for load ratings for various New Jersey Transit railroad bridges. The project entailed in-depth inspections, conditions ratings, load ratings, and report preparation for 50 bridges over highways or water bodies. The structures included steel bridges, concrete slabs and culverts, and arches and pipes with ballasted or open decks. Michael Baker inspected the bridge elements and track elements using photographs and field notes with report preparation in accordance with American Railway Engineering and Maintenance-of-Way Association. It made priority calls for immediate action for any critical conditions. Load ratings and updates were performed for maximum and normal load ratings with speed restriction checks of various locomotives, including 286k locomotive.
03/17 - 04/17	**Rehabilitation of Ellis Island Bridge, Ellis Island, NJ.** *National Park Service.* **Civil Associate.** Responsible for performing a load rating on the Ellis Island bridge. Michael Baker provided engineering and technical services to develop construction drawings and specifications for the rehabilitation of a 1,360-foot-long bridge owned by the National Park Service (NPS) connecting Liberty State Park in New Jersey to Ellis Island. The bridge, originally erected as a temporary bridge to support reconstruction activities at Ellis Island, was retained and has been in service for 30 years. The NPS intends for the bridge to provide service for another ten years. Michael Baker analyzed the bridge, and deteriorated portions were rehabilitated.
03/21 - 08/21	**Bridge Inspection and Load Rating Services.** *Rhode Island Turnpike and Bridge Authority (RITBA).* **Structural Engineer.** Responsible for checking Arch Load Ratings performed as part of this project. As part of a four-year contract, Michael Baker provided bridge safety inspection and load rating services for the Rhode Island Turnpike and Bridge Authority (RITBA). It inspected and load-rated numerous bridges under multiple assignments including steel and concrete multi-beam superstructures and concrete arches. RITBA owns basic and several major bridges including the Newport Pell, and Mount Hope Suspension bridges, the Jamestown Verrazano segmental bridge, and the new Sakonnet River steel box-girder bridge, all in southern Rhode Island.
04/20 - 06/20	**Statewide Load Rating - Package 3, Statewide, KY.** *KYTC.* **Structural Engineer.** Responsible for performing and reviewing the load rating for the JFK Truss Bridge for this project. Michael Baker performed the load rating for 17 bridges throughout Kentucky for KYTC. Additional field inspection was required for bridges to document deterioration or obtain measurements where plans were not available. Load ratings were performed in accordance with the Manual for Bridge Evaluation and the Kentucky Bridge Inspection Procedures Manual. ***Bridges were load rated using the AASHTO BrR software package.*** Load ratings were performed for the Kentucky legal loads, special hauling vehicles (SU4-SU7), three superload vehicles, and the emergency vehicles (EV2 and EV3) as required by FHWA.
08/19 - 09/19	**East 156th St. Bridge over Access to Housing and Concourse Village Ave. Bridge Rehabilitation, Bronx, NY.** *City of New York DOT.* **Structural Engineer.** Provided QA/QC review of the Level 1 Load Rating Report. Michael Baker is providing design and engineering services for two roadway bridges in the Bronx. One bridge carries 156th Street above the access driveway servicing six schools and a major housing development containing eight apartment buildings. The second bridge is a truss bridge carrying Concourse Village East over the Metro North Harlem Line. Michael Baker is performing design, alternatives analysis, structural engineering, and public outreach.
04/20 - 10/20	**Bridge Load Rating and Evaluation Engineering Services, SC.** *SCDOT.* **Bridge Engineer.** Responsible for performing and reviewing load ratings for multiple bridges for this load rating project. Michael Baker provided bridge load rating and evaluation engineering services for state-owned, county-owned, and other municipality-owned structures throughout South Carolina, primarily for the 1,815 bridges in District 3. Tasks include project management, site assessments, data collection, agency coordination, quality assurance reviews, and training development. Michael Baker established this statewide program and oversees five other consultants performing bridge load ratings, assessments, load and material testing, oversize and overweight permitting, complex structure rating and maintenance manuals, development of custom AASHTOWare Bridge Management program, and quality assurance reviews.

16. Staff Experience:

Firm employed by	Michael Baker International, Inc.		
Name	**Ling Zhao, PhD, PE**	*Years of relevant experience with this employer*	17
Title	Civil Engineer	*Years of relevant experience with other employer(s)*	5
Degree(s) / Years / Specialization	PhD / 2004 / Civil Engineering; MCE / 2000 / Civil Engineering; BCE / 1997 / Civil Engineering		
Active registration number / state / expiration date	PE No. 30484 / MD / exp. 01/11/28		
Year registered	2010	*Discipline*	Civil, Structural
Contract role(s) / brief description of responsibilities	Task 3, 5, 6, & 7: Movable Bridge Support		



Dr. Zhao is a structural engineer with extensive structural analysis/design, finite element modeling and analysis, and structural detailing design experience. His responsibilities include new bridge elements design such as deck, steel plate girder, prestressed concrete beams, spliced precast girder, segmental box girder, pier column, pier cap, pile foundation design, as well as existing bridge rehabilitation design such as structural steel repair design, bearing reset/replacement design, deck repair/replacement design, and substructure repair/strengthening design.

- ✓ 22+ years of bridge engineering experience
- ✓ Experienced with inspections and load ratings 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 years of experience specified in the applicable MPR(s).*
03/15 - 02/17	**Superstructure Repairs of Three Commission Bridges, Cape May, NJ. Cape May County. Engineer.** Michael Baker has performed numerous NBIS biennial inspections for State and County bridges that included field inspection, load ratings, SIA/NBE updates in accordance with National Bridge Inspection Standards (NBIS), priority recommendations, and moveable bridge inspections. Michael Baker is currently performing the third consecutive cycle of biennial NBIS inspections of the Cape May County Bridges, which consist of two movable bridges. Michael Baker has provided Type I, II, and III/IIIS inspection of movable bridges in Cape May County, Atlantic County, and Monmouth County, including the Oceanic Bridge. The movable inspection scope of work included electrical and mechanical inspections of single and double leaf bascule, swing and vertical lift spans of the movable bridges.
01/14 - 06/14	**Route 50 Tuckahoe River Bridge Replacement, Cape May and Atlantic Counties, NJ.** *NJDOT.* **Engineer.** Michael Baker provided final design services for the demolition of the 80-year-old three-span movable bridge; construction of a new 180-foot single-span fixed bridge; and relocation and protection of utilities, including measures to protect an underground gas pipeline that supplies all of the gas service to Cape May County. Michael Baker developed the innovative solution to redesign the already bid bridge replacement contract in order to reduce risk and in-water work in an effort to limit the potential liabilities and cost overruns associated with the as-bid contract. Extensive coordination with the regulatory community was required to obtain project buy-in and an expedited project review.
02/18 - 04/18	**Statewide Routine Bridge Inspections and Load Ratings.** *TxDOT.* **Engineer.** Michael Baker performed routine monthly inspections of bridges and culverts for TxDOT in various districts. It inspected each structure to assess its overall condition and determine whether it was sufficient to carry traffic safely. Follow-up action items were recorded for each structure requiring repair or rehabilitation. In addition, Michael Baker prepared plans, specifications, and estimates for the repairs. It also added newly completed structures to TxDOT's structure database and completed associated inspection reports and forms.
09/17 - 11/18	**Bridge Safety Inspection and Load-Rating Services, Statewide, RI.** *Rhode Island DOT.* **Engineer.** Michael Baker performed inspection services for bridges throughout Rhode Island as part of the Statewide Bridge Inspection Services Master Price Agreement project. Michael Baker performed inspections on more than 800 bridges and load ratings on more than 300. Additionally, it co-authored the Rhode Island Department of Transportation (RIDOT) Bridge Inspection Manual in partnership with RIDOT bridge engineering staff and has developed repair sketches for emergency repairs of deficiencies discovered during its inspections. Michael Baker has held this contract since 2009. During its current five-year assignment, it has performed numerous investigations, including initial and routine inspections, damage inspections, in-depth inspections, and special interim inspections. Structure types include steel and concrete multi-girder, steel trusses, concrete slabs and arches, pre-stressed concrete, stone masonry arches, network tied arches, and timber bridges.

08/19 - 08/19	**Statewide Bridge Load Ratings, Statewide, MA.** *MassDOT.* **Engineer.** Michael Baker performed live-load capacity ratings for municipally owned and state-owned bridges statewide in Massachusetts. Load ratings were developed for all types of structures from simple multibeam bridges to concrete-arch bridges to steel deck and through-truss bridges. Michael Baker's tasks involved reviewing plans, inspections and rating reports, and other available data; field-verifying the latest load-rating and inspection findings; performing nondestructive or partially destructive testing when applicable; preparing structural calculations; and developing a final rating report for each bridge structure.
12/23 - Ongoing	**Load Rating and Rehabilitation of the Goldstar Memorial Truss Bridge, New London, CT.** **Engineer.** As a subconsultant, Michael Baker is providing load rating services and preliminary and final design services for the rehabilitation of the Gold Star Memorial Bridge, which carries 42,600 vehicles per day on Interstate 95 over the Thames River in New London and Groton, Connecticut.
11/22 - Ongoing	**Pulaski Rehabilitation Support, NJ.** *NJDOT.* **Engineer.** Michael Baker is one of five design firms developing the rehabilitation plans for the 3.5-mile-long historic landmark viaduct structure that spans the Passaic and Hackensack Rivers and connects Newark to Jersey City in New Jersey. The scope includes a structural inspection, load rating, seismic vulnerability assessment, and contract plans and specifications development.
01/17 - 02/17	**Monmouth County Bridge Inspections, Monmouth County, NJ.** *NJDOT.* **Engineer.** Michael Baker inspected the mechanical and electrical components of four bridges in Monmouth County, following guidelines set by the New Jersey Department of Transportation. The bridges consisted of steel, built-up, riveted girders, floor beams, and stringers, and inspection tasks included hands-on visual inspections, documentation of any conditions observed, and updates to the Structure Inventory and Appraisal and National Bridge Elements. Michael Baker also calculated load ratings for all four structures.
11/10 - 11/11	**Garden State Parkway Widening, NJ.** *New Jersey Turnpike Authority.* **Engineer.** Scope of work included Bridge Condition Assessments to support environmental permitting, constructability reviews of bridges, accelerated bridge construction methods, bridge rehabilitation, new bridge design, complex MPT/staging, and LRFR rating of structures. Incorporated integral/jointless construction techniques on project. This section of the Parkway is vital to the needs of the communities along the Jersey Shore, as well as being the primary coastal evacuation route, which includes critical interchange links that could not be affected during construction. Construction staging was designed to maintain flow and minimize congestion.
10/09 - 10/09	**Mansfield Bridge Rehabilitation, Dravosburg, PA.** *Allegheny County Department of Public Works.* **Engineer.** Michael Baker provided comprehensive engineering services for the rehabilitation of the Mansfield Bridge. Michael Baker's services included in-depth inspection, analysis, and load rating; bridge rehabilitation design; roadway design; preparation of right-of-way plans; utility coordination; lighting design; paint system evaluation and recommendations; and construction administration.

16. Staff Experience:

Firm employed by	Michael Baker International, Inc.		
Name	**Hamid Ikram, PE**	*Years of relevant experience with this employer*	17
Title	Bridge/Structural Engineer	*Years of relevant experience with other employer(s)*	12
Degree(s) / Years / Specialization	MCE / Civil Engineering; BCE / Civil Engineering; BS / Computer Sciences		
Active registration number / state / expiration date	PE No. 24GE05489800 / NJ / exp. 04/30/28		
Year registered	2019	*Discipline*	Structural
Contract role(s) / brief description of responsibilities	Task 3, 5, 6, & 7: Movable Bridge Support		



Hamid is a Structural Engineer with comprehensive design and construction engineering experience. His expertise includes design of superstructure and substructure, preparation of plans and specifications, deck widening, and deck repair; structural design involving new or replacement structures; construction engineering services; structural rating; structural inspection; and review of various projects. He is an expert user for structural program like RCPIER, CONSPAN, CONBOX, CONSPLICE, STAAD, LARSA, FB Pier and other structural programs. In addition, he has experience in AASHTO LFD, AASHTO LRFD and AASHTO Bridge Rating.

- ✓ Nearly 30 years of bridge engineering experience
- ✓ Experienced with inspections and load ratings for movable bridges
- ✓ Highly experienced in AASHTO LFD, AASHTO LRFD and AASHTO BrR software

Experience dates (mm/yy–mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
10/16 - 01/17	**Superstructure Repairs of Three Commission Bridges, Cape May, NJ.** *Cape May County.* **Structural Designer.** Michael Baker has performed numerous NBIS biennial inspections for State and County bridges that included field inspection, load ratings, SIA/NBE updates in accordance with National Bridge Inspection Standards (NBIS), priority recommendations, and moveable bridge inspections. Michael Baker is currently performing the third consecutive cycle of biennial NBIS inspections of the Cape May County Bridges, which consist of two movable bridges. Michael Baker has provided Type I, II, and III/IIIS inspection of movable bridges in Cape May County, Atlantic County, and Monmouth County, including the Oceanic Bridge. The movable inspection scope of work included electrical and mechanical inspections of single and double leaf bascule, swing and vertical lift spans of the movable bridges.
05/14 - 05/14	**Route 50 Tuckahoe River Bridge Replacement, Cape May and Atlantic Counties, NJ.** *NJDOT.* **Structural Designer.** Michael Baker provided final design services for the demolition of the 80-year-old three-span movable bridge; construction of a new 180-foot single-span fixed bridge; and relocation and protection of utilities, including measures to protect an underground gas pipeline that supplies all of the gas service to Cape May County. Michael Baker developed the innovative solution to redesign the already bid bridge replacement contract in order to reduce risk and in-water work in an effort to limit the potential liabilities and cost overruns associated with the as-bid contract. Extensive coordination with the regulatory community was required to obtain project buy-in and an expedited project review.
11/18 - 11/18	**Essex County Bridge Inspections, Essex County, NJ.** *NJDOT.* **Structural Designer.** Michael Baker inspected and prepared reports for 12 bridges in Essex County, in compliance with National Bridge Inspection Standards (NBIS) and client requirements. These bridges included three movable structures with a steel-riveted through-truss swing span, for which Michael Baker provided Type II and IIIS mechanical and electrical inspections. The inspection tasks included hands-on visual inspection of the bridges, evaluation of all bridge components, and documentation of conditions observed in accordance with NJDOT guidelines. The project also included load ratings of several structures, updates to the SIA and NBE in accordance with NBIS, and priority repair plans and recommendations.
11/22 - 11/22	**Biennial Inspections of 67 Bridges, Bergen County, NJ.** *NJDOT.* **Engineer.** Michael Baker is conducting detailed visual inspections of 67 National Bridge Inspection Standards bridges in Bergen County. Services include recording data, recommending and detailing immediate repairs, preparing comprehensive reports and load ratings, and establishing a project management plan.
02/10 - 03/10	**56 Transit Bridge Inspections, Statewide, NJ.** *New Jersey Transit Corporation.* **Structural Designer.** Michael Baker is performing detailed inspections for 56 transit bridges in accordance with New Jersey Transit, National Bridge Inspection, and American Railway Engineering and Maintenance-of-Way Association standards. Michael Baker will review and update load rating calculations, prepare reports, and complete data input sheets.

SUPPORT PERSONNEL

TASK 4: TRAINING

16. Staff Experience:

Firm employed by	Michael Baker International, Inc.		
Name	**Daniel Baxter, PE, SE**	*Years of relevant experience with this employer*	22
Title	Project Manager & Senior Bridge Engineer	*Years of relevant experience with other employer(s)*	1
Degree(s) / Years / Specialization	MS / 2003 / Structural Engineering; BS / 2003 / Civil Engineering; BA / 2001 / Physics		
Active registration number / state / expiration date	PE No. 51483 / MN / exp. 06/30/28; SE No. 081.006808/ IL		
Year registered	2009 (SE); 2014 (PE)	*Discipline*	Structural
Contract role(s) / brief description of responsibilities	Task 4 Support		



Daniel is a structural engineer specializing in the design of bridges, focused on complex steel, prestressed concrete, and cast-in-place concrete structures. For concrete bridges, his experience encompasses cast-in-place concrete open spandrel and barrel arch bridges, strut-and-tie design of pier caps, concrete rigid frames, precast segmental box girder, segmental post-tensioned arch, and cast-in-place post-tensioned structures. His steel bridge design experience includes long-span truss, network tied arch, skewed and curved plate girder, box girder, and delta frame structures. He has extensive expertise in 3D finite element modeling of steel and concrete structures, and in writing post-processing tools to analyze program results for conformance with code requirements. ***He is also experienced in the load rating of steel truss, steel curved girder, concrete arches, and concrete rigid frame bridges.*** He is a twelve-time presenter at the International Bridge Conference and has published several papers in peer-reviewed journals.

- ✓ NHI instructor for LRFD for Highway Bridge Superstructures course; LRFR for Highway Bridges course; and Strut-and-Tie Modeling for Concrete Structures

Experience dates (mm/yy–mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
07/18 - 10/23	**FHWA/NHI Load and Resistance Factor Rating of Highway Bridges Course Delivery.** *Federal Highway Administration.* **Technical Specialist.** Served as an NHI-certified instructor for multiple deliveries of the NHI LRFR for Bridge Superstructures course.
06/18 - 02/20	**FHWA/NHI LRFD for Highway Bridge Superstructures Course Delivery.** *Federal Highway Administration.* **Technical Specialist.** Served as an NHI-certified instructor for multiple deliveries of the NHI LRFR for Bridge Superstructures course. Michael Baker provides technical services to support the National Highway Institute's structures, hydraulics, and geotechnical engineering program areas under this indefinite delivery/indefinite quantity contract. This contract provides for the development, update, and delivery of instructor-led training, web-based training, web conference training, video conference training, flipped classroom training, new and evolving training delivery platforms, and new technologies, such as mobile apps and virtual world delivery. Tasks include developing, updating, and delivering training, supplemental materials, and services to support training, advance the state of practice, and implement best practices for the program areas.
01/12 - 04/14	**Load and Resistance Factor Rating Planning and Implementation, Statewide, OK.** *Oklahoma DOT.* **Civil Engineer.** Provided technical guidance for the ratings of these complex structures, which included steel curved girders, steel delta frames, concrete rigid frames, concrete filled-earth arches, and post-tensioned concrete segmental box girders. Oversaw and checked the work performed by junior engineers for rating the concrete rigid frame and arch structures. He participated in the development of the code check spreadsheet used to rate the concrete rigid frame and arch bridges, which included the capability of generating interaction diagrams. He also developed the methods for modeling and extracting influence surfaces for the steel curved girder bridges, which were modeled using MIDAS/Civil finite element software. Michael Baker provided planning and implementation services for the Load and Resistance Factor Rating (LRFR) of state-owned bridges. The bridge LRFRs supported the development of an automated truck routing and permitting system. Michael Baker's Phase I tasks included coordinating the development of an LRFR implementation plan, determining bridge load-rating software requirements for the permitting and routing system, developing a software plan, computing LRFR ratings for the gusset plates of truss bridges, and creating a pilot bridge load-rating work plan. Michael Baker's Phase II tasks involved LRFR and LFR load rating of 159 complex bridges based on the use of influence lines and influence surfaces.

12/08 - 12/08	**AASHTO Virtis Development, Maintenance, and Support of a Bridge Load-Rating System, Nationwide.** *AASHTO.* **Technical Specialist.** Michael Baker prepared the functional requirements, developed functional prototypes, designed and developed the database and software, performed testing, and maintained and supported Virtis®, a new bridge load rating system, and Opis®, a new bridge design system, under the AASHTO Joint Development process. Virtis® and Opis® are part of three bridge software products available through AASHTO BRIDGEWare®. The objective was to develop a new bridge load rating system based on the Load Factor Design (LFD) specifications and a new design system based on the AASHTO LRFD specifications that could be used by states for the most common types of bridges. The initial product releases included commonly rated bridges (girder and plane frame) consisting of reinforced concrete, prestressed concrete, steel multi-girder, and girders with floor systems. Trusses and culverts were planned for future releases.
09/13 - 01/18 06/18 - 10/23	**FHWA NHI Structures and Geotechnical Engineering Training IDIQ, Nationwide.** *FHWA.* **Technical Specialist.** Served as an NHI-certified instructor for multiple deliveries of the NHI LRFD for Highway Bridge Substructures training course. Michael Baker provided technical services to support the National Highway Institute's structures and geotechnical engineering training initiative under this indefinite delivery/indefinite quantity contract. The objective of this contract is to effectively and efficiently develop and deliver a timely program of high-quality training in the broad general area of structures and geotechnical engineering.
11/15 - 01/16	**ITD Complex Bridge Load Rating, ID.** *Idaho Transportation Department, District 4.* **Civil Engineer.** Responsibilities included checking the 3D LARSA model of the U.S. 95 over Kootenai River Bridge. Developed the strain compatibility calculation procedure used to determine the ultimate strength of the structure's post-tensioned steel I-girders. He utilized the results of the LARSA model and strength calculations to compute the rating of the bridge, and reviewed the calculations of other engineers working on the project. Michael Baker provided load ratings services for three complex bridges: ▪ *Oldtown Bridge:* LFR rating for a seven-span 1,237-foot steel girder bridge using BrR with kinked girders and a deck width flare that started in one of the spans. ▪ *Kootenai Bridge:* LRFR rating for a ten-span 1,378-foot horizontally curved steel girder bridge with longitudinal girder and transverse deck post-tensioning using Finite Element Modeling (FEM). After discovering design details that limited the load rating, Michael Baker performed an innovative strain compatibility analysis that improved the results and avoided load posting. ▪ *Hope Bridge:* LFR rating for a 1,318-foot horizontally curved bridge with three continuous steel girder spans and nine cantilevered prestress concrete girders spans. The steel spans were analyzed in BrR® and the concrete spans were analyzed by hand.
02/21 - 09/21	**Bridge Load Rating and Evaluation Engineering Services, SC.** *SCDOT.* **Engineer.** Michael Baker provided bridge load rating and evaluation engineering services for state-owned, county-owned, and other municipality-owned structures throughout South Carolina, primarily for the 1,815 bridges in District 3. Tasks include project management, site assessments, data collection, agency coordination, quality assurance reviews, and training development. Michael Baker established this statewide program and oversees five other consultants performing bridge load ratings, assessments, load and material testing, oversize and overweight permitting, complex structure rating and maintenance manuals, development of custom AASHTOWare Bridge Management program, and quality assurance reviews.
03/23 - Ongoing	**MnDOT Bridge Asset Management.** *Minnesota DOT.* **Project Manager.** Responsible for project management of this comprehensive evaluation project that includes bridge inspection, materials testing, load rating, and bridge management plan development for a nearly 100-year-old historic concrete arch bridge over the Mississippi River in St. Paul, Minnesota. Responsible for coordinating the efforts of seven specialty subconsultants to develop bridge inspection and materials testing reports and provide load ratings. Additionally leading the computation of load ratings by overseeing development of a 3D finite element model of the structure using MIDAS/Civil software. Load ratings are computed by using forces output from the model in conjunction with in-house post-processing spreadsheets. Currently leading the development of a Bridge Management Plan for the structure.
05/19 - 03/20	**Twin Ports Interchange CMGC Project, Duluth, MN.** *Minnesota DOT.* **Project Manager.** As Project Manager and Engineer of Record, led the final design and load rating of Bridge 69905, which is a replacement structure for the ramp from northbound I-535 to northbound I-35. The structure is a two-span curved continuous steel plate girder bridge with a total length of 421 feet with an approximate radius of 300 feet. MIDAS/Civil software was used for the 3D finite element analysis, and an independent check of the results was undertaken using AASHTOWare BrR software. Coordinated the design work with groups engaged by MnDOT to develop the construction staging, railroad coordination, roadway design, and coordinated the tie-in details between the North Abutment wing walls and the adjacent MSE retaining wall design performed by others. Minnesota DOT reconstructed the I-35, I-535, and U.S. 53 interchange to enhance safety and improve the movement of freight while minimizing construction costs, long-term maintenance, and impacts to traffic. Michael Baker provided agency coordination, participating in regular meetings to coordinate with the Burlington Northern Santa Fe Railroad, the roadway design team, bridge design team, CMGC, and MnDOT construction and bridge office staffs. Michael Baker provided design plans and quantities at the 30, 60, 90, and 100 percent milestones.

16. Staff Experience:

Firm employed by	Michael Baker International, Inc.		
Name	**Vinacs Vinayagamoorthy, PE**	*Years of relevant experience with this employer*	2
Title	Bridge Technical Consultant	*Years of relevant experience with other employer(s)*	33
Degree(s) / Years / Specialization	MSc / 1988 / Civil and Structural Engineering; BSc / 1982 / Civil and Structural Engineering		
Active registration number / state / expiration date	PE No. C49828 / CA / exp. 09/30/28		
Year registered 1992	*Discipline* Civil		
Contract role(s) / brief description of responsibilities	Task 4 Support		



Vinacs has more than 35 years of bridge engineering experience, and excels at training staff in load rating methodologies for various bridge types, including steel and reinforced concrete structures. As a Senior Bridge Engineer at Caltrans, Vinacs oversaw the load rating of 24,000 California bridges and developed strategies and guidelines for loading and rating both simple and complex bridges. He is well-versed in using the AASHTOWare BrR software and has developed numerous training courses focused on load rating with this software.

- ✓ Oversaw load rating of 24,000+ bridges while at Caltrans
- ✓ Developed strategies for load rating simple and complex bridges
- ✓ Panel member for several NHRCP & FHWA load rating research projects
- ✓ Created permit truck configurations for design and load rating

Experience dates (mm/yy–mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
05/25 - Ongoing	**Bridge Inspection Program Evaluation, Statewide, AR.** *ARDOT.* **Consultant.** Responsible for developing several chapters ARDOT load rating manual. Michael Baker is working to determine the criteria for selecting a list of major bridges from ARDOT's bridge inventory. Phase I of this project involved establishing a baseline for the client's recent and current bridge inspection program by reviewing their Bridge Inspection Manual and numerous supporting documents noting areas for improvement. In Phase II, Michael Baker determined the criteria, methodology, and thresholds for prioritizing and selecting 200 bridges from the client's state-owned bridge inventory for a high-level evaluation of repair or replacement needs, including budgetary cost estimating for the next 20 years. Phase II also entails development of a stand-alone load rating manual.
02/25 - 02/25	**Statewide Routine Bridge Inspections and Load Ratings.** *TxDOT.* **Bridge Engineer.** Responsible for reviewing and commenting on the load rating calculations of pony truss bridge. Michael Baker provided routine bridge inspection services in TxDOT's Dallas District. The scope included approximately 825 bridge inspection and load ratings over seven months of various bridge types and materials. Work items included advanced coordination for inspection, reporting, calculations, SNBI regulation implementation, as well as database updates and maintenance module inputs for repairs or bridge closures.
08/25 - Ongoing	**General Engineering Services 2022-2026, Statewide, TN.** *TDOT.* **Bridge Engineer.** Responsible for reviewing BrR load rating models to verify that the electronic models accurately reflected bridge geometry, member properties, and structural details. Performed quality control reviews of load rating analyses and results to confirm that methodologies, assumptions, and outputs complied with the Tennessee Department of Transportation load rating guidelines. Michael Baker is serving a four-year on-call contract to provide bridge repair services across the state of Tennessee. The team is responsible for a variety of assignments including contract documents, tunnel inspection plan revision, NSTM inspection, truss bridge inspection with maintenance recommendations, and railroad flat car inspection.
2018 - 2023	**AASHTOWare BrDR Research Project. Task Force Member.** Monitored and directed project/product activities, including requiring and reviewing software developer progress reports to determine contract progress and compliance, ensuring the software meets the expectations of the users, ensuring the software considers newer technological breakthroughs, and, if needed, considering modernizing the software.
2010 - 2023	**AASHTOWare BrR Research Project. Technical Advisor.** Participated in reviewing mockups, beta testing changes to the software, and suggesting any improvements that need to be made to the software so that the software will be robust.
2020 - 2022	**AASHTO MBE Specification, 2020 and 2022 Interim Revisions, 3rd Edition. TI18 Committee Member.** Updated three examples including Simple Span Composite Steel Stringer Bridge, Simple Span Prestress Concrete I girder Bridge Evaluation of an Interior Girder A-Girder (LRFR only), and Reinforced concrete slab bridge design and legal load check.

11/24 - Ongoing	**Bridge Inspection and Evaluation Engineering Services, Statewide, SC.** *SCDOT.* **Technical Advisor.** Michael Baker is providing bridge inspection and engineering evaluation services in support of a statewide, consultant-led, bridge inspection effort for higher priority bridges across South Carolina. The more than 9,500 bridges included in this contract encompass interstate system bridges, bridges over railroads, underwater inspections, and bridges with more challenging access needs. Tasks include asset management, National Bridge Inspection Standards inspection, load rating, repair and rehabilitation recommendations, emergency response, truck permitting, quality control, and engineering evaluation in support of the statewide bridge management program.
12/24 - Ongoing	**BrR Program for Rating Iowa Bridges, Statewide, IA.** *Iowa DOT.* **Bridge Engineer.** Responsible for performing quality control by reviewing the load rating calculations and BrR electronic models generated for standard Truss bridges. Michael Baker is developing BrR template files for the Iowa Department of Transportation (DOT)'s standard bridge types with policies and training materials to familiarize local public agencies and their consultants with the templates and the BrR software. Michael Baker is creating analysis settings, system settings, and libraries, and is establishing file naming conventions.
11/24 - Ongoing	**Load Rating Routine Structures On-Call, Statewide, MO.** *Missouri DOT.* **Bridge Engineer.** Responsible for performing load ratings on some of the most complex bridges in the State of Missouri. Michael Baker is providing bridge engineering services under a three-year contract to load rate state-owned routine structures. The first task involves load rating 100 prestressed concrete double tee girder bridges. The second task is to load rate 205 additional bridges: 79 are prestressed concrete double tee girder bridges, 116 are prestressed I-beam bridges, and 10 are combined prestressed or post-tensioned concrete beam and steel beam bridges.
11/24 - Ongoing	**Bridge Inspection and Load Rating Quality Assurance, Statewide, MT.** *MTDOT.* **Bridge Engineer.** Responsible for reviewing and commenting on the Load Rating Manual developed by the Michael Baker team for the Montana Department of Transportation. Michael Baker is providing statewide bridge inspection and load rating services under a bridge inspection and load rating program. The project includes quality assurance (QA) reviews of 150 bridge inspection reports, field reviews of 60 field inspections, review and update of the Montana DOT Bridge Inspection and Rating Manual (BIRM), review of the MTDOT load rating program, scoping changes to the load rating program and manual, developing QA summary reports for individuals district-wide and statewide, generating the state bridge engineer's letter, and developing year-end training based on the QA reviews for the year.
12/24 - Ongoing	**Load Rating and Posting of Long-Span Bridges, Washington, D.C.** *Federal Highway Administration.* **Consultant.** Responsible for reviewing and commenting on the development of the project to ensure the study will lead to developing a better methodology to load rate long-span bridges. Michael Baker is performing a NCHRP research project for which the objective is to develop procedures and specifications for load rating, posting, and permitting of highway bridges with spans greater than 200 feet in length. It shall consider all applicable load effects. In addition to the final report, the main deliverable is proposed specifications for the AASHTO Manual for Bridge Evaluation.
2004 - 2005	**LRFD Fatigue Permit Design Truck for California.** *Caltrans.* **Bridge Engineer.** Developed the design. The fatigue design methodology within LRFD specification somewhat differs from the LFD design methodology. As a result, an extensive study was conducted to develop a Fatigue Permit Truck that allows the designers to include fatigue details based on fatigue stress ranges generated by the Permit trucks that operate in California.
2002 - 2005	**LRFD Design Permit Trucks for California.** *Caltrans.* **Bridge Engineer.** Developed a new configuration. The design permit trucks that had been used in the past did not envelope the permit trucks that operate in California. Furthermore, the frequency and GVW of the trucks steadily increased over the years. As a result, new design permit configurations were developed.
2000 - 2023	**Various Load Ratings Projects and Studies.** *Caltrans.* **Senior Bridge Engineer.** Developed strategies and guidelines to load rate bridges primarily using BrR (Virtis) software; this includes training load rating staff on BrR software, creating BrR Naming Convention guidelines, creating QA/QC guidelines, creating archiving processes and reporting rating results to bridge management software called SMART.
1988 - 1991	**University of Florida Research Projects. Graduate Research Assistant.** Worked in a 3-member team that developed BRUFEM (Bridge Rating Using Finite Element Method) software for the Florida Department of Transportation. The software: Created finite element models considering the construction sequence of the girder-slab bridges. Analyzed the finite element models. Rated the bridge based on Moment, Shear, and Cracking or Fatigue. The types of bridges consist of Prestressed single— and multi-span girder bridges, Concrete Tee beam girder bridges, Steel girder bridges, and Flat slab Concrete bridges. Responsibilities included developing coding to gather bridge geometrical data and analysis results, perform load ratings, and generate load rating reports. Also involved in conducting analytical studies of the behavior of various bridge types and writing documentation reports.

16. Staff Experience:

Firm employed by	Michael Baker International, Inc.		
Name	**Philip Walker, PE**	*Years of relevant experience with this employer*	7
Title	Technical Director - Complex Bridges	*Years of relevant experience with other employer(s)*	27
Degree(s) / Years / Specialization	MSCE / 1991 / Structural Engineering; BSCE / 1990 / Structural Engineering		
Active registration number / state / expiration date	PE No. 46394 / LA / exp. 09/30/26; PE No. 50854 / FL / exp. 02/28/27		
Year registered	1996 (FL); 2022 (LA)	*Discipline*	Civil
Contract role(s) / brief description of responsibilities	Task 4 Support		



Philip's experience focuses on the evaluation, design, and construction of long span bridge structures, with a specialty in segmental concrete bridges. He has either managed, peer reviewed, load rated, or been responsible for the design of bridges ranging from short span top-down constructed structures to bridges crossing navigational channels with up to 650-foot spans. He has been responsible for structures ranging from segmental concrete bridges to either curved steel girder or steel truss structures. ***He is an instructor at USF for concrete bridges, instructor for the NHI Strut and Tie Concrete course.***

- ✓ 30+ years of diverse bridge design experience
- ✓ USF Instructor for Concrete Bridge
- ✓ Responsible Engineer for award-winning Marc Basnight Bridge in NC, and St. Croix River Crossing in MN

Experience dates (mm/yy–mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
07/24 - Ongoing	**Training for the FHWA Structures Program Area Project, Pennsylvania.** *Federal Highway Administration.* **Engineer.** Michael Baker is developing, updating, and delivering instructor-led training (ILT), web-based training (WBT), web conference training (WCT), videoconference training (VCT), flipped classroom training, new and evolving training delivery platforms, electronic testing, and new technologies such as mobile apps, electronic workbooks, virtual simulations, and virtual world delivery under an Indefinite Deliver Indefinite Quantity (IDIQ) contract for the Federal Highway Administration's structure subject area.
03/22 - 11/23	**FHWA/NHI LRFD for Highway Bridge Superstructures Course Delivery.** *Federal Highway Administration.* **Engineer.** Michael Baker provides technical services to support the National Highway Institute's structures, hydraulics, and geotechnical engineering program areas under this indefinite delivery/indefinite quantity contract. This contract provides for the development, update, and delivery of instructor-led training, web-based training, web conference training, video conference training, flipped classroom training, new and evolving training delivery platforms, and new technologies, such as mobile apps and virtual world delivery. Tasks include developing, updating, and delivering training, supplemental materials, and services to support training, advance the state of practice, and implement best practices for the program areas.
01/20 - 11/23	**FHWA Structures, Hydraulics, Geotechnical Engineering Program IDIQ 2017-22, Nationwide.** *Federal Highway Administration.* **Engineer.** Michael Baker provided technical services to support the National Highway Institute's structures, hydraulics, and geotechnical engineering program areas under this indefinite delivery/indefinite quantity contract. This contract provided for the development, update, and delivery of instructor-led training, web-based training, web conference training, videoconference training, flipped classroom training, new and evolving training delivery platforms, and new technologies, such as mobile apps and virtual world delivery. Tasks included developing, updating, and delivering training, supplemental materials, and services to support training, advance the state of practice, and implement best practices for the program areas.
11/24 - Ongoing	**Bridge Inspection and Evaluation Engineering Services, Statewide, SC.** *SCDOT.* **Senior Engineer.** Michael Baker is providing bridge inspection and engineering evaluation services in support of a statewide, consultant-led, bridge inspection effort for higher priority bridges across South Carolina. The more than 9,500 bridges included in this contract encompass interstate system bridges, bridges over railroads, underwater inspections, and bridges with more challenging access needs. Tasks include asset management, National Bridge Inspection Standards inspection, load rating, repair and rehabilitation recommendations, emergency response, truck permitting, quality control, and engineering evaluation in support of the statewide bridge management program.

09/08 - 12/15	**Bayonne Bridge Navigational Clearance Program, Bayonne, NJ & State Island, NY.** *Port Authority of New York and New Jersey.* **Technical Advisor.** Supported the design of the segmental concrete approach spans to the main river crossing. He developed the preliminary span configuration, superstructure component sizing, and foundations size and location for the segmental concrete approach spans to the main river crossing. During design, he ***trained staff in the correct methodology for performing calculations for transverse analysis, evaluation of Differential Thermal loading,*** principal stress checks considering vertical post-tensioning in webs, and design of pier diaphragm segments. The approach units contain twin parallel precast segmental concrete boxes on the 2400-foot-long south approach structure and 2900-foot-long north approach structure to the main span. The main span's truss arch is 1652-feet-long and provides a navigational clearance of 215 feet. The approach structures are constructed using the balanced cantilever erection technique using an overhead gantry truss. Typical span for the variable depth concrete box girder is 248 feet.
06/21 - Ongoing	**PTB 199-41 Various Statewide Services, Statewide, IL.** *ILDOT.* **Engineer.** Michael Baker has been involved with 13 work orders since June 2021 with IDOT's Bureau of Bridges & Structures (BBS), assisting with complex load rating assignments on complex bridges and culverts, damage evaluation of bridges, and peer review of bridge policy development.
02/22 - 03/22	**I-40 / Mississippi River Inspection, West Memphis, AR and, Memphis, TN.** *ARDOT.* **QA/QC.** Served as the quality control reviewer for the system redundancy evaluations for the twin span 1800-feet arched truss bridge over the Mississippi River. The work consisted of ***determining whether the structure was able to support an acceptable level of live load after a hypothetical member failure.*** Using both linear and non-linear analysis of 3D models of the bridge, the redundant capacity of the system was determined based on the capacity of the faulted system. The end conclusions of the report allow the owner to designate specific members as System Redundant Members (SRM). These SRM members are designed and fabricated as Fracture Critical Members (FCM) but do not need to be considered as FCM members for FCM inspection requirements. This allows the owner to tailor the inspection procedure requirements for the truss reflecting the redundancy of its component members in the fracture critical system.
08/20 - 03/22	**Dauphin Island Bridge Repair, Mobile County, AL.** *ALDOT.* **Team Member.** Responsible for senior engineering and quality control. Served as the quality control reviewer for load rating of the segmental concrete box constructed units of the 17,814-foot-long bridge crossing an intracoastal waterway to Dauphin Island, Alabama. Work effort consisted of load rating four units constructed using the span-by-span erection technique as well as a single unit constructed using the balanced cantilever erection technique that contains a central 400-foot span across the navigational channel. At the owner's request, ratings were developed in accordance with LRFR Part B with modifications to reflect evaluation of a segmentally erected concrete superstructure. Operating ratings were developed for HS20, Military Loading, as well as several ALDOT posting vehicles. Although the bridge was in good condition, further refinement of evaluations was required in specific areas at the owner's request.
06/19 - 01/20	**Load Ratings and Inspections of Highway Bridges and Tunnels, Statewide, CT.** *Connecticut DOT.* **Engineer.** Michael Baker is performing over 1,000 biennial bridge safety inspections with element level reporting throughout the state of Connecticut in accordance with National Bridge Inspection Standards (NBIS) and AASHTO's Bridge Manual for Element Inspection. Tasks include routine, in-depth, complex, fracture-critical, and ***movable bridge inspections.*** Typical assignments may involve ***performing bridge load ratings,*** preparing white papers, and conducting special investigations. Michael Baker's services will assist the client in complying with state and federal highway safety standards and in responding to emergency evaluation and repair needs.
12/10 - 01/11	**Bridge 9/10. Lead Engineer.** Responsible for the Load Rating of two balanced cantilever erected segmental concrete box girder bridges (Bridge 9 and Bridge 10) constructed on a section of the parkway leading to the construction project. Load rating of the structure for design, various legal loading conditions, and various loading conditions was required.
12/08 - 10/11	**Bonner Bridge Replacement (NC12),Dare County, NC.** *NCDOT.* **Engineer of Record.** Served as Engineer of Record responsible for the 3,550-foot navigational unit section of the 14,800-foot bridge structure across the Oregon Inlet. The navigation unit superstructure consisted of 11 spans of balanced cantilever erected precast concrete segments supported by precast concrete columns. The maximum span length was 350 feet. During design, he provided detailing guidance for precast substructure columns. Post-tensioning bars were utilized for initial segment erection and for final column post-tensioning. The project's foundations contained either 30" square concrete piling or concrete cylinder piling designed to resist erection loadings, with capacity for a 2000k vessel collision loading, with scour conditions extending to an 80-foot depth.

BRIDGE ENGINEERING SUPPORT PERSONNEL

DEEP BENCH OF ADDITIONAL EXPERTS, IF NEEDED

16. Staff Experience:

Firm employed by	Michael Baker International, Inc.		
Name	**Jenny Raines, PE**	*Years of relevant experience with this employer*	14
Title	Civil Engineer	*Years of relevant experience with other employer(s)*	16
Degree(s) / Years / Specialization	MS / 2003 / Civil Engineering		
Active registration number / state / expiration date	PE No. 11012070 / IN / exp. 07/31/28		
Year registered	2010	*Discipline*	Civil
Contract role(s) / brief description of responsibilities	Bridge Engineering Support Pool		



Jenny specializes in bridge design and has over 20 years of experience in bridge design and rehabilitation that includes analysis, load rating, design, plan development, specification, cost estimate and project management. She is proficient in design and load rating of routine concrete/steel beam bridge and complex bridge like post tensioned concrete box girder, spandrel concrete arch, steel truss, and cable-stay bridges. She possesses proven leadership abilities in managing state DOT, Local Public Agency, and local projects as well.

- ✓ Led the load rating of 2,000+ bridges on a recent INDOT on-call contract
- ✓ Proficient in load rating of routine and complex bridges; trained in NHI "Load and Resistance Factor Rating" Course
- ✓ Experience with DOTD standards from the Pecue Ln project

Experience dates (mm/yy–mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
11/19 - 09/23	**On-Call Bridge Load Rating, Statewide, IN.** *Indiana DOT.* **Project Manager.** Responsible for bridge load rating. Michael Baker provided on-call load rating services for bridges throughout the State of Indiana as an INDOT subconsultant since 2012. Load ratings were performed for many different types of superstructures, including steel, prestressed concrete, and post-tensioned concrete girder in straight or curved alignments. Michael Baker also provided load rating for complex structures, like concrete spandrel arch, rigid steel frame and cable stayed bridges, using finite element method and in-house post process spreadsheets. Load ratings were performed in accordance with load factor rating or load and resistance factor rating, depending on when each bridge was designed.
03/20 - 12/21	**Pecue Lane / I-10 Interchange.** *DOTD.* **Bridge Engineer.** Responsible for supporting bridge load rating. The project involved a 2 span bridge over I-10 for a new interchange that abutment earthwork was being supported by retaining walls.
01/24 - Ongoing	**BrR Program for Rating Iowa Bridges, Statewide, IA.** *Iowa DOT.* **Bridge Engineer.** Responsible for the bridge load rating. Michael Baker is developing BrR template files for the Iowa DOT's standard bridge types with policies and training materials to familiarize local public agencies and their consultants with the templates and the BrR software. Michael Baker is creating analysis settings, system settings, and libraries, and is establishing file naming conventions.
05/25 - Ongoing	**ARDOT Bridge Inspection Program Evaluation, Statewide, AR.** *ARDOT.* **Bridge Engineer.** Responsible for rewriting the ARDOT Load Rating Manual. Michael Baker is working to determine the criteria for selecting a list of major bridges from Arkansas Department of Transportation's bridge inventory. Phase I of this project involved establishing a baseline for the client's recent and current bridge inspection program by reviewing their Bridge Inspection Manual and numerous supporting documents noting areas for improvement. In Phase II, Michael Baker determined the criteria, methodology, and thresholds for prioritizing and selecting 200 bridges from the client's state-owned bridge inventory for a high-level evaluation of repair or replacement needs, including budgetary cost estimating for the next 20 years. Phase II also entails development of a stand-alone load rating manual.
07/25 - Ongoing	**General Engineering Services 2022-2026, Statewide, TN.** *TDOT.* Bridge Engineer. Responsible for performing quality control of truss load ratings. Michael Baker is serving a four-year on-call contract to provide bridge repair services across the state of Tennessee. The team is responsible for a variety of assignments including contract documents, tunnel inspection plan revision, NSTM inspection, truss bridge inspection with maintenance recommendations, and railroad flat car inspection.
01/18 - 07/18	**OSARC Complex and Fracture Critical Bridge Inspections, Statewide, MS.** *MDOT.* **Bridge Engineer.** Responsible for bridge load rating. Michael Baker provided engineering services under multiple contracts for the inspection of locally-owned complex bridges of varying types throughout the state on an expedited schedule. Michael Baker's services included project management; inspection plan development; in-depth condition, appraisal, and fracture-critical inspections; load ratings; and preparation of inspection and load-rating reports.

06/25 - 07/25	**Statewide Routine Bridge Inspections and Load Ratings - Routine Bridge Inspection WA8, Austin, TX.** *TxDOT.* **Bridge Engineer.** Responsible for performing quality control of truss load ratings. Michael Baker provided routine bridge inspection services in the Austin District of Texas. The scope included approximately 467 bridge inspection and load ratings over three months of various bridge types and materials. Work items included advanced coordination for inspection, reporting, calculations, SNBI regulation implementation, client and subconsultant coordination, as well as database updates and maintenance module inputs for repairs or bridge closures.
01/24 - Ongoing	**Load Rating MoDOT Routine Structures On-Call, Statewide, MO.** *Missouri DOT.* **Bridge Engineer.** Responsible for the bridge load rating. Michael Baker is providing bridge engineering services under a three-year contract to load rate state-owned routine structures. The first task involves load rating 100 prestressed concrete double tee girder bridges. The second task is to load rate 205 additional bridges: 79 are prestressed concrete double tee girder bridges, 116 are prestressed I-beam bridges, and 10 are combined prestressed or post-tensioned concrete beam and steel beam bridges.
05/13 - 05/13	**Load and Resistance Factor Rating Planning and Implementation, Statewide, OK.** *Oklahoma DOT.* **Bridge Engineer.** Responsible for bridge load rating. Michael Baker provided planning and implementation services for the Load and Resistance Factor Rating (LRFR) of state-owned bridges. The bridge LRFRs supported the development of an automated truck routing and permitting system. Michael Baker's Phase I tasks included coordinating the development of an LRFR implementation plan, determining bridge load-rating software requirements for the permitting and routing system, developing a software plan, computing LRFR ratings for the gusset plates of truss bridges, and creating a pilot bridge load-rating work plan. Michael Baker's Phase II tasks involved LRFR and LFR load rating of 159 complex bridges based on the use of influence lines and influence surfaces.
10/16 - 12/16	**Load Rating - 2016-07 Package 2, Statewide, KY.** *KYTC.* **Bridge Engineer.** Responsible for load rating review. Michael Baker performed the load rating for 16 curved girder bridges for KYTC. Additional field inspection was required for bridges to document deterioration or obtain measurements where plans were not available. Having completed the project ahead of schedule and under budget, the client added seven additional bridges to the load rating contract, including one post tensioned I-beam bridge; one pin and hanger bridge; one four-span curved girder bridge; and four railroad flat car bridges. Load ratings were performed in accordance with the Manual for Bridge Evaluation and the Kentucky Bridge Inspection Procedures Manual. Bridges were load rated using the AASHTO BrR® software package. Load ratings were performed for the Kentucky legal loads, special hauling vehicles (SU4-SU7), three superload vehicles, and the emergency vehicles (EV2 and EV3) as required by FHWA.
09/22 - 02/24	**Bridge Load Ratings for Various Structures, Statewide, OH.** *ODOT, Central Office.* **Bridge Engineer.** Responsible for bridge load rating. Michael Baker is completing 50 bridge load ratings per month, for a duration of 24 months, as part of the Statewide Bridge Load Rating Project. This project includes creating new system models in the most recent version of the AASHTO Bridge Rating BrR® program to current loading conditions, furnishing the updated BrR® files, and providing their load rating results. Services include acquiring and reviewing all related bridge plans, inventory information, and the most current bridge inspection reports. The load rating analyses will be in accordance with State and Federal requirements and the most current AASHTO Manual of Bridge Evaluation.

16. Staff Experience:

Firm employed by	Michael Baker International, Inc.		
Name	**Kevin Frank, PE, CBI**	*Years of relevant experience with this employer*	3
Title	Project Manager - Bridge	*Years of relevant experience with other employer(s)*	6
Degree(s) / Years / Specialization	BSCE / 2016 / Civil Engineering		
Active registration number / state / expiration date	PE No. 062.074148 / IL / exp. 11/30/27; Certified Bridge Inspector (CBI) No. 2534 / Wisconsin		
Year registered 2022 *Discipline*	Civil		
Contract role(s) / brief description of responsibilities	Bridge Engineering Support Pool		



Mr. Frank serves as a structures project manager with a wealth of experience in overseeing the design of various structures, including bridges, retaining walls, box culverts, and sign supports. His expertise spans pre-stressed concrete, steel, cast-in-place concrete, and timber, and covers a range of projects such as highway interchanges, major river crossings, urban and rural infrastructure, pedestrian bridges, and movable bridges. Additionally, he served as a Civil Engineer at both the City of Milwaukee DPW and Chicago DOT giving him an owner's perspective on projects.

- ✓ Nearly a decade of bridge engineering and load ratings experience
- ✓ Experience with movable bridges and specialty 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 years of experience specified in the applicable MPR(s).*
09/21 - 07/24	**Bridge Inspection Program, Chicago, IL.** *Chicago DOT.* **Project Manager.** Responsibilities included review and approval of routine, fracture critical, element level, and special inspection reports, load ratings, maintenance recommendations, and emergency reports. Responsibilities also included orchestrating improvements to CDOT's bridge inventory management system and working with bridge inspectors to accurately input and collect data for CDOT's bridge improvement programming needs. Coordinated with city agencies, local businesses, Chicago Transit Authority and US Coast Guard for inspection and emergency work access.
08/15 - 08/15	**IH 39, Canadian Pacific Railroad, and Wisconsin River Structures, Columbia County, WI.** *Wisconsin DOT.* Civil Associate. Michael Baker provided engineering services for rehabilitation of four bridges carrying northbound and southbound IH 39 over the Canadian Pacific Railroad and the Wisconsin River. Improvements to the two railroad bridges included a concrete deck overlay, repainting, bearing replacement, expansion joint replacement, and concrete surface repair on the abutments. Improvements on the river bridge included repainting and replacing the expansion joints. The team prepared structure load rating calculations and preliminary and final bridge design. The team also completed traffic control and construction staging plans; structure approach work; cable barrier design; ramp terminal intersection modifications; and agency coordination.
08/15 - 08/15	**2015 Short Span Bridge and Underwater Inspections, Rock County, WI.** *Rock County.* **Inspector.** Michael Baker provided bridge inspection services for 37 short-span local bridges. Structure types included steel deck girder, concrete slab, steel pipe, and concrete box culvert structures. Inspections were completed in conformance with all WisDOT and FHWA requirements. Recommendations were made to the client for each structure regarding replacement, rehabilitation, repair, and maintenance activities.
12/18 - 09/21	**Plankinton Ave Bridge Rehabilitation, Milwaukee, WI.** *City of Milwaukee.* **Project Manager.** While working for the City of Milwaukee, Kevin was responsible for managing all aspects of this project including project management, agency coordination, stakeholder coordination, utility coordination, public involvement, and design development. This rehabilitation project involved sandblasting and painting structural steel on bascule leaves, overcoating steel in the piers, cleaning and staining the bridge, concrete surface repairs and epoxy injection, fiberglass sidewalk plate installation, bike plate removal and reinstallation, centerlock replacement, and additional work as detailed in the contract drawings and specifications.
02/25 - Ongoing	**Consulting Engineering Services.** *Ohio Turnpike Commission.* **Engineer.** Michael Baker conducted annual field inspections focusing on bridges, culverts, pavement, signs, and buildings. The 2024 inspection findings, covering new construction, maintenance, revenues, traffic, and safety, were delivered to the client's staff via Microsoft Access, GIS, and other digital formats. This data supports future maintenance and repair planning. Routine bridge, road and building inspection reports were completed per Ohio Revised Code requirements and submitted to ODOT's AssetWise platform.

16. Staff Experience:

Firm employed by	Michael Baker International, Inc.		
Name	**Hratch "Rich" Pakhchanian, PE**	*Years of relevant experience with this employer*	1
Title	Regional Operations Lead - Bridge	*Years of relevant experience with other employer(s)*	44
Degree(s) / Years / Specialization	Post-Baccalaureate Certificate / 2023 / Public Affairs; MS / 1996 / Civil and Structural Engineering; BS / 1983 / Civil and Structural Engineering		
Active registration number / state / expiration date	PE No. 17333 / MD / exp. 04/29/27		
Year registered	1988	*Discipline*	Civil
Contract role(s) / brief description of responsibilities	Bridge Engineering Support Pool		

Mr. Pakhchanian is a Regional Lead Bridge Operations Engineer with over 40 years of various design and inspection experience for many types of bridges including interest areas of new complex structures, rehabilitation of bridges, bridge safety, movable bridges and tunnels. His career responsibilities have included leading, managing, and directing several programs, both nationally and regionally, and an entire bridge staff which includes bridge design, bridge inspection, bridge management and bridge safety. His experience and academic background highlight a wide range of structural engineering with emphasis on complex bridge design and inspection concepts and procedures.

- ✓ 45+ years of bridge engineering and load rating experience
- ✓ Former Discipline Champion for the entire Office of Bridges and Structures for the Federal Land Highway (FLH) Offices, overseeing staff for all three FLH Divisions

Experience dates (mm/yy–mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
06/25 - Ongoing	**Four-Year Bridge Inspection Services Contract.** *TDOT.* **QA/QC Engineer.** Performed QA/QC reviews of bridge inspection reports to ensure compliance with NBIS and TDOT Standard Practices. Reviewed inspection summaries, condition ratings, SNBI data accuracy, profile verification, and field observations with photographic documentation. Evaluated recommended maintenance actions based on inspection findings. Completed QA/QC of Routine and NSTM inspection reports and cross-checked all assessments against TDOT standards and as-built records to ensure consistency and compliance.
07/25 - Ongoing	**Inspection of Non-Redundant Steel Tension Members (NSTM) Research Project.** *FHWA.* **Bridge Engineer.** Contributed to the development of inspection, evaluation, and load rating guidelines for deteriorated highway bridges for FHWA Headquarters. Led progress on Chapter 3 "Planning and Managing," including drafting content on NSTM procedures, coordination with related inspection types, program requirements, and other key planning and management topics. Michael Baker is completing a revision to the Federal Highway Administration IP-86-26 Inspection of Fracture Critical Bridge Members that provides an updated approach on non-redundant steel tension members (NSTMs) and captures revisions to the NBIS. The team is developing a rational and practice-ready approach for use in determining when load path redundancy exists through simple geometric and structural criteria and is identifying practical methods when analytical assessments are required.
06/25 - Ongoing	**Bridge Inspection and Evaluation Engineering Services, Statewide, SC.** *SCDOT.* **Bridge Engineer.** Provided regional leadership for bridge design, inspection, maintenance, and operations activities. Oversaw technical quality, regulatory compliance, and delivery performance across bridge projects. Coordinated with project managers and multidisciplinary engineering teams to support effective project execution and operational efficiency. Guided adherence to safety standards and agency requirements. Michael Baker was selected as the lead consultant to serve South Carolina statewide, assisting in the asset management, National Bridge Inspection Standards inspection, load rating, repair and rehabilitation recommendation, emergency response, truck permitting, quality control, and engineering evaluation in support of the statewide bridge management program of over 9,500 bridges, including all city and county bridges.
02/26 - Ongoing	**General Engineering Services 2022-2026, Statewide, TN.** *TDOT.* **Engineer.** Michael Baker is serving a four-year on-call contract to provide bridge repair services across the state of Tennessee. The team is responsible for a variety of assignments including contract documents, tunnel inspection plan revision, NSTM inspection, truss bridge inspection with maintenance recommendations, and railroad flat car inspection.

16. Staff Experience:

Firm employed by	Michael Baker International, Inc.		
Name	**Jason Sadowski, PE, SE, CBI**	*Years of relevant experience with this employer*	11
Title	Structures Manager	*Years of relevant experience with other employer(s)*	13
Degree(s) / Years / Specialization	MS / 2007 / Civil Engineering - Structures Emphasis; BS / 2002 / Civil Engineering		
Active registration number / state / expiration date	PE No. 38660-6 / WI / exp. 07/31/28		
Year registered 2007	*Discipline* Civil		
Contract role(s) / brief description of responsibilities	Bridge Engineering Support Pool		



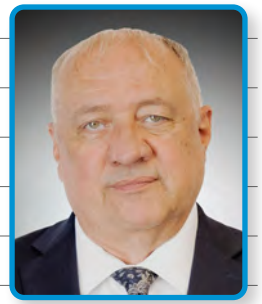
Jason is a project manager and senior structural engineer with extensive experience leading the design of bridges, retaining walls, box culverts, and sign structures. His experience includes prestressed concrete, steel, cast-in-place concrete, and timber, encompassing highway interchanges, major river crossings, urban and rural facilities, and pedestrian and movable bridges. His projects include new structures, structure replacements and structure rehabilitation. He is a highly experienced bridge inspector who has completed numerous load ratings, fatigue analyses, and bridge condition reports. He has developed and implemented quality control procedures to ensure high quality plans and deliverables, and has proven knowledge of AASHTO LRFD and Standard Specifications.

- ✓ 24+ years of bridge engineering and load rating experience
- ✓ Managed more than 100+ structures engineering projects

Experience dates (mm/yy–mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
09/17 - 02/19	**OSARC Statewide Bridge Inspection, Statewide.** *MDOT.* **Team Leader.** Responsible for timber bridge inspection as team leader, preparation of inspection reports, and load rating analysis. Provided quality control review of inspection reports, load ratings, and deliverables for bridges inspected by others. Assisted with the development of load rating procedures and tools for companywide usage. Michael Baker provided inspection and engineering services under multiple contracts for the National Bridge Inventory bridge safety inspections, load rating, and reporting of bridges with varying superstructure types. Michael Baker's services included project management, inspection plan development, routine and in-depth condition and appraisal inspections, load ratings, and the preparation of inspection and load-rating reports. The bridges were located on local road systems owned and maintained by various counties, cities, and towns throughout Mississippi. In all, Michael Baker inspected 1,322 bridges over nine years, from FY 2012 to FY 2020.
06/21 - Ongoing	**PTB 199-41 Various Statewide Services, Statewide, IL.** *Illinois DOT.* **Bridge Inspector.** Responsibilities included bridge inspection. Michael Baker has been involved with 13 work orders since June 2021 with IDOT's Bureau of Bridges & Structures (BBS), assisting with complex load rating assignments on complex bridges and culverts, damage evaluation of bridges, and peer review of bridge policy development.
11/22 - Ongoing	**Bridge Inspection and Related Services IDIQ Master Contract.** *MDOT.* **Structural Engineer.** Provided quality control reviews for load ratings.
08/18 - 11/18	**Load Rating - 2017-02 Package 3, Statewide, KY.** *KYTC.* **Structural Engineer.** Provided load ratings for two curved steel bridges on KY 841 over I-65. BrR 3D FEM analysis method was used. Michael Baker performed the load rating for 17 bridges throughout Kentucky for KYTC. Additional field inspection was required for bridges to document deterioration or obtain measurements where plans were not available. Load ratings were performed in accordance with the Manual for Bridge Evaluation and the Kentucky Bridge Inspection Procedures Manual. Bridges were load rated using the AASHTO BrR® software package. Load ratings were performed for the Kentucky legal loads, special hauling vehicles (SU4-SU7), three superload vehicles, and the emergency vehicles as required by FHWA.
05/18 - 10/19	**On-Call Load Rating, Statewaide, IN.** *Indiana DOT.* **Structural Engineer.** Provided load ratings updates for 'on-call ratings" tasks from INDOT. Also provided QC reviews of ratings performed by others. Ratings work is performed in BrR.
11/21 - 12/21	**On-Call Design, Analysis, Rating, Statewide, WI.** *Wisconsin DOT.* **Senior Structural Engineer.** Responsible for quality control review of design calculations, and leading plan development. Michael Baker provided structure design, rating, and detailing tasks for a variety of structure projects as part of an on-call project. Tasks included design, rating, and plan preparation, as well as quality control checking of design, ratings, plans, and cost estimates for in-house designed bridges.

16. Staff Experience:

Firm employed by	Michael Baker International, Inc.		
Name	**James Beatty, PE**	*Years of relevant experience with this employer*	5
Title	Senior Bridge Engineer	*Years of relevant experience with other employer(s)*	44
Degree(s) / Years / Specialization	BSCE / 1977 / Structural Engineering/Structural Design		
Active registration number / state / expiration date	PE No. 5343 / AR / exp. 12/31/27		
Year registered 1982	*Discipline*	Civil, Structural	
Contract role(s) / brief description of responsibilities	Bridge Engineering Support Pool		



Jim has experience in design of structures/bridges throughout the Southern U.S., with projects across Arkansas, Tennessee, Mississippi, Texas, Oklahoma, and Missouri using AISC, ACI, AASHTO and International Building Codes. He worked for ARDOT for 17 years in the Bridge Design Division. His bridge experience includes layout and design of simple span and multi-span composite steel beam and plate girder bridges (curved and straight), multi-span prestressed concrete bridges, concrete retaining walls and reinforced concrete slab bridges.

✓ Nearly 50 years of bridge engineering experience

Experience dates (mm/yy–mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
11/21 - Ongoing	**On Call Engineering and Design Services, Phillips County, AR.** *ARDOT.* **Bridge Engineer.** Michael Baker is providing design and engineering services for the rehabilitation of a bridge on Highway 49, Section 11, in Phillips County, Arkansas. The project scope includes a comprehensive bridge inspection, load rating analysis, and the development of repair strategies aimed at extending the service life of the superstructure. In addition, the work involves planning for traffic maintenance and staging. Rehabilitation efforts will consist of structural steel repairs and replacements, the application of a polymer overlay on the approach spans, deck replacement for the main truss spans, and various other structural and safety-related repairs.
07/23 - Ongoing	**List 15-18 - State Bridge Rehabilitation Program, Statewide, CT.** *Connecticut DOT.* **Bridge Engineer.** Responsible for the review of bridge detail drawings. Michael Baker provided final design and construction support services for six existing structures as part of the client's statewide List 15–18 Bridge Rehabilitation Program. Typical tasks include highway geometric design, deck replacement, superstructure and bearing replacement, substructure rehabilitation, load rating, foundation design, utility relocation, environmental permitting, scour mitigation, construction staging, and maintenance and protection of traffic plan preparation.
01/22 - Ongoing	**Highway 49 Mississippi River Bridge Rehabilitation, Phillips County, AR.** *ARDOT.* **Bridge Engineer.** Responsible for QC of design and details for new reinforced concrete bridge deck and new elastomeric bearing design and details. Michael Baker is providing design and engineering services for bridge rehabilitation work on Highway 49, section 11 in Phillips County, Arkansas. The project includes detailed bridge inspection, load rating, providing repair options for the superstructure to increase its service life, and maintenance of traffic and stage planning. Proposed rehabilitation efforts include structural steel repairs and replacements, polymer overlay for the approach spans, deck replacement for the main truss spans, and miscellaneous repairs.
11/21 - 03/22	**Districts 4, 8, and 9 Bridge Preservation, AR.** *ARDOT.* **Bridge Engineer.** Michael Baker provided roadway and bridge design and engineering services for the rehabilitation of 64 bridges across the state of Arkansas. The scope of work included bridge deck rehabilitation using polymer overlays. This project also updated the approach guardrails and end terminals to current safety standards. Michael Baker performed extensive field investigations to confirm the current conditions and verify any additional repairs that would be required. Michael Baker also provided Title II phase construction services to assist with contractor submittals, RFIs, and construction-related questions.

16. Staff Experience:

Firm employed by	Michael Baker International, Inc.		
Name	**Megan Land, PE**	*Years of relevant experience with this employer*	9
Title	Civil Engineer - Bridge	*Years of relevant experience with other employer(s)*	0
Degree(s) / Years / Specialization	BS / 2017 / Civil Engineering		
Active registration number / state / expiration date	PE No. 22655 / LA / exp. 12/31/27		
Year registered	2024	*Discipline*	Civil
Contract role(s) / brief description of responsibilities	Bridge Engineering Support Pool		



Megan has experience in bridge design and inspection. Bridge design projects include: DeRoche Creek, the first ABC lateral slide construction method performed by ARDOT; bridge preservation and deck rehabilitation on bridges across Arkansas; and various county road and state highway bridges. Bridge inspection includes experience with both routine inspection and NSTM inspection of complex bridges such as the Hernando DeSoto bridge in Memphis, Tennessee, and the Helena Bridge in Helena-West Helena, Arkansas.

- ✓ Nearly a decade of bridge engineering, inspection, and load rating experience
- ✓ Performed similar on-call load ratings work for similar statewide contracts in neighboring states

Experience dates (mm/yy-mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
12/22 - Ongoing	**ARDOT Bridge Inspection Program Evaluation, Statewide, AR.** *ARDOT.* **Civil Associate.** Michael Baker is working to determine the criteria for selecting a list of major bridges from Arkansas Department of Transportation's bridge inventory. Phase I of this project involved establishing a baseline for the client's recent and current bridge inspection program by reviewing their Bridge Inspection Manual and numerous supporting documents noting areas for improvement. In Phase II, Michael Baker determined the criteria, methodology, and thresholds for prioritizing and selecting 200 bridges from the client's state-owned bridge inventory for a high-level evaluation of repair or replacement needs, including budgetary cost estimating for the next 20 years. Phase II also entails development of a stand-alone load rating manual.
12/24 - 12/24	**General Engineering Services 2022-2026, Statewide, TN.** *TDOT.* **Bridge Inspector.** Provided the NSTM inspection of Piersol Road Bridge and reported the rating and results of the inspection. Michael Baker is serving a four-year on-call contract to provide bridge repair services across the state of Tennessee. The team is responsible for a variety of assignments including contract documents, tunnel inspection plan revision, NSTM inspection, truss bridge inspection with maintenance recommendations, and railroad flat car inspection.
02/25 - 03/25	**Statewide Routine Bridge Inspections and Load Ratings - Work Authorization 7, Dallas, TX.** *TxDOT.* **Bridge Inspector.** Responsible for performing the safety inspection of multiple box culverts in and around Dallas, Texas. Also responsible for reporting the results of these inspections as well as rating the structures with the new SNBI coding system. Michael Baker provided routine bridge inspection services in the Dallas District of Texas. The scope included approximately 825 bridge inspection and load ratings over seven months of various bridge types and materials. Work items included advanced coordination for inspection, reporting, calculations, SNBI regulation implementation, client and subconsultant coordination, as well as database updates and maintenance module inputs for repairs or bridge closures.
11/21 - Ongoing	**2021-2024 On Call Engineering and Design Services, Phillips County, AR.** *ARDOT.* **Civil Associate.** Michael Baker is providing design and engineering services for the rehabilitation of a bridge on Highway 49, Section 11, in Phillips County, Arkansas. The project scope includes a comprehensive bridge inspection, load rating analysis, and the development of repair strategies aimed at extending the service life of the superstructure. In addition, the work involves planning for traffic maintenance and staging. Rehabilitation efforts will consist of structural steel repairs and replacements, the application of a polymer overlay on the approach spans, deck replacement for the main truss spans, and various other structural and safety-related repairs.

16. Staff Experience:

Firm employed by	Moffat & Nichol Inc.		
Name	**Chace Hulon, PE**	*Years of relevant experience with this employer*	11
Title	Senior Bridge Engineer	*Years of relevant experience with other employer(s)*	10
Degree(s) / Years / Specialization	BS / 2005 / Civil Engineering		
Active registration number / state / expiration date	PE No. 39701 / LA / exp. 09/30/28		
Year registered	2015	*Discipline*	Civil
Contract role(s) / brief description of responsibilities	Bridge Engineering Support Pool		



Chace is a Civil Engineer and bridge asset management leader with more than 20 years of experience in bridge inspection, load rating, rehabilitation, and preservation programs. As Vice President of Inspection and Rehabilitation Services at Moffatt & Nichol, he has managed more than 40 NBIS bridge inspection projects, served as an NBIS Team Leader on over 80 projects, and performed or reviewed more than 5,000 bridge inspections across the United States. Mr. Hulon has extensive experience evaluating structural capacity and remaining service life, performing load ratings on bridges and waterfront structures, and developing rehabilitation recommendations based on detailed condition assessments. He served as Chief Editor and Chairman for DOTD's Bridge Inspection Manual and Bridge Load Rating Manual updates, helping implement evolving NBIS and SNBI requirements statewide. His qualifications include FHWA certifications in bridge inspection, underwater bridge inspection, fracture-critical inspection, and scour evaluation, as well as specialized expertise as a commercial dive supervisor and rope access technician. His combination of hands-on inspection experience, load rating knowledge, and leadership in bridge inspection standards makes him exceptionally qualified to assess bridge safety, structural capacity, and long-term asset performance.

- ✓ Performed or reviewed more than 5,000 bridge inspections across the U.S.
- ✓ Served as Chief Editor and Chairman for DOTD's Bridge Inspection Manual and Bridge Load Rating Manual updates
- ✓ 20+ years of bridge design and load rating experience

Experience dates (mm/yy–mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
01/14 - Ongoing	**IDIQ for Underwater Bridge Inspections, Statewide, LA.** *DOTD.* **Project Manager & Inspection Team Leader.** Leading Moffatt & Nichol's fourth consecutive contract to provide NBIS Underwater Bridge Inspections across Louisiana, focusing on Districts 03, 07, 61, and 62. When the project is completed over 2,700 bridges will be inspected under all task orders combined. Managing and leading in-depth inspections on signature bridges over large waterways with deep foundations and dynamic channel conditions. Inspections augment high resolution multibeam acoustic imaging technology to accurately monitor streambed conditions and structural deficiencies between inspection cycles. Continually responding to several emergency requests for engineering condition assessments and providing repair recommendations.
11/23 – 06/25	**MDOT 2023 IDIQ Underwater Bridge Inspections, Statewide, MS.** *MDOT.* **Project Manager.** Responsible for a three-year retainer contract for Levels I, II, and III underwater inspections of nearly 70 bridges in MDOT Districts 2 and 5 in accordance with FHWA BIRM, AASHTO MBE, current NBIS requirements and the MDOT PONTIS Inspection Manual for Bridges. Reviewed and evaluated critical structural conditions and communicated necessary actions of remedy. Responded within 24 hours to an emergency inspection request. Underwater acoustic imaging techniques were deployed to map out limits of scour and quantities required for a riprap repair. Moffatt & Nichol is currently on a third IDIQ retainer contract.
01/23 – Ongoing	**SNBI Program Development and Manual Publications, Statewide, LA.** *DOTD.* **Project Manager, Chief Editor, & Chairman of the Committee.** Led development of the Bridge Inspection Manual (BIM) (including off-system directives), the Bridge Load Rating Manual, and the Coding & Field Guide. The redevelopment is a result of the recent NBIS changes in the CFR and the implementation of the Specifications for the National Bridge Inventory (SNBI). The Manual will be fully compliant with the FHWA SNBI Program Metrics in accordance with the published timeline. The Manual will be uniquely ordered in a systemic fashion with an appendix to store all vital updated forms for the Bridge Inspection Program. Following delivery, acceptance and publishing of training will be delivered to all Districts on the newly released BIM document. Moffatt & Nichol has been retained for 5 years to provide critical updates following NBIS changes.

03/19 – 8/24	**In-Depth Bridge Inspections, Statewide, LA.** *DOTD.* **Project Manager & NBIS Team Leader.** Performed in-depth bridge inspections on complex and movable bridges. As a major subconsultant to HNTB, Moffatt & Nichol performed in-depth inspections (fulfilling both routine and fracture critical inspection types) as a quality assurance measure on the district personnel for the Headquarters Bridge Inspection Office. Level III inspections of submerged elements in accordance with the FHWA, BIRM, AASHTO MBE, AASHTO BEIM, and the BIM were required as needed. Bridge types included cantilever trusses, cable-stayed bridges, movable swing span bridges and bascule bridges.
06/22 – 12/24	**USACE Bridge Inspection Services at USAG Fort Polk, USACE Vicksburg District and ERDC, Leesville, LA.** **Project Manager & Team Leader.** Led the condition assessments reportable bridges in the Fort Polk inventory. Moffatt & Nichol was tasked with three (3) consecutive projects at Fort Polk from 2022-2024 to inspect a total of over 150 roadway and railroad bridges. Structure types included multi-beam reinforced concrete bridges, reinforced concrete pipe and box culverts, and corrugated metal arch bridges and pipe culverts. Led and supervised the underwater inspection of four bridges with high water levels to assess undermining of spread footings and provided repair recommendations and ROM cost estimates for repair. Performed final quality assurance report reviews and coordinated the submittal packages.

16. Staff Experience:

Firm employed by	Neel-Schaffer, Inc.		
Name	**Richard Withers, PE**	*Years of relevant experience with this employer*	4
Title	Bridge Asset Management Lead	*Years of relevant experience with other employer(s)*	24
Degree(s) / Years / Specialization	BS / 1997 / Civil Engineering		
Active registration number / state / expiration date	PE No. 15593 / MS / exp. 12/31/26		
Year registered	2002	*Discipline*	Civil
Contract role(s) / brief description of responsibilities	Bridge Engineering Support Pool		



Richard Withers joined Neel-Schaffer in 2022 as an Engineer Manager following a distinguished 24-year career with the Mississippi DOT, where he most recently served as Bridge Inspection Program Manager. Widely recognized for his expertise in bridge load rating, Richard has extensive experience performing and overseeing all aspects of load rating analyses, load posting determinations, and quality assurance reviews. At MDOT, he was responsible for statewide oversight of bridge load rating and posting programs, ensuring compliance with FHWA and National Bridge Inspection Standards (NBIS) requirements. His experience includes managing bridge inventory data, inspection records, overweight permitting, and QA/QC programs, providing him with a comprehensive understanding of the technical and regulatory requirements associated with bridge load ratings. At Neel-Schaffer, he continues to lead and perform bridge inspection and load rating services for a variety of bridge types and owners, leveraging decades of experience to support safe and reliable transportation infrastructure.

- ✓ Former MDOT Bridge Inspection Program Manager
- ✓ 28+ years of bridge evaluation, rating, and inspection experience

Experience dates (mm/yy–mm/yy)	*Experience and qualifications relevant to the proposed contract; i.e., "designed drainage", "designed girders", "designed intersection", etc. Experience dates should cover the years of experience specified in the applicable MPR(s).*
06/23 - Ongoing	**Bridge Load Rating, Statewide, TN.** *TDOT.* **Bridge Engineer.** Performed Load Ratings. Neel-Schaffer performed 200 bridge load ratings for the Tennessee Department of Transportation. Superstructure types include simple and continuous for live load prestressed concrete AASHTO I-girders, continuous for live load concrete box beams, cast-in-place concrete simple and continuous Tee beams, simple and continuous steel multigirders, concrete continuous slabs and post-tensioned and conventionally reinforced concrete multicell box girders. Structural detailing included complex bridge features, including curved, skewed, widened and flared beams, some of which required 3D finite element analysis and integral pier modeling. Load ratings were performed utilizing LRFR methodology. Load rating models created in AASHTOWare Bridge Rating (BrR) software included deterioration considerations as described in the most recent bridge inspections. Comprehensive bridge load rating reports were generated to document load rating results, assumptions and supporting calculations. Load rating reports were also created in InspectX to document load rating results and related SNBI data for the national bridge inventory.
08/22 - Ongoing	**OSARC Nonredundant Steel Tension Member/Complex Bridge Inspections and Load Rating, Statewide, MS.** *MDOT.* **Bridge Engineer.** Performed load ratings and bridge inspections. During each yearly cycle, Neel-Schaffer performed approximately 75 to 150 routine, Nonredundant Steel Tension Member (NSTM) and repair bridge inspections and load ratings for bridges with complex and NSTM elements located across the state. Examples of NSTM bridge types included steel girders, steel through trusses, steel girder/floorbeam systems and steel RR flatcars with various unusual elements such as steel haunched box girders. Substructure load ratings included pile bents composed of timber, steel and prestressed concrete piles, along with associated timber, steel and concrete caps. Bridge inspections were performed in accordance with the National Bridge Inspection Standards. Load ratings were performed using both LRFR and LFR.
08/22 - Ongoing	**OSARC Timber Bridge Inspections and Load Rating, Statewide, MS.** *MDOT.* **Bridge Engineer.** Performed load ratings and bridge inspections. During each yearly cycle, Neel-Schaffer performed approximately 125 to 200 routine and repair bridge inspections and load ratings for bridges with timber elements. Bridges may have been built from near 1940 to the present day and are of various lengths and could have unusual configurations.
08/22 - Ongoing	**Bridge Inspections, Pike County, MS.** *Pike County Board of Supervisors.* **Bridge Engineer.** Performed load ratings and bridge inspections. During each yearly cycle, Neel-Schaffer performed approximately 60 to 100 routine and scour monitoring bridge inspections for bridges with steel and concrete elements across the county. Neel-Schaffer is currently responsible for the inspection of all non-complex bridges, such as prestressed concrete multigirder bridges, precast channel beams, and concrete box culverts. Some bridges are inspected annually, and others are inspected every two years.

SECTION 17

FIRM EXPERIENCE



OSARC Bridge Inspections & Load Ratings, Statewide, Mississippi



Bridge Load Rating and Evaluation Contract, Statewide, South Carolina



Bridge Inspection and Load Rating Quality Assurance, Statewide, Montana

DOTD can rely on the Michael Baker Team's extensive expertise delivering similar bridge load ratings programs across the nation, such as MDOT's OSARC Bridge Safety Inspections and Load Ratings program, and TxDOT's Statewide Routine Bridge Inspections and Load Ratings contracts.

Michael Baker International's Projects

17. Firm Experience:

Firm name	Michael Baker International, Inc.	*Past Performance Evaluation Discipline(s)**	Bridge
Project name	**IIJA Off-System Bridge Program - Initial and Additional Services**	*Firm responsibility (prime or sub?)*	Prime Consultant
Project number	H.015338; H.015489; H.015490; H.015491; H.015492; H.015493; H.015494; H.015495	*Owner's Name*	Louisiana Department of Transportation and Development
Project location	District 07 Parishes, LA	*Owner's Project Manager*	Kurt Brauner, PE
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802 | 225-379-1933 | Kurt.Brauner@la.gov		
Services commenced by this firm (mm/yy)	10/22	*Total consultant contract cost ($1,000's)*	$2,450
Services completed by this firm (mm/yy)	Ongoing	*Cost of consultant services provided by this firm ($1,000's)*	$1,450

Michael Baker was selected by DOTD to provide bridge, roadway and environmental services for the replacement of off-system bridges in the five parishes (Allen Parish, Beauregard Parish, Calcasieu Parish, Cameron Parish and Jefferson Davis Parish) located in DOTD District 07. This off-system bridge program is being 100% funded by the recently passed IIJA bill. DOTD allocated $30.3 million of funding for District 07 for the implementation cost (construction, design, mitigation, right-of-way acquisition and utility relocation) for the replacement of bridges in this district. Structures will be replaced with Culvert(s), Box Culvert(s), or Slab Span Bridges that are available in DOTD Standard Plan catalog.



Part of the design calculations involved performing as-designed load ratings. ***We load rated the box culverts using AASHTOWare BrR in accordance with ASTM C1577,*** as directed by DOTD. One of the bridges at the Arkadelphia site has a curved span. The standard plans DGNs were modified to show the curved slab span as well as a BrR model and a LEAP model was developed to check the ***load rating for the substructure to take into effects of the centrifugal force due to the sharp horizontal curve.***

Additionally, since the existing bridge for Russell St has a raised curb and the approach roadways have sidewalks, it was deemed necessary for the replacement structure to also have a sidewalk on one side of the bridge. Since this bridge is therefore no longer designed on the basis of standard plans, we designed and load rated both superstructure and substructure. We used AASHTOWare BrR and BrDr ro load rate and perform a design spec check for the superstructure, and ***used the output from the LEAP bridge model to load rate the substructure*** in Excel.

Currently, this project is approximately 90% complete, and it is anticipated that all 12 bridges will have been let for construction by 2027. See the listed structures with the proposed replacement structure:

- H.015338 - Ardoin Cove Structures - 1 Bridge @ 100' (5 spans) & 3 Box Culverts - 10' x 7' @ 36'
- H.015489 - Arkadelphia Road Bridges - 1 Bridge @ 80' (4 spans) & 2 Bridges @ 100' (5 spans)
- H.015490 - Loftin Road - 4 Box Culverts - 8' x 6' @ 50'
- H.015491 - Bankens Road - 2 Box Culverts - 10' x 7' @ 52'
- H.015492 - Russell Street Structure - 1 Bridge @ 100' (5 Spans w/ Sidewalk)
- H.015493 - Muria Road Structure - 1 Bridge @ 60' (3 Spans)
- H.015494 - Lyons Road Structure - 1 Bridge @ 120' (6 Spans)
- H.015495 - Pecan Orchard & Payton Road Structures - 1 Bridge @ 120' (6 spans) & 1 Bridge @ 60' (3 spans)

RELEVANT FEATURES

- DOTD Project Meeting the Latest DOTD Design Guidelines
- IDIQ Contract
- As Designed Bridge Load Ratings
- Accelerated Schedule via Design-Build Delivery

Participating Team Members:
Shalin Sheth, PE | Jeff McRae, PE | Daniel Thornhill, PE | Alexis Harrouch, PE | Gabriel Rice, PE



17. Firm Experience:

Firm name	Michael Baker International, Inc.	*Past Performance Evaluation Discipline(s)**	Bridge, Traffic
Project name	**OSARC Bridge Safety Inspections and Load Ratings**	*Firm responsibility (prime or sub?)*	Prime Consultant
Project number	N/A	*Owner's Name*	Mississippi Department of Transportation (MDOT)
Project location	Statewide, MS	*Owner's Project Manager*	Harry James
Owner's address, phone, email	401 North West Street, Jackson, MS 39215 | 601-359-7150 | mail@osarc.state.ms.us		
Services commenced by this firm (mm/yy)	09/11	*Total consultant contract cost ($1,000's)*	$15,623
Services completed by this firm (mm/yy)	Ongoing	*Cost of consultant services provided by this firm ($1,000's)*	$15,623

Michael Baker has a 75-year history of serving the state of Mississippi. Our team has been a reliable partner for the Mississippi Department of Transportation (MDOT) Office of State Aid Road Construction (OSARC) for over 14 years. Under this contract, we have provided expertise in bridge inspection and load rating services for select bridges owned and maintained by various counties, cities, and towns throughout the state. Superstructure types included truss bridges, continuous plate girder, and steel girder bridges, railroad flat cars, movable bridges, bridges with prestressed concrete beams, concrete T-beams, concrete slab spans, precast channel beams, and timber bridge spans. Our focus has included load rating assessments aligned with federal guidance from the FHWA and AASHTO standards.

Bridge Load Ratings: Our load rating procedures have addressed a diverse range of bridge types. This approach has ensured accurate evaluations for approximately 1,700 of OSARC's 11,000 bridges. Each load rating was conducted using AASHTOWare's BrR software to perform Load Resistance Factor Rating (LRFR), Load Factor Rating (LFR), or Allowable Stress Rating (ASR) to analyze inventory and operating loads, state legal load vehicles and special emergency vehicles. Michael Baker prepared signed and sealed load rating reports, including weight restriction recommendations for each structure.



The load rating process involved a systematic approach where we prepared detailed bridge inspection plans to specify the necessary evaluation criteria and inspection frequency, particularly for fracture-critical elements. Following thorough inspections, we compiled comprehensive reports that included conditions, appraisal ratings, and detailed load rating computations. These reports featured visual documentation of any defects and essential load rating information.

The final project deliverables consisted of all findings organized within the department's AssetWise™ system. This encompassed inspection notes, sketches, photographs, load rating results, and recommendations for weight restrictions. Our diligent approach not only ensures compliance with regulations but also enhances the safety and operational viability of bridges throughout the state.

Bridge Inspections: Michael Baker's inspection services included inspection plan development, routine and in-depth condition and appraisal inspections, load ratings, and report preparation. Many of the bridges were located on local road systems owned and maintained by various counties, cities, and towns. ***In total, Michael Baker inspected more than 1,300 of OSARC's 12,000 bridges over the course of multiple recurring contracts.***

RELEVANT FEATURES

- IDIQ-type Contract for State DOT Agency
- Bridge Load Ratings
- Inspection Program Reorganization
- Fracture Critical and Routine Bridge Inspections
- Fixed and Movable Bridges
- Report Preparation
- Traffic Control
- DOT Inspector Training

Participating Team Members:
Shalin Sheth, PE | Fred Harper, PE | Jeff McRae, PE | Layton Breithaupt, PE | Luke McMahen, PE, SPRAT I | Gabriel Rice, PE



17. Firm Experience:

Firm name	Michael Baker International, Inc.	*Past Performance Evaluation Discipline(s)**	Bridge
Project name	**General Engineering Services, 2022 - 2026**	*Firm responsibility (prime or sub?)*	Prime
Project number	N/A	*Owner's Name*	Tennessee Department of Transportation (TDOT)
Project location	Statewide, TN	*Owner's Project Manager*	Rebecca Hayworth
Owner's address, phone, email	505 Deaderick Street, Nashville, TN 37243 | 615-253-2448 | rebecca.hayworth@tn.gov		
Services commenced by this firm (mm/yy)	07/22	*Total consultant contract cost ($1,000's)*	$8,975
Services completed by this firm (mm/yy)	06/27 (est.)	*Cost of consultant services provided by this firm ($1,000's)*	$8,975

Michael Baker is serving a four-year on-call contract to provide a wide array of bridge repair, load ratings, and maintenance services across Tennessee. The team is responsible for a variety of assignments including contract documents, load rating and specialty inspection of complex bridges, and maintenance recommendations. Relevant work orders under this contract include:

Load Rating of 22 Structures: Michael Baker is ***delivering 22 load ratings on a variety of structure types*** including steel, reinforced concrete, prestressed concrete, and two railroad flatcar (RRFC) bridges. The team is using TDOT's Bridge Evaluation Manual and the full list of trucks from an ongoing parametric vehicle study conducted by TDOT. ***All load ratings are anticipated to be completed in BrR.*** An in-house expert assisted with research on the behavior of RRFCs as bridges. Our ability to mobilize resources from multiple offices and maintain schedule integrity underscores our capacity for large-scale, complex assignments such as this.

Various On-System and Off-System Bridges, Statewide: The team produced ***models and stamped load rating reports*** of three off-system NBIS bridges, including two flat car bridges, as well as 19 NBIS bridges.

Dyer County Railroad Flatcar Inspections: The team also performed inspections of six different railroad flat cars. Michael Baker used in-depth knowledge of flat car behavior coupled with rope-access inspection techniques to gather data and advised the client of recommendations for both maintenance and ***updated load ratings of the bridges.*** Full hands-on NSTM inspections were conducted on all six bridges. Two bridges involved a second visit to monitor current conditions and gain additional measurement information for load ratings.

NSTM Plan and Manual Development: The work involves written detailed individual NSTM inspection plan procedures for the client's full inventory of NSTM bridges which totaled over 145 bridges. In addition, ***Michael Baker is authoring a new NSTM-specific section of the Tennessee Inspection Manual.*** This work order has helped our staff to gain a thorough understanding of TDOT's NSTM bridge inventory.

Shelby County Truss Inspections: Michael Baker oversaw inspection of ***five truss bridges*** throughout Shelby County and produced associated inspection reports and maintenance recommendations. The team inspected all structures in a single trip with one team lead and two assistant team leads.

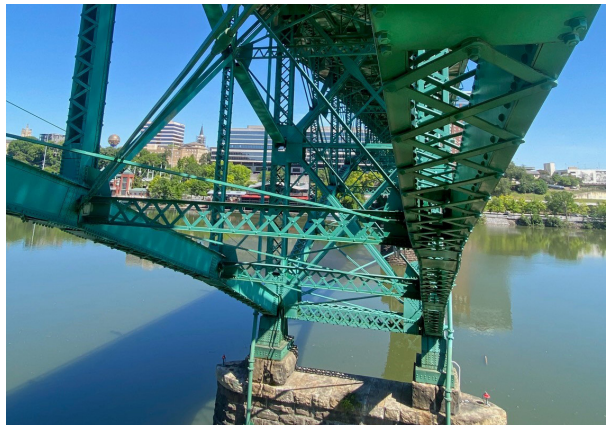
Knox County Bridge Inspection: This task order involved inspection using Society of Professional Rope Access Technicians (SPRAT)-certified climbers on the misaligned portions of the Gay Street truss bridge spanning the Tennessee River. ***Work included load rating of a deformed section using advance analysis and finite element.*** This task was an emergency supplementing inspection in response to misalignment found during routine inspection by the client's inspectors.

Bridge Repair Work Orders: Michael Baker is producing contract documents including structures, roadway, and maintenance of traffic plans for two bridges in the heavily used and populated downtown Nashville. These are the I-65 over Trinity Lane Bridge and Elm Hill Pike over I-40 bridges.

PROJECT SIMILARITIES

- IDIQ-type Contract
- Bridge Load Ratings
- Complex Bridges
- AASHTOWare BrR Software
- Data Collection / Site Visits
- Analysis & Load Ratings
- Specialty Inspections (SPRAT, Underwater)
- Inspection Manual Development
- Maintenance of Traffic / Traffic Control

Team Members Who Worked on This Project:
Shalin Sheth, PE | Tim Armbrecht, PE | Jason Stith, PhD, PE, SE | Stephen Fowler, PE | Petrina Butler, PE | Luke McMahen, PE, SPRAT I | Fred Harper, PE | Ethan Baker, PE | George Manning, PE, SE | Daniel Baxter, PE | Vinacs Vinayagamoorthy, PE | Ling Zhao, PE | Jenny Raines, PE | Megan Land, PE



17. Firm Experience:

Firm name	Michael Baker International, Inc.	*Past Performance Evaluation Discipline(s)**	Bridge
Project name	**Statewide Routine Bridge Inspections and Load Ratings**	*Firm responsibility (prime or sub?)*	Prime
Project number	N/A	*Owner's Name*	Texas Department of Transportation (TxDOT)
Project location	Statewide, TX	*Owner's Project Manager*	Jesus A. Alvarez, PE - Bridge Inspection Program Manager
Owner's address, phone, email	6230 E Stassney Lane, Austin, TX 78744 | 512-416-2183 | Jesus.alvarez@txdot.gov		
Services commenced by this firm (mm/yy)	02/23 (most recent contract)	*Total consultant contract cost ($1,000's)*	$6,515 (most recent contract)
Services completed by this firm (mm/yy)	Ongoing	*Cost of consultant services provided by this firm ($1,000's)*	$6,515 (most recent contract)

Since 2015, Michael Baker has managed multiple recurring IDIQ contracts, performing routine monthly inspections and load ratings of bridges and culverts for TxDOT in various districts statewide. This work has included both simple and complex bridges, ranging from culverts, concrete and steel, simple/continuous bridges, and timber stringer spans, to steel truss bridges, historic bridges, and major waterway crossings. ***Load rating services have been delivered using TxDOT's proprietary RATE spreadsheet and TBLR (LFR) spreadsheet, as well as AASHTOWare BrR software.***

Michael Baker has frequently managed multiple simultaneous work authorizations (WAs) across geographically dispersed areas by leveraging multiple teams and a large pool of support staff. We propose using using a similar approach for DOTD's Load Ratings IDIQ contract. ***Under these contracts, we have performed hundreds of load ratings*** across numerous WAs. Relevant, recent examples of this work are presented below:

Routine Bridge Inspections: Since 2024, Michael Baker has provided routine bridge inspection and load rating services for structures of various types in the following TxDOT Districts:

- *Dallas:* approximately 825 inspections and load ratings over seven months
- *Austin:* approximately 467 bridge inspection and load ratings over three months
- *Abilene:* approximately 656 bridge inspection and load ratings over six months

Work items included advanced coordination for inspection, reporting, calculations, SNBI regulation implementation, client and subconsultant coordination, as well as database updates and maintenance module inputs for repairs or bridge closures.

PROJECT SIMILARITIES

- IDIQ-type Contract
- Bridge Load Rating & Inspection Services
- Complex Bridges
- AASHTOWare BrR Software
- Document Retrieval & Review
- Site Visits
- Analysis & Load Ratings
- Traffic Control
- Historic Bridges

Team Members Who Worked on This Project:
Shalin Sheth, PE | Fred Harper, PE | Vinacs Vinayagamoorthy, PE | Alexis Harrouch, PE | Jacob Rish, EI | Jenny Raines, PE | Megan Land, PE

Historic Trinity River (HTR) Bridge Condition Assessment & Inspection: This 1930s era bridge has one 65' steel I-girder span, three 150' through truss spans and twenty-nine 32.5' concrete T-section spans. The inspection team assessed all structural elements on the truss, bridge deck, and substructure. The truss spans had significant impact damage to bracing members in both top and side panels. To accurately load rate the truss bridge, detailed measurements and assessments of each truss member was required. ***Using an innovative approach to meet the 9-week project completion schedule and maintain data quality, Michael Baker used vehicular-mounted LiDAR.*** The LiDAR point cloud provided a detailed 3D model of the bridge deck and components above the bridge deck in MicroStation format. ***With the LiDAR data, the engineering team was able to accurately measure the member deformations and include in the load rating calculations.***

CASE STUDY - SH 16 OVER LLANO RIVER TRUSS BRIDGE

This two-lane, six-span, 876' long structure was built in 1936 and consists of four through truss spans and two enclosed concrete T-beam approach spans running transverse to the roadway. Michael Baker was tasked with load rating the structure after the 2025 routine bridge inspection identified further degradation of defect areas indicating that the bridge condition may have worsened from "Fair" to "Poor". To accurately categorize the bridge condition state, ***Michael Baker needed to update the load rating on record from 2002.*** *This included the use of BrR software and defect modeling of the gusset plates, which was a more recent FHWA requirement that had not previously been calculated.* ***By leveraging our national pool of bridge load rating experts, we were able to efficiently deliver high-quality results for this complex project.*** *This bridge is on the National Register for historical significance, and since it is a truss it consists of multiple non-redundant steel tension members. This makes it a priority for bridge maintenance to the public, which would otherwise have to detour 37 miles to cross the Llano River.*

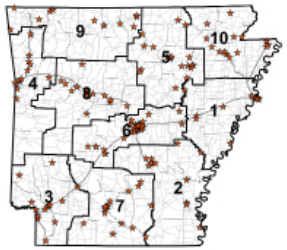




17. Firm Experience:

Firm name	Michael Baker International, Inc.	*Past Performance Evaluation Discipline(s)**	Bridge
Project name	**Bridge Inspection, Maintenance, and Rehabilitation Program Evaluation**	*Firm responsibility (prime or sub?)*	Prime Consultant
Project number	N/A	*Owner's Name*	Arkansas Department of Transportation (ARDOT)
Project location	Statewide, AR	*Owner's Project Manager*	Andy Nanneman
Owner's address, phone, email	10324 Interstate 30, P.O. Box 2261, Little Rock, AR 72209 | 501-569-2466 | Andrew.Nanneman@ardot.gov		
Services commenced by this firm (mm/yy)	08/22	*Total consultant contract cost ($1,000's)*	$1,059
Services completed by this firm (mm/yy)	12/26 (est.)	*Cost of consultant services provided by this firm ($1,000's)*	$1,059

Michael Baker is working to determine the criteria for selecting a list of major bridges from ARDOT's bridge inventory. Phase I of this project involved establishing a baseline for the client's recent and current bridge inspection program by reviewing their Bridge Inspection Manual and numerous supporting documents noting areas for improvement. In Phase II, Michael Baker determined the criteria, methodology, and thresholds for prioritizing and selecting 200 bridges from the client's state-owned bridge inventory for a high-level evaluation of repair or replacement needs, including budgetary cost estimating for the next 20 years. Phase II also entails development of a stand-alone load rating manual.



Phase I - Baseline Review: Michael Baker established a baseline by comprehensively reviewing client documentation noting areas for improvement. This included ARDOT's Bridge Inspection Manual, memorandums or addenda that supplement the Bridge Inspection Manual, the Load Rating and Posting Manual, local government procedures for compliance with NBIS, the FHWA's Bridge Inspection Program Assessment for ARDOT, Hernando de Soto Bridge Emergency Repair and Inspection After Action Report, and ARDOT's Action Plan to respond to FHWA's comments.

The team also reviewed ARDOT's 2020 Bridge Inspection Manual; a random sampling of various inspection reports, bridge ratings, and scour appraisals; and a review of the InspectX Bridge Management System. With client input, we developed and conducted a comprehensive 73 question survey, summarized results, and incorporated them into our report recommendations. Recommendation goals were sorted into high, medium, and low priority based on the importance and timeliness scores.

Phase IIA – Criteria and Selection: Using the most currently available Structure, Inventory, and Appraisal (SI&A) data for state bridges, Michael Baker determined the factors and scoring methodology used to rank and prioritize all bridges, and then select 200 major bridges anticipated to require the highest maintenance, repair, or rehabilitation costs over the next 20 years. The 22 evaluation factors included: year built or reconstructed, number of lanes, historical significance, navigation control, type(s) of service under the bridge, type of construction, bridge length, maximum span length, deck width and area, deck, superstructure and substructure - condition ratings, ***load rating,*** and average daily traffic.

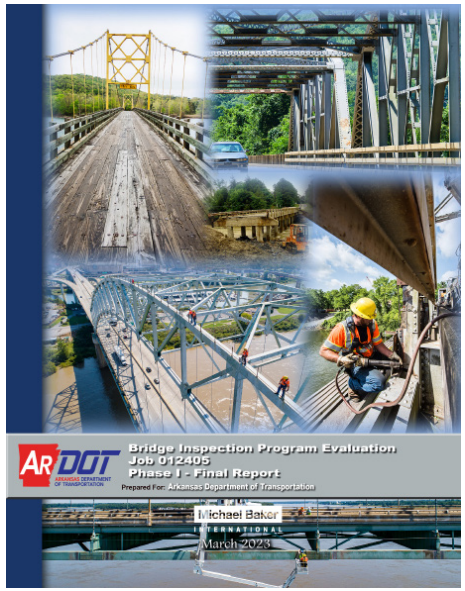
Phase IIB – High-Level Evaluation of Repair Needs with Budgetary Cost Estimate: Using the list of bridges from Phase IIA, Michael Baker is performing a high-level evaluation of maintenance, repair, rehabilitation, and potential replacement needs and a budgetary cost estimate for the next 20 years. The team is responsible for using element level data and ballpark unit pricing for major elements and for determining a budgetary cost to improve and keep those bridges and elements from poor condition. Michael Baker is obtaining element-level data, existing plans, and inspection reports for all bridges to be considered.

Phase IIC - Stand-alone Load Rating Manual: Michael Baker led the development of a stand-alone Load Rating Manual for ARDOT Bridge Division that defines load rating policies, software applications, data collection, and structural considerations for various bridge types, including reinforced concrete, prestressed concrete, steel, timber, and culverts. Our team was responsible for project administration, drafting fifteen chapters and appendices, QA/QC processes, drafting and photos, and delivering the final revised draft based on comments from stakeholders. The manual serves as a critical resource for consistent application of load rating policies and procedures across Arkansas. Specialized sections address non-typical and complex bridge types, substructures, and posting considerations. The inclusion of QA/QC processes are comprised of definitions, conditions, and detailed steps of QA/QC processes.

PROJECT SIMILARITIES

- Statewide IDIQ-type Contract
- Bridge Load Ratings
- Inspection and Load Ratings Criteria

Participating Team Members:
Tim Armbrecht, PE | Fred Harper, PE | Vinacs Vinayagamoorthy, PE | Jason Stith, PE | Jenny Raines, PE | Ethan Baker, PE | Megan Land, PE



Subconsultant Projects

17. Firm Experience:

Firm name	Moffat & Nichol Inc.	*Past Performance Evaluation Discipline(s)**	Bridge
Project name	**IDIQ 2023 Load Rating Services, Statewide**	*Firm responsibility (prime or sub?)*	Subconsultant
Project number	4400027651 | H.009859.5	*Owner's Name*	Louisiana Department of Transportation and Development
Project location	Statewide, LA	*Owner's Project Manager*	William Metcalf, Jr.
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, LA 70802 | 225-379-1741 | william.metcalf@la.gov		
Services commenced by this firm (mm/yy)	03/26	*Total consultant contract cost ($1,000's)*	$220
Services completed by this firm (mm/yy)	Ongoing	*Cost of consultant services provided by this firm ($1,000's)*	$220

Moffatt & Nichol has recently been engaged as a subconsultant as part of a newly awarded bridge load rating contract to perform load rating analyses for 10 Precast Prestressed Concrete bridges. The analyses will be completed using AASHTOWare Bridge Design and Rating (BrR) Version 7.6.1 to evaluate the primary superstructure components of each bridge. Services include downloading and reviewing bridge inventory data, inspection reports, and available supporting documentation; developing bridge rating models; conducting load rating analyses; and preparing comprehensive load rating reports. The load ratings will incorporate all deficiencies and condition-related findings documented in the latest inspection reports and will provide inventory, operating, and legal load ratings for each structure in accordance with applicable standards and agency requirements.

The bridge currently undergoing load rating analysis is a three-span prestressed concrete structure located on US-167 over the Coulee River in Lafayette Parish (Recall No. 030045). The other nine bridges identified for evaluation are anticipated to be authorized under a separate Notice to Proceed and, upon issuance, will be rated as part of that subsequent phase of work.



PROJECT SIMILARITIES

- DOTD Project
- IDIQ Contract
- Bridge Load Ratings
- Document Retrieval & Review
- Analysis & Load Rating
- AASHTOWare BrR Software

Team Members Who Worked on This Project:
Herodotos Pentas, PhD, PE | Isabella Mejdrech, PE | David Wolfe, PE | Chace Hulon, PE

17. Firm Experience:

Firm name	Moffat & Nichol Inc.	*Past Performance Evaluation Discipline(s)**	Bridge
Project name	**OSARC IDIQ Master Contract for Bridge Inspection and Related Services**	*Firm responsibility (prime or sub?)*	Subconsultant
Project number	N/A	*Owner's Name*	Mississippi Department of Transportation
Project location	Statewide, MS	*Owner's Project Manager*	C. David Barrett (Program Manager)
Owner's address, phone, email	412 E. Woodrow Wilson Avenue, Jackson, MS 39216 | 601-359-7129 | dbarrett@osarc.ms.gov		
Services commenced by this firm (mm/yy)	02/23	*Total consultant contract cost ($1,000's)*	Unavailable
Services completed by this firm (mm/yy)	06/23	*Cost of consultant services provided by this firm ($1,000's)*	$115

As a subconsultant, Moffatt & Nichol provided engineering services involving bridge inspection, load rating, and other on-call services under OSARC's National Bridge Inspection Standards (NBIS) Bridge Inspection program for bridges owned and maintained by various counties, cities, or towns throughout Mississippi. Tasks included performance of NBIS compliant inspections, evaluations, and load ratings for various bridge types (routine & complex) involving routine, initial, in-depth, special, fracture critical, damage, supplemental, and/or repair inspections and load rating.

Under their initial task, M&N completed NBIS inspections for 8 bridges. Acquired general information, inventory photos, channel soundings, channel/scour data, and deck/super/substructure condition. Their team provided reports (generated in AssetWise) covering inspection findings with summary noting structural deficiencies. Inspected bridges were 1, 2, or 3 span structures utilizing timber, steel, and/or concrete superstructures with timber, steel, and/or concrete substructures. Bridge decks included gravel, gravel/dirt, asphalt/gravel, or asphalt/dirt/gravel overlays.

Under their second task order, M&N provided load rating analysis for four bridges using AASHTOWare BrR (v7.4.0) for primary superstructure members & LEAP Bridge Concrete (v20) model together with MicroSoft Excel. Services included downloading bridge information/inspection data from AssetWise, performing load ratings, and creating a load rating report in AssetWise which incorporated all deficiencies from the most recent inspection report. Ratings were provided for inventory loads, operating loads, and legal loads vehicles.

The four bridges and the results of those ratings were:

- **Westside Avenue over Indian Bayou (SA67-068), Sunflower County:** Controlling members were varied between a girder in the superstructure and a bent cap in the substructure. Depending on the vehicle analyzed, controlling ratings varied between the two members. Based on rating results, no posting was recommended for the interior girders in the superstructure. Based upon the load rating results, posting was recommended for the EV3 vehicle.
- **Preacher Powell Road over Catahoula Creek (SA23-006), Hancock County:** Controlling ratings were for the interior girders in the superstructure. Based upon the load rating results, posting was recommended for the EV3 vehicle.
- **D. Newman Road over Five Mile Creek (SA25-100), Hinds County:** Controlling ratings were primarily for the exterior girders in the superstructure (one vehicle was controlled by bent cap). Based upon the load rating results, no posting was recommended.
- **Hardy Billips Road over Magowah Branch (SA44-17), Lowndes County:** Controlling ratings were primarily for the exterior girders in the superstructure and the as-built bent cap for the substructure. Depending on the particular vehicle analyzed, controlling ratings varied between the two members. Based upon the load rating results, no posting was recommended.

PROJECT SIMILARITIES

- Statewide IDIQ-type Contract
- Bridge Load Ratings
- Complex Bridges
- AASHTOWare BrR Software
- Document Retrieval & Review
- Analysis & Load Ratings

Team Members Who Worked on This Project:
Herodotos Pentas, PhD, PE | Isabella Mejdrech, PE | David Wolfe, PE | Chace Hulon, PE



17. Firm Experience:

Firm name	Moffat & Nichol Inc.	*Past Performance Evaluation Discipline(s)**	Bridge
Project name	**Limited Services Term Contracts for Providing Load Ratings of Existing Highway Structures - Region III and Statewide**	*Firm responsibility (prime or sub?)*	Subconsultant
Project number	N/A	*Owner's Name*	Virginia Department of Transportation (VDOT)
Project location	Statewide, VA	*Owner's Project Manager*	Tony Barati
Owner's address, phone, email	1401 E. Broad Street, Richmond, VA 23219 | 804-786-5117 | tony.barati@vdot.virginia.gov		
Services commenced by this firm (mm/yy)	11/08	*Total consultant contract cost ($1,000's)*	$18,000
Services completed by this firm (mm/yy)	11/18	*Cost of consultant services provided by this firm ($1,000's)*	$3,061

As a subconsultant, Moffatt & Nichol, under three consecutive contracts, performed load ratings of various types of highway structures on a regional (Culpeper, Staunton, & Northern Virginia Districts) and statewide basis for VDOT. To provide the highest quality for load ratings, the team developed QA/QC plans specifically for these contracts.

Load ratings were performed in accordance with VDOT policies and procedures and the AASHTO Manual for Bridge Evaluation. Results were reported on VDOT's standard load rating summary form along with documentation of the load rater's assumptions. Superstructure load ratings were accomplished using AASHTOWare BrR (formerly VIRTIS) software in accordance with LRFR and LFR methodologies. Curved steel plate girder superstructures were load rated using Descus-I software. Cast-in-place and precast three-sided frames and arches were load rated using STAAD.Pro and LARSA 4D finite element software and spreadsheet calculations. The geometric and structure data was primarily taken from as-built plans and bridge inspection reports, with data sometimes obtained from District bridge files, site visits and obsolete bridge standards.

Over the course of these contracts, Moffatt & Nichol was tasked with load rating 653 bridge structures, including:

- 131 structures with rolled steel beams and concrete deck
- 86 structures with rolled steel beams and timber deck
- One structure with rolled steel beams and corrugated metal deck
- 98 structures with steel plate girders and concrete deck
- 18 structures with curved plate girders and concrete deck
- 54 structures with prestressed concrete beams and concrete deck
- Nine structures with prestressed concrete box beams with concrete decks and asphalt toppings
- 22 structures with prestressed voided slabs
- 48 structures with reinforced concrete tee beams
- 102 structures with reinforced concrete slab spans
- 24 structures with reinforced concrete voided slab spans
- One structure with reinforced concrete through-girders
- Five structures with glued laminated timber (glulam) slab spans
- 54 structures with precast (Con/span, Bebo, and Omega) and cast-in-place concrete frames and arches (including Luten arches)

PROJECT SIMILARITIES

- Statewide IDIQ-type Contract
- Bridge Load Ratings
- Complex Bridges
- AASHTOWare BrR Software
- Document Retrieval & Review
- Analysis & Load Ratings
- Contract-Specific QA/QC Plans

Team Members Who Worked on This Project:
Eric Vugteveen, PE | David Wolfe, PE



17. Firm Experience:

Firm name	Neel-Schaffer, Inc.	*Past Performance Evaluation Discipline(s)**	Bridge
Project name	**Bridge Load Rating Projects**	*Firm responsibility (prime or sub?)*	Prime
Project number	n/a	*Owner's Name*	New Orleans Department of Public Works
Project location	New Orleans, LA	*Owner's Project Manager*	Bao Vu
Owner's address, phone, email	1300 Perdido St, Room 6W03, New Orleans, LA 70112 | 504-658-8001 | bvu@nola.gov		
Services commenced by this firm (mm/yy)	07/15	*Total consultant contract cost ($1,000's)*	$184
Services completed by this firm (mm/yy)	11/17	*Cost of consultant services provided by this firm ($1,000's)*	$125

The New Orleans Department of Public Works requested that Neel-Schaffer provide structural engineering services to determine superstructure and substructure load ratings for 25 bridges, as well as to provide plans and specifications for the repair of the South Broad Street Overpass. DOTD had previously inspected these bridges and recommended that load ratings be developed. Neel-Schaffer's structural engineers were responsible for making site visits, calculating load ratings, and providing bridge repair recommendations.

Engineering services for the project included:

- Site visits;
- Calculations of load ratings for the 25 bridges; and
- Site visit to the South Broad Street Overpass to review DOTD bridge inspection findings and identify and quantify potential bridge repairs.

Load ratings were performed utilized LRFR methodology.





PROJECT SIMILARITIES

- Louisiana Project
- DOTD Specifications
- Document Retrieval & Review
- Site Visits
- Analysis & Load Ratings
- LRFR Methodology
- Repair Recommendations

Team Members Who Worked on This Project:
Wesley Phillips, PE

17. Firm Experience:

Firm name	Neel-Schaffer, Inc.	*Past Performance Evaluation Discipline(s)**	Bridge
Project name	**OSARC Bridge Inspections and Load Rating**	*Firm responsibility (prime or sub?)*	Prime
Project number	n/a	*Owner's Name*	Mississippi Department of Transportation
Project location	Statewide, MS	*Owner's Project Manager*	David Barrett
Owner's address, phone, email	P.O. Box 1850, Jackson, MS 39215 | 601-359-7150 | dbarrett@osarc.ms.gov		
Services commenced by this firm (mm/yy)	08/22	*Total consultant contract cost ($1,000's)*	$9,068
Services completed by this firm (mm/yy)	Ongoing	*Cost of consultant services provided by this firm ($1,000's)*	$9,023

Neel-Schaffer performed approximately 800 routine, Nonredundant Steel Tension Member (NSTM) and repair bridge inspections and superstructure and substructure load ratings for bridges with timber and NSTM elements located across the state. Examples of NSTM bridge types included steel girders, steel through trusses, steel girder/ floorbeam systems and steel RR flatcars with various unusual elements such as steel haunched box girders.

Routine inspections included bridges with timber elements and unusual configurations. Substructure load ratings included pile bents composed of timber, steel and prestressed concrete piles, along with associated timber, steel and concrete caps. Bridge inspections were performed in accordance with the National Bridge Inspection Standards. The inspections and load ratings required SNBI data to be collected and input into the client's electronic database. Load ratings were performed using both LRFR, LFR and ASR methodologies.







PROJECT SIMILARITIES

- IDIQ-type Contract
- Bridge Load Ratings & Inspection Services
- Complex Bridges
- Data Collection / Site Visits
- Analysis & Load Ratings
- LRFR, LFR and ASR Methodologies

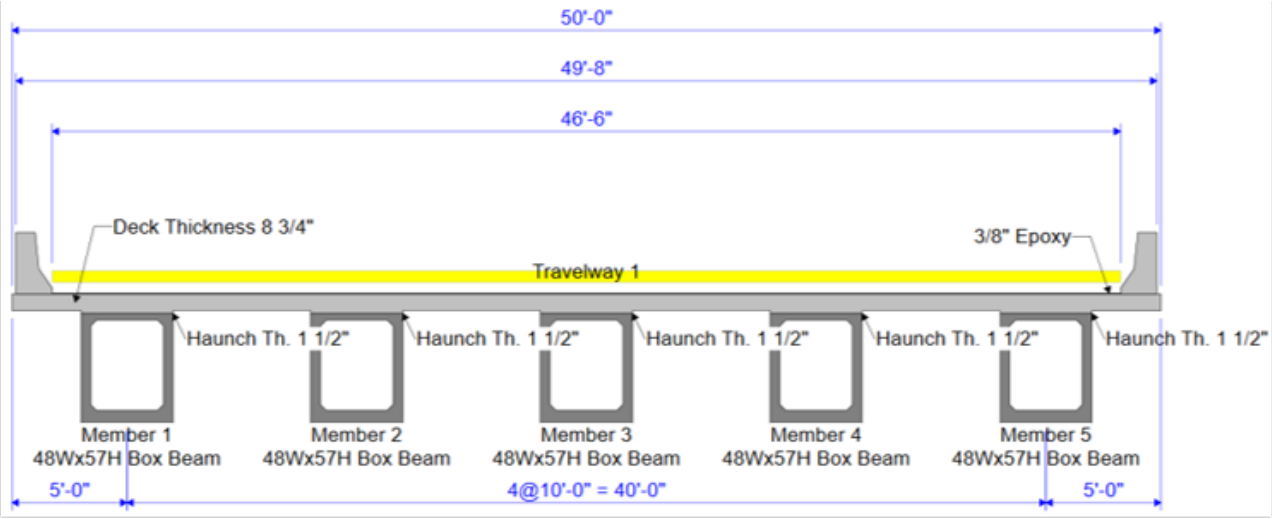
Team Members Who Worked on This Project:
Richard Withers, PE | Wesley Phillips, PE

17. Firm Experience:

Firm name	Neel-Schaffer, Inc.	*Past Performance Evaluation Discipline(s)**	Bridge
Project name	**Bridge Load Rating**	*Firm responsibility (prime or sub?)*	Prime
Project number	N/A	*Owner's Name*	Tennessee Department of Transportation
Project location	Statewide, TN	*Owner's Project Manager*	Rebecca Hayworth
Owner's address, phone, email	W.R.S. Tennessee Tower, 2nd Floor, 312 Rosa L. Parks Ave., Nashville, TN 37203 | 615-253-2448 | rebecca.hayworth@tn.gov		
Services commenced by this firm (mm/yy)	06/23	*Total consultant contract cost ($1,000's)*	$2,441
Services completed by this firm (mm/yy)	Ongoing	*Cost of consultant services provided by this firm ($1,000's)*	$2,441

Neel-Schaffer performed 200 bridge load ratings for TDOT. Superstructure types include simple and continuous for live load prestressed concrete AASHTO I-girders, continuous for live load concrete box beams, cast-in-place concrete simple and continuous Tee beams, simple and continuous steel multigirders, concrete continuous slabs and post-tensioned and conventionally reinforced concrete multicell box girders. Structural detailing included complex bridge features, including curved, skewed, widened and flared beams, some of which required 3D finite element analysis and integral pier modeling.

Bridge inspections were performed by others in accordance with the National Bridge Inspection Standards. Load ratings were performed utilizing LRFR methodology. Load rating models created in AASHTOWare Bridge Rating (BrR) software included deterioration considerations as described in the most recent bridge inspections. Comprehensive bridge load rating reports were generated to document load rating results, assumptions and supporting calculations. Load rating reports were also created in InspectX to document load rating results and related SNBI data for the national bridge inventory.



Typical Section, AASHTOWare Bridge Rating (BrR) software

PROJECT SIMILARITIES

- Bridge Load Rating & Inspection Services
- Complex Bridges
- AASHTOWare BrR Software
- Document Retrieval & Review
- Analysis & Load Ratings
- LRFR Methodology

Team Members Who Worked on This Project:
Richard Withers, PE | Wesley Phillips, PE

SECTION 18

APPROACH & METHODOLOGY



DOTD 2023 Load Ratings IDIQ, Statewide, LA



SH 16 over Llano River Truss Bridge, Llano County, Texas



OSARC Bridge Inspections & Load Ratings, Statewide, Mississippi

Michael Baker has developed a tailored approach to efficiently deliver multiple concurrent task orders under this contract, based on our experience managing similar contracts nationwide.

18. Approach & Methodology:

The Michael Baker Team will apply proven strategies from similar Load Rating IDIQ contracts delivered to peer DOTs across the nation. As IDIQ delivery experts familiar with DOTD's Districts, personnel, standards, and structures, our local team can provide ample support to multiple Task Orders at once .

Michael Baker understands that DOTD's Bridge Maintenance Section requires a responsive, technically rigorous, and scalable statewide load rating team capable of supporting routine ratings, complex structure evaluations, permit reviews, BrR file updates, and implementation of automated permitting initiatives. Our approach combines experienced bridge rating engineers, established QA/QC procedures, advanced analytical capabilities, and extensive experience with AASHTOWare BrR to provide timely and defensible load ratings for bridges throughout Louisiana. All work will be performed in accordance with the current AASHTO Manual for Bridge Evaluation, FHWA requirements, DOTD Bridge Design and Evaluation Manual (BDEM), and Bridge Maintenance policies and procedures. ***The overall methodology is organized by task, as defined in the advertisement:***

TASK 1: Plan and Document Retrieval & Review

Our team will establish a systematic document retrieval process to gather and review all available bridge information from DOTD Headquarters, District offices, AssetWise Bridge Records, FileNet, inspection databases, as well as Bridge Design and Bridge Maintenance departments. Our staff is also familiar with accessing plans stored on microfilms for older inventory. Assumptions related to unknown material properties will be made in accordance with the BDEM and DOTD's approval.

TASK 2: Site Visits

When required by the Task Order, our engineers will perform targeted site visits focused specifically on load rating needs rather than routine inspection activities. The objective of these visits is to verify existing conditions, supplement missing record information, document deterioration, and obtain field measurements necessary for accurate structural modeling. If necessary, Michael Baker can deploy SPRAT -certified personnel for measurements/data collection. ***We also have certified underwater inspectors, if needed.***

TASK 3: Analysis and Load Rating

Structural Modeling Strategy

Analysis and load rating constitute the core of this contract and represent the primary area where our team's expertise provides value to DOTD.

For conventional bridge types, we will utilize AASHTOWare BrR to develop detailed rating models consistent with LRFR requirements for the superstructure. Bridge geometry, member properties, and load distribution parameters will be verified against available plans, inspection findings, and field observations. For substructure rating, Michael Baker is acquainted with DOTD's preferred process of developing a LEAP Bridge model, extracting shear forces and moments for all the rating vehicles including Louisiana specific legal vehicles, and then utilizing MS Excel and/or MathCAD to determine the load ratings. We have executed this process for the as-designed ratings for our recent bridge design projects, and our staff has experience performing hundreds of load ratings this way.

Complex Bridges: For complex bridge types such as trusses and movable bridges, AASHTOWare BrR will itself be used for the load rating. This helps to maintain consistency and compare results against existing ratings computed previously. Moveable bridges can be load rated as a girder-stringer-floorbeam system in a closed position, however an operational analysis can also be conducted to check the performance of the bridge if desired by the DOTD. If a need arises to load rate segmental structures, cable-supported structures, complex fracture-critical systems, and highly skewed or curved bridges, we will develop refined three-dimensional finite element models if necessary to accurately evaluate system behavior and load distribution. The level of refinement will be selected based on bridge complexity, available data, and project objectives.

In accordance with the contract requirements, we will evaluate all required live load cases, including HL-93 design loading, Louisiana legal loads, Specialized Hauling Vehicles (SHV), and emergency vehicles. Load effects will be generated using current AASHTO rating procedures and DOTD requirements.

Timber Bridges: We are aware that many older bridges in Louisiana utilize timber substructures. Our evaluation will account for the unique characteristics and condition-sensitive behavior of timber caps and piles by verifying member dimensions, deterioration, decay, splitting, and section loss documented during inspections and field reviews. Timber piles, caps, bents, and bracing will be rated using the current AASHTO Manual for Bridge Evaluation and applicable LRFR procedures, with particular emphasis on determining the governing net cross-sectional area and effective member capacity based on existing conditions. Where deterioration is present, reductions in section properties and capacity will be incorporated into the analysis to ensure that load rating results accurately reflect the structure's current load-carrying capability and remaining service life.

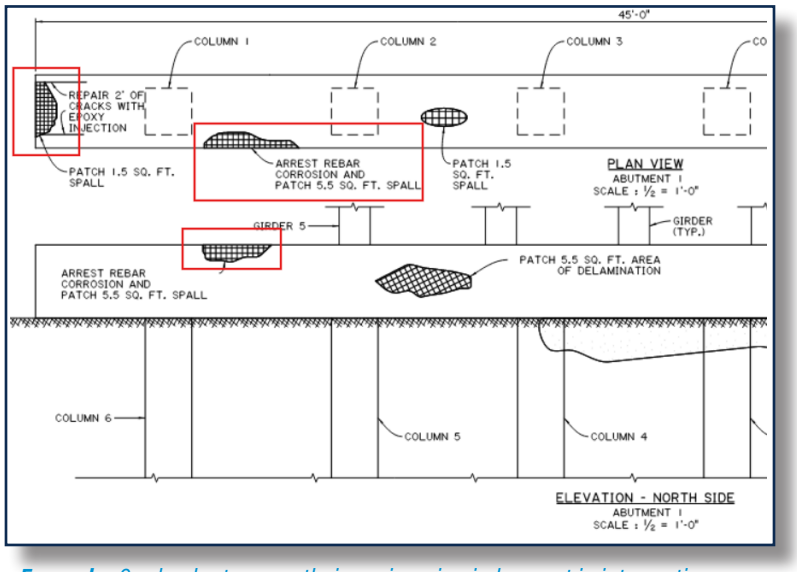
PROVEN SUCCESS - SCDOT BRIDGE LOAD RATING & EVALUATION CONTRACT



Michael Baker provides statewide bridge load rating and evaluation services for various state, county, and municipal structures, focusing primarily on the 1,815 bridges in District 3. We also created a customized training session with hands-on exercises that incorporates SCDOT's Load Rating Guidance Document (LRGD) and use of AASHTOWare BrR software, and we are training SCDOT staff to implement LRGD requirements into their load rating processes.

Incorporation of Existing Condition Data

An accurate load rating must reflect the bridge's current condition rather than its original design capacity. Our approach integrates inspection findings, deterioration data, section loss measurements, repaired members, fatigue concerns, and condition-state information into the rating process. Material properties, resistance factors, and effective section properties will be adjusted where warranted by available evidence and engineering judgment consistent with AASHTO requirements.



Example: *Our load raters use their engineering judgement in interpreting inspection reports and condition ratings before performing the load ratings to make sure whether the documented deterioration affects the portions of the member resisting controlling flexural and shear forces.*

Load Rating Calculations, Refined Analysis, & Posting Evaluation

All rating calculations will be performed in accordance with the current AASHTO Manual for Bridge Evaluation and DOTD BDEM. AASHTOWare BrR will be the primary software used for rating. Influence lines will be provided for bridges that can't be rated using BrR, for critical members, and substructures.

When initial analyses indicate potential posting requirements, our team will perform refined evaluations before recommending posting actions. These evaluations may include improved load distribution modeling, three-dimensional finite element analysis, influence surface development, connection assessments, or reassessment of load path behavior.

This refined-analysis-first philosophy often provides a more accurate understanding of system behavior and can prevent unnecessary restrictions while maintaining public safety and regulatory compliance.

Posting Recommendations and Improvement Concepts

If posting is ultimately determined to be necessary, we will provide practical schematic recommendations to improve or remove posting limitations. Recommendations may include patching and sealing of cracks to protect exposed reinforcement, member strengthening using external post tensioning using titanium alloy bars or CFRP wrap if deemed applicable, connection modifications, insertion/replacement of a pile to shorten the span length within the bent cap, concrete encasement of a timber pile, etc. When warranted by the scope, conceptual repair details and planning-level recommendations will be prepared for DOTD consideration.

Deliverables and Documentation

For every bridge rated under this contract, our team will prepare complete and transparent documentation supporting all assumptions, calculations, model development decisions, field observations, and rating conclusions. Electronic deliverables will include rating reports, BrR files, analytical models, calculations, and any other supporting documentation, as required.

We recognize the importance of maintaining consistency and efficiency in the load rating process, and we believe DOTD should be informed of any assumptions or deviations from standard load rating procedures as early as possible. Open communication and proactive coordination with the client are fundamental to our approach.

Proven IDIQ Methodology in Action: *For example, under a task order involving 10 bridges, we would submit the complete load rating package for the first one or two bridges for DOTD review and approval. Once concurrence is received and expectations are aligned, we will proceed with the remaining bridge load ratings, ensuring consistency across all deliverables and minimizing the need for rework.*

PROVEN SUCCESS - MODOT ON-CALL ROUTINE STRUCTURES LOAD RATINGS



Michael Baker is conducting load ratings on state-owned structures throughout Missouri under a three-year contract encompassing two major tasks:

1. *Load rating for 100 prestressed concrete double tee girder bridges.*

2. *Load rating for an additional 205 bridges, which includes 116 prestressed I-beam bridges and 10 bridges that are either combined prestressed or post-tensioned concrete beam and steel beam structures.*

We are also applying our nationally recognized AASHTOWare BrR expertise to help creating BrR models of the state's inventory of bridges.

Quality Assurance and Quality Control

Because load ratings directly affect bridge posting decisions and permitting operations, our QA/QC process includes independent technical reviews by senior load rating engineers not involved in the original analysis. Reviews will verify model development, input assumptions, calculation methodology, rating results, and compliance with current AASHTO and DOTD

BDEM requirements before final submission. This process provides DOTD with technically defensible and reliable rating products that can be confidently incorporated into asset management and permitting systems.

TASK 4: Training

Our team will develop and deliver specialized training programs focused on complex bridge load rating methodologies, advanced analytical techniques, and effective use of AASHTOWare BrR as and when needed. Training modules will be tailored to DOTD Bridge Maintenance personnel and may be provided virtually or in person as directed by DOTD.

Training materials will include real-world examples, model development procedures, troubleshooting techniques, and lessons learned from complex bridge rating projects. The objective is to enhance DOTD's in-house capabilities while promoting consistency across rating practices statewide.

EXPERT INSTRUCTORS AVAILABLE TO TRAIN DOTD STAFF

Tim Armbrecht, PE



- ✓ *PM developing training materials for Iowa DOT's BrR program*
- ✓ *Developed training materials for FHWA's Structures Program*
- ✓ *Panel member for several NHRCP load ratings research projects*

Daniel Baxter, PE



- ✓ *NHI instructor for LRFD for Highway Bridge Superstructures course*
- ✓ *NHI instructor for LRFR for Highway Bridges course*
- ✓ *NHI instructor for Strut-and-Tie Modeling for Concrete Structures*

Vinacs Vinayagamoorthy, PE



- ✓ *Oversaw load rating of 24,000+ bridges while at Caltrans*
- ✓ *Developed strategies for load rating simple and complex bridges*
- ✓ *Panel member for several NHRCP & FHWA load rating research projects*
- ✓ *Created permit truck configurations for design and load rating*

Philip Walker, PE



- ✓ *University of South Florida instructor for concrete bridge courses*
- ✓ *NHI instructor for Strut and Tie Concrete course*

TASK 5: Overweight Permit Review

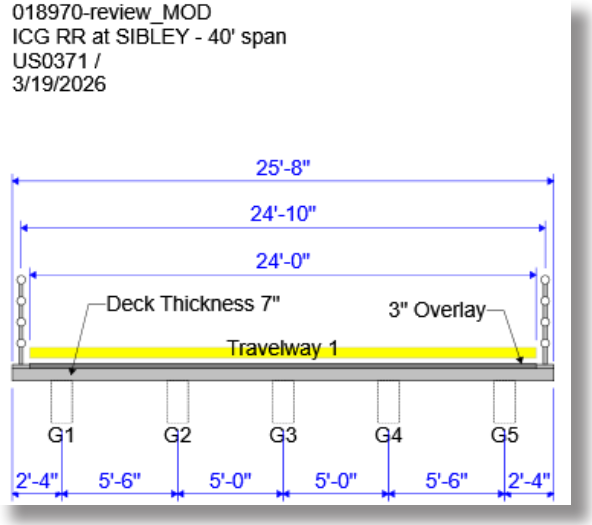
Michael Baker will provide rapid-response support for overweight vehicle permit reviews. Using existing BrR models, refined analytical methods, and DOTD permitting guidance, our engineers will evaluate proposed permit vehicles and determine whether safe passage can be accommodated.

Our process emphasizes efficient turnaround while maintaining technical rigor. When necessary, route-specific recommendations, operational restrictions, lane control requirements, or alternative crossing strategies will be developed to assist DOTD in permit decision-making.

TASK 6: Review, Update, and Correct AASHTOWare BrR Files

We recognize that reliable BrR files are critical to automated permitting initiatives and long-term bridge asset management. Our team will conduct detailed reviews of existing BrR models to verify geometry, member definitions, material properties, loading assumptions, support conditions, and rating outputs.

Where discrepancies or errors are identified, we will troubleshoot the files, implement corrections, validate rating results, and document all modifications. Our objective is to provide robust and dependable BrR models that support both current rating needs and future automated permitting operations.



During review of DOTD's BrR model for the Sibley bridge rehabilitation, Michael Baker identified a software bug that produced different 3D-FEM rating factors depending on the analysis workflow. We coordinated with the BrR support team to resolve the issue and promptly notified the concerned load rater and PM at DOTD.

TASK 7: Bridge Rating Review

To support DOTD's quality assurance objectives, our senior rating engineers will perform independent reviews of ratings developed by other consultants. Reviews will evaluate compliance with AASHTO and BDEM requirements, adequacy of analytical models, appropriateness of assumptions, and accuracy of reported rating factors.

Our review process will identify potential inconsistencies, recommend corrective actions, and provide DOTD with a clear assessment of the technical validity of submitted rating packages. This independent perspective helps ensure statewide consistency and reliability across the bridge rating program.

TASK 8: Miscellaneous Rating Work

Michael Baker will remain available to support emerging bridge rating and permitting initiatives as DOTD's needs evolve throughout the five-year contract. This support may include development of rating policies, evaluation procedures, automated permitting implementation strategies, specialized engineering studies, database reviews, workflow improvements, and technical guidance related to bridge load rating operations.

Our flexible IDIQ team structure allows us to quickly adapt to unique assignments and provide specialized expertise whenever required, helping DOTD respond effectively to changing program needs while maintaining a safe, efficient, and technically sound bridge inventory.

Maintenance of Traffic (Neel-Schaffer)

We have included Neel-Schaffer, Inc. on our team to provide dedicated support to ***both bridge load ratings as well as maintenance of traffic.*** Maintenance of Traffic will only be required in case of a site visit to confirm member dimensions, deterioration and any other missing parameters needed to load rate the bridge. It will be completed in conformance with the latest requirements of the DOTD Roadway Design Procedures and Details Manual, the DOTD Engineering Directives and Standards (EDSM), the Manual of Uniform Traffic Control Devices, DOTD Temporary Traffic Control Standard Plans, and FHWA published guidance.

Specialty Bridge Load Rating Support (Moffat & Nichol)

We have also engaged Moffatt & Nichol (M&N) to provide ***added depth and focused bridge load rating expertise*** to our team. Their firm's approach to bridge load rating aligns with our own, combining thorough data collection, sound engineering judgment, advanced analytical tools, and a rigorous QA/QC process to develop accurate and defensible load ratings.

- ✓ Familiar with DOTD Bridge Maintenance load rating preferences, requirements, and format
- ✓ Provides recommendations for posting, refined analysis, and additional evaluation

Project Management Approach

After selection, Shalin will request a meeting with the DOTD Project Manager and other required DOTD staff for a scoping meeting. This meeting will define Task Order (TO) scope where all parties involved have full understanding of the scope. Defining the scope early helps to make sure these items are included as part of the final contract.

If we are given consultant access to the InspectX system used by the DOTD Bridge Maintenance department, Michael Baker will extract all relevant information, such as past bridge inspection reports and maintenance history, and keep DOTD informed regarding our approach for potential preservation alternatives. ***We emphasize proactive, intentional communication to ensure full alignment with DOTD's objectives*** for each structure and its intended performance outcomes.

Project Schedule - Managing Two Task Orders Concurrently

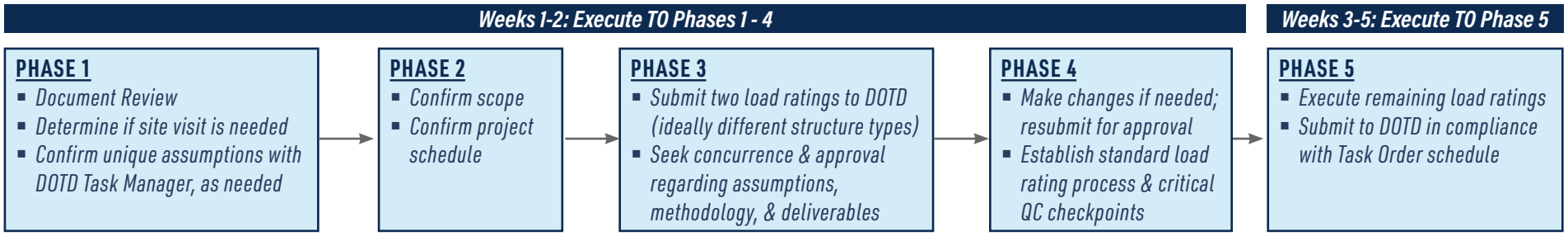
The sample schedules below illustrate two example TOs being delivered concurrently:

- ***TO 1*** focuses on a large group of 15 simple, fixed-span bridges
- ***TO 2*** focuses on 1-2 complex bridges (possibly a truss bridge and/or movable bridge)

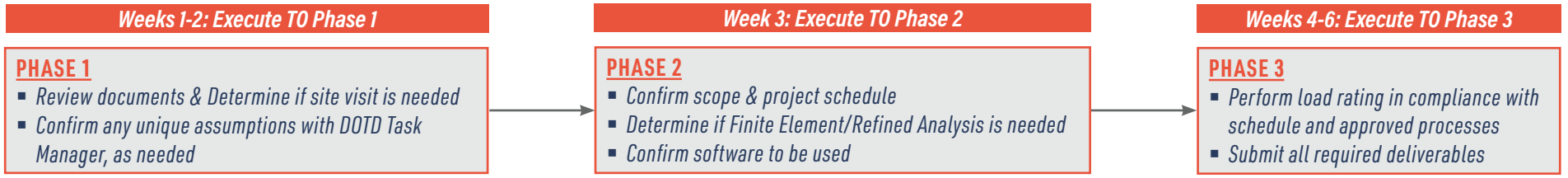
Durations for those services are shown below. ***Please note that the indicated timelines are approximate and for illustrative purposes, and we recognize that depending on the complexity of the bridge, the project timeline can vary.***

The Michael Baker team is staffed to deliver two such task orders simultaneously, with ample capacity and redundancy to meet the fluctuating needs of IDIQ contracts. Additionally, we have staff who are capable of developing training modules in parallel to these as well as staff who can evaluate permit ratings. Shalin, Gabriel, and Principal-in-Charge Daniel Thornhill will seamlessly communicate with each other and with DOTD to assess each TO's needs and manage our team's resources apropriately. They will continually monitor TO schedules and budgets, looking for opportunities to ramp up or down resources to expedite work, and reallocate personnel resources between teams as the demands of each TO fluctuate. As shown on our organizational chart in Section 14, ***we have a deep pool of qualified bridge engineers who are not currently assigned to any task, ready and available for support.***

EXAMPLE TASK ORDER: 15 SIMPLE, FIXED-SPAN BRIDGES



EXAMPLE TASK ORDER: 1-2 COMPLEX BRIDGES



SECTION 19

WORKLOAD



OSARC Bridge Inspections & Load Ratings, Statewide, Mississippi



Bridge Load Rating and Evaluation Contract, Statewide, South Carolina



Bridge Inspection and Load Rating Quality Assurance, Statewide, Montana

Each member of the Michael Baker Team offers DOTD high current availability, backed by proven success on numerous past and present projects for the Department.

19. Workload:

Firm(s) ***ALL FIRMS*** *MUST BE REPRESENTED IN THIS TABLE*	*Past Performance Evaluation Discipline(s)*	*Contract Number and State Project Number*	*Project Name*	*Remaining Unpaid Balance* **
Michael Baker International, Inc.	Bridge	Contract No. 4400021519 S.P. No. H.012030.5 F.A.P. No. H012030	US 371: KCS RR Overpasses HBI	$40,000
	Bridge	Contract No. 4400021519 S.P. No. H.012030.5 and S.P. No. H.016471.5	US 371: KCS RR Overpasses HBI and US 371: ICG RR Overpass – Supplemental No. 3	$133,000
	Bridge	Contract No. 4400025026 S.P. No. H.015338 F.A.P. No. H015338	Infrastructure Investment and Jobs Act (IIJA) Off-System Bridge Program – District 07, Supplemental Agreement No. 1	$54,350
Moffat & Nichol Inc.	Bridge	4400029207 H.009730.5	IDIQ Contract for Underwater Bridge Inspection	$1,353,915
	Bridge	4400029683 H.009730.5	IDIQ Contract for In-Depth Bridge Inspection	$248,498
	Bridge	4400027651 H.009859.5	IDIQ Contract for Bridge Load Rating Services	$214,731
	Bridge	4400026585 H.006226.5	Pointe-a-la-Hache Ferry Landing Replacement	$130,698
Neel-Schaffer, Inc.	Traffic	4400010428 S.A. 6 H.004774.5; H.007300	Kansas Lane: Garrett Road Connector and I-20 Improvements (SUB)	$70,974
	Traffic	4400017438 H.013284	MRB South GBR: LA 1 to LA 30 Connector, Ascension, EBR, Iberville & WBR	$23,250
	Traffic	4400026458 H.014710.5	Cedar Street Ext. to LA 22 and Roundabout	$17,951
	Traffic	4400025299 H.016168.1	Baton Rouge Northern Bypass Expressway	$137,277
	Traffic	4400023689 H.015574.5	LCG FYA Signal Improvements Phase 2	$191,594
	Traffic	4400028585 H.014516.5	Mills Ave & Rees St Intersection Imp	$44,788
	Traffic	4400025299 H.014305.1	US 61: Cardinal Drive to Bert Street	$121,104
	Traffic	4400025299 H.016437.5	US 190: Wooddale to Livingston P/L	$73,432

SECTION 20

CERTIFICATIONS/LICENSES



Pecue Lane / I-10 Interchange, Baton Rouge, Louisiana
Source: WAFB 9News


NODPW Bridge Load Ratings,
New Orleans, Louisiana


U.S. 371 Sibley Bridge Rehabilitation, Sibley, Louisiana

The Michael Baker Team is fully certified and licensed in the appropriate fields and disciplines necessary to deliver this project in compliance with DOTD and industry standards.

Alexis Harrouch, PE - Michael Baker International

ATSSA

Safer Roads Save Lives

Alexis Harrouch

has attended
Louisiana Traffic Control Supervisor Refresher

Completed: 19-JUN-2026

CEU (If Applicable): 0.75

ATSSA provides training and certification but neither constitutes employment by ATSSA.

This certificate provides proof of training, not certification.

American Traffic Safety Services Association
ATSSA.com

Gabriel Rice, PE - Michael Baker International

ATSSA

Safer Roads Save Lives

Gabriel Rice

has attended
Louisiana Traffic Control Supervisor

Completed: 13-MAR-2025

CEU (If Applicable): 1.5

ATSSA provides training and certification but neither constitutes employment by ATSSA.

This certificate provides proof of training, not certification.

American Traffic Safety Services Association
ATSSA.com

Mai Nguyen, PE - Neel-Schaffer, Inc.



ATSSA TRAINED

PROOF OF TRAINING

THIS CERTIFICATE HEREBY RECOGNIZES THAT

Mai Nguyen

has attended

Louisiana Traffic Control Supervisor Refresher

Training Course

9/8/2023 to 9/8/2027
Training Valid Through

Vice President of Education and Technical Services

Baton Rouge, LA
Location

President, CEO

ATSSA provides training and certification but neither constitutes employment by ATSSA.

ATSSA American Traffic Safety Services Association ATSSA.com

20. Certifications/Licenses

Secretary of State Registration - Michael Baker International, Inc.

Name	Type	City	Status
MICHAEL BAKER INTERNATIONAL, INC.	Business Corporation (Non-Louisiana)	PITTSBURGH	Active

Previous Names

MICHAEL BAKER, JR., INC. (Changed: 7/6/2015)

Business: MICHAEL BAKER INTERNATIONAL, INC.
Charter Number: 30035020F
Registration Date: 12/29/1972

Secretary of State Registration - Moffat & Nichol Inc.

Name	Type	City	Status
MOFFATT & NICHOL INC.	Business Corporation (Non-Louisiana)	LONG BEACH	Active

Previous Names

MOFFATT & NICHOL, ENGINEERS, INC. (Changed: 11/17/2003)

Business: MOFFATT & NICHOL INC.
Charter Number: 34527896F
Registration Date: 5/23/1996

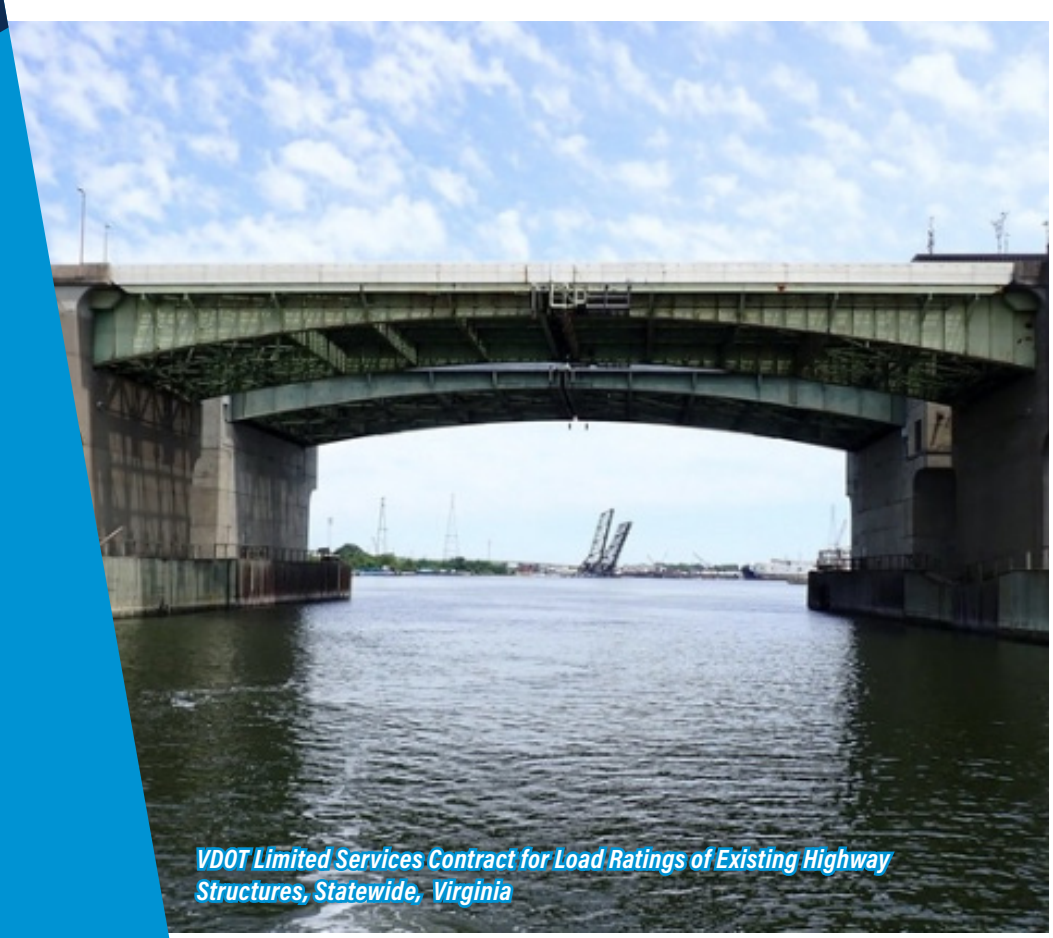
Secretary of State Registration - Neel-Schaffer, Inc.

Name	Type	City	Status
NEEL-SCHAFFER, INC.	Business Corporation (Non-Louisiana)	JACKSON	Active

Previous Names

Business: NEEL-SCHAFFER, INC.
Charter Number: 34112054F
Registration Date: 4/25/1983

QA/QC PLAN | SUB-CONSULTANT INFORMATION | LOCATION



VDOT Limited Services Contract for Load Ratings of Existing Highway Structures, Statewide, Virginia



Gay Street Bridge Inspection, Knoxville, Tennessee



SH 16 over Llano River Truss Bridge, Llano County, Texas

Michael Baker has assembled a team of trusted subconsultants, each of whom have successfully delivered these same specialty services to DOTD and peer agencies under similar bridge load ratings contracts.

21. QA/QC Plan

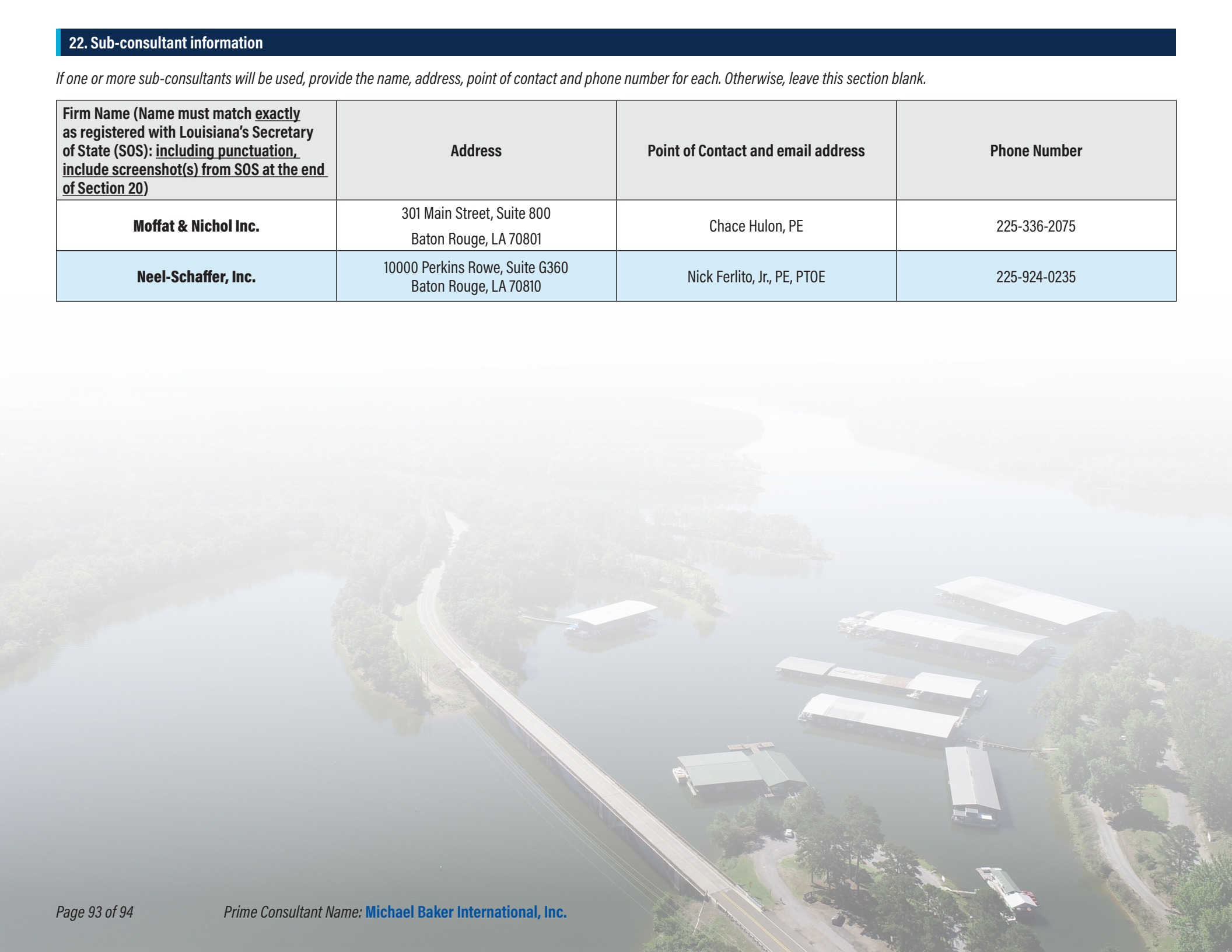
If the advertisement requires submission of a QA/QC plan, include it here. ***Otherwise, leave this section blank. If a QA/QC plan is included in this section and was not required by the advertisement, it will be redacted.***

Per the advertisement, a QA/QC plan is not required at this time.

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 (Name must match exactly as registered with Louisiana's Secretary of State (SOS): including punctuation, include screenshot(s) from SOS at the end of Section 20)	Address	Point of Contact and email address	Phone Number
Moffat & Nichol Inc.	301 Main Street, Suite 800 Baton Rouge, LA 70801	Chace Hulon, PE	225-336-2075
Neel-Schaffer, Inc.	10000 Perkins Rowe, Suite G360 Baton Rouge, LA 70810	Nick Ferlito, Jr., PE, PTOE	225-924-0235



23. Location

If location is an evaluation criterion for this advertisement (see page 2) and the prime consultant intends to establish a local presence, describe the plan for doing so. ***Otherwise, leave this section blank. Any information included in this section will be redacted if not required by the Evaluation Criteria section of the advertisement.***

Michael Baker
INTERNATIONAL

We Make a Difference

MICHAEL BAKER INTERNATIONAL
2600 CitiPlace Drive · Suite 450
Baton Rouge, LA 70808