



IDIQ CONTRACT FOR BRIDGE LOAD RATING

Contract No. 4400027650, 4400027651, and 4400027652
Statewide
September 12, 2023



SECTION

1-11



DOTD FORM: 24-102

(Revised January 1, 2023)

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 Contract for Bridge Load Rating
2. Contract Number(s) as shown in the advertisement.	4400027650, 4400027651, and 4400027652
3. State Project Number(s), if shown in the advertisement	N/A
4. Prime consultant name (name must match as registered with the Louisiana Secretary of State where such registration is required by law)	SDR Engineering Consultants, 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)	EF0003263 DUNS Number: 968522367
6. Prime consultant mailing address	2820 Continental Drive, Suite 100, Baton Rouge, LA 70808
7. Prime consultant physical address (existing or to be established, if location is used as an evaluation criteria)	2820 Continental Drive, Suite 100, Baton Rouge, LA 70808
8. Name, title, phone number, and email address of prime consultant's contract point of contact.	Mohsen Shahawy, PhD, PE Principal & COO (850) 222-2737, Ext. 226 shahawy@sdrengineering.com
9. Name, title, phone number, and email address of the official with signing authority for this proposal	Ann Shahawy CEO (850) 222-2737, Ext. 222 ashahawy@sdrengineering.com

<p>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.</p>	 <p>Signature above shall be the same person listed in Section 9:</p> <p><u>9/12/2023</u> Date:</p>
<p>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.</p>	<p><u>Firm(s):</u> <u>Firm(s)' %:</u> N/A</p>





SECTION 12-15

12. Past Performance Evaluation Discipline Table:

Past Performance Evaluation Discipline(s)	% of Overall Contract	SDR Engineering Consultants, Inc. (Prime)	Russo Structural Services LLC	Each Discipline must total to 100%
Bridge	100%	95%	5%	100%
Identify the percentage of work for the <u>overall contract</u> to be performed by the prime consultant and each sub-consultant.				
Percent of Contract	100%	95%	5%	100%

Consultants :

SDR Engineering Consultants, Inc.



Russo Structural Services LLC



13. Firm Size:

Firm name	DOTD Job Classification	Number of personnel committed to this contract	Total number personnel available in this DOTD Job Classification (if needed)
 SDR Engineering Consultants, Inc.	Principal	1	2
	Supervisor Engineer	2	3
	Engineer	7	9
	Engineer Intern	6	7
	Inspector-Bridge	6	6
	CADD Drafter	1	2
	Computer Analyst	1	1
	Administrative	1	2
 Russo Structural Services LLC	Principal	1	1

14. Organizational Chart:



Louisiana Department of Transportation & Development
CONTRACTS NO. 4400027650, 4400027651, & 4400027652
IDIQ CONTRACT FOR BRIDGE LOAD RATING
STATEWIDE

SDR Engineering Consultants, Inc.
 Mohsen Shahawy, PhD, PE
Principal-in-Charge

Quality Control
 Lead: Mohsen Shahawy, PE (SDR)
 Support: Zhiyong Liang, PE (SDR)
 Pepe Garcia, PE (SDR)
 Francesco Russo, PE (Russo)

Contract Management
 Lead: Mohsen Shahawy, PE (SDR)
 Support: Zhiyong Liang, PE (SDR)

SDR Engineering Consultants, Inc.
 Zhiyong Liang, PhD, PE
Project Manager

Site Visits

Document Review & Load Rating

Training Services

SDR Engineering Consultants, Inc.
 Lead: Adnan El-Saad, PE*
 Support: James "Greg" Fussell, PE
 Osama Elsaad, PE*
 Feng Xie, PE

SDR Engineering Consultants, Inc.
 Lead: Zhiyong Liang, PE
 Support: Adnan El-Saad, PE*
 Pepe Garcia, PE
 James "Greg" Fussell, PE
 Feng Xie, PE
 Osama Elsaad, PE *
 Hao Yuan, PE, SE
 Sarah Elsawah, PE
 Andy Rodriguez, EI
 Parnian Abdi, EI
 SDR EIs

SDR Engineering Consultants, Inc.
 Lead: Mohsen Shahawy, PE
 Support: Zhiyong Liang, PE
 Pepe Garcia, PE

Russo Structural Services LLC
 Lead: Francesco Russo, PhD, PE

Russo Structural Services LLC
 Lead: Francesco Russo, PhD, PE

* personnel meeting preconstruction work zone training

Consultants
SDR Engineering Consultants, Inc
Russo Structural Services LLC



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	Mohsen Shahawy, PhD, PE	SDR Engineering Consultants, Inc. 	PE.31465 - Civil	LA	03/31/2025
2					
3					
4	Zhiyong Liang, PhD, PE	SDR Engineering Consultants, Inc. 	PE.34873 - Civil	LA	03/31/2024
	Adnan El-Saad, PE		PE.34533 - Civil	LA	09/30/2025
	Francesco Russo, PhD, PE	Russo Structural Services LLC 	PE.47522 - Civil	LA	09/30/2025
5	James “Greg” Fussell, PE	SDR Engineering Consultants, Inc. 	PE.43706 - Civil	LA	03/31/2024
	Feng Xie, PE		PE.43987 - Civil	LA	03/31/2024
	Osama Elsaad, PE		PE.45668 - Civil	LA	09/30/2025

SECTION

16



16. Staff Experience:

Firm employed by: SDR Engineering Consultants, Inc. 					
Name	Mohsen Shahawy, PhD, PE		Years of relevant experience with this employer	25	
Title	Principal and COO		Years of relevant experience with other employer(s)	15	
Degree(s) / Years / Specialization		PhD / 1984 / Civil Engineering MS / 1981 / Civil Engineering BS / 1976 / Civil Engineering			
Active registration number / state / expiration date		PE.31465 / Louisiana / 03-31-2025			
Year registered	2004	Discipline	Civil Engineer		
Contract role(s) / brief description of responsibilities		Principal in charge, design, management, QC/QA			
Dr. Shahawy is the managing principal of SDR with 40 years of bridge design experience of movable steel bridges, post-tensioned segmental precast/cast-in-place concrete box girders, segmental concrete/steel cable-stayed systems, welded steel plate multi-girders, steel truss structures, precast prestressed concrete U-beams as well as drill-shafts, pile foundations, substructures, and retaining walls. He is an expert in bridge evaluation, structural assessment, and load rating. During his 15 years tenure at FDOT he has inspected, evaluated, and designed over 200 bridges of every possible bridge type. He is a Co-author of the PCI Bridge Design Manual; the first comprehensive bridge design manual dealing with the implementation of the AASHTO LRFD Bridge Design Specifications.					
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract, <i>i.e.</i> , “Bridge Inspection,” “condition assessment,” “steel and concrete rehabilitation,” “Non-destructive Testing”, “Project Management”.				
10/2014–Present	<p>H.009859: Load Rating of Bridges, Statewide, LA</p> <p>Led many bridge load rating projects and rehabilitation of various bridge types including concrete slabs, prestressed concrete girders, steel girders, steel trusses, and culverts. Main responsibilities: structural analysis, QC review of FE models, and independent peer reviews. Sample bridge load rating projects include:</p> <ul style="list-style-type: none"> • H.009859.5: Load Rating of 114 Bridges (07/2022–Present) • H.009859.5: Load Rating of 74 Bridges (04/2017–02/2018) • H.009859.5: Load Rating of 50 Bridges (04/2017–11/2017) • H.009859.5: Load Rating of 100 Bridges (03/2016–06/2017) • H.009859.5: Load Rating of 125 Bridges (10/2014–10/2015) 				
03/17–Present	<p>Load Rating of Complex Bridges, Statewide, LA</p> <p>Led many bridge rehabilitation and load rating projects of various complex bridge types including truss, swing, lift, pontoon bridges. Main responsibilities: leading structural analysis, QC review of FE models, and independent peer reviews. Sample movable bridge projects include:</p> <ul style="list-style-type: none"> • Bridge No. 054360 (Steel Plate Girder Swing Span) • Bridge No. 058750 (Steel High Truss Swing Span) • Bridge No. 056430 (Steel Truss Swing Span) • Bridge No. 054480 (Ponton Span) 				

	<ul style="list-style-type: none"> • Bridge No. 000930 (Steel Tower Vertical Lift Span) • Bridge No. 200871 (Steel I-Beam Swing Span) • Bridge No. 200866 (Pontoon Span) • Bridge No. 020447 (Steel Plate Girder Bascule Span) • Bridge No. 200903 (Steel Plate Girder Swing Span) • Bridge No. 200877 (Steel Plate Girder Swing Span)
03/2010–05/2012	<p>H.005380.5: Evaluation and Load Rating of Three Major Truss Bridges, Statewide, LA</p> <p>The scope of work included in-depth inspection and 3-D computer modeling of the truss spans to access existing deficiencies and performing load rating of three major truss bridges including the approach spans.</p> <ul style="list-style-type: none"> • Mississippi River Bridge at Vicksburg (4,210 feet) • Sunshine Bridge at Donaldsonville (3,327 feet) • I-10 Calcasieu River Bridge at Lake Charles (6,617 feet) <p>Role(s): Project Manager, lead engineer, Responsibilities included: QC review of all inspection reports, structural assessment of found deficiencies and determining effect of steel section loss for both members and gusset plates on load rating; developing structural modeling parameters and supervising the team developing the 3-D finite element model for the main truss using LUSAS; and load rating all elements of the truss spans.</p>
06/86–10/00	<p>Complex Bridge Design/Rating, Statewide, FL</p> <p>Design and load rating of complex bridges in Florida. Sample projects include:</p> <ul style="list-style-type: none"> • Indian River, Vero Beach, FL, Bridge No. 880054 • Big Carlos bridge (#120028), Lee County, FL • Oakland Blvd., Ft. Lauderdale, FL, Bridge No. 860941 • Longboat bridge (#130057), Sarasota, FL • S.R. 706, Jupiter, FL, Bridge No. 930007 • Laurel street bridge (#105503), Tampa, FL • Delray Beach, FL, Bridge No. 930064 • Blackburn Pt. Bridge (#170064) Sarasota, FL • US A1A, Evans Crary, FL, Bridge Numbers 890058 and 890060. <p>Role(s): Lead the load rating and design analysis and provide guidance to the project team to address review comments at every stage.</p>
2008-2012 2014-2018 2011-2014 2015-2017	<p>Teaching and Training</p> <p>FDOT Training Statewide (one week course) - Resistance Factor (LRFR) Rating Analysis of Complex Bridges</p> <p>International Road Federation (IRF) - IRF Bridge Training (design and load rating)</p> <p>National Highway Institute NHI - Load and Resistance Factor Rating of Highway Bridges (130092)</p> <p>National Highway Institute NHI - FRP Materials and Applications for Concrete Structures (130105A)</p>

Firm employed by: SDR Engineering Consultants, Inc. 					
Name	Zhiyong Liang, PhD, PE		Years of relevant experience with this employer	13	
Title	Vice President		Years of relevant experience with other employer(s)	12	
Degree(s) / Years / Specialization		PhD / 2008 / Civil Engineering MS / 2004-2005 / Civil Engineering-Computer Science BS / 1996 / Civil Engineering FHWA-NHI-13055 Safety Inspection of In-Service Bridges			
Active registration number / state / expiration date		PE.34873 / Louisiana / 3-31-2024			
Year registered	2009	Discipline	Civil Engineering-Structures		
Contract role(s) / brief description of responsibilities		Bridge NDT, load test, and load rating leader.			
Dr. Liang's experience focuses on bridge design, load rating, and conditions evaluation of steel and concrete bridges. He has been a Project Manager and Engineer of Record on many successfully completed bridge load rating, design, testing, and rehabilitation projects, including 20+ movable bridges (Swing/Lift/Bascule/Ponton). He is the main designer of several bridge design and rating software that are currently used by LADOTD, including Smart Bridge Culvert, and COMPSTIL2 Influence Line Program.					
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , “designed drainage,” “designed girders”, “designed intersection”, etc. Experience dates should cover the time specified in the applicable MPR(s).				
04/11–Present	<p>Projects on Load Rating of Bridges, Statewide, LA</p> <p>Lead the load rating of more than 1000 bridges in the past ten years. The bridge types varied from concrete slab, prestressed concrete girder, steel girder, steel truss, timber bridge, multi-pile bent, hammerhead, steel tower bent, two-girder system with floorbeam, movable bridge, and culvert. Simple bridges and culverts were rated using AASHTOWare BrR, & RC-Pier. Complex bridges were rated using refined 3D finite element analysis combined with MathCAD or Excel. Sample projects include:</p> <ul style="list-style-type: none"> • H.009859.5: Load Rating of 114 Bridges (07/2022–Present) • H.012485.5: Load Rating of 176 Bridges (03/2021–09/2021) • H.012485.5: Load Rating of 617 Bridges (07/2019–06/2021) • H.009859.5: Load Rating of 74 Bridges (04/2017–02/2018) • H.009859.5: Load Rating of 50 Bridges (04/2017–11/2017) • H.009859.5: Load Rating of 100 Bridges (03/2016–06/2017) • H.009859.5: Load Rating of 125 Bridges (10/2014–10/2015) • H.003003, H.003014, H.010601: Evaluation of I-10 Bridges for Widening (22 bridges) (1/2014–9/2014) • H.005382.5: Load Rating of 230 unrated Bridges (04/2011–03/2012) <p><u>As the project manager and lead engineer for all listed projects, Dr. Liang's responsibilities are as follows:</u></p> <ul style="list-style-type: none"> • Retrieve and review plans and documents from diverse sources (online, LADOTD offices, fabricators, digital, film, print etc.). • Site visit to collect necessary information to rate bridges without plans and reflect the current field conditions in load rating analysis. 				

	<ul style="list-style-type: none"> • Perform load rating of bridges and culverts, especially the ones with special requirement. • Supervise the load rating team and review the final rating report of all bridges. • Perform refined analysis to avoid posting of bridges with deficiencies based on traditional analysis. • Provide repair or strengthening recommendations to improve or remove load posting.
03/10–08/19	<p>Projects on Load Rating of <u>Complex Bridges, Statewide, LA</u></p> <p>Lead the inspection and load rating of many complex bridges including major truss bridges, swing bridges, lift bridges, pontoon bridges, tapered steel U-girder bridges, and bridges with special layouts such as flared girders or curved deck, etc. Most of the bridges required refined 3-D finite element modeling and/or special analysis to obtain the proper rating. The selected projects are:</p> <ul style="list-style-type: none"> • H.011487: LA 182 over Berwick Bay (major truss bridge) (09/2018–08/2022) • H.012485.5: Load Rating of 27 Complex Bridges (02/2019–08/2019) • H.009859.5: Load Rating of 18 Complex Bridges (01/2018–06/2019) • H.011484:US 80 Red River Bridge Texas St Rehab (major truss bridge) (12/2015–04/2018) • H.009859.5: Load Rating of 10 Truss Bridges (01/2013–08/2016) • H.009859.5: Load Rating of 18 Posted Bridges (01/2015–08/2015) • H.005380.5: Evaluation and Load Rating of Three Major Truss Bridges (03/2010–05/2012) <p><u>As the project manager and lead engineer for all listed projects, Dr. Liang’s responsibilities are as follows:</u></p> <ul style="list-style-type: none"> • In-depth field inspection to assess the deterioration that may affect the bridge rating. • Build 3D finite element model using Midas or Lusas. • Review load rating results and refine the analysis to avoid unnecessary posting. • Provide repair or strengthening recommendations and cost estimate of construction.
07/13–04/15	<p>H.010498: Luling Bridge Rehabilitation, St. Charles Parish, LA</p> <p>The project was the evaluation and rehab of Luling Bridge (Hale Boggs Memorial Bridge), a five-span cable-stayed bridge with twin steel towers supporting the cables and a floor beam-stringer deck system. <u>Dr. Liang’s responsibilities are as follows:</u></p> <p>In-depth inspection of the bridge.</p> <ul style="list-style-type: none"> • Load rating of the main cable-stayed spans using 3D finite element analysis. • Investigation of the cause of fatigue cracks and development of rehab plans.
07/2004-Present	<p>Teaching and Training</p> <p>Dr. Liang possesses extensive experience in presentation, teaching, and training, which includes:</p> <ul style="list-style-type: none"> • Instructing engineering courses at New Mexico State University from 2014 to 2019. • Delivering presentations at numerous engineering conferences, such as the Louisiana Transportation Conference and the AASHTOWare Rating and Design Bridge User Group Meeting. • Being listed in the MIDAS Expert Network for Engineers and conducting many online presentations on Finite Element analysis, along with providing training to local engineers for FDOT. • Conducting training sessions for LADOTD engineers on the utilization of Smart Bridge software for bridge load rating and design.

Firm employed by: SDR Engineering Consultants, Inc. 					
Name	Adnan El-Saad, P.E.		Years of relevant experience with this employer	11	
Title	Senior Project Engineer & GM		Years of relevant experience with other employer(s)	23	
Degree(s) / Years / Specialization			BS / 1981/ Civil Engineering		
Active registration number / state / expiration date			PE. 34533 / Louisiana / 09-30-2025		
Year registered	2009	Discipline	Civil Engineering-Structures		
Contract role(s) / brief description of responsibilities			Senior Engineer & Deputy Project Manager		
Adnan Elsaad is an expert engineer with over 30 years of experience in non-destructive testing, LRFR load rating, bridge evaluation, and bridge testing. He has planned, instrumented, and executed over 300 bridge tests. He has extensive experience with and a specialized knowledge of testing both steel and concrete structures, as well as load rating and bridge inspection.					
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , “designed drainage,” “designed girders”, “designed intersection”, etc. Experience dates should cover the time specified in the applicable MPR(s).				
05/20–Present	<p>H.014288.5-2: LA 82 Mermentau MB Rehab (G Chenier) (HBI), Cameron Parish, LA</p> <p>This is a swing truss bridge built in 1959, with a span length of 204 ft on the truss span and a total bridge length of 1049 ft including the approach concrete slab spans and steel I-beam spans. The major tasks were to inspect, and load test the bridge, then develop the rehabilitation plans to strengthen the bridge so that the posting can be removed. <u>Mr. Elsaad’s responsibilities are as follows:</u></p> <ul style="list-style-type: none"> • Develop testing plan, install strain gauges, and perform load test. • Prepare rehabilitation plans. 				
09/19-06/21	<p>H.009859.5: Load Rating of 617 Bridges, Statewide, LA</p> <p>The scope of work was to analyze and load rate 617 existing off-system bridge structures. The load rating was performed using AASHTOWare Bridge Rating Software. The load rating consisted of concrete slab spans, steel spans, concrete girder spans, pile bents, and hammer head piers. <u>Adnan El-Saad’s responsibilities were as follows:</u></p> <ul style="list-style-type: none"> • Site visit to gather bridge information, as necessary. • Perform load rating of simple bridges and precast girder bridges. • Develop load rating reports. • Supervise field inspection and field measurements. • QCQA review of load rating reports. 				
02/19–Present	<p>H.011487: LA 182 Over Atchafalaya River (Berwick bay) Bridge Rehabilitation, Lafayette, LA</p> <p>The major through truss bridge carries LA 182 over the Atchafalaya River (Berwick Bay). The bridge consists of 47 spans with a total length of 3,746 ft. The approach spans consist of two (2) reinforced concrete slab spans, 40 reinforced concrete T-beam spans, and two (2) deck truss spans. The navigational spans consist of three (3) identical through truss spans. The substructure is comprised of concrete pile bents, two-column concrete bents, and concrete piers. <u>Mr. Elsaad responsibilities are as follows:</u></p>				

	<ul style="list-style-type: none"> • Inspection leader, collecting structure information, review of records, developing inspection plans, performing NBIS element-level inspection, and instrumentation and load testing of the approach spans. • Lead design of the substructure rehabilitation, bridge deck, concrete approach spans, and QC/QA of the superstructure rehabilitation.
05/19–01/20	<p>H.009859.5: Evaluation & Load Testing of Five Posted Bridges, Statewide, LA</p> <p>The scope of work was to evaluate five (5) bridges (three (3) of which are movable bridges), that are posted for a load lesser than the Legal Loads and/or Special Hauling Vehicles. The evaluation was conducted utilizing load rating analysis and load testing coupled with detailed 3-D Finite Element Analysis with the aim of removing current load posting. <u>Adnan El-Saad's responsibilities were as follows:</u></p> <ul style="list-style-type: none"> • Supervise field instrumentation and testing. • Instrument and field test deficient members. • QCQA review load testing reports and analysis.
11/15-04/18	<p>H.011484: US 80 Texas Street over Red River Bridge Rehab, Shreveport, LA</p> <p>The US 80 Texas Street Bridge, built in 1934, is a historic bridge which carries US 80 over the Red River at Shreveport, LA. The bridge consists of 45 spans with a total length of 2,895 feet. The approach spans consist of reinforced concrete T-beam girders, steel girders, and steel deck trusses. The main span consists of a three-span steel truss with a total length of 884 feet. The scope of work included in-depth inspection of the entire bridge structure; evaluation of the structural strength; load rating analysis of the deficient structure; and design of rehabilitation and construction plans production. <u>Adnan El-Saad's responsibilities were as follows:</u></p> <ul style="list-style-type: none"> • Inspection team member conducting hands-on element inspection and ultrasonic testing of the steel pins. • QC/QA review activities: load rating analysis; evaluation report; design of substructure rehabilitation; and construction plans.
07/17-02/18	<p>H.009859.5: Load Rating of 74 Bridges, Statewide, LA</p> <p>The scope of work was to analyze and load rate 74 existing bridge structures. Load rating was performed using AASHTOWare Bridge Rating Software. The load rating consisted of concrete slab spans, steel spans, concrete girder spans, pile bents, and hammer head piers. <u>Adnan El-Saad responsibilities were as follows:</u></p> <ul style="list-style-type: none"> • Load rating analysis of simple bridges with deteriorating piles. • Develop load rating reports. • QCQA review of load rating reports.

Firm employed by: SDR Engineering Consultants, Inc. 				
Name	Jose “Pepe” Garcia, MS, PE		Years of relevant experience with this employer	9
Title	Operational Manager, Sr. VP		Years of relevant experience with other employer(s)	30
Degree(s) / Years / Specialization		MS / 1978 / Civil Engineering BSE / 1975 / Civil Engineering FHWA-NHI-13055 Safety Inspection of In-Service Bridges FHWA NHI-130078 Fracture Critical Inspection for Steel Bridges		
Active registration number / state / expiration date		PE.42014 / Louisiana / 03-31-2024		
Year registered	2017	Discipline	Civil Engineering	
Contract role(s) / brief description of responsibilities		Mr. Garcia is responsible for technical and project management related to the inspection and assessment of the condition of bridges and ancillary structures and support of asset maintenance.		
<p>Jose “Pepe” Garcia has over 39 years of professional experience working in private and public industry. He served as technical lead and project manager for several national and international proposals and projects for bridge inspection, assessment, and preservation. Mr. Garcia served as Principal Investigator and Program Manager for an FHWA Long-Term Bridge Preservation (LTBP) program. Over 20 years, Mr. Garcia held various positions at the Florida Department of Transportation (FDOT), which included progressive responsibility in bridge and roadway maintenance and preservation, structures design, and construction engineering including cost center management and office administration. Mr. Garcia served as structures Maintenance Engineer and Construction Resident Engineer for structures repair and rehabilitation for FDOT Districts 1 & 7. He also supported statewide research and development initiatives. Bridge inventory responsibility comprehended thousands of simple and complex bridges, and ancillary roadway structures with annual financial obligation exceeding \$30 million. During his SDR tenure, he performed activities as designer, project manager for multidisciplinary technical, program management, emergency response and administrative activities. Experience involved interaction with federal and local government agencies and multiple engineering disciplines and specialties, including but not limited to geotechnical, mechanical, electrical, scour hydraulics, instrumentation, traffic control, roadway, permitting and environmental.</p>				
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; <i>i.e.</i> , “designed drainage,” “designed girders”, “designed intersection”, etc. Experience dates should cover the time specified in the applicable MPR(s).			
02/19 – present	<p>Florida Drawbridge, Inc. (FDOT District 4)</p> <p>Project engineer for inspection of bridges for FDOT District 4. NBIS Inspection of simple and complex (segmental and movable) bridges, signing and sealing reports and project coordination. Complex bridges included a total of 64 movable bridges located throughout West Central and South Florida. Movable bridge types encompass Hopkins Frame, Vertical Lift, Rolling Gear, Swing Gear and Hydraulic, Strout (Special), Hydraulic, and Electrical systems, Hydraulic Hopkins system.</p>			
03/17 – 12/18	<p>FDOT District 1 and 7 highway bridge and other structures inspection.</p> <p>Project manager responsible for inspecting, signing, and sealing FDOT/NBI inspection reports for simple and complex bridges, including movable bridges, mechanical and electrical inspection and emergency response inspection, assessment and rehabilitation.</p>			



02/17 – 06/18	<p>Inspection of the Ft. Lauderdale-Hollywood International Airport Terminal Project engineer, under contract with Keith and Associates, responsibility included oversight of inspection, coordination with clients, and signing and sealing inspection reports.</p>
04/13 – 04/18	<p>Emergency Management Response, FDOT District 7 Responsibilities include pre- and post-hurricane event planning and catastrophic incident response and corrective action plan development, repair and rehabilitation plans preparation and construction inspection, contractor selection and claims management. Structure inventory included over 1,300 bridges varying in complexity, including over 30 (state & local agency) movable bridges, and hundreds of ancillary structures.</p>
03/15 – 08/17	<p>NBIS Bridge Inspections, Florida Department of Transportation Districts 1 and 7 Project manager responsible for planning and directing all aspects of field inspection, load rating and structural reports for over 1,200 bridges in nine counties of central and western Florida. These structure types included 12 swing span and 4 double leaf bascule bridges, closed spandrel concrete and stone arches, open spandrel arches, and culverts.</p>
01/13 – 09/15	<p>Longboat over Lagoon Pond, Sarasota Florida (FDOT) - Bascule Bridge Rehabilitation Designed, detailed, and checked bridge rehabilitation construction plans. Duties included repairs to the damage to the abutments and approach concrete slabs, heat straightening of damaged elements, replacement of the steel grid deck on the movable span and design of the structural upgrades to existing pedestrian walkway along the bridge. Developed construction details and plans for the rehabilitation and upgrading of the operator's house. Also, assisted in the design of structural supports for Intelligent Transportation System and sign support for Cantilever overhead signs. Provided construction support and site inspection.</p>
03/08 – 01/10	<p>I-75 over CR 574, SCL Railroad, Woodberry Road and CSX Railroad Bridges Project manager for accelerated partial deck replacement and other bridge superstructure repairs. Project included both design and construction engineering inspection for the replacement of deteriorated concrete deck sections using precast panels and carbon fiber reinforcement. All work was performed at non-peak traffic hours to maximize safety and minimize the impact to the traveling public.</p>
10/99 – 06/08	<p>Bob Graham Sunshine Skyway Bridge (I-275 over Tampa Bay) Project principal for post-tensioning system assessment and rehabilitation. The 4.1-mile (6.6-kilometer) bridge consists of a 4,000-foot-long (1,219-meter) cable-stayed bridge main span, 4,860 feet (1,481 meters) of high-level approach spans, and 13,020 feet (3,968 meters) of low approach spans. The main span bridge, high-level approaches, superstructure, and all columns are post-tensioned precast concrete segments. Work included the corrosion and structural investigation and rehabilitation of post-tensioned elements including stay cable and internal and external tendons.</p>

Firm employed by: SDR Engineering Consultants, Inc. 				
Name	James “Greg” Fussell, ME, PE		Years of relevant experience with this employer	10
Title	Bridge Engineer		Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization		ME / 2014 / Structural Engineering BS / 2013 / Civil Engineering		
Active registration number / state / expiration date		PE.0043706 / Louisiana / 03-31-2024		
Year registered	2019	Discipline	Civil Engineer	
Contract role(s) / brief description of responsibilities		PM, Design, Analysis, Load Rating, Inspection, Drafting		
<p>Mr. Fussell has 10 years of experience as a bridge engineer. His current focus is primarily in the areas of bridge design, load rating, and rehabilitation with experience in bridge testing and inspection. His involvement in projects has included new bridge design, emergency repair projects, load rating evaluation and reporting, on-site construction support and inspection, and bridge instrumentation testing. The following projects are the major projects that he served as a lead engineer on.</p>				
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract, <i>i.e.</i> , “Bridge Inspection,” “condition assessment”, “steel and concrete rehabilitation, “Non-destructive Testing”, “Project Management”.			
03/16-Present	<p>Bridge Load Rating Projects, Statewide, LA Performing and overseeing the load rating of over 600 bridges throughout the state of Louisiana. Load ratings encompassed cast-in-place slab, precast slab unit, concrete deck girder, prestressed concrete girder, steel plate girder, various culverts, steel swing, moveable, deck truss, and cantilever truss bridges. Substructures included timber, concrete, and steel bent caps, hammerheads, inverted-t caps, and timber and steel piles. AASHTOWARE BrR and LEAP Bridge Concrete were used for the rating of simple bridges, while FEM or in-house influence line software was used for the rating of complex bridges. Mr. Fussell was actively involved with the following projects:</p> <ul style="list-style-type: none"> • H.009859.5: Load Rating of 114 Bridges (07/2022-Present) • H.012485.5: Load Rating of 176 Bridges (04/2021–09/2021) • H.012485.5: Load Rating of 617 Bridges (07/2019–06/2021) • H.009859.5: Load Rating of 74 Bridges (04/2017–02/2018) • H.009859.5: Load Rating of 50 Bridges (04/2017–11/2017) • H.009859.5: Load Rating of 100 Bridges (03/2016–06/2017) <p>Mr. Fussell’s responsibilities were as follows:</p> <ul style="list-style-type: none"> • Reviewing the as-built drawings of each bridge to determine the appropriate load rating method and assumptions for the analysis. • Performing load rating of bridges using BrR, LEAP, Mathcad, and Midas. Then producing in-depth reports to present load rating overview, results, and schematics. • QC of load rating models and reports for other engineers to ensure accuracy and consistency throughout the project. • Determine efficient, economic repair recommendations for posted bridges in order to improve or remove posting. 			
01/18-08/19	Complex Bridge Load Rating Projects, Statewide, LA			



	<p>Performing load ratings on complex bridges that required in-depth evaluation reports for major bridges throughout the state of Louisiana. These projects consisted of various bridge types including swing, lift, pontoon, continuous steel plate girder, truss, and steel and concrete U-beam bridges. These complex bridges with complicated bridge geometries demanded precise modeling and detailed reporting. The superstructures were rated using AASHTOWARE Bridge Rating (BrR) and/or spreadsheets and the substructures were rated using LEAP Bridge Concrete and MathCad. In some cases, Midas was used for 3D finite element analysis. Projects are presented below that Mr. Fussell participated in extensively:</p> <ul style="list-style-type: none"> • H.012485.5: Load Rating of 27 Complex Bridges (02/2019–08/2019) • H.009859.5: Load Rating of 18 Complex Bridges (01/2018–06/2019) <p><u>Mr. Fussell’s responsibilities were as follows:</u></p> <ul style="list-style-type: none"> • Field investigation to determine critical members, current structure conditions, and most efficient load rating procedure. • Extensive modeling of the structures using AASHTOWARE Bridge Rating and Midas for 3D FEM analysis. • Detailed reports were developed for each bridge to summarize the load rating results, along with the posting recommendations based on the results.
08/17-02/21	<p>H.011487: LA 182 Berwick Bay Bridge Rehabilitation, St. Mary, LA</p> <p>The Long-Allen Bridge, built in 1933, is a simple through truss bridge which carries Louisiana Route 182 over the Atchafalaya River (Berwick Bay). The bridge consists of 47 spans with a total length of 3,746 ft. The approach spans consist of two reinforced concrete slab spans, 40 reinforced concrete T-beam spans, and 2 deck truss spans. The main spans consist of 3 identical through truss spans. The substructure is comprised of concrete pile bents, two-column concrete bents, and concrete piers. The load rating was performed using AASHTOWARE BrR. <u>Mr. Fussell’s responsibilities were as follows:</u></p> <ul style="list-style-type: none"> • The load rating was performed using AASHTOWARE BrR for all superstructure elements based on as-built plans, shop drawings, and the latest inspection report. The substructure was evaluated using RC Pier for the column bents at the request of LADOTD. • Considering the inspection and load rating findings, investigation of repair procedures such as heat straightening and paint containment systems for truss configurations.
05/16-04/18	<p>H.011484.5: US 80 Red River Bridge Inspection, Load Rating, and Rehabilitation, Shreveport, LA</p> <p>The US 80 Texas St. Bridge is a historic truss bridge in Shreveport, LA that has undergone inspection, load rating, and rehabilitation design. The complex structure consists of a steel cantilever truss, steel deck truss spans, a steel girder span, and 35 reinforced concrete deck girder approach spans of various lengths. The load rating was performed using AASHTOWARE BrR. <u>Mr. Fussell’s responsibilities were as follows:</u></p> <ul style="list-style-type: none"> • An in-depth field investigation of the entire structure was performed by the SDR team to determine current conditions and critical members. • The load rating was performed using AASHTOWARE BrR for all superstructure elements. • Considering the inspection and load rating findings, investigation of repair procedures such as heat straightening and paint containment systems for truss configurations.

Firm employed by: SDR Engineering Consultants, Inc. 					
Name	Feng Xie, MS, PE		Years of relevant experience with this employer	7	
Title	Engineer Analyst		Years of relevant experience with other employer(s)	1	
Degree(s) / Years / Specialization			MS / 2014 / Civil Engineering BS /2012/ Civil Engineering		
Active registration number / state / expiration date			PE. 43987/ Louisiana/ 03-31-2024		
Year registered	2019	Discipline	Civil Engineering-Structures		
Contract role(s) / brief description of responsibilities			Structural inspection and analysis		
Mr. Xie is a seasoned engineer with 8 years of professional experience in civil engineering. His current work involves bridge inspection, non-destructive testing, load testing, bridge design and detailing, bridge load rating, and quantity/cost estimate preparation. Throughout his career, he has worked on diverse types of bridges, including concrete, prestressed concrete, steel, timber, etc.					
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract; i.e., “designed drainage,” “designed girders”, “designed intersection”, etc. Experience dates should cover the years of experience specified in the applicable MPR(s).				
03/23-Present	<p>H.009859.5: Load Rating and Influence Line of 104 Bridges</p> <p>This project involved the load rating of 5 complex bridges using the LRFR method and the development of influence lines for 99 bridge substructures statewide. <u>Feng’s responsibilities and tasks included:</u></p> <ul style="list-style-type: none"> Managing project schedules and tasks. Quality control of the bridge rating and influence line work conducted by other engineers. 				
07/22-07/23	<p>H.009859.5: Load Rating of 114 Bridges</p> <p>This project encompassed the analysis and load rating of 114 bridges of diverse types throughout the state, including steel spans, concrete spans, truss spans, and movable spans. <u>Feng’s responsibilities and tasks included:</u></p> <ul style="list-style-type: none"> Managing the details of the work schedule and tasks. Developing rating models, conducting load rating assessments, and preparing bridge rating reports. Performing site visits and providing recommendations for improving the bridge capacity. Quality control of the load rating work performed by other engineers. 				
02/22-07/22	<p>H.009859: Load Rating of 36 Bridges</p> <p>This project involved the analysis and load rating of 36 diverse bridges statewide. Bridge structures include steel spans and concrete spans. <u>Feng’s responsibilities and tasks included:</u></p> <ul style="list-style-type: none"> Managing the details of the project schedule and tasks. Analyzing the bridges, preparing reports, and making recommendations for improving the posting. Reviewing engineers' work and providing technical assistance. 				
04/21-09/21	<p>H.009859.5: Load Rating of 176 On-System Bridges, Statewide LA</p> <p>This project focused on the analysis and load rating of 176 on-system bridges located in Louisiana. Culverts were load rated using the improved rating method developed by SDR. Other bridge structures included continuous voided slab bridges, concrete deck girder bridges, and a pontoon bridge. <u>Feng’s responsibilities and tasks included:</u></p>				

	<ul style="list-style-type: none"> • Managing the details of the submittal schedule and tasks. • Reviewing the load rating work completed by engineers. • Assisting other engineers with technical issues related to load rating.
07/19-06/21	<p>H.012485.5: Load Rating Of 617 Off-System Bridges, Statewide, LA This project entailed the analysis and load rating of 617 off-system bridges of different types across Louisiana, comprising timber spans, steel spans, and concrete spans. <u>Feng's responsibilities and tasks included:</u></p> <ul style="list-style-type: none"> • Managing the details of the submittal schedule and tasks for engineers. • Preparing the load rating reports for the bridges. • Quality control of the load rating work conducted by other engineers.
02/20-09/20	<p>H.009859.5: Reinforced Concrete Box Culverts Testing and Rating, Statewide, LA The main objective of this project is to develop a load rating methodology for culverts that considers actual field conditions, performance history, and advanced modeling techniques. The project involved load tests on 12 culverts, the development of a load rating method for culverts, and load ratings of 100 culverts. <u>Feng's responsibilities and tasks included:</u></p> <ul style="list-style-type: none"> • Conducting field inspections and load testing on culverts, as well as processing load test data. • Reviewing culvert rating models using the proposed rating method and the load rating reports.
03/19-08/19	<p>H.009859.5: Load Rating of 27 Complex Bridges, Statewide, LA This project involved the analysis and load rating of 27 complex bridges, including continuous steel spans, prestressed concrete spans, movable spans, etc., located in Louisiana. <u>Feng's responsibilities and tasks included:</u></p> <ul style="list-style-type: none"> • Managing the project schedule details. • Developing load rating models and reports for complex bridges. • Reviewing engineers' work and providing technical assistance.
02/16-07/17	<p>H.009859.5: Truss Bridges Rating and Evaluation, Statewide, LA This project focused on the load rating of complex truss bridges, including steel low truss bridges, steel high truss bridges, and steel deck truss bridges. The work included inspection, analysis, and load rating, preparation of rating reports, and offering repair methods and plans for these bridges. <u>Feng's responsibilities and tasks were:</u></p> <ul style="list-style-type: none"> • Preparing inspection equipment and schedules. • Conducting in-depth inspections and evaluations of truss members using a snooper truck. • Load rating of the truss bridges and preparing rating reports.
08/14-09/15	<p>H.009859.5 (A): Load Rating 125 Bridges, Statewide, LA This project consisted of the analysis and load rating of 125 bridges located in Louisiana State. Bridge structures include timber spans, steel spans, and concrete spans. <u>Feng's responsibilities and tasks were:</u></p> <ul style="list-style-type: none"> • Reviewing inspection reports and as-built plans. • Performing field inspections and evaluating the conditions of selected bridges. • Load rating the bridges and preparing load rating reports.

Firm employed by: SDR Engineering Consultants, Inc. 					
Name	Osama Elsaad, ME, P.E.		Years of relevant experience with this employer	6	
Title	Structural/Bridge Engineer		Years of relevant experience with other employer(s)	0	
Degree(s) / Years / Specialization			ME / 2017 / Civil Engineering (Structural) BS / 2016 / Civil Engineering		
Active registration number / state / expiration date			PE.45668 / Louisiana / 09-30-2023		
Year registered	2021	Discipline	Civil Engineer-Structures		
Contract role(s) / brief description of responsibilities			Structural Bridge Engineer, bridge inspection and testing		
Osama Elsaad is a structural engineer with 6 years of experience. His involvement on projects has included on-site inspection, bridge instrumentation load testing, emergency repair projects, load rating evaluation and reporting, rehabilitation projects, and quantity/cost estimate preparation. He is experienced in load rating analysis of concrete bridges, steel bridges, and assisted in developing and reviewing reports. He has also completed the FHWA-NHI Bridge Inspection Training.					
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract, <i>i.e.</i> , “Bridge Inspection,” “condition assessment”, “steel and concrete rehabilitation, “Non-destructive Testing”, “Project Management”.				
03/23-Present	<p>H.009859.5: Load Rating & Influence Line of 104 Bridges, Statewide, LA This project involved the load rating of 5 complex bridges using the LRFR method and the development of influence lines for 99 bridge substructures statewide. <u>Mr. Elsaad’s responsibilities were as follows:</u></p> <ul style="list-style-type: none"> • Creation of 2D finite element model of previously load rated substructures. • Exporting influence line results into COMPSTIL. • Comparison of the load rating results between RC-Pier & COMPSTIL for the various controlling load effects. 				
07/22-06/23	<p>H.009859.5: Load Rating of 114 Bridges, Statewide, LA The scope of work was to analyze and load rate 114 existing bridge structures. The load rating was performed using AASHTOWare Bridge Rating Software. The load rating consisted of concrete slab spans, steel spans, concrete girder spans, complex spans, pile bents, and hammer head piers. <u>Mr. Elsaad’s responsibilities were as follows:</u></p> <ul style="list-style-type: none"> • Review the as-built drawings to determine the appropriate load rating method and assumptions for the analysis. • Perform load rating of bridges using BrR, LEAP, Mathcad, and Midas. Then producing in-depth reports to present load rating overview, results, and schematics. • QC of load rating models and reports for other engineers to ensure accuracy and consistency throughout the project. 				
07/19-06/21	<p>H.009859.5: Load Rating of 617 Bridges, Statewide, LA The scope of work was to analyze and load rate 617 existing off-system bridge structures. The load rating was performed using AASHTOWare Bridge Rating Software. The load rating consisted of concrete slab spans, steel spans, concrete girder spans, pile bents, and hammer head piers. <u>Mr. Elsaad’s responsibilities were as follows:</u></p> <ul style="list-style-type: none"> • Review the as-built drawings to determine the appropriate load rating method and assumptions for the analysis. • Perform load rating of bridges using BrR, LEAP, Mathcad, and Midas. Then producing in-depth reports to present load rating overview, results, and schematics. • Perform field inspection. 				

	<ul style="list-style-type: none"> • Collect field measurements of bridges with missing plans. • Collect rebar data of concrete structures with missing plans using Ground Penetrating Radar (GPR). • QC of load rating models and reports for other engineers to ensure accuracy and consistency throughout the project.
05/20–10/20	<p>H.009859.5: RC Box Culverts Testing and Rating, Statewide, LA</p> <p>The scope of work was to evaluate twelve (12) culverts to develop a load rating process to allow culverts to pass. The evaluation was conducted utilizing load rating analysis and load testing coupled with detailed 3-D Finite Element Analysis. The culverts were chosen to have varied sizes, fill heights, and soil types. <u>Mr. Elsaad's responsibilities were as follows:</u></p> <ul style="list-style-type: none"> • Coordinate load testing, instrument, and field test twelve culverts. • Perform load rating analysis on 100 culverts AASHTOWare Bridge Rating Software. <p>Develop in-depth reports to present load rating overview, results, and schematics.</p>
05/19–01/20	<p>H.009859.5: Evaluation & Load Testing of Five Posted Bridges, Statewide, LA</p> <p>The scope of work was to evaluate five (5) bridges, three (3) of which are movable bridges, that are posted for a load lesser than the Legal Loads and/or Specialized Hauling Vehicles. The evaluation was conducted utilizing load rating analysis and load testing coupled with detailed 3-D Finite Element Analysis with the aim of removing current load posting. <u>Mr. Elsaad's responsibilities were as follows:</u></p> <ul style="list-style-type: none"> • Develop finite element bridge models. • Instrument and field test deficient members according to instrumentation and load configuration plans. • Perform load rating of movable bridges using AASHTOWare BrR. • Update finite element model and BrR models with adjustment factors. • Develop final report with field test results with updated load rating.
03/19-08/19	<p>H.009859.5: Load Rating of 27 Complex Bridges, Statewide, LA</p> <p>The scope of work was to analyze and load rate 27 existing off-system bridge structures. The load rating was performed using AASHTOWare Bridge Rating Software. The structure types consisted of swing bridges, pontoon bridges, and bascule bridges. <u>Mr. Elsaad's responsibilities were as follows:</u></p> <ul style="list-style-type: none"> • Performing load rating analysis of complex bridges using AASHTOWare Bridge Rating Software. • Develop in-depth reports to present load rating overview, results, and schematics. • Review load rating reports.
07/17-02/18	<p>H.009859.5: Load Rating of 74 Bridges, Statewide, LA</p> <p>The scope of work was to analyze and load rate 74 existing bridge structures. Load rating was performed using AASHTOWare Bridge Rating Software. The load rating consisted of concrete slab spans, steel spans, concrete girder spans, pile bents, and hammer head piers. <u>Mr. Elsaad's responsibilities were as follows:</u></p> <ul style="list-style-type: none"> • Perform load rating analysis using AASHTOWare Bridge Rating Software. • Develop load rating reports. • Develop substructure influence line models.

Firm employed by: SDR Engineering Consultants, Inc. 					
Name	Sarah Elsawah, MS, PE		Years of relevant experience with this employer	5	
Title	Structural/Bridge Engineer		Years of relevant experience with other employer(s)	0	
Degree(s) / Years / Specialization			MS / 2018 / Civil Engineering BE /2016/ Building Engineering		
Active registration number / state / expiration date			PE. 46814/ Louisiana/ 09-30-2024		
Year registered	2022	Discipline	Civil Engineer		
Contract role(s) / brief description of responsibilities			Structural/Bridge Engineer		
Sarah Elsawah has 5 years of experience in bridge engineering. She has assisted in new bridge design, steel rehabilitation, load rating and evaluation and load testing projects. Her expertise is load rating of complex bridges and load test and evaluation of bridges.					
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract, <i>i.e.</i> , “Bridge Inspection,” “condition assessment”, “steel and concrete rehabilitation, “Non-destructive Testing”, “Project Management”.				
07/22-06/2023	<p>H.009859.5: Load Rating of 114 bridges, Statewide LA</p> <p>This project consisted of the analysis and load rating of 114 bridges located in Louisiana State. Bridge structures include all types of timber spans, steel spans, and concrete spans. Others are continuous voided slab bridges, continuous steel, truss, slab, and a pontoon bridge. The project additionally included load rating of inverted-T piers. <u>Ms. Elsawah’s responsibilities and tasks were:</u></p> <ul style="list-style-type: none"> • Reviewed documents and plans of the bridges. • Performing load rating of bridges using BrR, RC-Pier and Mathcad. • Producing in-depth reports to present load rating overview, results, and schematics. • QC of load rating models and reports for other engineers to ensure accuracy and consistency throughout the project. 				
05/19-01/20	<p>H.009859.5: Load Testing and Evaluation of Five Posted Bridges, Statewide, LA</p> <p>The five bridges were posted for a load lesser than Louisiana State Legal Loads. This project consisted of load tests for these bridges. Load tests combined with detailed three-dimensional Finite Element Analysis revealed that these bridges can carry higher loads than those estimated by design codes. <u>Ms. Elsawah’s responsibilities and tasks were:</u></p> <ul style="list-style-type: none"> • Review of the existing documents and models obtained from LADOTD. • Identifying the critical members to be tested in the field. • Modeling the bridge with detailed three-dimensional Finite Element Analysis (3-D model) using MIDAS software. • Analyzing the field data and predicting the behavior of the deficient member. • Develop the load testing report discussing the field test output. 				
03/19-08/19	<p>H.009859.5: Load Rating of 27 Complex Bridges, Statewide, LA</p> <p>The scope of work was to analyze and load rate 27 existing off-system bridge structures. The bridge types comprised cast-in-place slab, prestressed concrete girders, steel plate-girders, truss bridges, and swing spans. The superstructures were rated using AASHTOWARE Bridge Rating (BrR) and/or spreadsheets and the substructures were rated using RC-Pier and</p>				

	<p>MathCad Sheets. The structure types consisted of swing bridges, slab bridges, and bascule bridges. <u>Ms. Elsayah's responsibilities and tasks were:</u></p> <ul style="list-style-type: none"> • Performing load rating of bridges using BrR, RC-Pier and Mathcad. • Producing in-depth reports to present load rating overview, results, and schematics. • QC of load rating models and reports for other engineers to ensure accuracy and consistency throughout the project.
01/18-06/19	<p>H.009859.5: Load Rating of 18 Bridges, Statewide, LA</p> <p>The project involved the load rating of 18 existing load-posted bridges consisting of swing spans, concrete box girders, truss spans, and continuous steel plate girders to determine if the posting could be removed. This scope includes collecting and compiling all pertinent information, load rating the bridges using standard analysis, performing an in-depth field investigation, analyzing, and rating deficient structures, and providing a detailed evaluation report. <u>Ms. Elsayah's responsibilities and tasks were:</u></p> <ul style="list-style-type: none"> • Performing load rating of bridges using BrR, RC-Pier, Mathcad, and Midas. Then producing in-depth reports to present load rating overview, results, and schematics. • QC of load rating models and reports for other engineers to ensure accuracy and consistency throughout the project.
5/18-06/18	<p>H.009859.5: Truss Bridges Rating and Evaluation, Statewide, LA</p> <p>This project included the load rating of complex truss bridges. The structure type includes steel low truss bridge, steel high truss bridge, and steel deck truss bridge. The work included analysis and load rating, preparing rating reports, generating repair strategies and plans for these bridges. <u>Ms. Elsayah's responsibilities and tasks were:</u></p> <ul style="list-style-type: none"> • Computing the capacity of continuous steel members. • Updating the AASHTOWARE Bridge Rating (BrR) based on the computed capacity for continuous members with rating below 1 under legal and SHV vehicles. • Preparation of the updated rating report.

Firm employed by: SDR Engineering Consultants, Inc. 					
Name	Hao Yuan, PhD, PE, SE		Years of relevant experience with this employer	3.5	
Title	Structural/Bridge Engineer		Years of relevant experience with other employer(s)	2	
Degree(s) / Years / Specialization			PhD / 2018 / Civil Engineering (Structures & Mechanics) MS / 2012 / Civil Engineering (Structures) BS / 2011 / Civil Engineering		
Active registration number / state / expiration date			PE.47145 / Louisiana / 03-31-2025		
Year registered	2022	Discipline	Civil Engineering, Structural Engineering		
Contract role(s) / brief description of responsibilities			Engineer / bridge load rating and refined analysis		
Dr. Yuan is a seasoned bridge engineer. His current work primarily includes bridge analysis, design, load rating, load testing, and non-destructive evaluation. He has encompassed concrete, prestressed concrete, steel, timber bridges, etc., in his professional career. He has also completed the FHWA-NHI Bridge Inspection Training and qualified as a bridge inspection team leader. He also has a research background on fatigue cracking and corrosion fatigue of bridge details.					
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract, <i>i.e.</i> , “Bridge Inspection,” “condition assessment,” “steel and concrete rehabilitation, “Non-destructive Testing”, “Project Management”.				
09/23–Present	<p>Load Rating and Information Collection of 45 Bridges, Statewide, LA</p> <p>This project consists of the analysis and load rating of 40 bridges and information collection of 5 bridges located in Louisiana State. Different types of bridges (including some special bridges like a Bascule bridge and RRFLCR bridges) are investigated, in accordance with AASHTO and LADOTD codes. <u>Dr. Yuan’s responsibilities include:</u></p> <ul style="list-style-type: none"> • Modeling, analysis, and load rating of special bridges using multiple software. • Review the load rating work from other engineers. • Help other engineers with technical issues in load rating. 				
04/23–Present	<p>H.015409.5: I-10 over LA 1 & M.P. Railroad Repair Phase I, Baton Rouge, LA</p> <p>This project consists of the refined analysis, load rating, and repair design for a complex steel bridge on I-10. The bridge was evaluated for fatigue cracking and other deterioration. The repair plans and rehab load rating were prepared in accordance with AASHTO and LADOTD codes. <u>Dr. Yuan’s responsibilities include:</u></p> <ul style="list-style-type: none"> • Modeling, analysis, and load rating of bridges using multiple software. • Investigate local stress using refined analysis and perform fatigue assessment. • Repair design calculations. • Help other engineers with technical issues in refined analysis and load rating and performing reviews. 				
03/23–Present	<p>H.009859.5: Load Rating and Influence Line of 104 Bridges, Statewide, LA</p> <p>This project consists of the analysis, load rating, and substructure influence line of 104 bridges located in Louisiana State. Diverse types of bridges (including a complex high truss bridge) are rated, in accordance with AASHTO and LADOTD codes. <u>Dr. Yuan’s responsibilities include:</u></p> <ul style="list-style-type: none"> • Modeling, analysis, and load rating of a complex high truss bridge. • Review the load rating and influence line work from other engineers. 				

	<ul style="list-style-type: none"> • Help other engineers with technical issues in load rating and influence line development.
07/22–06/23	<p>H.009859.5: Load Rating of 114 Bridges, Statewide, LA This project consists of the analysis and load rating of 114 bridges located in Louisiana State. Different types of bridges (including some complex bridges such as swing truss bridges) were rated, in accordance with AASHTO and LADOTD codes. <u>Dr. Yuan's responsibilities included:</u></p> <ul style="list-style-type: none"> • Modeling, analysis, and load rating of bridges using multiple software. • Review the load rating work from other engineers. • Help other engineers with technical issues in load rating.
02/22–07/22	<p>H.009859: Load Rating of 36 Bridges, Statewide, LA The load ratings were performed for diverse types of bridges, in accordance with AASHTO and LADOTD codes. <u>Dr. Yuan's responsibilities included:</u></p> <ul style="list-style-type: none"> • Modeling, analysis, and load rating of bridges using multiple software. • Review the load rating work from other engineers and assist with technical issues.
04/21–09/21	<p>H.009859: Load Rating of 176 Bridges, Statewide, LA This project consisted of the analysis and load rating of 176 bridges located in Louisiana State. Most of them are culverts. The culverts were rated using the improved rating method developed by SDR. Others are continuous voided slab bridges, concrete deck girder bridges, and a pontoon bridge. <u>Dr. Yuan's responsibilities included:</u></p> <ul style="list-style-type: none"> • Modeling, analysis, and load rating of bridges using multiple software. • Refined analysis and STM analysis for RC arched frame bridges Recall No. 001780/001790. • Review the load rating work from other engineers.
07/19–06/21	<p>H.009859.5: Load Rating of 617 Bridges, Statewide, LA The scope of work was to analyze and load rate 617 existing off-system bridge structures. The load rating was performed using AASHTOWare Bridge Rating Software. The load rating consisted of concrete slab spans, steel spans, concrete girder spans, pile bents, and hammer head piers. <u>Dr. Yuan's responsibilities included:</u></p> <ul style="list-style-type: none"> • Modeling, analysis, and load rating of bridges using multiple software. • Refined analysis and rating for steel box beam bridge and STM analysis for hammerhead. • Review the load rating work from other engineers.
04/22–08/22	<p>H.009730.5: Load Testing and Evaluation of LA 3021 over Southern Railroad, New Orleans, LA This concrete deck girder bridge with arched frame spans was found to have a low shear capacity in an earlier load rating project. This project consisted of load tests and evaluation for this bridge. Load tests combined with detailed three-dimensional finite element analysis revealed that the bridge can carry higher loads. <u>Dr. Yuan's responsibilities included:</u></p> <ul style="list-style-type: none"> • Analysis and load rating of the bridge using the beam-element model and plate-element model. • Developed the load testing and evaluation report.

Firm employed by: SDR Engineering Consultants, Inc. 				
Name	Andres (Andy) Rodriguez, ME, EI		Years of relevant experience with this employer	4
Title	Engineer Intern II		Years of relevant experience with other employer(s)	-
Degree(s) / Years / Specialization		ME / 2020 / Civil Engineering (Structural Focus) BS / 2018 / Civil Engineering		
Active registration number / state / expiration date		EI.0034329 / Louisiana / 3-31-2024		
Year registered	2019	Discipline	Civil Engineer	
Contract role(s) / brief description of responsibilities		Pre-professional Staff Engineer		
<p>Mr. Rodriguez is a pre-professional engineer with 4 years of experience in bridge engineering and in-depth bridge inspection. His current work consists of load rating, bridge detailing and design of ancillary structures, bridge inspection, quantity/cost estimate preparation, conduct Non-Destructive Testing, and evaluation of load testing data. Furthermore, he has successfully completed and obtained certification from the FHWA/NHI Safety Inspection of In-Service Bridges course.</p>				
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract, <i>i.e.</i> , “Bridge Inspection,” “condition assessment,” “steel and concrete rehabilitation,” “Non-destructive Testing”, “Project Management”.			
03/23-Present	<p>H.009859.5: Load Rating & Influence Line of 104 Bridges, Statewide, LA This project involved the load rating of 5 complex bridges using the LRFR method and the development of influence lines for 99 bridge substructures statewide. <u>Mr. Rodriguez’s responsibilities were as follows:</u></p> <ul style="list-style-type: none"> • Creation of 2D finite element model of previously load rated substructures. • Exporting of influence line results into COMPSTIL. • Comparison of the load rating results between RC-Pier & COMPSTIL for the various controlling load effects for 30 plus bridges to be utilized by LADOTD to quickly load rate the bridge for permit loads. 			
07/22-06/23	<p>H.009859.5: Load Rating of 114 Bridges, Statewide, LA The scope of work was to analyze and load rate 114 existing bridge structures. The load rating was performed using AASHTOWare Bridge Rating Software. The load rating consisted of concrete slab spans, steel spans, concrete girder spans, complex spans, pile bents, and hammer head piers. <u>Mr. Rodriguez’s responsibilities were as follows:</u></p> <ul style="list-style-type: none"> • Review the as-built drawings of each bridge to determine the appropriate load rating method and assumptions for the analysis. • Perform load rating of bridges using BrR, LEAP, and Mathcad. Then producing in-depth reports to present load rating overview, results, and schematics. • Complex bridges responsible for included four truss bridges (Recall No.’s 058710, 009000, 500590, & 058750) and a continuous curved steel girder bridge supported by hammerhead piers (Recall No. 001422) load rated using STM. 			
02/22-07/22	<p>H.009859: Load Rating of 36 Bridges, Statewide, LA The load ratings are performed for diverse types of bridges, in accordance with AASHTO and LADOTD codes. <u>Mr. Rodriguez’s responsibilities were as follows:</u></p> <ul style="list-style-type: none"> • Modeling, analysis, and load rating of bridges using multiple software. 			



	<ul style="list-style-type: none"> • Review the load rating work from other engineers. • Led the load rating of a complex steel floorbeam bridge (Recall No. 001360) with over 50 plus unique span configurations/members to evaluate.
05/21-09/21	<p>H.009859.5: Load Rating of 176 Bridges, Statewide, LA</p> <p>The scope of work was to analyze and load rate 176 bridges statewide consisting primarily of box culverts. Load rating of the culverts was performed utilizing the new theory developed through parametric research developed by SDR on behalf of the LADOTD to analyze culverts in a refined way accounting for the true behavior of the box culvert based on the structural detailing of the corners. Considering the actual behavior prevented unnecessary posting of the box culverts. The superstructures were rated using AASHTOWARE Bridge Rating (BrR) and/or spreadsheets and the substructures were rated using RC-Pier and MathCad Sheets. The structure types consisted of primarily box culverts in addition to frame arch culverts, pontoon, concrete deck girder and continuous voided slab bridges. <u>Mr. Rodriguez's responsibilities and tasks were:</u></p> <ul style="list-style-type: none"> • Performing load rating of bridges using BrR, RC-Pier and Mathcad. • Producing in-depth reports to present load rating overview, results, and schematics. <p>Implementation of new theory for analysis and load rating of box culverts.</p>
07/19-06/21	<p>H.009859.5: Load Rating of 617 Bridges, Statewide, LA</p> <p>The scope of work was to analyze and load rate 617 existing off-system bridge structures. The load rating was performed using AASHTOWare Bridge Rating Software. The load rating consisted of concrete slab spans, steel spans, concrete girder spans, pile bents, and hammer head piers. <u>Mr. Rodriguez's responsibilities were as follows:</u></p> <ul style="list-style-type: none"> • Perform load rating of concrete bridges and simply supported and continuous steel bridges. • Perform in-depth field inspection & collect field measurements of bridges with missing plans. • Collect rebar data of concrete structures with missing plans using Ground Penetrating Radar (GPR).
03/19-08/19	<p>H.009859.5: Load Rating of 27 Complex Bridges, Statewide, LA</p> <p>The scope of work was to analyze and load rate 27 existing off-system bridge structures. The bridge types comprised cast-in-place slab, prestressed concrete girders, steel plate-girders, truss bridges, and swing spans. The superstructures were rated using AASHTOWARE Bridge Rating (BrR) and/or spreadsheets and the substructures were rated using RC-Pier and MathCad Sheets. <u>Mr. Rodriguez's responsibilities and tasks were:</u></p> <ul style="list-style-type: none"> • Performing load rating of bridges using BrR, RC-Pier and Mathcad. • Producing in-depth reports to present load rating overview, results, and schematics. • Refined analysis and rating for a steel box beam bridge (Recall No. 040120).

Firm employed by: SDR Engineering Consultants, Inc. 					
Name	Parnian Abdi, MS, E.I.		Years of relevant experience with this employer	2	
Title	Engineer Intern II		Years of relevant experience with other employer(s)	2	
Degree(s) / Years / Specialization			MS / 2021 / Civil Engineering BS / 2019 / Civil Engineering		
Active registration number / state / expiration date			EI.0035314 / Louisiana / 11-07-2022		
Year registered	2022	Discipline	Civil Engineering, Land Surveying		
Contract role(s) / brief description of responsibilities			Engineer Intern, bridge load rating		
Parnian Abdi has 2 years of experience in a variety of projects including load rating evaluation and reporting of different bridge structures, engineering plan preparations, and quantity/cost estimates.					
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract, <i>i.e.</i> , “Bridge Inspection”, “condition assessment”, “steel and concrete rehabilitation”, “Non-destructive Testing”, “Project Management”.				
08/23-Present	<p>H.009859.5: Load Rating of 45 Bridges, Statewide, LA</p> <p>The scope of the project was to evaluate and load rate 45 bridge structures located in the state of Louisiana. The load rating was performed on a variety of bridge structures, including concrete slab spans, steel spans, prestressed concrete girder spans, complex spans, and pile bents. <u>Ms. Abdi’s responsibilities were:</u></p> <ul style="list-style-type: none"> • Review of as-built drawings or standard plans of the bridge structure. • Performing load rating of bridges using AASHTOware BrR, LEAP, and Mathcad. • Preparing in-depth reports to present load rating overview, results, and schematics. 				
05/23-08/23	<p>H.015409: Rehabilitation of I-10 Bridge Over Mississippi River, LA</p> <p>The scope of the project was to review the as-built plans and inspection reports provided by LADOTD, conduct a site visit to verify and quantify the deteriorations, perform 3D Finite Element Analysis for spans with web cracking to determine the local stress concentration, and provide repair recommendation. In this project <u>Ms. Abdi’s responsibilities were assisting with:</u></p> <ul style="list-style-type: none"> • The load rating of deteriorated steel spans using AASHTOware BrR. • Preparing the rehabilitation plans including the plan and profiles using MicroStation. 				
07/22-06/23	<p>H.009859.5: Load Rating of 114 Bridges, Statewide, LA</p> <p>The scope of the project was to evaluate and load rate 114 bridge structures located in the state of Louisiana. The load rating consisted of concrete slab spans, steel spans, prestressed concrete girder spans, complex spans, and pile bents. <u>Ms. Abdi’s responsibilities were:</u></p> <ul style="list-style-type: none"> • Review of as-built drawings or standard plans of the bridge structure. 				

	<ul style="list-style-type: none"> • Performing load rating of bridges using AASHTOware BrR, LEAP, and Mathcad. • Preparing in-depth reports to present load rating overview, results, and schematics.
08/22–01/23	<p>SR 5 (US 1) Bridge over Channel No. 5 Jacking, Monroe County, FL</p> <p>The segmental bridge constructed using span-by-span method is to be repaired including bearing replacement, which requires jacking of the bridge under full live load. <u>Ms. Abdi's responsibilities were:</u></p> <ul style="list-style-type: none"> • Assisting with the analysis of the bridge under full operational loads using Midas Civil. • Preparing the report to present the overview, results, and schematics.
02/22-07/22	<p>H.009859: Load Rating of 36 Bridges, Statewide, LA</p> <p>The scope of the project included the analysis and load rating of 36 bridges statewide per AASHTO and LADOTD codes. <u>Ms. Abdi's responsibilities were:</u></p> <ul style="list-style-type: none"> • Review of as-built drawings or standard plans of the bridge structure. • Performing load rating of bridges using AASHTOware BrR, LEAP, and Mathcad. • Preparing in-depth reports to present load rating overview, results, and schematics.

Firm employed by: Russo Structural Services LLC				
Name	Francesco Russo, Ph.D., P.E.		Years of relevant experience with this employer	29
Title	Principal and CEO		Years of relevant experience with other employer(s)	0
Degree(s) / Years / Specialization		Ph.D./2000/ Civil Engineering/Structural Engineering M.S.C.E./1994/ Civil Engineering/Transportation Engineering B.S./1992/ Civil Engineering/Construction Engineering Technology		
Active registration number / state / expiration date		PE. 47522/ Louisiana/ 09-30-2025		
Year registered	2023	Discipline	Civil Engineer	
Contract role(s) / brief description of responsibilities		Principal in charge, design, management, and QC/QA		
<p>Dr. Russo is Founder & Principal of Russo Structural Services. He is a recognized expert in the background and use of AASHTO load and resistance factor design (LRFD) and load and resistance factor (LRF) rating specifications, including serving as the National Highway Institute lead instructor for 144 individual courses (over 3,700 participants) covering LRFD bridge superstructure, bridge substructure, curved and skewed steel girder, strut-and-tie modeling of concrete bridges, fatigue and fracture design and evaluation of steel bridges, and LRF bridge rating since 2006. Of these, five classes and over 150 students were in classes for LADOTD. He is a technical advisor to the AASHTO committees on loads, safety, and evaluation (load rating), steel, and concrete.</p>				
Experience dates (mm/yy–mm/yy)	Experience and qualifications relevant to the proposed contract, <i>i.e.</i> , “Bridge Inspection”, “condition assessment”, “steel and concrete rehabilitation”, “Non-destructive Testing”, “Project Management”.			
	<p>FHWA Structures, Engineering Program IDIQ 2017-22, Nationwide</p> <p><i>Federal Highway Administration.</i> Instructor. Lead instructor for six FHWA bridge design courses including: (1) LRFD for Highway Bridge Superstructures, (2) Fundamentals of LRF and Applications, (3) LRFD and Analysis of Curved Steel Highway Bridges, (4) Engineering for Structural Stability in Bridge Construction, (5) Design and Evaluation of Bridges for Fatigue and Fracture, (6) Strut-and-Tie Modeling (STM) for Concrete Structures. Served as Subject Matter Expert for the development of the Strut-and-Tie and Fatigue and Fracture, and the update of the Stability course. Served as Subject Matter Expert and bridge engineer for the update of FHWA NHI Fundamentals of LRF and Applications of LRF for Bridge Superstructures 4-day instructor-led-training course. Provided complete technical content review for all existing lessons, the goal being to update the materials to the AASHTO MBE through 2018 interim revisions. Provided all required technical and content updates.</p>			
	<p>Bridge Inspection and Load Rating Quality Assurance, Statewide, Montana</p> <p><i>Montana Department of Transportation.</i> Task Manager. Providing on-call bridge load rating assistance to the Montana Department of Transportation as a technical advisor. Provided technical review of existing load rating documents and developed a scope of work for a new bridge load rating manual. Subject matter expert and contributing author for the State’s new load rating manual.</p>			
	<p>Bridge Load Rating Manual, Minnesota</p> <p><i>Minnesota DOT.</i> Project Manager. Responsible for project manager and principal author duties for new Bridge Load Rating Manual for the State of Minnesota. The project included a review of existing state policies and various legacy documents as well</p>			



	<p>as the policies of other states and those of AASHTO. The review concluded with a summary document identifying gaps and inconsistencies and a recommendation for a new manual, table of contents, and overall presentation. A new manual was developed to provide overall load rating policy guidance, language for Allowable Stress Rating (ASR), Load Factor Rating (LFR), and Load and Resistance Factor Rating (LRFR) implementation, as well as specific guidance on load posting, overweight permitting, signing, and administrative aspects of bridge load rating and management.</p>
	<p>KYTC Statewide Load Rating - 2017-02 Package 3, Statewide, Kentucky <i>Kentucky Transportation Cabinet.</i> Senior Structural Engineer. Provided senior structural engineering advice and load rating guidance for various bridges and bridge components as part of the KYTC load rating contract. Advised Baker and KYTC staff on load rating issues with complex haunched plate girders with various flange transitions. These beams have details that are no longer compliant with AASHTO rules for proportioning and overall design. Used my work on an AASHTO / NSBA subcommittee developing new rules to handle these more complicated situations as a tool to help KYTC with these ratings. 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.</p>
	<p>Complex Major River Bridge Load Ratings, Statewide, Illinois <i>Illinois Department of Transportation.</i> Technical Advisor. Technical advisor to a team of engineers, developing load rating and permit load evaluation tools for several complex truss and arch bridges for the department and assisting in multiple technical aspects of the project to guide the model creation and member capacity determination efforts.</p>
	<p>VAR-STW Bridge GUE-209-0857 Load Rating, Columbus, Ohio <i>Ohio Department of Transportation, Central Office.</i> Technical Advisor. Responsible for providing technical support including specification and software modeling support for the load rating of a multi-span kinked steel girder bridge. Various issues were identified in the load rating through the use of a refined model. Worked with the load rating team to determine which of this merited further attention and which could be dismissed as "noise" attributed to the fineness of the modeling. This work included a LRFR rating of the GUE-209-0857 Bridge, an 850-foot-long, five-span, two-girder system (considered non-redundant) with the girders kinked at the field splice points to follow the horizontally curved bridge deck geometry. This rating included the bridge's parabolically haunched plate girders and floorbeams in the proposed rehabilitated condition, which entailed a composite concrete deck.</p>
	<p>Load Rating of Duluth Bridges, Duluth, Minnesota <i>Minnesota DOT.</i> Technical Advisor. Provided load rating support for a complex concrete post-tensioned interchange structure in Duluth, Minnesota. Assisted the team in evaluating various load rating strategies and in developing the overall technical approach. Responsible for coordinating with the Minnesota Department of Transportation (MNDOT) on the overall project approach and findings. Project components included the preparation of load ratings using AASHTOWare BrR, a 3D finite element model derived from MIDAS civil engineering software, a strut-and-tie model to analyze pier caps, and the analysis of the superstructures, hinge joints, and cap beams of the bridges.</p>

SECTION

17



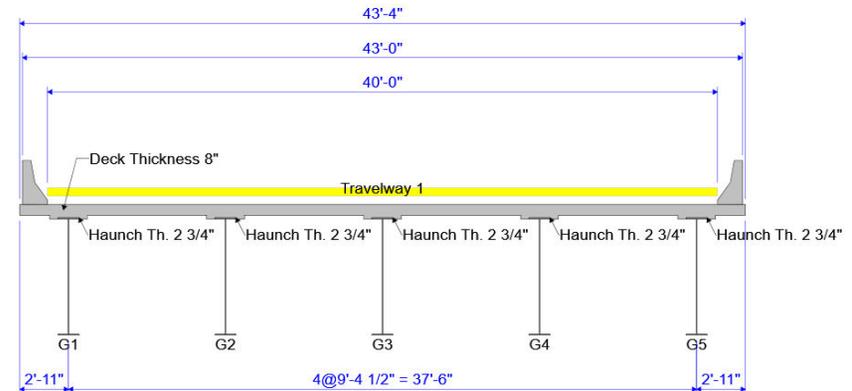
17. Firm Experience:

Firm name	SDR Engineering Consultants, Inc. 		Past Performance Evaluation Discipline(s)	Bridge
Project name	Load Rating of 114 Bridges		Firm responsibility (prime or sub?)	Prime
Project number	H.009859.5	Owner's name	LADOTD	
Project location	Statewide, LA		Owner's Project Manager	Danny Tullier
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, (225) 379-1060, Danny.Tullier@LA.GOV			
Services commenced by this firm (mm/yy)	07/22	Total consultant contract cost (\$1,000's)		\$1,321
Services completed by this firm (mm/yy)	Present	Cost of consultant services provided by this firm (\$1,000's)		\$1,321

The scope was to perform Load and Resistance Factor Rating (LRFR) load rating analysis of 114 bridges in accordance with LADOTD Bridge Design and Evaluation Manual (BDEM) and AASHTO Manual for Bridge Evaluation (MBE).

The bridge types include:

- reinforced concrete slab
- precast concrete slab
- reinforced concrete T-beam
- precast prestressed concrete girder
- steel I-beam
- steel plate girder
- steel plate girder swing spans
- steel plate girder continuous spans
- steel box girder
- low truss swing spans
- high truss swing spans
- pontoon



Team:

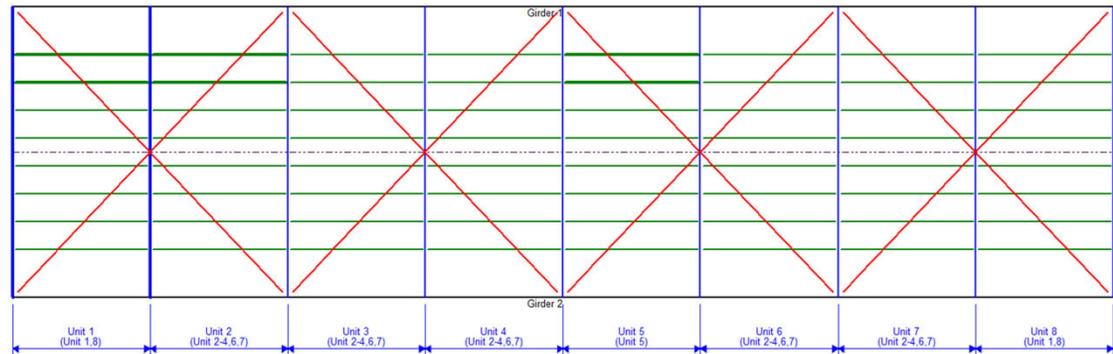
Osama Elsaad, PE; Sarah Elsayah, PE; James "Greg" Fussell, PE; Zhiyong Liang, PhD, PE; Feng Xie, PE; Hao Yuan, PhD, PE, SE; Andres Rodriguez, EI; Parnian Abdi, EI; Mohsen Shahawy, PhD, PE.

Firm name	SDR Engineering Consultants, Inc. 	Past Performance Evaluation Discipline(s)	Bridge
Project name	Load Rating of 617 Bridges		Firm responsibility (prime or sub?) Prime
Project number	H.012485.5	Owner's name	LADOTD
Project location	Statewide, LA	Owner's Project Manager	Dana Feng, PhD, PE
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, (225) 379-1060, Dana.Feng@LA.GOV		
Services commenced by this firm (mm/yy)	07/19	Total consultant contract cost (\$1,000's)	\$3,841
Services completed by this firm (mm/yy)	06/21	Cost of consultant services provided by this firm (\$1,000's)	\$3,841

The scope was to perform Load and Resistance Factor Rating (LRFR) load rating analysis of 617 bridges in accordance with LADOTD Bridge Design and Evaluation Manual (BDEM) and AASHTO Manual for Bridge Evaluation (MBE).

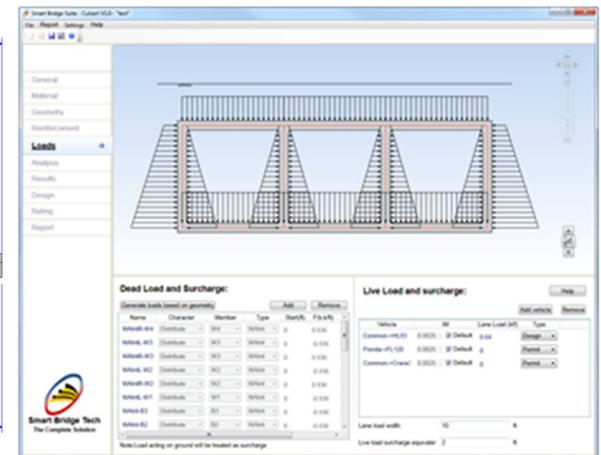
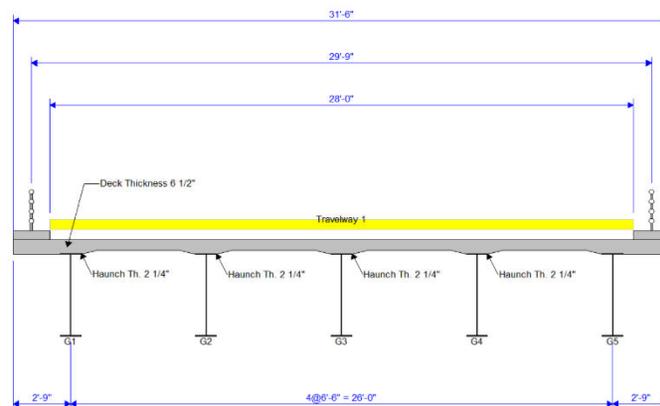
The bridge types include:

- reinforced concrete slab
- precast concrete slab
- reinforced concrete T-beam
- precast prestressed concrete girder
- steel I-beam
- steel plate girder
- reinforced concrete box culverts
- reinforced concrete arched culverts
- timber bridges



Team:

Osama Elsaad, PE; Sarah Elsayah, PE; James "Greg" Fussell, PE; Zhiyong Liang, PhD, PE; Mohsen Shahawy, PhD, PE; Feng Xie, PE; Hao Yuan, PhD, PE, SE; Andres Rodriguez, EI; Adnan El-Saad, PE



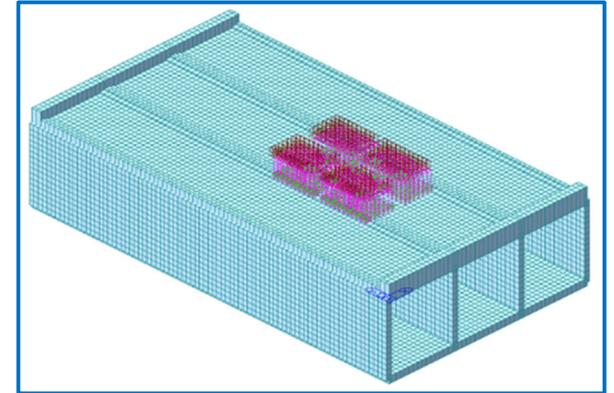
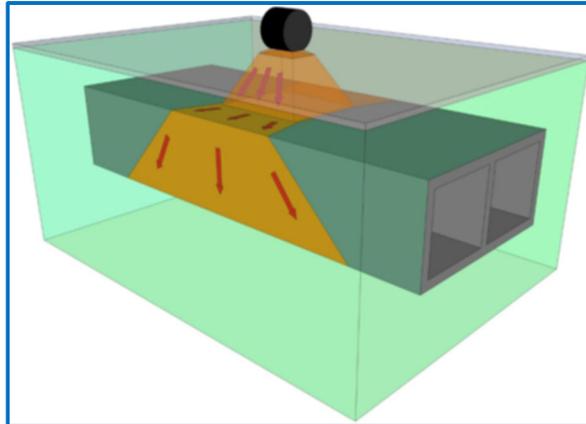
Firm name	SDR Engineering Consultants, Inc. 	Past Performance Evaluation Discipline(s)	Bridge
Project name	RC Box Culverts Testing and Rating		Firm responsibility (prime or sub?) Prime
Project number	H.009730.5	Owner's name	LADOTD
Project location	Statewide, LA	Owner's Project Manager	Dana Feng, PhD, PE
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, (225) 379-1060, Dana.Feng@LA.GOV		
Services commenced by this firm (mm/yy)	12/18	Total consultant contract cost (\$1,000's)	\$837
Services completed by this firm (mm/yy)	10/20	Cost of consultant services provided by this firm (\$1,000's)	\$837

The scope was to assess the load rating of representative CIP-RC box culverts from the Louisiana DOTD inventory and to develop a load rating procedure representative of the actual field performance.

The project was conducted in two phases. Phase I comprised literature review of published standards and reports; preliminary analytical study using 2-D frame element models to investigate the influential parameters, and examination of LADOTD culvert inventory.

Phase II comprised performing diagnostic load testing of 12 culverts with different configurations representative of LADOTD inventory and conducting a parametric study that included development of 120 3-D finite element models for culverts with different configurations (fill heights, span lengths and culvert lengths) and the corresponding 2D frame element models. The purpose of the parametric study was to develop correction factors to correlate internal forces obtained from 3-D analysis with those obtained from 2-D analysis.

Phase III comprised performing load rating of 100 box culverts using the proposed method in AASHTOWare Bridge Rating Software based on 3-D finite element analysis and diagnostic load testing results.



Team:

Osama Elsaad, PE; James "Greg" Fussell, PE; Zhiyong Liang, PhD, PE; Mohsen Shahawy, PhD, PE; Feng Xie, PE

Firm name	SDR Engineering Consultants, Inc. 	Past Performance Evaluation Discipline(s)	Bridge
Project name	Load Rating of 27 Complex Bridges		Firm responsibility (prime or sub?)
Project number	H.009859.5	Owner's name	LADOTD
Project location	Lafourche Parish, LA	Owner's Project Manager	Yan "Seraphy" Shen, PhD, PE
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, 225-379-1012, Yan.Shen@LA.GOV		
Services commenced by this firm (mm/yy)	02/19	Total consultant contract cost (\$1,000's)	\$649
Services completed by this firm (mm/yy)	08/19	Cost of consultant services provided by this firm (\$1,000's)	\$649

SDR was tasked by LADOTD to conduct load rating analysis of 27 complex off-system bridges across the state of Louisiana using the LRFR method in accordance with LADOTD Bridge Design and Evaluation Manual (BDEM) and AASHTO Manual for Bridge Evaluation (MBE).

The bridge types included in this project were as follows:

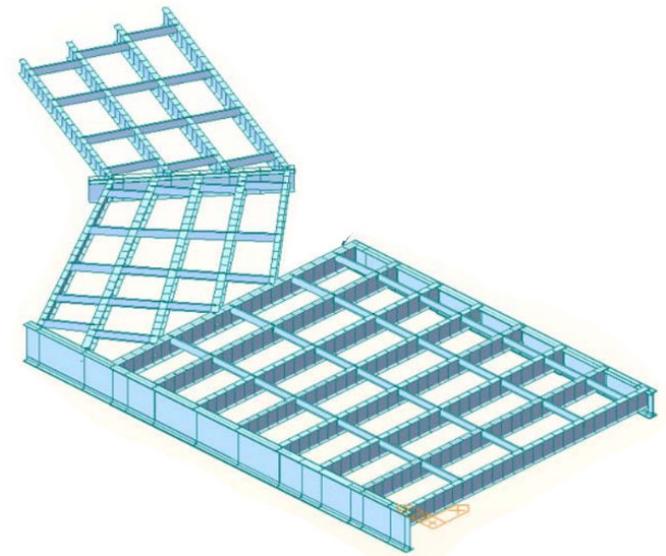
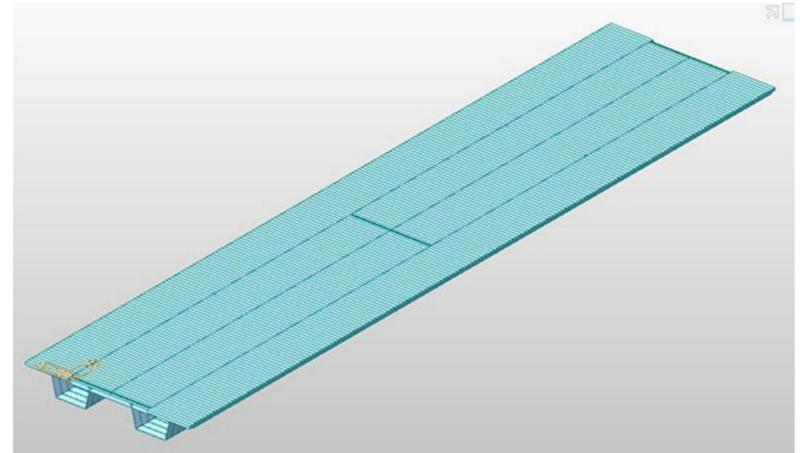
- ferry-toll
- pontoon
- steel I-beam
- steel plate girder swing spans
- steel plate girder continuous spans
- steel plate girder bascule spans
- low truss swing spans
- steel box girder

Since AASHTO approximate analysis is not applicable to many of the bridges, the superstructures were analyzed utilizing Finite Element Analysis along with in-house-developed spreadsheets or Mathcad. The substructures were rated using RC-Pier, MathCAD, and Microsoft Excel spreadsheets.

Influence lines for the controlling load effect at critical sections were also developed for the substructures.

Team:

Osama Elsaad, PE; Sarah Elsayah, PE; James "Greg" Fussell, PE; Zhiyong Liang, PhD, PE; Feng Xie, PE; Andres Rodriguez, EI; Mohsen Shahawy, PhD, PE



Firm name	SDR Engineering Consultants, Inc. 	Past Performance Evaluation Discipline(s)	Bridge
Project name	Load Rating of 18 Complex Bridges		Firm responsibility (prime or sub?)
Project number	H.009859.5	Owner's name	LADOTD
Project location	Lafourche Parish, LA	Owner's Project Manager	Dana Feng, PhD, PE
Owner's address, phone, email	1201 Capitol Access Road, Baton Rouge, (225) 379-1060, Dana.Feng@LA.GOV		
Services commenced by this firm (mm/yy)	01/18	Total consultant contract cost (\$1,000's)	\$625
Services completed by this firm (mm/yy)	06/19	Cost of consultant services provided by this firm (\$1,000's)	\$625

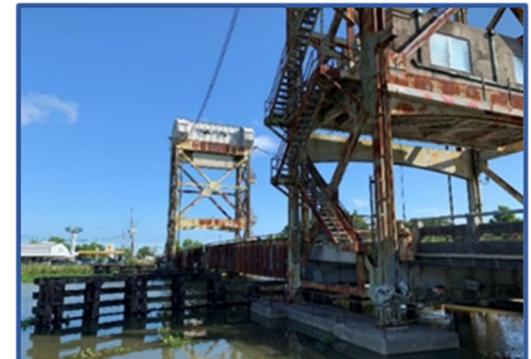
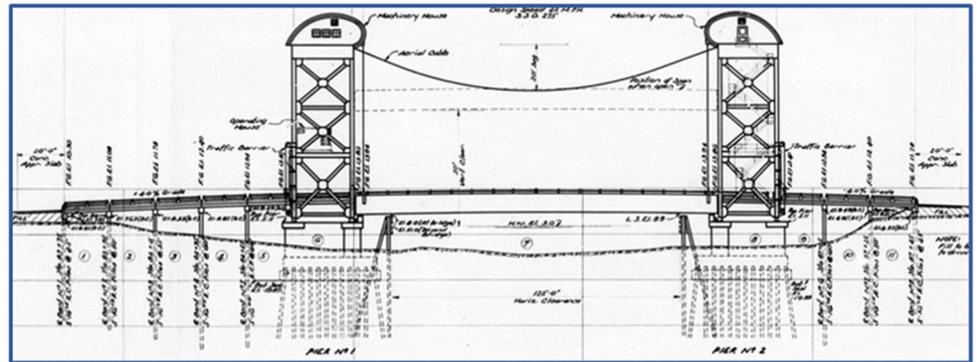
The project is to evaluate and perform LRFR load rating analysis for the superstructure and substructure of 18 complex bridges. Several of the bridges were movable bridges, including four (4) swing span bridges, two (2) ponton span bridges, and one (1) vertical lift span bridge.

Scope of work included field investigation, extensive modeling of the structures using AASHTOWARE Bridge Rating and 3-D Finite Element (FE) Analysis. Detailed reports were developed for each bridge. 3-D FE modeling was used when AASHTO approximate analysis utilized by AASHTOWare Bridge Rating (BrR) was not applicable.

Further load rating of the vertical lift span, tower spans, and concrete approach spans reveals that few spans are deficient and are controlling the rating factors of the bridge, requiring the bridge to be posted. LADOTD supplemented the project requiring SDR to further evaluate the bridge and perform a more rigorous analysis. The bridge was evaluated utilizing diagnostic load testing coupled with detailed 3-D FE Analysis with the aim of eliminating the load posting. The evaluation results reveal that the bridge can carry loads higher than those estimated by AASHTO and that there is no need to post the bridge.

Team:

Sarah Elsawah, PE; James "Greg" Fussell, PE; Zhiyong Liang, PhD, PE; Mohsen Shahawy, PhD, PE



Firm name	Russo Structural Services, LLC		Past Performance Evaluation Discipline(s)	Bridge
Project name	FHWA Structures, Hydraulics, Geotechnical Engineering Program IDIQ 2017-22		Firm responsibility (prime or sub?)	Sub
Project number		Owner's name	Michael Baker International (contracted to FHWA)	
Project location	Nationwide	Owner's Project Manager	Rachel Sharp (MBI)	
Owner's address, phone, email	100 Airside Dr, Moon Township PA, 412-269-7941, rsharp@mbakerintl.com			
Services commenced by this firm (mm/yy)	09/21	Total consultant contract cost (\$1,000's)	open-ended	
Services completed by this firm (mm/yy)	ongoing	Cost of consultant services provided by this firm (\$1,000's)	\$95 to date	

Lead instructor for six FHWA bridge design courses including: (1) LRFD for Highway Bridge Superstructures, (2) **Fundamentals of LRFR and Applications**, (3) LRFD and Analysis of Curved Steel Highway Bridges, (4) Engineering for Structural Stability in Bridge Construction, (5) Design and Evaluation of Bridges for Fatigue and Fracture, (6) Strut-and-Tie Modeling (STM) for Concrete Structures. Served as Subject Matter Expert for the development of the Strut-and-Tie and Fatigue and Fracture, and the update of the Stability course. **Served as Subject Matter Expert and bridge engineer for the update of FHWA NHI Fundamentals of LRFR and Applications of LRFR for Bridge Superstructures 4-day instructor-led-training course.** Provided complete technical content review for all existing lessons, the goal being to update the materials to the AASHTO MBE through 2018 interim revisions. Provided all required technical and content updates.

Since 2006 in total (and 2021 as Russo Structural Services) have instructed over 140 individual training sessions for FHWA including five for LADOTD staff.

Team:

Francesco Russo, PhD, PE

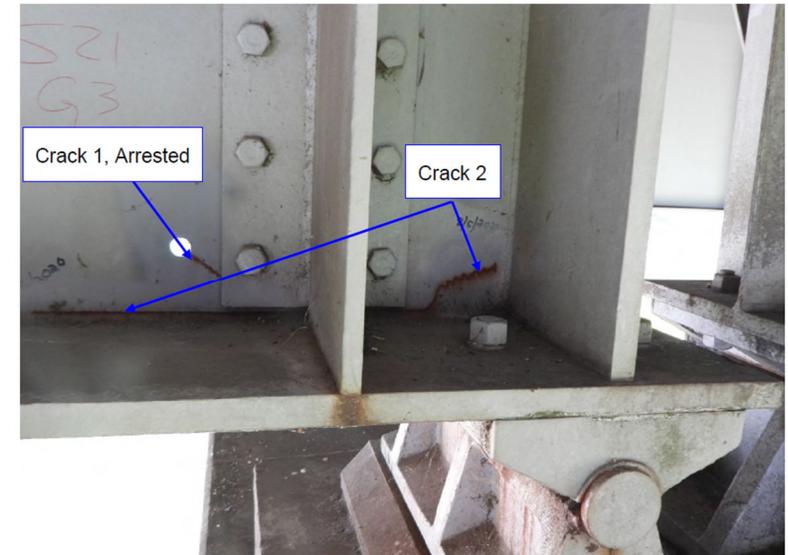
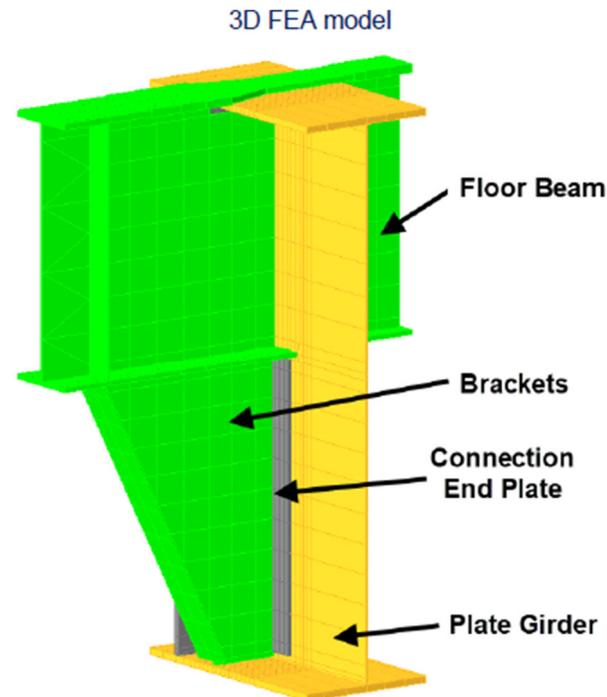


Firm name	Russo Structural Services, LLC		Past Performance Evaluation Discipline(s)	Bridge
Project name	I-10 Mississippi River Bridge Rehabilitation		Firm responsibility (prime or sub?)	Sub
Project number	H.015409.5	Owner's name	SDR (contracted to LADOTD)	
Project location	Baton Rouge, LA	Owner's Project Manager	Mohsen Shahawy, Ph.D, PE	
Owner's address, phone, email	2260 Wednesday Street Suite 500 Tallahassee FL 32308, 850-222-2737, shahawy@sdrengineering.com			
Services commenced by this firm (mm/yy)	07/23	Total consultant contract cost (\$1,000's)	\$8	
Services completed by this firm (mm/yy)	ongoing	Cost of consultant services provided by this firm (\$1,000's)	\$8	

The scope was to provide a peer review of the fatigue cracking investigation, report, analysis, and recommended repair details. Collaborating with prime consultant SDR Engineering, Russo Structural Services reviewed the initial cracking photos and reports, developed an analysis approach, and provided a peer review of the recommendations report and the project repair plans. Russo Structural Services continues to be engaged in this project as it is ongoing. We will provide a review and response of LADOTD comments and support SDR with any RFI's that arise during construction.

Team:

Francesco M Russo, PhD, PE



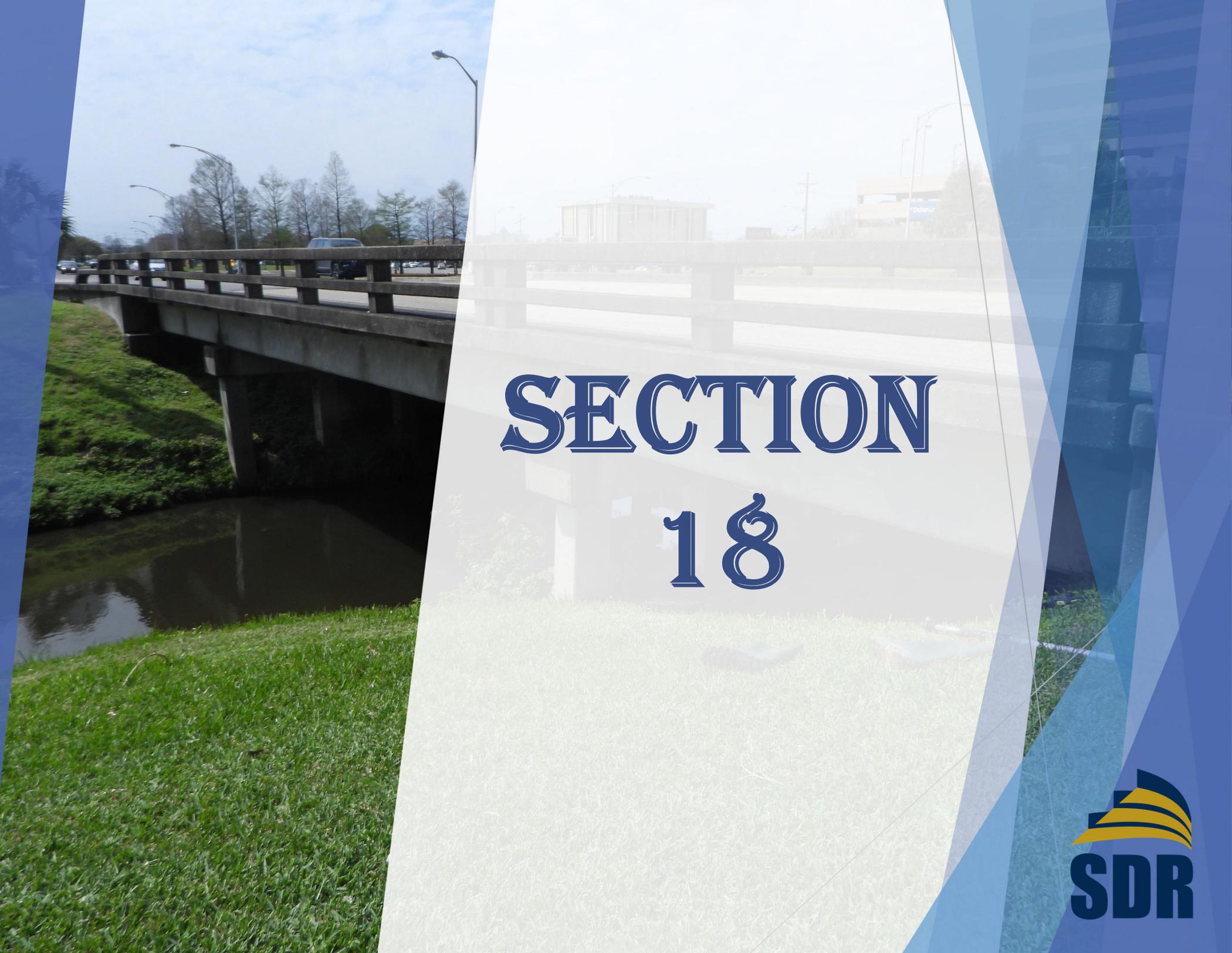
Firm name	Russo Structural Services, LLC		Past Performance Evaluation Discipline(s)	Bridge
Project name	Montana DOT Bridge Load Rating Manual and Load Rating Support		Firm responsibility (prime or sub?)	Sub
Project number		Owner's name	Michael Baker International (contracted to MDT)	
Project location	Statewide, MT	Owner's Project Manager	Keely Matson, PE	
Owner's address, phone, email	165 S Union Blvd, Lakewood CO 80228, 720-479-3158, keely.matson@mbakerintl.com			
Services commenced by this firm (mm/yy)	09/21	Total consultant contract cost (\$1,000's)	\$49.9	
Services completed by this firm (mm/yy)	Ongoing	Cost of consultant services provided by this firm (\$1,000's)	\$25.8 to date	

This project is being undertaken for several reasons. First, MDT was notified by FHWA that their inspection and load rating program was non-compliant with reference to Metric 14 (Load Post or Restrict) and Metric 18 (Scour Critical Bridge Status/POA's). Additionally, this notification indicated that Metric 6 (Low Risk Routine Inspection – Frequency), Metric 7 (Higher Risk Routine Inspection – Frequency), Metric 12 (Inspection Quality), Metric 13 (Load Rating Status), Metric 15 (Bridge Files), and Metric 23 (Update Inventory Data) were either conditionally compliant or substantially compliant. Additionally, MDT's load rating guidance consisted only of a chapter in the MDT BIRM, numerous emails, intermediate guidance, and memo's. MDT thus executed a contract with Michael Baker International who then subcontracted with Russo Structural Services for a stand-alone load rating manual that integrates all prior documents, as well as best practices and experience from other states, in a single document. The overall goal of this project is to bring the MDT Bridge Inspection program back into compliance with the Federal Metrics noted above.

Russo Structural Services is providing chapter writing and review of work by others, integrating / recommending best practices from other agencies, and meets with the client on a regular basis to review ongoing work and respond to comments. Additionally, RSS has been called upon on several occasions to assist MDT with specific load rating challenges beyond the writing of the load rating manual.

Team:

Francesco M Russo, PhD, PE



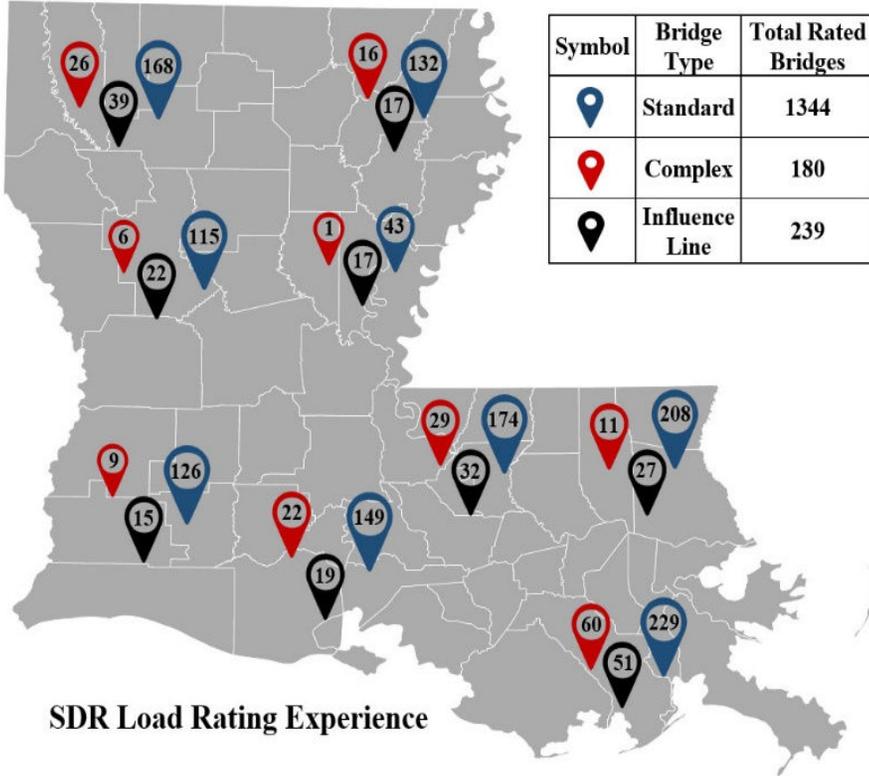
SECTION

18



18. Approach and Methodology:

SDR has a proven record of timely and accurate project delivery on past similar LADOTD IDIQ projects with a team combined experience of over 150 years in load rating and bridge evaluation. SDR’s team, led by Dr. Zhiyong Liang, PE, has inspected, load rated, surveyed, and prepared rehabilitation plans for over 1500 bridges across Louisiana over the past 10 years.



SDR is assisted by Russo Structural Services, providing complex steel bridges load rating and training services.

PROJECT APPROACH:

Plan and Document Retrieval and Review: Prior to load rating, SDR shall collect and review existing project documents such as as-built construction plans, past rehabilitation plans, inspection reports, previous load rating reports, other bridge maintenance historical information as well as field measurements and load testing data, if available, to identify trends or recurring issues that could affect the load rating. If such documents are not available, SDR will reach out to the district/parish office, original design company, precast manufacturer, etc., to collect any available plan sheets, sketches, or partial

drawings, and existing rating documents prepared by engineers of record or firms. SDR shall also carefully compare the bridge documents with photos from inspection reports to ensure the consistency and accuracy of the documents. SDR’s plan for document retrieval and review is based on producing the most accurate load rating results that reflect the current structure field conditions.

Bridge Site Visits: SDR shall perform bridge site visits concentrating on specific areas or components to gather more precise data and identify any structural issues that may affect the load rating. Any signs of deterioration or damage that may affect the integrity of the bridge will be identified and documented. If necessary, field measurements and other forms of non-destructive evaluation methods such as GPR, ultrasonic testing or magnetic particle inspection could be employed to locate existing reinforcement, assess the condition of concrete elements, or detect hidden defects.

During these site visits, any critical deficiencies identified in previous inspection reports shall be examined to assess the impact of such deficiencies and location on the bridge load rating.

SDR utilizes an established procedure using digital platforms and customized software to streamline the site visit data collection process, ensuring consistency and to facilitate accurate documentation.

In addition, the site visit should assess the surrounding area including adjacent roads and buildings which may affect construction accessibility in case of required rehabilitation.

All gathered data, including all measurements taken during the site visit along with detailed observations regarding the condition of the bridge, will be documented and included in a summary bridge inspection report. The inspection report will be prepared based on the AASHTO MBE and LADOTD BDEM. The bridge inspection report will include a detailed description of the bridge, its features, any observed deterioration or damage, an assessment of the bridge's condition relative to its current load rating and recommendations for repairs or modifications that may need to be completed in order to bring the bridge up to current standards.

Analysis and Load Rating: All relevant factors such as existing structural deficiencies, material type and strength, age of materials used in construction, traffic loads imposed on the bridge over time, and any past repairs or modifications, shall be considered in load rating analysis. For simple bridges, a system structural model and analysis must be performed. For complex bridges, a three-dimensional structural model may be necessary to capture all relevant factors.



Complex bridges are sensitive to secondary and temperature effects that could significantly affect the load rating and should be considered in the computer modeling and analysis.

Proper analysis will help identify potential structural problems and whether additional repairs/strengthening are necessary before a new load rating can be established.

SDR shall follow the bridge rating methods outlined in the latest AASHTO Manual for Bridge Evaluation (MBE) with the supplemental requirements of the LADOTD Bridge Design and Evaluation Manual (BDEM) and BDTM's. Rating shall be performed using AASHTOWare Bridge Rating (BrR) and LEAP Bridge Concrete, coupled with in-house unique analysis tools if required.

If the BrR rating results in a load posting, refined analysis may be required, depending on whether any existing severe damage controls the load rating. Finite Element Analysis, FEA, will be utilized to calculate the stresses and deformations in the bridge structure based on load factors as defined by AASHTO, and any other relevant parameters. In many cases, refined analysis along with material verifications might be sufficient to improve or eliminate the load posting.

Bridges with missing design plans: All missing bridge dimensions shall be field-measured and compared to previous sketches, if available. Ground Penetrating Radar (GPR) scanners will be used to determine the location and size of reinforcement. Bridge inspection findings of any damage or section loss shall be documented and summarized in a report. The data collected will be used to perform the load rating in addition to generating accurate sketches and plans of these bridges for future use.

If BrR analysis is determined to be inadequate for complex bridges, the use of three-dimensional finite element analysis (FEA) will be utilized through Midas or other FEA software from the LADOTD Pre-Approved Software List. The influence lines are used to indicate how specific loads affect various parts of a bridge structure and can help identify potential areas where strengthening may be necessary to ensure safety. Influence lines for critical members of the superstructure and substructure will be provided.

Mathcad and Excel are extensively used to present comprehensive rating reports inclusive of rating assumptions, model schematics, software output, tabulated results, bridge plans, and inspection reports. Developed computer models from BrR, LEAP, Midas, COMPSTIL2, or any other approved

software shall be included with the submittal. If any other software is required for unique applications, for which pre-approved software cannot be used, an outline with the required documentation shall be submitted to PM for approval.

SDR, having developed the LADOTD influence line software COMPSTIL2, has vast experience in this area ensuring clear understanding of LADOTD's needs and accurate rating results for critical superstructure and substructure elements.

The live load analysis shall include HL-93 Design loads, LADOTD State Legal loads, Specialized Hauling Vehicle loads, and Emergency Vehicles.

From experience with past load rating projects, several additional steps may be necessary to accurately calculate capacity, load distribution, or other element specific conditions. Existing bridges, in many cases differ from as-built plans, as an example, existing shoulders and sidewalks, number of lane(s) and construction details do affect the load distribution and should be considered for producing an accurate load rating.

Another example is steel members with longer unbraced lengths that are laterally supported along the top flange tend to have extremely low ratings due to the overly conservative C_b calculation. In this case, detailed calculation of the C_b value is necessary to ensure accurate evaluation.

SDR is always willing to take extra steps to find the actual carrying capacity of the bridge, to improve the load rating and avoid unnecessary posting or strengthening of the bridge. From past experience, assessment of the accuracy of the BrR results is important since, in several cases, SDR has identified significant errors in the load ratings performed in BrR and have been instrumental in developing solutions through active communications with LADOTD PM. The ability to determine the validity of rating results from the use of approved software is a crucial measure in the load rating process.

Using influence lines for issuing load permits is an important part of bridge load rating. Influence lines provide insight into how much weight can safely be put onto any given span or section of a bridge. This information makes it possible to issue accurate and timely permits for vehicles that exceed legal load limits without compromising safety.

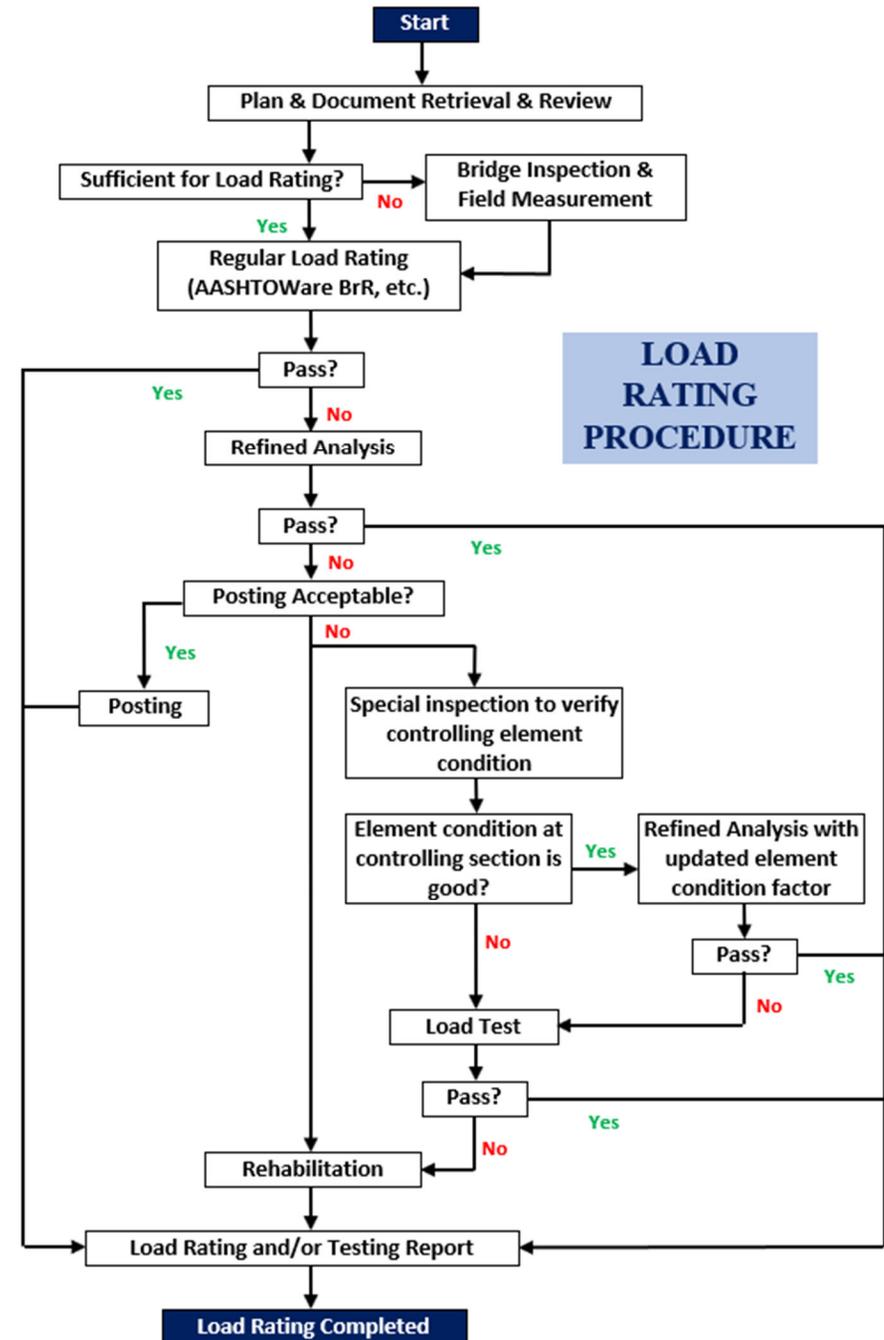
Schematic Recommendations to Improve Posting: SDR approach to load posting is shown in the flowchart. In cases, when refined analysis failed to provide acceptable level of posting, special inspection of the controlling elements could be necessary to verify the actual conditions and whether a higher condition factor could be considered in the analysis. For example, if the posting is controlled by shear sufficiency and the condition of the bridge is classified as poor, a reduction factor $\phi=0.85$, is assumed in the analysis. If the inspection of the shear regions shows no cracking or deterioration, the ϕ factor could be adjusted and a secondary analysis is performed resulting in a higher load rating. Similarly, condition factors for flexural regions could be adjusted higher if observed damage is outside the flexural regions.

Depending on types and locations, many identified deficiencies that result in a reduced condition factor have very little to no impact on flexural and shear capacity. However, blanket consideration of the overall condition factor in the analysis most often result in posting.

SDR shall provide detailed recommendations to improve or remove the posting. Load posting may be required for bridges with severe deficiencies in which the ratings cannot be sufficiently improved with refined analysis. SDR will provide schematic recommendations to improve the posting including NDT/load testing, if needed. If required, proposed rehabilitation will be based on structural integrity, ease of construction, future plans for replacement, and cost effectiveness. The repair plans shall include specific repair locations and repair details for each individual element of the structure requiring repair. The repair plans shall also include any recommended traffic diversions and temporary traffic signage that may be required during construction.

Final Report: A comprehensive report summarizing the details of the inspection findings shall be submitted to LADOTD for review and approval. The report shall also highlight the strengthening required, if any, to improve or eliminate the posted weight limits. The report shall be discussed with PM throughout and revised as necessary before the final official submittal.

QC/QA: SDR has established quality control procedures for all project scopes. For this project, a project panel consisting of select key members (raters, checkers, and reviewers as specified in the BDEM) will be established to ensure quality and adherence to established load rating policies, procedures, standards, specifications, and guidelines in the preparation and review of all documents. The QC/QA team will ensure that all LADOTD publication requirements are met, and reports produced are free of errors and omissions.



Project Schedule: For each task order, the first step is to address the project PM's objectives, schedule, emergency, availability of records and any operation limitations that need to be considered. A clear and concise work scope, cost estimate of the task order, and proposed schedule is then developed and submitted to the PM for review and approval. Once a NTP is received, a meeting will be scheduled with the PM to present and discuss staffing, QC plan for the task, work schedule, and dates for milestone submittals. Invoices, along with work progress reports, are submitted monthly. Submitting milestones follows the approved schedule. All submittals and information exchanged are performed through ProjectWise or as per the PM's direction.

Development of a Formal Training Course

To assist the DOTD load rating group in analyzing more complex structure types, the consultant will develop a formal training course. This course will be designed to equip participants with the necessary knowledge and skills to effectively analyze and rate structures using AASHTOWare BrR. The consultant's role in developing this training course will involve:

Curriculum Development: The consultant will create a comprehensive curriculum that covers all aspects of load rating analysis, including theoretical concepts, practical applications, and hands-on exercises.

Instructional Materials: The consultant will develop instructional materials, such as presentations, manuals, and reference guides, to support the training course and facilitate learning. To demonstrate how the software can be used in practice, several case studies can be presented. These case studies will highlight successful load rating analysis conducted using the software, demonstrating its effectiveness in a real-world context.

Training Delivery: Depending on the preferences and requirements of the DOTD staff, the training course can be conducted either virtually or in person. Both options have their advantages and considerations, and the consultant will provide an overview of each to help participants make an informed decision.

Dr. Shahawy and Dr. Russo have prepared and delivered National Highway Institute sponsored courses since 2004 covering various topics including complex bridge LRFR Load rating.

SDR KEY PERSONNEL: The key staff listed below will be fully active in supporting all project requirements.

Zhiyong Liang, Ph.D., P.E. (PM) is a seasoned bridge manager, having successfully managed several IDIQ contracts for LADOTD. Dr. Liang has over 20 years of experience in bridge inspection/ assessment, load rating, and

non-destructive testing. He has performed structural evaluations and load ratings of complex bridges such as segmental, cable-stayed, and major truss bridges. He has vast experience in Finite Element Analysis (FEA) of complex structures and bridges. Dr. Liang is also an NBIS certified team leader bridge inspector.

Mohsen Shahawy, Ph.D., P.E. (Managing Principal), has over 30 years of experience in bridge design, rehabilitation, and load rating of complex bridges. He prepared and delivered NHI, IRF, and PCI sponsored courses since 2004 covering diverse topics including bridge rehabilitation and complex bridge LRFR Load rating. He is an expert in load rating and evaluation of post-tensioned segmental concrete bridges utilizing span-by-span and cantilever construction techniques and cable-stayed bridges, having performed over 25 load rating and rehabilitation of such structures. He has published over 180 papers covering shear performance, LRFD and LRFR Code issues, and bridge rehabilitation utilizing Carbon Fiber Composites.

Francesco Russo, Ph.D., P.E. has over 30 years of experience in design and evaluation of complex bridges and served as lead instructor for the National Highway Institute courses covering LRFD complex bridge superstructure, bridge substructure, curved and skewed steel girder.

Adnan El-Saad, P.E. is an expert engineer with over 30 years of experience in bridge design, analysis, inspection, and load rating of simple and complex bridges. This includes movable (swing, bascule, and lift) bridges, and fixed-type bridges including arch, truss, as well as more common multi-girder bridges. He is an expert in NDT, having performed over 300 NDT bridge projects.

James "Greg" Fussell, M.E., P.E. has over 10 years of experience in the design, analysis, construction, inspection, load rating, and rehabilitation of complex highway bridges including post-tensioned precast segmental, arch, and steel plate girder bridges.

SDR has unmatched scope-specific experience having been on the forefront on all issues related to bridge evaluation, NDT, load rating, and bridge rehabilitation for over 30 years. SDR has developed many engineering software programs and in-house analysis tools for load rating and refined analysis of bridges. Among them the Smart Bridge Suite, Smart Bridge Culvert, and COMPSTIL2 are currently used by LADOTD and listed as pre-approved standard software for bridge load rating.

SECTION 19-23



19. Workload:

Firm(s)	Past Performance Evaluation Discipline(s)	Contract Number and State Project Number	Project Name	Remaining Unpaid Balance
SDR Engineering Consultants, Inc. 	Bridge	H.002980.6	IDIQ Contract 4400024188, Task Order # 1	16,300
		H.011487.6	IDIQ Contract 4400024188, Task Order # 5	146,000
		H.015409.5	IDIQ Contract 4400024188, Task Order # 4	33,500
		H.009859.5	IDIQ Contract 4400017310, Task Order # 7	41,555
		H.009859.5	IDIQ Contract 4400021595, Task Order # 6	285,140
		H.009730.5	IDIQ Contract 4400023510, Task Order # 1	116,900
Russo Structural Services LLC 	Bridge	State Project No.: H.015409.5	I-10 Mississippi River Bridge Rehabilitation	\$7,500

DO NOT SUM

20. Certifications/Licenses:

Zhiyong Liang, PhD, PE

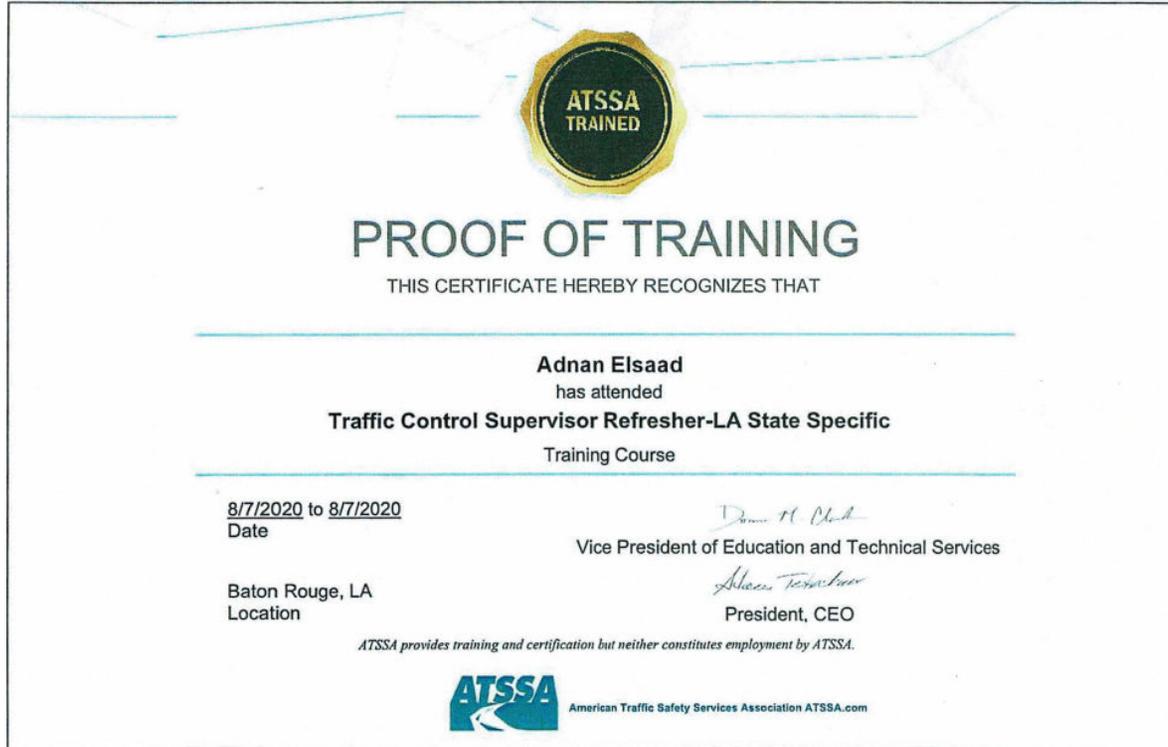


FHWA-NHI Bridge Inspector





ATSSA Traffic Control Supervisor



Osama Elsaad, PE



ATSSA Traffic Control Supervisor



FHWA-NHI Bridge Inspector





FHWA-NHI Bridge Inspector



**U.S. Department of Transportation
Federal Highway Administration**

National Highway Institute

Certificate of Training

GREG FUSSELL

has participated in

FHWA-NHI-130055

Safety Inspection of In-Service Bridges

hosted by

LA DOTD/LTRC

Date: December 4-15, 2017 **Hours of Instruction:** 67

Location: Baton Rouge, LA

Guy R. Lang, PE
Instructor

Allison H. Landry
Local Coordinator

Patric Maitens, PE
Instructor

Valerie Briggs
Valerie Briggs, Director
National Highway Institute





FHWA-NHI Bridge Inspector



U.S. Department
of Transportation
**Federal Highway
Administration**

National Highway Institute

Certificate of Training

FENG XIE

has participated in

***FHWA-NHI-130056 Safety Inspection of In-Service Bridges
for Professional Engineers***

hosted by

LA DOTD/LTRC



Date: *October 11-15, 2021*

Location: *Baton Rouge, LA*

Hours of Instruction: *34*



Instructor



Instructor



Local Coordinator



Thomas Harman, Director
National Highway Institute



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.**

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 as registered with Louisiana's Secretary of State)	Address	Point of Contact and email address	Phone Number
Russo Structural Services LLC 	121 Kathmere Road, Havertown, PA 19083	Francesco Russo frank.russo@russosstructural.com	215-266-5623

23. Location:

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

