



ROUTINE ENGINEERING SERVICES  
FOR STREET PROJECTS  
RESOLUTION NO. 144319  
SOQ NO. 24-021

Statement of Qualifications (TEC Questionnaire)



July 16, 2024





Colorado | Florida | Illinois | Louisiana | Michigan | Missouri | New Jersey | New York | North Carolina | Pennsylvania | Texas | Washington, DC | West Virginia

7/16/2024

Jefferson Parish Purchasing Department  
200 Derbigny Street, Suite 4400  
Gretna, LA 70053

RE: **SOQ No. 24-021**  
**Resolution No. 144319**  
**Routine Engineering Services for Streets Projects**

Modjeski and Masters, Inc. (M&M) is pleased to submit our Statement of Qualifications (TEC Questionnaire) for Routine Engineering Services for Streets Projects.

M&M has a highly qualified team of engineers and support staff with extensive technical expertise and a vast portfolio of project-related experience in their respective disciplines to meet project goals. We therefore request favorable consideration of our Firm for providing professional engineering services for street projects.

Very truly yours,

A handwritten signature in black ink, reading "Cullen J. Ledet, PE".

**Cullen J. Ledet, PE**  
Vice President

cc: Newell H. Schindler, M&M

encl.

## TEC Professional Services Questionnaire

**A. Project Name and Advertisement Resolution Number:**

Routine Engineering Services for Streets Projects – SOQ No. 24-021  
Resolution No. 144319

**B. Firm Name & Address:**



**Modjeski and Masters, Inc.**  
1100 Poydras St., Suite 900  
New Orleans, LA 70163

**C. Name, title and contact information of Principal, as defined in Section 2-926 of the Jefferson Parish Code of Ordinances, who is a registered, licensed architect, professional engineer, or surveyor in the State of Louisiana:**

**Cullen J. Ledet, PE**  
1100 Poydras St., Suite 900  
New Orleans, LA 70163  
504-524-4344  
cjledet@modjeski.com

**D. Name and contact information of employee who is a registered and licensed architect, professional engineer, or surveyor in the State of Louisiana in the applicable discipline. A subcontractor may be substituted here only if the advertised Project requires more than one discipline.**

**Newell H. Schindler, Jr., PE**  
1100 Poydras St., Suite 900  
New Orleans, LA 70163  
504-524-4344  
nhschindler@modjeski.com

**E. Please provide the number of employees whose primary function corresponds with each category:**

<u>33</u> Administrative	<u>    </u> Estimators	<u>    </u> Specification Writers
<u>    </u> Architects (Licensed)	<u>    </u> Geologists	<u>55</u> Structural Engineers
<u>    </u> Chemical Engineers	<u>    </u> Geotechnical Engineers	<u>    </u> Graduate Engineers
<u>7</u> Civil Engineers	<u>    </u> Interior Designers	<u>45</u> Project Managers
<u>7</u> Construction Inspectors	<u>    </u> Landscape Architects	<u>    </u> Clerical
<u>    </u> Ecologists	<u>    </u> Land Surveyor	<u>    </u> Grant/Funding Specialist
<u>11</u> Electrical Engineers	<u>13</u> Mechanical Engineers	<u>    </u> Sanitary Engineers
<u>55</u> Engineer Intern	<u>    </u> Environmental Engineers	
<u>    </u> Professional Land Surveyors		<u>226</u> TOTAL

**F. Is this submittal by a JOINT-VENTURE? Please check: YES ☐ NO ☒**

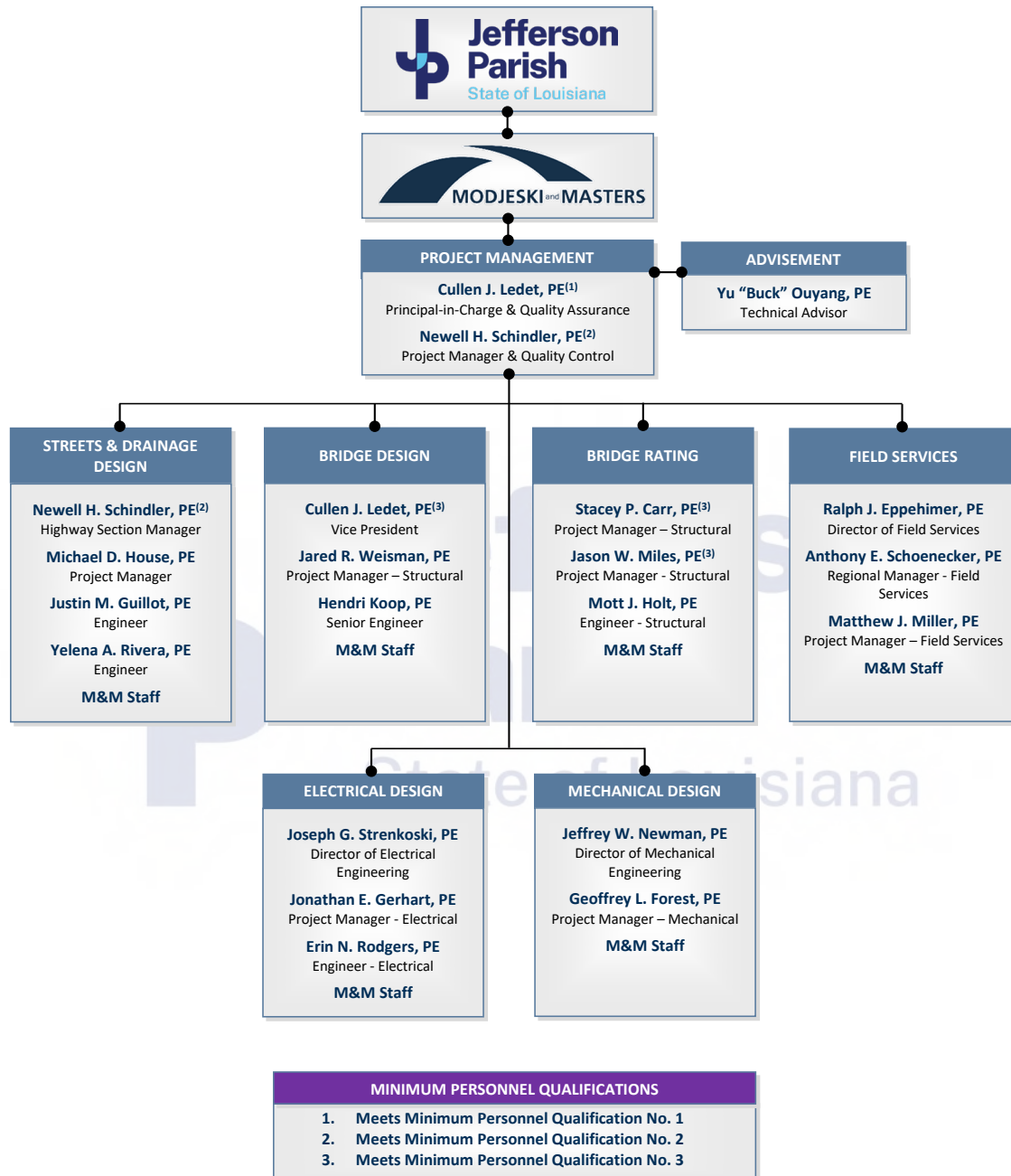
**If marked “No” skip to Section I. If marked “yes” complete Sections G-H.**

## TEC Professional Services Questionnaire

<b>G. If submittal is by JOINT-VENTURE, list the firms participating and outline specific areas of responsibility (including administrative, technical, and financial) for each firm. Please attach additional pages if necessary.</b>		
1. N/A		
2.		
<b>H. Has this JOINT-VENTURE previously worked together? Please check:</b> <div style="display: flex; justify-content: space-around;"> <span>YES</span> <span>NO</span> </div>		
<b>I. List all subcontractors anticipated for this Project. Please note that <u>all subcontractors must submit a fully completed copy of this questionnaire</u>, applicable licenses, and any other information required by the advertisement. See Jefferson Parish Code of Ordinances, Sec. 2-928(a)(3). Please attach additional pages if necessary.</b>		
<b>Name &amp; Address:</b>	<b>Specialty:</b>	<b>Worked with Firm Before (Yes or No):</b>
1. None		
2.		
3.		
<b>J. Please specify the total number of support personnel that may assist in the completion of this Project:</b>  M&M employs over 226 personnel in 17 offices nationwide; The New Orleans office houses 38 employees with expertise in structural, road and drainage design as well as field services, CE&I and inspection experience.		

## TEC Professional Services Questionnaire

**K. List the professional in charge, key persons, specialists, and individual consultants anticipated for this Project and provide their relevant information below. If necessary, please attach additional documentation (i.e. resume) that demonstrates the employment history and experience of the Firm's key persons that may assist in the completion of this Project. Please attach additional pages if necessary.**



## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>	
<b>Name &amp; Title:</b>	
Cullen J. Ledet, PE Vice President New Orleans Regional Director	
<b>Project Assignment:</b>	
Principal / Quality Assurance	
<b>Name of Firm with which associated:</b>	
	
<b>Years' experience with this Firm:</b>	
With this Firm: 22 Total: 22	
<b>Education: Degree(s)/Year/Specialization:</b>	
B.S., Civil Engineering, Tulane University (2000)	
<b>Active registration: Year first registered/discipline:</b>	
2007/Professional Engineer (Civil) – AR, LA, MI, MS	
<b>Other experience and qualifications relevant to the proposed Project:</b>	
<p>Mr. Ledet joined the New Orleans Office of Modjeski and Masters in 2002 as a Design Engineer after having interned two summers with the firm. He is the Regional Director of the New Orleans Office. Serves as the CAD Manager for the office, and leads business development activities and project pursuits. As a Design Engineer, he was engaged in the design of both fixed and movable highway and railroad bridges and has prepared designs, plans, and specifications for a number of projects both for improvements as well as complex projects. He has served as Project Manager or Task Leader on numerous roadway lighting projects for interstate interchanges and roundabouts. Mr. Ledet is familiar with the Manual for Uniform Traffic Control Devices along with local standards and has coordinated the development of sequence of construction and traffic control details for various projects.</p> <p><b>Meets Minimum Personnel Qualification No. 1 and 3</b></p>	



## **TEC Professional Services Questionnaire**

### **LA 1 – Port Allen Bridge Replacement. Port Allen, LA | LA DOTD (2017-Present)**

The ongoing project consists of replacing the existing northbound and southbound bridge structures on LA 1 over the Intracoastal Canal Waterway (ICWW). The proposed LA 1 SB Bridge will consist of 3 - 12' travel lanes and 2 - 10' shoulders and will be approximately 2,680' long. The proposed LA 1 NB Bridge will consist of 2 - 12' travel lanes and 2 - 10' shoulders (LA 1 NB roadway), a permanent 2' wide median barrier and 1 - 12' travel lane with 2 - 6' shoulders (I-10 EB Exit Ramp roadway). The Exit Ramp and LA 1 NB roadway will be separated by a permanent 2' wide median barrier until the LA 1 NB Bridge will bifurcate where the LA 1 NB roadway and I-10 EB Exit Ramp roadway will be carried on separate bridge structures. The LA 1 NB Bridge and I-10 EB Exit Ramp Bridge will be approximately 2,700' and 354' long, respectively. Both LA 1 NB and LA 1 SB Bridges will consist of a 870' long haunched three span continuous steel plate girder main span unit over the ICWW and prestressed concrete LG girder approach spans. Mr. Ledet serves as Deputy Project Manager for this project and is developing the General Plan and Elevation drawings while identifying any potential conflicts with utilities and existing structures.

### **MacArthur Drive Interchange. Harvey, Louisiana | LA DOTD (2012-2016)**

The MacArthur Interchange Project consisted of the addition of two new ramps to the Westbank Expressway near MacArthur Drive, as well as the demolition of two existing ramps. M&M was responsible for the substructure design for Ramps 7 and 8 in a complex urban setting which included steel pile footings and reinforced concrete columns. M&M also provided construction related engineering support services. Mr. Ledet reviewed substructure plans and quantities and generated design details.

### **Huey P. Long Bridge Widening at New Orleans, LA | LA DOTD (2000-2012)**

This Project widens the existing bridge roadways through the widening of river piers using conventional and post-tension concrete, two new truss lines and 43' roadways to replace existing 18' roadways. The Project construction cost is \$1.2B. This Project was a major complex design involving adding truss lines while maintaining existing traffic. Mr. Ledet assisted in the design and detail of the main river pier widening; designed and detailed plans and generated specifications for various components of the superstructure and substructure of the approaches, including steel and prestressed concrete girders; provided construction engineering support services for approaches contract.

### **US 90 (I-49) from Albertsons Pkwy to Ambassador Caffrey Pkwy, Lafayette Parish, LA | LA DOTD (2015-2017)**

As a member of the Design-Build team with C.H. Fenstermaker & Associates, M&M provided an independent QC review of the structures over the BNSF Railroad and Albertsons Parkway. Both bridges included construction of various continuous precast prestressed concrete girder Spans supported on bent columns and pile footing foundations. The structures over the BNSF Railroad included a phased sequence of construction. Mr. Ledet performed the review of the structural plans and details at every submittal milestone.


### **Replacement of LA3249 (Well Road) over I-20, Monroe, LA | LA DOTD (2011)**

This Project was the replacement of the Well Road Overpass using accelerated construction methods to construct replacement spans within the interchange R/W and over a weekend remove existing spans and install new spans. Mr. Ledet was the point of contact for Modjeski and Masters, Inc. He designed and detailed deck drainage; calculated quantities and generated construction cost estimate; construction services.

### **US 11 Bridge over Lake Pontchartrain, New Orleans, LA | LA DOTD (2017-Present)**

The project involved the performance of structural, mechanical, electrical and architectural rehabilitation services for the two bascule spans within this five mile bridge. Modjeski and Masters, Inc. provided the following services for this project: structural, mechanical, electrical and architectural evaluation, evaluation of existing paint system, development of Scope of Services for the rehabilitation of this bridge, development of preliminary plans and bridge rating. \$503,111 (fee), \$20,900,000 (est. const.)

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>	
<b>Name &amp; Title:</b>	
Newell H. Schindler, PE Project Manager   Highway Design	
<b>Project Assignment:</b>	
Project Manager	
<b>Name of Firm with which associated:</b>	
	
<b>Years' experience with this Firm:</b>	
With this Firm: 4 Total: 42	
<b>Education: Degree(s)/Year/Specialization:</b>	
B.S., Civil Engineering, Louisiana State University, 1982	
<b>Active registration: Year first registered/discipline:</b>	
1988/Professional Engineer (Civil & Environmental) – AL, AR, LA, MS, TX	
<b>Other experience and qualifications relevant to the proposed Project:</b>	
<p>Mr. Schindler has 42 years of experience in the management and design of infrastructure projects, and 13 years of experience in the Road Design Section of LADOTD. Accompanying this is, 29 years of experience as a Consulting Engineer which has included project management and design of LADOTD roadway improvement projects. He has immense knowledge of current LADOTD and the American Association of State Highway &amp; Transportation Officials (AASHTO) policies and design procedures. He has supervised the design of a multitude of road and bridge improvement projects including complex urban interstate, urban arterial, rural arterial, and minor bridge replacement projects. Projects included coordination with Traffic Engineers and evaluation of traffic analyses to develop capacity and safety roadway improvements, including intersections and interchanges. He is familiar with the NEPA process and has completed the course “National Environmental Policy Act (NEPA) and Transportation Decision Making”, sponsored by the National Highway Institute (NHI).</p> <p><b>Meets Minimum Personnel Qualification No. 2 and 3</b></p>	



## **TEC Professional Services Questionnaire**

### **Cline Ave Bridge. East Chicago, Indiana | United Bridge Partners (2020-2021)**

Mr. Schindler served as lead engineer for several post construction design tasks. Performed an independent technical review (ITR) of final roadway signing and striping plans prepared by others to determine conformance with AASHTO, IDOT, and MUTCD design criteria and guidelines. 23 non-conformance Items were identified and documented in M&M's NCR Report. Also provided the Client with 17 additional recommendations to improve the operation and safety of the Cline Ave. Bridge facility. Subsequently, prepared final construction plans to address the NCR items and recommendations. Final plans included signing and striping layouts along with sign structure details. Also prepared final plans for the installation of Guide (Attraction) signs along Indiana SR 912 and I-90 in Indiana and Illinois. Plans were prepared in accordance with MUTCD, AASHTO and Illinois and Indiana sign guidelines. Also Served as lead engineer developing conceptual geometric layouts for two (2) proposed new partial and fully directional interchanges. at Riley Road and Cline Ave. Bridge (SR-912) (CAB). Five (5) conceptual interchange layouts were developed for the proposed Riley Rd./CAB Interchange and Three (3) conceptual interchange layouts were developed for the proposed Riley Rd./CAB Interchange and presented in a feasibility report. Conceptual roundabout layouts were developed for the ramp intersections. Developed design criteria for the proposed ramps in accordance with AASHTO and IDOT Interchange guidelines.

### **RR105 FEMA Lower Ninth Ward Northeast Group C (FRC), (Orleans Parish, LA) | City of New Orleans DPW (2019 -2020)**

Project Principal and QA/QC Officer., provided professional engineering design and construction administration services for FEMA- eligible street repairs in the Lower Ninth Ward neighborhood. Consisted of full reconstruction of several streets including replacement of sub-surface drainage, water and sewer. Services provided included topographic and right-of-way surveying, roadway and sub-surface drainage design (10 yr. storm), The design followed FEMA guidelines, as well as the guidelines set forth by City of New Orleans Public Works.

### **Central City Group A (FRC) (DPW P. No. 2017-RR021). New Orleans, LA | City of New Orleans - DPW (2016-2020)**

Mr. Schindler served as Project Principal, Engineer of Record and Quality Control Officer. He performed technical engineering design quality control reviews for full reconstruction (FRC) of several streets (13 blocks) in the urbanized Central City Neighborhood. Project was a complex urban design due to the number of underground utilities. Mr. Schindler performed technical quality control reviews of the hydrologic and hydraulic analyses for the design of the sub-surface drainage system for a 10-year design storm in accordance with Louisiana (LA) DOTD Hydraulics Manual, along with technical quality control reviews of the design for the replacement of the existing water and sewer systems. He reviewed the designed profile grades to confirm conformance with AASHTO design criteria and LA DOTD sub-surface hydraulic criteria. He. performed technical analysis and quality control reviews of the proposed geometric details and joint layouts. Mr. Schindler reviewed calculations for quantities for all construction items. He performed quality control reviews of the final construction plans and specifications, including typical sections, plan/profile sheets, geometric detail, joint layouts and cross sections.



### **Urban System Project, Earhart Blvd., (Hamilton – Dublin), (Orleans Parish LA) | LA DOTD & City of New Orleans DPW (1995-2000)**

Project Manager overseeing preliminary and final design to widen existing four-lane urban arterial w/median to six-lanes w/median. Included preparation of Typical Sections, Plan/profile sheets, Summary of Estimated quantities, plan/profile sheets, sequence of Construction, traffic control plan, cross sections, drainage design in accordance with LA DOTD hydraulics criteria and geometric layouts. LA DOTD Urban System Project, through the New Orleans Department of Public Works (NODPW). Coordination of design with LA DOTD, N. O. Sewerage and Water Board and NODPW was required throughout the design process.

### **Causeway Blvd. – 17th St. Canal; I- 10, (Jefferson Parish, LA) | LA DOTD (1994-1995)**

LA DOTD Project Manager and Consultant Coordinator overseeing the design of capacity improvements for a complex urban interstate design, included additional travel lanes and modifications to ramp configurations at the Bonabel Blvd. and Causeway Blvd. interchanges. Review all consultant deliverables to ensure compliance with AASHTO and LA DOTD policies and guidelines.

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>	
<b>Name &amp; Title:</b>  <b>Yu “Buck” Ouyang, PE</b> Vice President	
<b>Project Assignment:</b>  Technical Advisor	
<b>Name of Firm with which associated:</b>  <div style="text-align: center;">  </div>	
<b>Years' experience with this Firm:</b>  With this Firm: 33 Total: 35	
<b>Education: Degree(s)/Year/Specialization:</b>  BS, Structural Engineering, Zhejiang University (1982) MS, Civil Engineering, Zhejiang University (1985) MS, Civil Engineering, University of Kentucky (1990)	
<b>Active registration: Year first registered/discipline:</b>  1994/Professional Engineer (Civil) - LA	
<b>Other experience and qualifications relevant to the proposed Project:</b>  <p>Mr. Ouyang has been with Modjeski and Masters, Inc. since 1991, and has vast bridge engineering experience, ranging from conventional designs to special projects of high complexity, and from feasibility studies to construction services. He specializes in the design of fixed and movable highway and railroad bridges, and the rating and rehabilitation of existing bridges. His expertise also extends to analysis of complex bridge structures, vessel collision risk assessment and protection systems, seismic design, analysis and retrofit, and fatigue evaluations. Mr. Ouyang thrives on finding creative solutions to complex engineering challenges through high level analysis, efficient designs and with special emphasis on proper detailing. He also brings extensive experience in managing engineering and design efforts of varying sizes and difficulties, and in leading, coordinating and managing technical teams and subconsultants. His hands-on project management has led to successful and on-time completion of large and highly technical projects. Mr. Ouyang is MM Washington DC office manager.</p>	

## **TEC Professional Services Questionnaire**

### **LA 1 – Port Allen Bridge Replacement. Port Allen, LA | LA DOTD (2017-Present)**

The project consisted of replacing the existing northbound and southbound bridge structures on LA 1 over the Intracoastal Canal Waterway (ICWW). The proposed LA 1 SB Bridge will consist of 3 - 12' travel lanes and 2 - 10' shoulders and will be approximately 2,680' long. The proposed LA 1 NB Bridge will consist of 2 - 12' travel lanes and 2 - 10' shoulders (LA 1 NB roadway), a permanent 2' wide median barrier and 1 - 12' travel lane with 2 - 6' shoulders (I-10 EB Exit Ramp roadway). The Exit Ramp and LA 1 NB roadway will be separated by a permanent 2' wide median barrier until the LA 1 NB Bridge will bifurcate where the LA 1 NB roadway and I-10 EB Exit Ramp roadway will be carried on separate bridge structures. The LA 1 NB Bridge and I-10 EB Exit Ramp Bridge will be approximately 2,700' and 354' long, respectively. Both LA 1 NB and LA 1 SB Bridges will consist of a 870' long haunched three span continuous steel plate girder main span unit over the ICWW and prestressed concrete LG girder approach spans. M&M is responsible for the design, plans, quantities and cost estimate of the bridge structures from abutment to abutment. Mr. Ouyang served as the Project Manager for the LA 1 Port Allen Bridge Replacement.

### **MacArthur Drive Interchange. Harvey, Louisiana | LA DOTD (2012-2016)**

The MacArthur Interchange Project consisted of the addition of two new ramps to the Westbank Expressway near MacArthur Drive, as well as the demolition of two existing ramps. M&M was responsible for the substructure design for Ramps 7 and 8 in a complex urban setting which included steel pile footings and reinforced concrete columns. M&M also provided construction related engineering support services. Mr. Ouyang served as the Project Manager for this project.

### **Huey P. Long Bridge Widening at New Orleans, LA | LA DOTD (2000-2012)**

The Huey P. Long Bridge is a high-level, combination highway and railroad bridge which crosses the Mississippi River in New Orleans, Louisiana. The total structure length, including approaches, is approximately 23,000 ft. The main span unit is 3,524 ft. long, consisting of a 750-ft. cantilever through truss span, two 530-ft. anchor truss spans, one 530-foot simple through truss span, and four deck truss spans. All consist of riveted steel construction. The firm designed the structure and provided construction supervision from 1925 until 1936. The original design called for two 9' vehicular lanes (in each direction) to be bracketed from the trusses. The firm also provides an in-depth annual inspection for the New Orleans Public Belt Railroad. Mr. Ouyang served as Lead Structural Engineer for the Main Truss Design and performed complex analysis of the combined main span trusses under numerous loading conditions and stages of construction.



### **LA 16 over Tangipahoa River, Tangipahoa Parish, LA | LA DOTD (2018-2019)**

M&M developed all necessary topographic surveys, preliminary and final plans for this bridge replacement project on LA 16, between LA 51 and LA 1054, in Amite City, LA. This project included reconstruction of the approach slabs and roadway on the east and west sides of the bridge. It was anticipated that traffic shall be maintained during construction with an on-site diversion roadway and bridge. The plans were prepared in accordance with AASHTO LRFD Bridge Design Specifications and the Bridge Design and Evaluation Manual (BDEM), DOTD 2017 Design Guidelines, DOTD 2016 Standard Specifications for Roads and Bridges, DOTD Road Design Manual, and DOTD Hydraulics Manual. QA/QC was provided in accordance with Part 1, Chapter 3 of BDEM. Construction Related Engineering Support was provided and is currently on-going. Mr. Ouyang served as the Project Manager for this project.

### **US 61 Thompson Creek Bridge Replacement, St. Francisville LA | LA DOTD (2018-2020)**

M&M prepared full sets of roadway and bridge drawings for this major transportation corridor. This project involved the emergency replacement and repairs to the flood-damaged U.S. 61 bridges over Thompson Creek. A temporary diversion median crossover was used to maintain traffic during construction on this high speed four-lane rural principal arterial highway. Modjeski and Masters coordinated the roadway design and bid documents preparation. Highway Work included asphalt concrete roadway, guardrail improvements, design of a temporary roadway diversion and adjacent detour. Mr. Ouyang served as the Project Manager for the US 61 Thompson Creek Bridge Replacement.

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>	
<b>Name &amp; Title:</b>	
Michael D. House, PE Project Manager	
<b>Project Assignment:</b>	
Engineer – Roadway & Drainage Design	
<b>Name of Firm with which associated:</b>	
	
<b>Years' experience with this Firm:</b>	
With this Firm: 22 Total: 26	
<b>Education: Degree(s)/Year/Specialization:</b>	
B.S., Civil Engineering, Clarkson University, 1998	
<b>Active registration: Year first registered/discipline:</b>	
2007/Professional Engineer (Civil) – IL, NC, NY, OH, PA	
<b>Other experience and qualifications relevant to the proposed Project:</b>	
Mr. House joined Modjeski and Masters, Inc. in 2002 and heads the Pennsylvania Regional Office's Highway Design Section. He is a Project Manager with nearly 24 years of experience and is knowledgeable in the design delivery process for highway and bridge related projects. He has served as lead highway design engineer on numerous traditional design-bid-build and design-build projects, performing roadway geometric design, work zone traffic control, and hydrologic and hydraulic analyses of bridges and culverts. Mr. House has extensive experience with the design and delivery of highway facilities.	



## **TEC Professional Services Questionnaire**

### **US61 Thompson Creek Bridge Replacement. East and West Feliciana Parish, LA | LADOTD (2019)**

This project involved the emergency replacement and repairs to the flood-damaged U.S. 61 bridges over Thompson Creek. A temporary diversion median crossover was used to maintain traffic during construction. The project included roadway design and bid documents preparation for this high-speed four-lane principal arterial controlled access highway. Highway Work included asphalt concrete roadway, guardrail improvements, design of a temporary roadway diversion and adjacent detour. Mr. House coordinated the roadway design and bid documents preparation for this high-speed four-lane principal arterial controlled access highway. Highway Work included asphalt concrete roadway, guardrail improvements, design of a temporary roadway diversion and adjacent detour.

### **I-84 Over 9W Overpass Rehabilitation. Newburgh, NY | New York State Bridge Authority (2019)**

Due to the deteriorated concrete deck and deck joints, M&M was selected to rehabilitate this structure (which was widened by M&M back in the early 1980's). As part of the rehabilitation design, M&M eliminated deck joints, performed a seismic analysis/retrofits, and increased the vertical clearance by raising the profile grade of I-84. Mr. House created the work zone traffic control plans for Route 9W and was the quality assurance reviewer for the design of the new Interstate alignment and profile, full-depth pavement reconstruction, permanent and temporary drainage, and the construction staging and maintenance and protection of traffic for I-84, a controlled access highway.

### **Burnt House Road Bridge Replacement. Cumberland County, PA | PennDOT (2007-2011)**

The Burnt House Road Bridge is a two-span, 93-ft three-span pre-cast concrete arch bridge over the Yellow Breeches Creek. The project consists of a bridge replacement and removal of the existing bridge. Critical to this project was the type and alignment of the proposed roadway profile to avoid a 100-year backwater upstream of the bridge. Mr. House performed all HECRAS modeling for an award-winning bridge replacement using a triple CONSPAN arch culvert.

### **New River Parkway Design. Hinton, WV | West Virginia DOH (2013)**

The current roadway is mostly a one-lane asphalt road with no shoulders. Our designs for the New River Parkway will create two lanes with shoulders that allow slow speed touring and provide access to the New River recreational facilities. Especially challenging is the client's directive to minimize the use of cuts and fill. This project also takes advantage of our expertise in hydraulics (for drainage studies), retaining wall design, and highway engineering services. Phase I includes 1.3 miles of roadway and Phase II includes 5.2 miles. Tasks performed include: highway/interchange design, hydraulics and hydrology, drainage and safety improvements, and preliminary and final new structure design. Designs meet the criteria of the West Virginia Division of Highways (WVDOT), as well as satisfy the project's other stakeholders, including the National Park Service (NPS) and the New River Parkway Authority (NRPA). Mr. House was a Project Engineer providing design and analysis of three large open-bottom culverts, all closed drainage systems, traffic signing, and NPDES permitting. He participated in the hydrologic analyses for major drainage and design and analysis of two large open-bottom CONSPAN culverts using HECRAS.

### **Corridor H, Section 3 Design. Davis to Elkins, WV | West Virginia DOH (2013)**

Corridor H is a four-lane divided arterial with limited access and a design speed of 65 MPH. Corridor Section 3, approximately two miles in length, is in a previously heavily mined area of the Beaver Creek Valley, where the topography includes unmitigated strip mine areas, ponds, and small streams in addition to the Creek. An abandoned railroad grade lies between Route 93 and Beaver Creek and is under design by others for use as a bicycle trail. At one location Beaver Creek swings close to the alignment requiring that grading for the bicycle trail be incorporated in the design. Over much of the project bifurcated horizontal and vertical alignments are used to avoid other fill slope interferences with the trail. Major drainage courses requiring culvert pipes over 60 inches in diameter, are encountered in multiple locations. An extremely busy coal mine access road joins the alignment near the eastern end of the project, requiring an at-grade intersection with turning lanes. MM provided highway/interchange design, drainage design, maintenance and protection of traffic, and construction services for this project. Mr. House participated in roadway design, erosion and sedimentation control plans, traffic control plans, highway geometric design and surface modeling, and drainage design for this limited access highway project.



## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>	
<b>Name &amp; Title:</b>	
Justin M. Guillot, PE Engineer - Highway	
<b>Project Assignment:</b>	
Engineer – Roadway & Drainage Design	
<b>Name of Firm with which associated:</b>	
	
<b>Years' experience with this Firm:</b>	
With this Firm: 1 Total: 6	
<b>Education: Degree(s)/Year/Specialization:</b>	
B.S., Civil and Environmental Engineering, University of New Orleans, 2017 B.S., Psychology, Louisiana State University, 2008	
<b>Active registration: Year first registered/discipline:</b>	
2021/Professional Engineer (Civil) – LA	
<b>Other experience and qualifications relevant to the proposed Project:</b>	
<p>Mr. Guillot has over 8 years of experience in the design of infrastructure projects. He has a broad knowledge of current Louisiana Department of Transportation and Development (LA DOTD) and the American Association of State Highway &amp; Transportation Officials' (AASHTO) policies and design procedures. He has also served in project management roles and performed construction administration. In addition, Mr. Guillot has completed coursework by the American Traffic Safety Services Association (ATSSA) and is certified as a Traffic Control Technician, Traffic Control Supervisor, and Flagger.</p> <p><b>US 90-Z CCC Decorative Lighting, New Orleans, LA   LADOTD (2023-2024)</b></p> <p>M&amp;M was contracted by LADOTD for the design of the proposed Dynamic Decorative Lighting System to be installed on the two Crescent City Connection (CCC) Bridges over the Mississippi River in New Orleans, LA. (CCC #1 &amp; CCC #2). The proposed decorative lighting system will include remotely operated dynamic LED necklace lighting on the top chords, uplighting on selected truss members and downlighting on the main piers and would be on both the upriver and downriver sides of the two superstructures. Project was on an expedited schedule. M&amp;M was responsible for preparing the final construction plans and specifications, Level 4 Transportation Management Plan (TMP) and coordinating USCG</p>	

## **TEC Professional Services Questionnaire**

approval. Mr. Guillot developed the temporary traffic control plans in accordance with MUTCD and LADOTD requirements. He assisted with the TMP development and the USCG approval process for the installation of decorative lighting on a navigable waterway.

### **Rossignol Road Bridge Replacement. Calcasieu Parish, LA | Calcasieu Parish Police Jury (CPPJ) (2016-2019)**

Mr. Guillot provided general Engineering support for the replacement of an 80' timber bridge on Rossignol Road with a precast concrete slab span bridge. He performed geometric design of the bridge alignment and roadway approaches in accordance with AASHTO design criteria. He performed hydrologic and hydraulic analyses of roadway drainage elements and designed the approach guardrails as well as the bridge abutment scour protection, all to LA DOTD standards. He calculated final construction quantities and compiled an OPCC. He also assisted in the development of final construction plans and specifications.

### **Cline Avenue Bridge. East Chicago, IN | United Bridge Partners (2021 - 2022)**

This project involves various tasks related to the recent construction of a privately-owned 1.7-mile segmental box girder toll bridge. Mr. Guillot served in a general engineering support role in performing an Independent Technical Review of final Signage and Striping Plans produced by another consulting firm for conformance with Indiana Department of Transportation (InDOT) Design Guidelines as well as the Indiana Manual on Uniform Traffic Control Devices (IMUTCD). He was also tasked with proposing recommendations to improve the safety and operation of the bridge and roadway approaches, including revisions to the pavement marking layout and the addition of various warning and regulatory signs as well as roadway delineation. He produced final construction plans which included corrections to the items found not in compliance as well as the proposed recommendations. He calculated construction quantities and compiled an opinion of probable construction cost. He also reviewed construction material submittals from the contractor for conformance with the project specifications.

In addition, the client wanted to add various "Attraction" signs and Advance Guide Signs along several routes in the area to attract more motorists to the toll bridge. Mr. Guillot's role included determining acceptable sign locations and designing the signs (overall size and color as well as letter font, size, and spacing) and their foundations in accordance with InDOT as well as the IMUTCD. He also produced preliminary plans for the fabrication and installation of the signs.

Another task was the creation of conceptual layouts for new interchanges along the bridge. Mr. Guillot's role included determining the appropriate ramp design criteria (design speed, travel lane and shoulder widths, cross slope, maximum grades, curve radii, etc.) and designing multiple horizontal and vertical geometries for a total of 8 ramps at 2 different interchange locations in accordance with InDOT and AASHTO's "A Policy on Geometric Design of Highways and Streets". These ramps required complex layouts due to vertical clearance issues caused by the presence of overhead utilities and at-grade railroad tracks as well as limited right-of-way availability. He also produced conceptual layout drawings to illustrate each alternative.

### **Central City Group A (FRC) (DPW P. No. 2017-RR021). New Orleans, LA | City of New Orleans - DPW (2017-2020)**

Mr. Guillot served as Design Lead during the preliminary and final design phases then transitioned to Project Manager and Construction Administrator upon the start of the construction phase. He performed geometric design in accordance with AASHTO design criteria and ensured compliance with the Americans with Disabilities Act (ADA) for full reconstruction (FRC) of 9 city blocks in the urbanized Central City Neighborhood. The project was a complex urban design due to the number of underground utilities and limited Right-of-Way. Mr. Guillot performed hydrologic and hydraulic analyses for the design of the sub-surface drainage system for a 10-year design storm in accordance with the LA DOTD Hydraulics Manual, along with design of the replacement of existing water and sanitary sewer systems. He oversaw development of the final construction plans and specifications, including typical sections, special details, plan/profile sheets, geometric details, joint layouts, and cross sections. Mr. Guillot calculated quantities for all construction bid items and compiled an Opinion of Probable Construction Cost (OPCC) which was ultimately within 1.1% of the winning contractor's bid. Upon the start of construction, Mr. Guillot was the primary point of contact for both the client and the contractor. He reviewed contractor material submittals and shop drawings for compliance with the plans and specifications. Lastly, he performed frequent site visits to ensure safe work practices were being followed and verify the contractor's implementation of proper temporary traffic control measures.

## **TEC Professional Services Questionnaire**

### **Lower Ninth Ward Northeast Group C (FRC) (DPW P. No. 2019-RR105). New Orleans, LA | City of New Orleans - DPW (2019-2020)**

Mr. Guillot served as Design Lead during the preliminary design phase. He performed geometric design in accordance with AASHTO design criteria and ensured compliance with the ADA for full reconstruction of 12 city blocks in the urbanized Lower Ninth Ward Neighborhood. The project was a complex urban design due to the number of underground utilities and limited Right-of-Way. Mr. Guillot performed hydrologic and hydraulic analyses for the design of the sub-surface drainage system for a 10-year design storm in accordance with the LA DOTD Hydraulics Manual, along with design of the replacement of existing water and sanitary sewer systems. He oversaw development of the preliminary plans and specifications, including typical sections, special details, plan/profile sheets, geometric details, joint layouts, and cross sections. Mr. Guillot also calculated quantities for all construction bid items and compiled a preliminary OPCC.

### **Memorial Drive Tunnel Traffic Control Design, Houston, TX | Strinteg Corporation - DPW (2023)**

The recently constructed and opened tunnels along Memorial Drive eastbound and westbound within Memorial Park in the City of Houston were to receive their first structural inspection in accordance with National Bridge Inspection Standards (NBIS) requirements. Temporary Traffic control was required to facilitate the performance of these inspections. As a sub-consultant to Strinteg, M&M developed temporary traffic control plans in accordance with Manual of Uniform Traffic Control Devices (MUTCD), Texas Department of Transportation (TxDOT), and City of Houston. The plans included the types and spacing of traffic control devices and warning signs. Mr. Guillot developed the traffic control plans and layouts.

### **SH 22 Richland Creek Bridge Replacement, Hill County, TX | Texas DOT (2024)**

Modjeski and Masters performed engineering services for development of plans, specifications and cost estimate for the on-system bridge replacement SH 22 at Richland Creek in Hill County, TX. Services included preparing roadway and bridge design, hydrologic and hydraulic design, traffic control, survey, and geotechnical data collection. Mr. Guillot's role included preliminary geometric design and plan production for the roadway portion of the bridge replacement.

## TEC Professional Services Questionnaire

### KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

<b>Name &amp; Title:</b>	
<b>Yelena A. Rivera, PE</b> Engineer	
<b>Project Assignment:</b>	
Engineer – Bridge, Roadway & Drainage Design	
<b>Name of Firm with which associated:</b>	
	
<b>Years' experience with this Firm:</b>	
With this Firm: 2 Total: 15	
<b>Education: Degree(s)/Year/Specialization:</b>	
B.S., Civil and Environmental Engineering, University of New Orleans, 2009	
<b>Active registration: Year first registered/discipline:</b>	
2016/Professional Engineer (Civil) – LA	
<b>Other experience and qualifications relevant to the proposed Project:</b>	
<p>Ms. Rivera has over 15 years of experience in the design of infrastructure projects. She has a broad knowledge of current Louisiana Department of Transportation and Development (LA DOTD) and the American Association of State Highway &amp; Transportation Officials' (AASHTO) policies and design procedures. She has worked on a variety of highway/roadway and bridge improvement projects through planning and design phases. She has also served in project management roles and performed construction administration.</p> <p><b>Central City Group A (FRC) (DPW P. No. 2017-RR021). New Orleans, LA   City of New Orleans - DPW (2017-2020)</b></p> <p>Ms. Rivera served as Project Manager overseeing the Surveying, Preliminary Design, Final Design and Bidding Phases of this project. Project consisted of full reconstruction (FRC) of several streets (13 blocks) in the urbanized Central City Neighborhood of New Orleans. Project was a complex urban design due to the number of underground utilities. Included geometric design in accordance with AASHTO design criteria and ensured compliance with the Americans with Disabilities Act (ADA). Included hydrologic and hydraulic analyses for the design of the sub-surface drainage system for a 10-year design storm in accordance with the LA DOTD Hydraulics Manual, along with design of the replacement of existing water and sanitary sewer systems.</p>	



## **TEC Professional Services Questionnaire**

### **Lower Ninth Ward Northeast Group C (FRC) (DPW P. No. 2019-RR105). New Orleans, LA | City of New Orleans DPW (2019-2020)**

Ms. Rivera served as Project Manager overseeing the Surveying, Preliminary Design, Final Design and Bidding Phases of this project. Project consisted of full reconstruction (FRC) of several streets (18 blocks) in the urbanized Lower Ninth Ward Neighborhood of New Orleans. Project was a complex urban design due to the number of underground utilities. Included geometric design in accordance with AASHTO design criteria and ensured compliance with the Americans with Disabilities Act (ADA). Included hydrologic and hydraulic analyses for the design of the sub-surface drainage system for a 10-year design storm in accordance with the LA DOTD Hydraulics Manual, along with design of the replacement of existing water and sanitary sewer systems.

### **Menetre Park and Boat Launch Master Plan. Covington, LA | City of Covington (2016-2018)**

The purpose of this project was to provide conceptual plans for improvements that would increase the safety of all visitors and expand the utilization of the Menetre Park and Boat Launch. Ms. Rivera performed a site visit and analysis on the property and derived potential alternative improvements which could be implemented in phases as funding becomes available. The 3 phases of improvements were then presented at a public stakeholder meeting to gauge public interest. Once all public comments were collected, a final Master Plan Report was prepared to detail the proposed improvements, summarize public comments, and provide a final recommendation to city officials.

### **Videotaping & Analysis of Culverts. New Orleans, LA | Flood Protection Authority East (2017-2019)**



This project consisted of two phases. Phase I entailed gathering data on all Orleans Levee District's Valves and Culverts which penetrate flood reduction systems including Levees and Floodwalls along the Mississippi River and Lake Pontchartrain. Phase II entailed the video/sonar inspections of all culverts and the preparation of an engineering report to document the condition of each along with recommendations for repairs in accordance with USACE "Flood Damage Reduction Segment/System Inspection Report". Ms. Rivera served as project manager and coordinated with the Engineering, Surveying and Underwater Acoustics Departments to complete both Phase I: Data Gathering and Verification and Phase II: Video/Sonar Inspection & Engineering Reports (91 total)

### **Orleans Levee District, Lakefront Levee Concrete Slope Paving. New Orleans, LA | Flood Protection Authority East (2014-2016)**

Ms. Rivera prepared construction documents for the construction of concrete slope paving on the protected side of the levee at three intersections along Hayne Boulevard. Ms. Rivera prepared permit documents, coordinated with the US Army Corps of Engineers for compliance, prepared construction plans and specifications, and aided in the bidding and award of the proposed work. Ms. Rivera also provided construction administration support for the project duration. Construction commenced in August 2015 and was completed ahead of schedule in December 2016.



## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>	
<b>Name &amp; Title:</b>  <b>Hendri Koop, PE</b> Senior Engineer   Structures	
<b>Project Assignment:</b>  Engineer – Bridge Design	
<b>Name of Firm with which associated:</b>  <div style="text-align: center;">  </div>	
<b>Years' experience with this Firm:</b>  With this Firm: 5 Total: 15	
<b>Education: Degree(s)/Year/Specialization:</b> B.S., Civil Engineering, Delft University of Technology (2005) M.S., Civil Engineering, Delft University of Technology (2008)	
<b>Active registration: Year first registered/discipline:</b>  2019/Professional Engineer (Civil) – CA	
<b>Other experience and qualifications relevant to the proposed Project:</b> <p>Mr. Koop is a licensed civil engineer specializing in structural engineering. Mr. Koop is a self-driven structural engineer with more than fifteen years of experience in engineering of complex infrastructure including fixed and movable bridges, ship locks, flood protection systems, and hydraulic structures, with thorough knowledge of structural mechanics and outstanding project management, leadership, and communication skills.</p> <p><b>I-Street Bridge Replacement, Sacramento, CA   LADOTD (2022 - Ongoing)</b>            Mr. Koop... As a subconsultant to Mark Thomas &amp; Company, M&amp;M was selected to design a new Sacramento River bridge. Our portion of the design extends from abutment to abutment and includes all movable components. The first phase was a conceptual study and permitting, followed by final design. This new structure will accommodate highway traffic, which currently crosses the 102-year-old I-Street Swing Bridge (upper deck) and will be located on an alignment just to the North. The existing I-Street Bridge will remain in place and continue to carry rail traffic (lower deck). The preferred alternative was decided on a vertical lift bridge with a network-tied arch lift span. Due to the complicated nature of the structure and the coordination required between structural, mechanical, and electrical concerns, the design is being developed using 3D BRIM design software (AutoCAD Inventor). This new structure will accommodate highway and pedestrian traffic.</p>	

## **TEC Professional Services Questionnaire**

### **I-10 Calcasieu Bridge Replacement. Lake Charles, Louisiana | LADOTD (2022 - Ongoing)**

Mr. Koop serves the Lead Engineer and Project Coordinator for this pursuit. The P3 Project is part of LA DOTD's larger I-10 corridor project extending from the I-10/I-210 east interchange to the I-10/I-210 west interchange. The limits of the P3 Project extend from the I-10/I-210 west interchange to the Ryan Street exit ramp on the east side of the bridge. The Calcasieu River Bridge and the interstate mainline within the P3 Project limits will be reconstructed to ensure that the vertical clearance, horizontal alignment, sight distances, and other road and bridge elements meet current design criteria. The segment of LA 378 (Sampson Street) from I-10 to Sulphur Avenue will be improved and several access ramps and the interchanges at Sampson Street and US 171 will also be reconfigured as part of the P3 Project.

### **Load Rating of 160 Bridges. Statewide, LA | LADOTD (2023 – 2024)**

Mr. Koop served as a rating engineer for this project. Modjeski and Masters, Inc. is performing plan and document retrieval, bridge inspection and analysis, and load and resistance factor rating of complex bridge structures, including large cantilever trusses, vertical lifts and swing spans. Gusset, truss, floorsystem and substructure components are being rated. Bridge inspections focus on gusset plates and existing member conditions for rating. AASHTOWare BrR is being used for the ratings, which follow the AASHTO Manual for Bridge Evaluation, the LADOTD Policies and Guidelines for Bridge Rating and Evaluation, and LADOTD Bridge Design and Evaluation Manual.

### **Lambert's Point VE Study, Norfolk, VA | Norfolk Southern (2022)**

Mr. Koop performed design analysis in accordance with the AREMA Manual, mentored an engineer-in-training, and coordinated plan development with a drafter, while meeting the client's schedule. Lambert's Point Coal Terminal, located along the eastern shore of the Elizabeth River in Norfolk, Va., is a transshipment terminal with an annual throughput capacity of 48 million tons of coal. The primary component of the terminal's operation is Pier 6, which has two shiploaders that permit the facility to load two vessels simultaneously. M&M performed a value engineering study to see if there were ways to improve the design for better constructability. M&M was able to identify significant cost saving measures and a number of improvements to the design details for greater constructability and minimized risk.

### **Alexandria Bridges Girder Study, Alexandria, LA | LADOTD (2021 – 2022)**

M&M was approached for an emergency evaluation of damaged PPC girders on three bridges in Alexandria, LA. The evaluation resulted in two of the three bridges needing emergency repairs for which repair plans were developed. For US165 and I49, Mr. Koop worked with the team to update repair detail plans, address DOTD comments, and checked calculations, and BrR model. For US71, Mr. Koop worked on FRP design for fire damaged span, and marked up plans as necessary. He also participated in the development and discussion of modifications to FRP flexural design template to accommodate prestressing and checked modified spreadsheets.

### **Danziger Bridge Repair and Rating, New Orleans, Louisiana | LADOTD (2021)**

Mr. Koop checked load rating calculations of various components of the movable bridge, and reviewed the load rating report. M&M performed repair and load rating services for the Danziger Bridge, a steel vertical lift structure with a steel girder superstructure supported by reinforced concrete piers, and the flanking prestressed concrete approach structures. AASHTOWare Bridge Rating BrR software was used to perform load rating based on the present condition, capacity and loading of the bridge. All load rating analysis followed current AASHTO Manual for Bridge Evaluation, LADOTD Bridge Design and Evaluation Manual and AASHTO LRFD Bridge Design Specifications.

### **Prien Lake Bridge Rating. Lake Charles, Louisiana | LADOTD (2021)**

Mr. Koop acted as the Lead Engineer on the load rating of the 8500 ft long continuous steel girder bridge and performed rating analysis of stringers, floorbeams, crossframes and main girders of the main spans crossing the Calcasieu Ship Channel. The analysis included LUSAS FEM models, AISC based moment gradient modifier calculation and AASHTOWare BrR modelling. He also supervised two Engineers in Training performing load rating analyses for other bridge components, was responsible for quality control of team members their work products, and coordinated the development of the load rating report deliverable. M&M performed the as-is/as-repaired LRFR of Prien Lake Eastbound and Westbound Main Bridge and Approaches for a total length of over 17,000 feet. Analysis included LUSAS FEM models, AASHTOWare BrR models of continuous span girders and ratable superstructure components, analysis of girder splices for rating and use of the AISC moment Gradient Modified Cb as needed. The "Girder System Superstructure" definition was used for the girder spans, and the "Floor System Superstructure" definition was used to model the continuous stringer units and floorbeams without crossframes. The steel plate girders were modeled separately from the multi-span continuous stringer floor system because of the pin and hanger arrangements. All BrR-models utilized a line

## **TEC Professional Services Questionnaire**

girder analysis. Design and legal load capacity ratings were calculated for the girders and link joint connections of the steel plate girder spans, and for the caps of the pile bents. Ratings for the superstructure and substructure were calculated using Load and Resistance Factor Rating (LRFR) methodology.

### **Onslow Beach Road Bascule Bridge - Design Build. Camp LeJeune, NC | NAFVAC (2021)**

Mr. Koop performed quality control activities of structural calculations and plans of the fixed span over the bascule bridge counterweight. This included checking of the prestressed precast concrete girder design, cast-in-place reinforced concrete deck design, chamber design and bearing design packages.

### **Load Rating 14 Complex Bridges. State of Louisiana | LADOTD (2019 – 2021)**

Mr. Koop was responsible for the load rating analysis of four existing, complex, continuous steel plate girder and rolled beam bridges with pin & hanger assemblies. The analysis included development of AASHTOWare BrR models, development of 3D FEM LUSAS models for investigation of kinked girder behaviour, AISC based moment gradient modifier calculations for refinement of the AASHTOWare BrR models, development of CSiBridge models for the bridges with significant horizontal curvature, calculations for all pin & hanger assembly components, and rating calculations for the reinforced concrete hammerhead bents. He wrote rating reports and compiled deliverable packages including calculation files for each bridge. The investigations, calculations and refined models proofed that no posting requirements are needed for these 4 interstate bridges. Additionally, Mr. Koop developed strengthening options that will eliminate or improve posting requirements on 6 of the complex bridges, which included 2 swing bridges, 2 pontoon bridges, and 2 pony truss bridges, and compiled report deliverables in LaDOTD's format.

Modjeski and Masters, Inc. is performing plan and document retrieval, bridge inspection (as needed), analysis and load rating, sampling/instrumentation and non-destructive testing (as needed), and plan production (as needed) for 14 complex bridges. The bridge types include swing spans, bascule spans, truss spans and curved steel spans. For the analysis and load rating task, M&M is generating a system structural model and performing an analysis of each bridge to determine dead and live load forces in the members. For the bridge superstructures, the "Girder System" in AASHTOWare BrR software is being used. For the complex bridges, a three-dimensional structural model is needed. M&M is also developing influence lines and COMPSTIL2 input files for complex substructures including hammerheads and inverted-T pier caps. All load rating analysis will follow current AASHTO Manual for Bridge Evaluation, the LADOTD Policies and Guidelines for Bridge Rating and Evaluation, and LADOTD Bridge Design and Evaluation Manual.

### **Ten Truss Bridges Load Rating and Evaluation. Statewide, LA | LADOTD (2021)**

Mr. Koop performed checking activities of a refined load rating analysis for the LA3046 Bridge over LA Southern/KCS Railway and Claiborne Avenue. M&M performed plan and document retrieval, bridge inspection and analysis, and load and resistance factor rating of complex bridge structures, including large cantilever trusses, vertical lifts and swing spans. Gusset, truss, floorsystem and substructure components are being rated. Bridge inspections are focusing on gusset plates and existing member conditions for rating. AASHTOWare BrR is being used for the ratings, which follow current AASHTO Manual for Bridge Evaluation, the LADOTD Policies and Guidelines for Bridge Rating and Evaluation, and LADOTD Bridge Design and Evaluation Manual.

### **354 Off-System Bridges Rating & Evaluation. State of Louisiana | LADOTD (2019 – 2021)**

Mr. Koop acted in various roles on this project with increasing technical responsibility. This included performing load rating analysis with AASHTOWare BrR and LEAP Bridge Concrete for 8 concrete bridges including reporting; QC checking of load rating analysis and reports for 79 bridges, and QA review of load rating reports for 41 bridges out of a total of 347 bridges rated on this project.

Modjeski and Masters, Inc. performed plan and document retrieval, bridge inspection (as needed), analysis and load rating, sampling/instrumentation and non-destructive testing (as needed), and plan production (as needed) for 354 off system bridges including prestressed concrete, reinforced concrete and steel plate girder bridges. For the analysis and load rating task, M&M generated a system structural model and performing an analysis of each bridge to determine dead and live load forces in the members. For the bridge superstructures, AASHTOWare BrR software was used. For the complex bridges, a three-dimensional structural model was needed. All load rating analysis followed current AASHTO Manual for Bridge Evaluation, LADOTD Bridge Design and Evaluation Manual and AASHTO LRFD Bridge Design Specifications.

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>	
<b>Name &amp; Title:</b>  <b>Jared R. Weisman, PE</b> Project Manager	
<b>Project Assignment:</b>  Engineer – Bridge Design	
<b>Name of Firm with which associated:</b>  <div style="text-align: center;">  </div>	
<b>Years' experience with this Firm:</b>  With this Firm: 13 Total: 13	
<b>Education: Degree(s)/Year/Specialization:</b>  BS, Civil Engineering, Penn State University (2008) MS, Civil Engineering, Penn State University (2010)	
<b>Active registration: Year first registered/discipline:</b>  2014/Professional Engineer (Civil) – AL, DC, LA, PA	
<b>Other experience and qualifications relevant to the proposed Project:</b>  <p>Mr. Weisman has been employed with Modjeski and Masters since August of 2010. He has experience in the design, inspection, rating, and rehabilitation of a number of new and existing highway and railroad bridges. He has worked on a variety of bridge types including deck and through plate girders, prestressed concrete girders, swing, fixed, and bascule trusses, and inclined steel arch bridges.</p> <p><b>US 61 Thompson Creek Bridge Replacement, St. Francisville LA   LA DOTD (2018-2020)</b>            The existing I-10 route has several locations which require the addition of new sign trusses and associated modification of structure to add new sign truss supports. Modjeski and Masters, Inc. performed engineering services associated with the final design and detail completion for additional sign truss supports to be added to existing bridge structures. The scope of work included the following major tasks: (1) Completed design check for adequacy of DOTD Sign Truss Special Details ("BD.2.7.2.0.7 checks"). If special detail sign truss categories were not insufficient, M&amp;M performed special design of sign truss to point of recommending required sign truss member sizes. (2) Completed final design of required sign truss supports to be added to three existing bridge structures: Louisa Street, Paris Road, Almonaster Avenue. (3) Completed final plan details for required sign truss supports to be added to three existing bridge structures identified under Item 2. Mr. Weisman served as the Lead Engineer for this project.</p>	



## **TEC Professional Services Questionnaire**

### **LA 1 Port Allen Bridge Replacement, Port Allen, LA | LA DOTD (2017-Present)**

The ongoing project consists of replacing the existing northbound and southbound bridge structures on LA 1 over the Intracoastal Canal Waterway (ICWW). The proposed LA 1 SB Bridge will consist of 3 - 12' travel lanes and 2 - 10' shoulders and will be approximately 2,680' long. The proposed LA 1 NB Bridge will consist of 2 - 12' travel lanes and 2 - 10' shoulders (LA 1 NB roadway), a permanent 2' wide median barrier and 1 - 12' travel lane with 2 - 6' shoulders (I-10 EB Exit Ramp roadway). The Exit Ramp and LA 1 NB roadway will be separated by a permanent 2' wide median barrier until the LA 1 NB Bridge will bifurcate where the LA 1 NB roadway and I-10 EB Exit Ramp roadway will be carried on separate bridge structures. The LA 1 NB Bridge and I-10 EB Exit Ramp Bridge will be approximately 2,700' and 354' long, respectively. Both LA 1 NB and LA 1 SB Bridges will consist of a 870' long haunched three span continuous steel plate girder main span unit over the ICWW and prestressed concrete LG girder approach spans. Mr. Weisman serves as the Lead Engineer for this project.

### **LA 1064 at Little Natalbany River, Livingston Parish, LA | LA DOTD (2018-2019)**

M&M developed all necessary topographic surveys, preliminary and final plans for this bridge replacement project on LA 1064, near LA 43 and Hoover Road, in Albany, LA. This project included reconstruction of the approach slabs and roadway on the east and west sides of the bridge. It was anticipated that the roadway would be closed during construction and a detour route was detailed. The plans were prepared in accordance with AASHTO LRFD Bridge Design Specifications and the Bridge Design and Evaluation Manual (BDEM), DOTD 2017 Design Guidelines, DOTD 2016 Standard Specifications for Roads and Bridges, DOTD Road Design Manual, DOTD Hydraulics Manual, and DOTD Location and Survey Manual. QA/QC was provided in accordance with Part 1, Chapter 3 of BDEM. Construction Related Engineering Support was also provided. Mr. Weisman served as the Lead Engineer for this project..

### **LA 16 over Tangipahoa River, Tangipahoa Parish, LA | LA DOTD (2018-2019)**

M&M developed all necessary topographic surveys, preliminary and final plans for this bridge replacement project on LA 16, between LA 51 and LA 1054, in Amite City, LA. This project included reconstruction of the approach slabs and roadway on the east and west sides of the bridge. It was anticipated that traffic shall be maintained during construction with an on-site diversion roadway and bridge. The plans were prepared in accordance with AASHTO LRFD Bridge Design Specifications and the Bridge Design and Evaluation Manual (BDEM), DOTD 2017 Design Guidelines, DOTD 2016 Standard Specifications for Roads and Bridges, DOTD Road Design Manual, and DOTD Hydraulics Manual. QA/QC was provided in accordance with Part 1, Chapter 3 of BDEM. Construction Related Engineering Support was provided and is currently on-going. Mr. Weisman served as the Lead Engineer for this project. Professional Services fee: \$380KLead Engineer for this project.

### **I-10 & LA 47 Overhead Sign Upgrades, New Orleans, LA | LA DOTD (2019-2021)**

The existing I-10 route has several locations which require the addition of new sign trusses and associated modification of structure to add new sign truss supports. Modjeski and Masters, Inc. performed engineering services associated with the final design and detail completion for additional sign truss supports to be added to existing bridge structures. The scope of work included the following major tasks: (1) Completed design check for adequacy of DOTD Sign Truss Special Details ("BD.2.7.2.0.7 checks"). If special detail sign truss categories were not insufficient, M&M performed special design of sign truss to point of recommending required sign truss member sizes. (2) Completed final design of required sign truss supports to be added to three existing bridge structures: Louisa Street, Paris Road, Almonaster Avenue. (3) Completed final plan details for required sign truss supports to be added to three existing bridge structures identified under Item 2. Mr. Weisman served as the Lead Engineer for this project.



## TEC Professional Services Questionnaire

### KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:

<b>Name &amp; Title:</b>	
<b>Stacey P. Carr, PE</b> Project Manager   Structures	
<b>Project Assignment:</b>	
Engineer – Bridge Load Rating & Analysis	
<b>Name of Firm with which associated:</b>	
	
<b>Years' experience with this Firm:</b>	
With this Firm: 32 Total: 33	
<b>Education: Degree(s)/Year/Specialization:</b>	
B.S., Civil Engineering, Tulane University (1990) M.S., Civil Engineering, Tulane University (2004)	
<b>Active registration: Year first registered/discipline:</b>	
1996/Professional Engineer (Civil) – IN, LA	
<b>Other experience and qualifications relevant to the proposed Project:</b>	
<p>Stacey P. Carr, PE joined Modjeski and Masters in 1991 and has been extensively involved in the design, rating and strengthening of bridge structures since her employment with the firm. Her design experience includes being Superstructure Task Leader for the widening of the Huey P. Long Bridge near New Orleans, Louisiana. Her rating experience includes highway, railroad, and combined highway / railroad structures, including miles of complex elevated railroad viaducts, large cantilever truss spans, movable bridges, and substructures. She has extensive experience with rating work for the Louisiana Department of Transportation and Development. She is well experienced with AASHTOWare Bridge Rate (BrR) and is knowledgeable of both LFR and LRFR rating requirements. Ms. Carr is currently an Associate in the firm's New Orleans office and manages design and load rating projects while mentoring and training engineering staff.</p>	

## **TEC Professional Services Questionnaire**

### **Huey P. Long Bridge Widening at New Orleans, LA | LA DOTD (2000-2012)**

The widening project for the Huey P. Long Bridge included new vehicular approaches on both sides of the Mississippi river plus making the main bridge into a three-barrel truss structure. This complex bridge carries three vehicular lanes on each side of two railroad tracks. M&M was also charged to rate the widened portion of the bridge including the railroad. Ms. Carr was the Main Bridge Superstructure Task Leader for both the widening of the bridge and the rating of the structure. She also participated in the design and rating of individual structural components.

### **Nineteen Complex Bridge Load Rating and Evaluation | LA DOTD (2017-2018)**

Modjeski and Masters, Inc. is performing plan and document retrieval, bridge inspection and analysis, and load and resistance factor rating of complex bridge structures, mainly steel vertical lifts. Gusset, truss, floorsystem and substructure components are being rated. Bridge inspections are focusing on gusset plates and existing member conditions for rating. AASHTOWare BrR is being used for the ratings, which follow current AASHTO Manual for Bridge Evaluation, the LADOTD Policies and Guidelines for Bridge Rating and Evaluation, and LADOTD Bridge Design and Evaluation Manual. Ms. Carr was the Project Manager who oversees and performs primary QC/QA for the load rating of the bridges.

### **Ten Truss Bridges Load Rating and Evaluation. Louisiana | LA DOTD (2016-2017)**

Modjeski and Masters, Inc. is performing plan and document retrieval, bridge inspection and analysis, and load and resistance factor rating of complex bridge structures, including large cantilever trusses, vertical lifts and swing spans. Gusset, truss, floorsystem and substructure components are being rated. Bridge inspections are focusing on gusset plates and existing member conditions for rating. AASHTOWare BrR is being used for the ratings, which follow current AASHTO Manual for Bridge Evaluation, the LADOTD Policies and Guidelines for Bridge Rating and Evaluation, and LADOTD Bridge Design and Evaluation Manual. Ms. Carr was Project Manager who oversaw and performed primary QC/QA for the load rating of the bridges.

### **Rating and Posting of On-System State Bridges, Statewide, LA | LA DOTD (2002-2014)**

M&M performed load rating analyses for 110 existing bridge structures using the Load and Resistance Factor Rating Method. Elements to be rated include superstructure and substructure components. Provisions in the 2011 AASHTO Manual for Bridge Evaluation as well as LADOTD Policies and Guidelines for Bridge Rating and Evaluation were followed. Ms. Carr was group leader, oversaw, and performed primary QC/QA for the load rating of the bridges.

### **LA 1 Port Allen Bridge Replacement, Port Allen, LA | LA DOTD (2017-Present)**

The project consisted of replacing the existing northbound and southbound bridge structures on LA 1 over the Intracoastal Canal Waterway (ICWW). The proposed LA 1 SB Bridge will consist of 3 - 12' travel lanes and 2 - 10' shoulders and will be approximately 2,680' long. The proposed LA 1 NB Bridge will consist of 2 - 12' travel lanes and 2 - 10' shoulders (LA 1 NB roadway), a permanent 2' wide median barrier and 1 - 12' travel lane with 2 - 6' shoulders (I-10 EB Exit Ramp roadway). The Exit Ramp and LA 1 NB roadway will be separated by a permanent 2' wide median barrier until the LA 1 NB Bridge will bifurcate where the LA 1 NB roadway and I-10 EB Exit Ramp roadway will be carried on separate bridge structures. The LA 1 NB Bridge and I-10 EB Exit Ramp Bridge will be approximately 2,700' and 354' long, respectively. Both LA 1 NB and LA 1 SB Bridges will consist of a 870' long haunched three span continuous steel plate girder main span unit over the ICWW and prestressed concrete LG girder approach spans. M&M is responsible for the design, plans, quantities and cost estimate of the bridge structures from abutment to abutment. Ms. Carr oversaw the load rating analysis for the replacement bridge.

### **Load Rating of 354 Off System Bridges | LA DOTD (2019 - 2021)**

Modjeski and Masters, Inc. is performing plan and document retrieval, bridge inspection (as needed), analysis and load rating, and plan production (as needed) for 354 off system bridges including prestressed concrete, reinforced concrete and steel plate girder bridges. For the analysis and load rating task, M&M generated a system structural model and performing an analysis of each bridge to determine dead and live load forces in the members. For the bridge superstructures, AASHTOWare BrR software was used. For the complex bridges, a three-dimensional structural model is needed. All load rating analysis followed current AASHTO Manual for Bridge Evaluation, LADOTD Bridge Design and Evaluation Manual and AASHTO LRFD Bridge Design Specifications. Ms. Carr is the Project Manager who oversees and performs primary QA/QC for the load rating of the bridges.

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>	
<b>Name &amp; Title:</b>  <b>Jason W. Miles, PE</b> Project Manager	
<b>Project Assignment:</b>  Engineer – Bridge Load Rating & Analysis	
<b>Name of Firm with which associated:</b>  <div style="text-align: center;">  </div>	
<b>Years' experience with this Firm:</b>  With this Firm: 15 Total: 15	
<b>Education: Degree(s)/Year/Specialization:</b>  B.S., Math, Louisiana State University (2004) B.S., Civil Engineering, Louisiana State University (2008)	
<b>Active registration: Year first registered/discipline:</b>  2013/Professional Engineer (Civil) – LA	
<b>Other experience and qualifications relevant to the proposed Project:</b>  <p>Mr. Miles has been employed as a Design Engineer in the New Orleans office of Modjeski and Masters, Inc. since 2009. During this period, he has been engaged in multiple complex projects. The majority of his time has been spent in complex structural analysis, 3-D structural modeling, steel member shop drawing review, assessment of steel fabricator quality control reports, and in performing finite element analysis using both the LUSAS and Florida Pier programs. Mr. Miles attended the AASHTOWare Bridge Rate (BrR) meeting titled “AASHTOWare Bridge Design and Rating Software User Group Meeting” in August 2014, 2016 and 2020. He also completed NHI Course No. 130092, Fundamentals of LRFR and Applications of LRFR for Bridge Superstructures and NHI Course No. 130081, LRFD for Highway Bridge Superstructures. Mr. Miles also has experience with finite element analysis, in particular through the use of Lusas software to check AASHTOWare BrR results.</p>	

## **TEC Professional Services Questionnaire**

### **Sunshine Bridge Collision – Emergency Response. Donaldsonville, LA | LA DOTD (2018-2019)**

The Louisiana Route 70 Sunshine Bridge is a steel cantilever through truss bridge that carries four lanes of traffic over the Mississippi River near Donaldsonville, LA. The three main truss spans are each about 800 feet in length and provide up to 133 feet in vertical clearance above high water. On October 12, 2018, a barge mounted crane was traveling upstream in the western most channel of the river. There was insufficient clearance as the barge passed underneath the bridge, and the back-stay of the crane impacted the downstream bottom chord of the truss. The impact caused significant damage to a bottom chord member, tearing off the bottom plate of the box member and inducing severe out of plane distortion. The member in question was a primary load path compression member, designed to carry 1,700 kips of dead load. LADOTD closed the bridge to traffic directly after the incident and engaged Modjeski and Masters to perform an emergency hands-on inspection using technical rope access techniques. With the damage documented, work on repair concepts began. Mr. Miles served as a lead engineer and structural analyst for this emergency project.

### **Nineteen Complex Bridge Load Rating and Evaluation | LA DOTD (2017-2018)**

Modjeski and Masters, Inc. is performing plan and document retrieval, bridge inspection and analysis, and load and resistance factor rating of complex bridge structures, mainly steel vertical lifts. Gusset, truss, floorsystem and substructure components are being rated. Bridge inspections are focusing on gusset plates and existing member conditions for rating. AASHTOWare BrR is being used for the ratings, which follow current AASHTO Manual for Bridge Evaluation, the LADOTD Policies and Guidelines for Bridge Rating and Evaluation, and LADOTD Bridge Design and Evaluation Manual. Mr. Miles participated in the load rating analysis and reporting for this project.

### **Ten Truss Bridges Load Rating and Evaluation. Louisiana | LA DOTD (2016-2017)**

Modjeski and Masters, Inc. is performing plan and document retrieval, bridge inspection and analysis, and load and resistance factor rating of complex bridge structures, including large cantilever trusses, vertical lifts and swing spans. Gusset, truss, floorsystem and substructure components are being rated. Bridge inspections are focusing on gusset plates and existing member conditions for rating. AASHTOWare BrR is being used for the ratings, which follow current AASHTO Manual for Bridge Evaluation, the LADOTD Policies and Guidelines for Bridge Rating and Evaluation, and LADOTD Bridge Design and Evaluation Manual. Mr. Miles participated in the load rating analysis and reporting for this project.

### **West Larose Vertical Lift Bridge over ICWW, Larose, LA | LA DOTD (2013-2014)**

M&M was charged with the development of plans and specifications to rehabilitate and extend the life of this vertical lift bridge for 30-40 years. This includes structural, mechanical, electrical and architectural disciplines. Work included site inspections, scope development, preliminary and final design. Mr. Miles performed AASHTOWare Bridge Rate (BrR) ratings of the bridge.

### **Rating and Posting of Off-System State Bridges, Statewide, LA | LA DOTD (2019 - 2021)**


Modjeski and Masters, Inc. performed plan and document retrieval, bridge inspection (as needed), analysis and load rating, sampling/instrumentation and non-destructive testing (as needed), and plan production (as needed) for 354 off system bridges including prestressed concrete, reinforced concrete and steel plate girder bridges. For the analysis and load rating task, M&M generated a system structural model and performing an analysis of each bridge to determine dead and live load forces in the members. For the bridge superstructures, AASHTOWare BrR software was used. For the complex bridges, a three-dimensional structural model was needed. All load rating analysis will follow current AASHTO Manual for Bridge Evaluation, LADOTD Bridge Design and Evaluation Manual and AASHTO LRFD Bridge Design Specifications. Mr. Miles provided technical guidance to bridge raters involved in a variety of bridge types, including slab spans, prestressed girder spans, and grid deck on steel beam spans. Mr. Miles provided specific guidance on ratings of timber substructure elements. Ratings were performed using AASHTOWare BrR with refinements done in Excel when needed. Mr. Miles also performed general QA/QC and rating report review.

### **Rating and Posting of On-System State Bridges, Statewide, LA | LA DOTD (2015 - 2016)**

M&M performed load rating analyses for 110 existing bridge structures using the Load and Resistance Factor Rating Method. Elements to be rated include superstructure and substructure components. Provisions in the 2011 AASHTO Manual for Bridge Evaluation as well as LADOTD Policies and Guidelines for Bridge Rating and Evaluation were followed. Mr. Miles participated in the load rating analysis and reporting for this project.



## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>	
<b>Name &amp; Title:</b>  <b>Mott J. Holt, PE</b> Engineer – Structures	
<b>Project Assignment:</b>  Engineer – Bridge Load Rating & Analysis	
<b>Name of Firm with which associated:</b>  	
<b>Years' experience with this Firm:</b>  With this Firm: 7 Total: 8	
<b>Education: Degree(s)/Year/Specialization:</b> B.S., Civil Engineering, Louisiana State University (2016)	
<b>Active registration: Year first registered/discipline:</b>  2021/Professional Engineer (Civil) – LA	
<b>Other experience and qualifications relevant to the proposed Project:</b>  <p>Mr. Holt has been employed in the New Orleans office of Modjeski and Masters, Inc. since 2017. He is assigned to the firm's Structural Design Section and has been primarily involved in a variety of bridge rating projects, including large truss, movable, and cantilevered structures. He has also been involved in scour analysis projects to assess the structural stability of existing deep foundation caissons and piers located at large river crossings.</p>	



## **TEC Professional Services Questionnaire**

### **Load Rating of Fourteen Complex Bridges. Statewide Louisiana | LADOTD (04/19 – 05/21)**

M&M performed plan and document retrieval, bridge inspection (as needed), analysis and load rating, sampling/instrumentation and non-destructive testing (as needed), and plan production (as needed) for 14 complex bridges. The bridge types include swing spans, bascule spans, truss spans and curved steel spans. For the analysis and load rating task, M&M generated a system structural model and performing an analysis of each bridge to determine dead and live load forces in the members. For the bridge superstructures, AASHTOWare BrR software was used. For the complex bridges, a three-dimensional structural model was needed. M&M is also developing influence lines and COMPSTIL2 input files for complex substructures including hammerheads and inverted-T pier caps. All load rating analysis followed current AASHTO Manual for Bridge Evaluation, LADOTD Bridge Design and Evaluation Manual and AASHTO LRFD Bridge Design Specifications. Mr. Holt performed rating analysis of superstructure elements of a steel swing truss bridge. Elements rated included main truss members, floorbeams, stringers, gussets and chord splices. Mr. Holt utilized AASHTOWare, AutoCAD, Excel and LUSAS software in the ratings. Mr. Holt utilized LUSAS software to model 3D load distribution effects resulting from a missing wedge support at one of the rest piers of the swing truss

### **Danziger Bridge Repair and Rating. New Orleans, Louisiana | LADOTD (07/19 - 05/21)**

Modjeski and Masters, Inc. performed repair and load rating services for the Danziger Bridge, a steel vertical lift structure with a steel girder superstructure supported by reinforced concrete piers, and the flanking prestressed concrete approach structures. AASHTOWare Bridge Rating BrR software was used to perform load rating based on the present condition, capacity and loading of the bridge. All load rating analysis followed AASHTO Manual for Bridge Evaluation, LADOTD Bridge Design and Evaluation Manual and AASHTO LRFD Bridge Design Specifications. Mr. Holt performed rating analysis of superstructure and substructure elements of the approach spans. Elements rated included slab spans, prestressed concrete girders, and concrete bent caps. Mr. Holt utilized AASHTOWare, AutoCAD, Excel and LEAP Bridge Concrete software in the ratings.

### **H.012485.1: Load Rating of 354 Off System Bridges. Statewide Louisiana | LADOTD (07/19 - 05/21)**

M&M performed plan and document retrieval, bridge inspection (as needed), analysis and load rating, sampling/instrumentation and non-destructive testing (as needed), and plan production (as needed) for 354 off system bridges including prestressed concrete, reinforced concrete and steel plate girder bridges. For the analysis and load rating task, M&M generated a system structural model and performing an analysis of each bridge to determine dead and live load forces in the members. For the bridge superstructures, AASHTOWare BrR software was used. For the complex bridges, a three-dimensional structural model was needed. All load rating analysis will follow current AASHTO Manual for Bridge Evaluation, LADOTD Bridge Design and Evaluation Manual and AASHTO LRFD Bridge Design Specifications. Mr. Holt performed rating analysis of superstructure and substructure elements of various bridge types. Elements rated included cast-in-place concrete slabs, precast concrete panels, prestressed concrete girders, concrete bent caps, timber bent caps and timber piles. Mr. Holt utilized AASHTOWare, AutoCAD, Excel and LEAP Bridge Concrete software in the ratings. Mr. Holt assisted in project management and bridge assignments.

### **H.009859.5: Nineteen Complex Bridge Load Rating and Evaluation. Statewide Louisiana | LADOTD (01/17 - 06/17)**

Modjeski and Masters, Inc. performed plan and document retrieval, bridge inspection and analysis, and load and resistance factor rating of complex bridge structures, mainly movable bridges. Gusset, truss, floorsystem and substructure components were rated. Bridge inspections focused on gusset plates and existing member conditions for rating. AASHTOWare BrR was used for the ratings, which follow current AASHTO Manual for Bridge Evaluation, the LADOTD Policies and Guidelines for Bridge Rating and Evaluation, and LADOTD Bridge Design and Evaluation Manual. Elements rated included concrete slab spans, concrete girders, steel girders, floorbeams, stringers and concrete bent caps. Mr. Holt utilized AASHTOWare, AutoCAD, Excel and LEAP Bridge Concrete software in the ratings. Mr. Holt also assisted in the analyzing and rating of makeshift field supports, which had been installed outside of the originally designed bearing locations of a swing span.

### **H.009859.5: Ten Truss Bridges Load Rating and Evaluation. Statewide Louisiana | LADOTD (03/17 - 06/17)**

M&M performed plan and document retrieval, bridge inspection and analysis, and load and resistance factor rating of complex bridge structures, including large cantilever trusses, vertical lifts and swing spans. Gusset, truss, floorsystem and substructure components were rated. Bridge inspections focused on gusset plates and existing member conditions for rating. AASHTOWare BrR was used for the ratings, which followed the AASHTO Manual for Bridge Evaluation, the

## **TEC Professional Services Questionnaire**

LADOTD Policies and Guidelines for Bridge Rating and Evaluation, and LADOTD Bridge Design and Evaluation Manual. Mr. Holt performed rating analysis of superstructure elements of a steel cantilevered truss bridge and a steel vertical lift bridge. Elements rated included main truss members and floorbeams. Mr. Holt utilized AASHTOWare, AutoCAD and Excel software in the ratings.

### **H.009859.5: Load Rating of Fourteen Complex Bridges. Statewide Louisiana | LADOTD (04/19 - 05/21)**

M&M performed plan and document retrieval, bridge inspection (as needed), analysis and load rating, sampling/instrumentation and non-destructive testing (as needed), and plan production (as needed) for 14 complex bridges. The bridge types include swing spans, bascule spans, truss spans and curved steel spans. For the analysis and load rating task, M&M generated a system structural model and performing an analysis of each bridge to determine dead and live load forces in the members. For the bridge superstructures, AASHTOWare BrR software is being used. For the complex bridges, a three-dimensional structural model was needed. M&M also developed influence lines and COMPSTIL2 input files for complex substructures including hammerheads and inverted-T pier caps. All load rating analysis followed current AASHTO Manual for Bridge Evaluation, LADOTD Bridge Design and Evaluation Manual and AASHTO LRFD Bridge Design Specifications. Mr. Holt performed rating analysis of superstructure elements of a steel swing truss bridge. Elements rated included main truss members, floorbeams, stringers, gussets and chord splices. Mr. Holt utilized AASHTOWare, AutoCAD, Excel and LUSAS software in the ratings. Mr. Holt utilized LUSAS software to model 3D load distribution effects resulting from a missing wedge support at one of the rest piers of the swing truss.

### **Gramercy Bridge Rating & Evaluation. Statewide Louisiana | LADOTD (04/17 – 06/17)**

Mr. Holt performed rating analysis of superstructure elements of the Gramercy Bridge. Elements rated included gusset plates and floor system members. Mr. Holt utilized AASHTOWare, AutoCAD and Excel software in the ratings. Modjeski and Masters, Inc. performed load rating and evaluation for the Gramercy Bridge, a steel, three-span cantilevered through truss composed of a 776'-1,460'-777' arrangement. An inspection of specific areas of the structure was performed including identifying section loss, deterioration, distortion and other issues for the main truss gusset plates and a cursory inspection of the other main bridge members. The trusses and floor system were modeled using AASHTOWare Bridge Rating BrR utilizing the Truss System Superstructure model type. All load rating analysis was in accordance with the AASHTO Manual for Bridge Evaluation, the LADOTD Policies and Guidelines for Bridge Rating and Evaluation, and LADOTD Bridge Design and Evaluation Manual.

### **Four Bridges Strengthening. Statewide Louisiana | LADOTD (02/19 – 04/19)**

Mr. Holt performed rating analysis of superstructure elements of a steel swing span and superstructure and substructure elements of the accompanying approach spans. Elements rated included steel floorbeams, concrete slab spans, and concrete bent caps. Mr. Holt utilized AASHTOWare, AutoCAD, Excel and LEAP Bridge Concrete software in the ratings. M&M developed a repair scheme and prepared plans for bridge strengthening to remove posting for four moveable structures. M&M also updated the rating reports.

### **Port Allen Canal Bridge Final Design. West Baton Rouge Parish, Louisiana | LADOTD (06/19 – 07/20)**

Mr. Holt performed rating analysis of superstructure and substructure elements. Elements rated included prestressed concrete girders, continuous steel girders and concrete bent caps. Mr. Holt utilized AASHTOWare, AutoCAD, Excel and LEAP Bridge Concrete software in the ratings.

### **Movable Bridge Ratings & Inspection. New Orleans, Louisiana | Port of New Orleans (02/18 – 03/18)**

Mr. Holt performed rating analysis of superstructure elements of a bascule bridge. Elements rated included main truss members, floorbeams and stringers. Mr. Holt utilized AASHTOWare, AutoCAD and Excel software in the ratings. M&M performed load capacity rating and bridge related field measurements for three (3) movable bridges: Seabrook Bridge, Almonaster Bridge, and Florida Avenue Bridge.

### **LADOTD Bridge Scour Program – Batch F. Statewide Louisiana | LADOTD (02/18 – 08/20)**

Mr. Holt performed scour analysis to assess the structural stability of existing deep foundation caissons and piers located at large river crossings. Limiting criteria for assessing the structural stability included lateral deflections, overall stability, and minimum embedment. Mr. Holt utilized FB-Multiplier and Excel software in the analysis. Mr. Holt utilized the FB-Multiplier software to generate finite element analysis for the structures, which included soil-structure interactions.

### **US 90 Claiborne Ave Bridge Rating and Evaluation & Strengthening | LADOTD (12/19 - 8/20)**

## **TEC Professional Services Questionnaire**

Mr. Holt performed rating analysis of superstructure and substructure elements of US 90 Claiborne Ave over City Streets. Elements rated included steel girders, steel stringers, steel floorbeams, steel bent caps and steel columns. Mr. Holt utilized AASHTOWare, AutoCAD, Excel and LEAP Bridge Concrete software in the ratings.

### **Load Rating of 2 Existing Bridges. Statewide Louisiana | LADOTD (11/21 – 07/22)**

Mr. Holt performed rating analysis of superstructure and substructure elements of the swing span and approaches of the US 190 Bridge over Bayou Lacombe. Elements rated included concrete deck girders, steel girders, steel floorbeams (including the pivot floorbeam), steel stringers, steel girder splices and concrete bent caps. Mr. Holt utilized AASHTOWare, AutoCAD, Excel and LEAP Bridge Concrete software in the ratings.

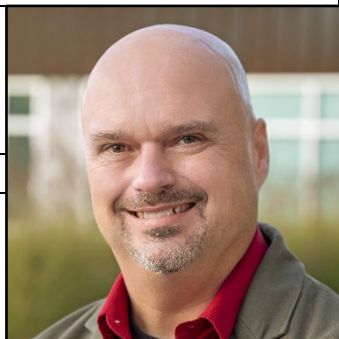

### **I-10 Widening - Baton Rouge CMAR Seg 1, Baton Rouge, Louisiana | LADOTD (09/22 – 01/23)**

The LADOTD is conducting a Construction Management at Risk (CMAR) contract to improve Interstate 10 (I-10) in Baton Rouge through the widening and reconstruction of the mainline from three to four lanes in each direction. The reconstruction will include bridge replacements and rehabilitations, interchange and ramp modification, shoulder widening and auxiliary lanes. The Project is divided into two phases: Phase 1 includes the limits of Mississippi River Bridge (MRB) to Essen Lane on I-10 and I-12; Phase 2 includes the limits of LA 415 to the MRB. M&M performed a structure type study in order to develop conceptual designs for the replacement of the existing I-10 bridges over City Park Lake with a signature type bridge. M&M is also the Engineer of Record for the final design of the selected bridge type which showcases architectural and aesthetic features as part of a overall context sensitive solution. The proposed bridge is 844' and will be constructed in three phases in order to maintain traffic along I-10 at all times. The proposed superstructure features precast concrete LU girders at spans of 140'-8" supported on reinforced concrete arched piers at varying skews. The proposed substructure calls for reinforced concrete footings supported on precast, prestressed concrete piles. Each end of the bridge is accented with decorative towers at the four corners of the structure inscribed with architectural features and illumination.

### **I-10 Calcasieu Br P3 - Pre-Award Service. Lake Charles, Louisiana | LADOTD (05/22 - 09/22)**

Mr. Holt performed design analysis to assess the structural stability of main channel pier design alternatives for the I-10 Calcasieu Bridge Replacement Project. Limiting criteria for assessing the structural stability included lateral deflections, overall stability, and minimum embedment. Mr. Holt utilized AutoCAD, Excel, LEAP Bridge and FB-Multipier software in the design analysis. Mr. Holt utilized the LEAP Bridge and FB-Multipier software to generate finite element analysis for the structures, which included soil-structure interactions. The I-10 Calcasieu River Bridge opened to traffic in 1952 as part of the US 90 system and was later integrated as part of Interstate 10 (I-10) in the 1960s. Currently, the daily number of vehicles traveling the Calcasieu River Bridge section of I-10 exceeds the existing capacity of 70,876 vehicles per day. The P3 Project is part of LA DOTD's larger I-10 corridor project extending from the I-10/I-210 east interchange to the I-10/I-210 west interchange. The limits of the P3 Project extend from the I-10/I-210 west interchange to the Ryan Street exit ramp on the east side of the bridge. The Calcasieu River Bridge and the interstate mainline within the P3 Project limits will be reconstructed to ensure that the vertical clearance, horizontal alignment, sight distances, and other road and bridge elements meet current design criteria. The segment of LA 378 (Sampson Street) from I-10 to Sulphur Avenue will be improved and several access ramps and the interchanges at Sampson Street and US 171 will also be reconfigured. M&M is completing bridge design, navigation design, and lighting design for this project.

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>	
<b>Name &amp; Title:</b>	
Joseph G. Strenkoski, PE Senior Project Manager	
<b>Project Assignment:</b>	
Engineer – Electrical Design/Street Lighting	
<b>Name of Firm with which associated:</b>	
	
<b>Years' experience with this Firm:</b>	
With this Firm: 11 Total: 35	
<b>Education: Degree(s)/Year/Specialization:</b>	
B.S., Electrical Engineering Technology, Penn State University (1988)	
<b>Active registration: Year first registered/discipline:</b>	
1997/Professional Engineer (Electrical): AR, CA, CT, ID, LA, MA, MD, NC, NJ, NY, PA, TX, VA, WV	
<b>Other experience and qualifications relevant to the proposed Project:</b>	
Mr. Strenkoski has been employed by the Modjeski and Masters, Inc. Mechanicsburg, PA office since 2013. He has more than 30 years of experience in the electrical engineering consulting field including over a decade of project management work and almost two decades of electrical section management. Mr. Strenkoski is currently serving as the Director of Electrical Engineering and Senior Project Manager. His responsibilities include: Daily management of the Electrical Section personnel. and procedures, technical QA/QC for electrical engineering designs, project management on multi-discipline designs, and marketing electrical engineering services.	



## **TEC Professional Services Questionnaire**

### **H.011137.5 Lighting Engineering Design Services for I-12: LA 1077 to US 190. Covington, LA | LA DOTD (2017-On-going)**

As part of an overall interstate widening project, M&M provided an investigation for a future roadway lighting system along I-12 in St. Tammany Parish. M&M provided an illumination analysis per LADOTD standards for a complete lighting design at the I-12 at LA 1077, I-12 at LA 21, I-12 at Pinnacle Pkwy, and I-12 at US 190 interchanges. M&M provided plans and specifications for lighting and electrical equipment to accommodate installation of a future lighting system as well as plans and specifications for a new navigation lighting design on the widened Tchefuncte River Bridge. M&M is currently providing construction related engineering services for this project. Mr. Strenkoski serves as the Project Manager for this project.

### **H.003184: I-10: Texas State Line – E. of Coone Gully Lighting, Calcasieu Parish, LA | LA DOTD (2017- On-going)**

M&M performed a study of the existing roadway lighting system of Interstate 10 (I-10) in Calcasieu Parish at five locations for the LADOTD as part of S.P. H.003184 which calls for a portion of I-10 from the Texas state line through to the East of Coone Gully to be widened from four to six lanes of travel. The scope of the work and inquiry consisted of an illumination and roadway lighting construction feasibility study at the five specified locations. The as-designed roadway lighting systems were evaluated and compared to the proposed widened geometry to determine if the existing systems would remain in compliance with LADOTD Illumination standards. Where needed, modifications were recommended to satisfy required illumination and electrical criteria. Mr. Strenkoski served as Project Manager for this project.

### **H.012503: I-12 @ LA 447 (Walker) Interchange Lighting, Walker, LA | LA DOTD (2016 – 2019)**

The project involved the design of roadway lighting at the I-12/LA 447 Interchange in Walker, LA. The design included providing lighting for two roundabouts at the ramp terminals and was coordinated with the local government agencies as well as the electrical utility company in order to simplify future maintenance and to provide desired aesthetics. M&M provided plans & construction estimates, and is currently providing construction related services including shop drawing review and field inspections. Mr. Strenkoski served as Project Manager for this project

### **H.003003: I-10: E. Jct. I-49 to LA 328 Lighting, Lafayette and St. Martin Parishes LA | LADOTD (2015 – On-going)**

The project involved the design of roadway lighting on Interstate 10 from I-49 to LA328 in Lafayette, LA. The design included the use of high-mast and low-mast poles as well as underpass lighting and was coordinated with the local government agencies as well as the electrical utility company in order to simplify future maintenance and to provide desired aesthetics. M&M provided plans & construction estimates, and is currently providing construction related engineer services including shop drawing review and field inspections. Mr. Strenkoski serves as Project Manager for this project.

### **H.003014: I-10: LA 347 to Atchafalaya Floodway Bridge Lighting, St. Martin Parish LA | LA DOTD (2015- On-going)**

The project involved the design of roadway lighting for Interstate 10 from LA347 to Atchafalaya Floodway Bridge in Lafayette, LA. The design included providing low-mast lighting for two roundabouts at the ramp terminals and was coordinated with the local government agencies as well as the electrical utility company in order to simplify future maintenance and to provide desired aesthetics. M&M provided plans & construction estimates, and is currently providing construction related engineering services including shop drawing review and field inspections. Mr. Strenkoski serves as Project Manager for this project.

### **Route 79/Braga Bridge Improvements, Fall River, MA | MassDOT (2013 – 2017)**

Route 79/Braga Bridge Improvements Project - This design-build project included the design of roadway LED lighting and architectural landscape and decorative LED lighting for major improvements to the Fall River Route 79 and Braga Bridge interchanges. Design involved detailed lighting with photometric calculations, voltage drop calculations, wire and conduit sizing for lighting circuits. The design also involved power distribution and lighting control design to meet MassDOT standards. Mr. Strenkoski served as the Project Electrical/Lighting Design Engineer.

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>	
<b>Name &amp; Title:</b>  <b>Jonathan E. Gerhart, PE</b> Project Manager - Electrical	
<b>Project Assignment:</b>  Engineer – Electrical Design/Street Lighting	
<b>Name of Firm with which associated:</b>  	
<b>Years' experience with this Firm:</b>  With this Firm: 14 Total: 26	
<b>Education: Degree(s)/Year/Specialization:</b>  B.S., Electrical Engineering Technology, Penn State University (1998)	
<b>Active registration: Year first registered/discipline:</b>  2016/Professional Engineer (Electrical): FL, IL, LA, MI, MD, MS, PA, SC, WV	
<b>Other experience and qualifications relevant to the proposed Project:</b>  <p>Jon Gerhart, PE is a Project Manager in Modjeski and Masters' Electrical Engineering Section and has over 24 years of experience in the design of electrical distribution systems, control systems and safety systems, including roadway lighting systems. Having over 10 years of experience on Roadway Lighting Projects, Mr. Gerhart is experienced with photometric analysis and roadway lighting design (both HPS and LED), including inspections, construction support, and troubleshooting. He has vast expertise in all matters related to lighting systems having served as Lead Design Engineer for numerous roadway lighting projects and has developed evaluations, recommendations, cost estimations, value engineering and consultations with electrical design staff for various agencies.</p>	

## **TEC Professional Services Questionnaire**

### **H.003184: I-10: Texas State Line – E. of Coone Gully Lighting, Calcasieu Parish, LA | LA DOTD (2017- On-going)**

M&M performed a study of the existing roadway lighting system of Interstate 10 (I-10) in Calcasieu Parish at five locations for the LADOTD as part of S.P. H.003184 which calls for a portion of I-10 from the Texas state line through to the East of Coone Gully to be widened from four to six lanes of travel. The scope of the work and inquiry consisted of an illumination and roadway lighting construction feasibility study at the five specified locations. The as-designed roadway lighting systems were evaluated and compared to the proposed widened geometry to determine if the existing systems would remain in compliance with LADOTD Illumination standards. Where needed, modifications were recommended to satisfy required illumination and electrical criteria. Mr. Gerhart oversaw the photometric analysis, electrical calculations and final plan development for the design portion of this project. He also performs field inspections during construction and works directly with LADOTD electrical engineers.

### **H.012503: I-12 @ LA 447 (Walker) Interchange Lighting, Walker, LA | LA DOTD (2016 – 2019)**

The project involved the design of roadway lighting at the I-12/LA 447 Interchange in Walker, LA. The design included providing lighting for two roundabouts at the ramp terminals and was coordinated with the local government agencies as well as the electrical utility company in order to simplify future maintenance and to provide desired aesthetics. M&M performed photometric analysis, and provided plans & construction estimates and construction related engineering services including shop drawing review and field inspections. Mr. Gerhart oversaw the photometric analysis, electrical calculations and final plan development for the design portion of this project. He also performed field inspections during construction and worked directly with LADOTD electrical engineers.

### **H.003003: I-10: E. Jct. I-49 to LA 328 Lighting, Lafayette and St. Martin Parishes LA | LADOTD (2015 – On-going)**

The project involved the design of roadway lighting on Interstate 10 from I-49 to LA328 in Lafayette, LA. The design included the use of high-mast and low-mast poles as well as underpass lighting and was coordinated with the local government agencies as well as the electrical utility company in order to simplify future maintenance and to provide desired aesthetics. M&M provided plans & construction estimates, and is currently providing construction related engineer services including shop drawing review and field inspections. Mr. Gerhart oversaw the photometric analysis, electrical calculations and final plan development for the design portion of this project. He also performs field inspections during construction and works directly with LADOTD electrical engineers.

### **H.003014: I-10: LA 347 to Atchafalaya Floodway Bridge Lighting, St. Martin Parish LA | LA DOTD (2015- On-going)**

The project involved the design of roadway lighting for Interstate 10 from LA347 to Atchafalaya Floodway Bridge in Lafayette, LA. The design included providing low-mast lighting for two roundabouts at the ramp terminals and was coordinated with the local government agencies as well as the electrical utility company in order to simplify future maintenance and to provide desired aesthetics. M&M provided plans & construction estimates, and is currently providing construction related engineering services including shop drawing review and field inspections. Mr. Gerhart oversaw the photometric analysis, electrical calculations and final plan development for the design portion of this project. He also performs field inspections during construction and works directly with LADOTD electrical engineers.

### **H.010863: I-10 @ Ambassador Caffery Parkway Interchange Lighting, Lafayette, LA | LA DOTD (2015- 2017)**

The project involved the design of roadway lighting for the Ambassador Caffery Parkway (LA 3184) Interchange along Route I-10 in Lafayette, LA. The design included the use of high-mast and low-mast poles as well as underpass lighting and was coordinated with the local government agencies as well as the electrical utility company in order to simplify future maintenance and to provide desired aesthetics. M&M also provided construction related engineering services including shop drawing and O&M manual review and field inspections, including final punch-list inspection. Mr. Gerhart oversaw the photometric analysis, electrical calculations and final plan development for the design portion of this project. He also performed field inspections during construction and worked directly with LADOTD electrical engineers.

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>	
<b>Name &amp; Title:</b>  <b>Erin N. Rodgers, PE</b> Engineer - Electrical	
<b>Project Assignment:</b>  Engineer – Electrical Design/Street Lighting	
<b>Name of Firm with which associated:</b>  <div style="text-align: center;">  </div>	
<b>Years' experience with this Firm:</b>  With this Firm: 7 Total: 7	
<b>Education: Degree(s)/Year/Specialization:</b>  B.S., Mechanical and Electrical Concentrations, Elizabeth University (2017)	
<b>Active registration: Year first registered/discipline:</b>  2017/Engineer-in-Training (Electrical): PA	
<b>Other experience and qualifications relevant to the proposed Project:</b>  <p>Ms. Rodgers joined Modjeski and Masters, Inc. as an engineer in training in 2017 following her graduation from Elizabethtown College with a Bachelor of Science in Engineering. Ms. Rodgers serves as an Electrical Engineer for the Electrical section and has been involved in design and inspection of several movable bridges during her time with the firm. She also has experience with roadway lighting design, tunnel lighting design and utility coordination projects.</p> <p><b>H.012889.5: I-20 Rehabilitation (Pines Road to I-220) – Shreveport, LA   LA DOTD (2018- On-going)</b>            As part of an overall interstate improvement project, M&amp;M was selected to develop roadway lighting plans to accommodate future interstate median lighting and to relocate any existing light poles in conflict with reconfigured on and off ramps. Ms. Rodgers is working under the direction of a senior engineer to design a preliminary roadway lighting system for the I-20 widening project. She is performing a photometric analysis using Visual lighting software to achieve optimal lighting illumination levels and uniformity while minimizing pole quantity and related costs. She will use the final approved photometric analysis report to generate final plans and specifications.</p>	



## **TEC Professional Services Questionnaire**

### **H.003184: I-10: Texas State Line – E. of Coone Gully Lighting, Calcasieu Parish, LA | LA DOTD (2017- On-going)**

M&M performed a study of the existing roadway lighting system of Interstate 10 (I-10) in Calcasieu Parish and Ms. Rodgers worked under the direction of a senior engineer to design a roadway lighting system for I-10 widening project near Coone Gully, Louisiana. She completed a photometric analysis using Visual lighting software to achieve optimal lighting illumination levels and uniformity while minimizing pole quantity and related costs. Ms. Rodgers also worked to develop complete lighting plans for the project including plan layouts, pole schematics, and equipment detailing.

### **H.012503: I-12 @ LA 447 (Walker) Interchange Lighting, Walker, LA | LA DOTD (2016 – 2019)**

M&M was selected to prepare final plans, specifications, photometric calculations and a construction cost estimate for the I-12 at LA 447 Interchange which includes two roundabouts. M&M worked closely with local government agencies and utility companies to provide an optimum, low-maintenance lighting system. Ms. Rodgers worked under the direction of a senior engineer to review submittals for the roadway lighting design for the I-12 widening project in Louisiana. Her responsibilities included verifying contractor submissions met design intent and coordinating all equipment to be used on the project with the contractor.

### **H.003003: I-10: E. Jct. I-49 to LA 328 Lighting, Lafayette and St. Martin Parishes LA | LA DOTD (2015 – On-going)**

M&M was selected to prepare final plans, specifications, photometric calculations and a construction cost estimate for the I-10 at I-49 to LA 328 Interchange Lighting. M&M will be working closely with local government agencies and utility companies to provide an optimum, low-maintenance lighting system. Ms. Rodgers worked under the direction of a senior engineer to review submittals for the roadway lighting design for the I-10 widening project in Louisiana. Her responsibilities included verifying contractor submissions met design intent and coordinating all equipment to be used on the project with the contractor.

### **H.011235.5: I-49 South at Verot School Road – Lafayette, LA | LA DOTD (2018 – 2019)**

Ms. Rodgers worked under the direction of a senior engineer to design a preliminary roadway lighting system for the new interchange to be built at the intersection of I-49 and Verot School Rd near Lafayette, Louisiana. She completed a photometric analysis using Visual lighting software to achieve optimal lighting illumination levels and uniformity while minimizing pole quantity and related costs.



### **H.003014: I-10: LA 347 to Atchafalaya Floodway Bridge Lighting, St. Martin Parish LA | LA DOTD (2015- On-going)**

M&M was selected to prepare final plans, specifications, photometric calculations and a construction cost estimate for the I-10 @ LA 347 Interchange which consists of two roundabouts. M&M worked closely with local government agencies and utility companies to provide an optimum, low-maintenance lighting system. Ms. Rodgers worked under the direction of a senior engineer to review submittals for the roadway lighting design for the I-12 widening project in Louisiana. Her responsibilities included verifying contractor submissions met design intent and coordinating all equipment to be used on the project with the contractor.

### **H.011137.5 Lighting Engineering Design Services for I-12: LA 1077 to US 190. Covington, LA LA DOTD (2019- On-going)**

As part of an overall interstate widening project, M&M provided an investigation for a future roadway lighting system along I-12 in St. Tammany Parish. M&M provided an illumination analysis per LADOTD standards for a complete lighting design at the I-12 at LA 1077, I-12 at LA 21, I-12 at Pinnacle Pkwy, and I-12 at US 190 interchanges. M&M provided plans and specifications for lighting and electrical equipment to accommodate installation of a future lighting system as well as plans and specifications for a new navigation lighting design on the widened Tchefuncte River Bridge. M&M is currently providing construction related engineering services for this project. Ms. Rodgers performed photometric analysis and assisted in final electrical plan development.

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>	
<b>Name &amp; Title:</b>  <b>Jeffrey W. Newman, PE</b> Senior Project Manager - Mechanical	
<b>Project Assignment:</b>  Engineer – Mechanical Design/Movable Bridges	
<b>Name of Firm with which associated:</b>  <div style="text-align: center;">  </div>	
<b>Years' experience with this Firm:</b>  With this Firm: 32 Total: 36	
<b>Education: Degree(s)/Year/Specialization:</b>  B.S., Mechanical Engineering, Penn State University (1987)	
<b>Active registration: Year first registered/discipline:</b>  1993/ Professional Engineer (Mechanical): CA, FL, IL, LA, MA, MD, PA	
<b>Other experience and qualifications relevant to the proposed Project:</b>  <p>Mr. Newman is a Senior Project Manager and is the technical director for Modjeski and Master's Mechanical Engineering department. He has been dedicated to movable bridge work since 1988. His experience includes a wide variety of hands-on movable bridge engineering. With over 30 years in this arena, Mr. Newman offers hard to match experience in inspection, evaluation and design of movable bridge machinery. His work in implementing strain gage instrumentation for use in the movable bridge industry has paved the way for many bridge owners to properly maintain and update their aging structures. Mr. Newman continues to be on the forefront of the industry by helping develop the design standards used for both highway and rail movable bridges. Recent work includes being the Project Manager for several traditional design and design-build projects including: Spit Bascule Bridge mech/elec upgrade (Sydney, AU), Fore River Vertical Lift Bridge replacement (Quincy, MA), and Livingston Avenue Swing Bridge mech/elec upgrade. Mr. Newman's ability to understand constructability and cross-discipline design and coordination make him a perfect fit to ensure clear and concise bid documents are provided on-time and under budget for movable bridge projects.</p>	

## **TEC Professional Services Questionnaire**

### **Port of New Orleans Bridges – Inspection, Load Rating, and Rehab, New Orleans, LA | Port of New Orleans (Ongoing)**

Mr. Newman is the Engineer of Record for the mechanical design for many of these projects. For over 40 years, Modjeski and Masters has provided various bridge engineering services for the four Port owned movable bridges: Seabrook Bridge, Almonaster Bridge and St. Claude Avenue Bridge (Strauss Bascule Bridges) and Florida Avenue (Vertical Lift). Services provided for these bridges includes Bridge Inspections, On-Call Services/Repairs, New Bridge Designs, Repair/Maintenance, Load Capacity Rating, and Construction Administration and Inspection.

### **LA 1 West Larose Vertical Lift Bridge over ICWW, Larose, LA | LA DOTD (2013-Present)**

Mr. Newman is the Engineer of Record for the mechanical design of this project. M&M provided rehabilitation plans for the upgrade of the structural, electrical, mechanical system to extend the life of the bridge 30-40 years for this vertical lift bridge. Additionally, a new fender system was designed, the operator house was significantly upgraded, and bridge repainted. A bridge inspection and development of scope of service preceded the preparation of plans.

### **4th Street Harvey Bridge Rehabilitation, Harvey, LA | LA DOTD (2013- Present)**

Mr. Newman was the Engineer of Record for the plans and specifications for the mechanical design of this project. Categorized as a high priority project, the electrical, structural and mechanical rehabilitation of the 4th Street Bridge in Harvey, LA became a top priority for M&M. The bridge, a double leaf rolling bascule movable bridge, is approximately 40 years old and has recently experienced reliability problems. The rehabilitation was done to allow the structure to operate reliably for an additional 30-40 years with regular maintenance.

### **US 11 Bridge over Lake Pontchartrain, New Orleans, LA | LA DOTD (2013-2018)**

Mr. Newman is the Engineer of Record for the mechanical design of this project. Within the US 11 Bridge, commonly known as the 5 mile bridge, are two double-leaf bascule spans (North Draw and South Draw). There was considerable damage to the bridge as a result of Hurricane Katrina. M&M was retained to determine the improvement needs structural, electrical and mechanical to extend the life by 20-30 years and to prepare rehabilitation plans.

### **Rehabilitation of Houma Navigation Canal Swing Bridge, Houma, LA | LA DOTD (2010-2015)**

This Project started with the development of a scope of services and cost estimate to determine the extent of rehabilitation that fit the DOTD budget. Included in the rehabilitation were: structural repairs, new mechanical and electrical systems, new traffic barriers and gates, new fender system, new operator house, concrete repairs, sampling existing paint coatings, repainting, rebalancing of swing span, and revetment repairs. One significant feature was the installation of a platform under the roadway for mounting the mechanical system and electrical components so that they would no longer be submerged during high water conditions. Mr. Newman was the Engineer of Record for all mechanical inspection, design and installation review.

### **Mermentau Swing Bridge Rehabilitation, Grand Chenier, LA | LA DOTD (2007-2011)**

This Project was the rehabilitation of the LA 82 swing bridge over the Mermentau River. Included in the Project were structural repairs, electrical and mechanical upgrades, repainting, operator house upgrades, fender repairs, and traffic control devices. Traffic was maintained throughout the project. Mr. Newman was the Engineer of Record for all mechanical inspection, design and installation review.

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>	
<b>Name &amp; Title:</b>	
Geoffrey L. Forest, PE Project Manager - Mechanical	
<b>Project Assignment:</b>	
Engineer – Mechanical Design/Movable Bridges	
<b>Name of Firm with which associated:</b>	
	
<b>Years' experience with this Firm:</b>	
With this Firm: 22 Total: 22	
<b>Education: Degree(s)/Year/Specialization:</b>	
B.S., Mechanical Engineering, Louisiana Tech University (2000) M.S., Mechanical Engineering, Louisiana Tech University (2001)	
<b>Active registration: Year first registered/discipline:</b>	
2007/ Professional Engineer (Mechanical): FL, LA, PA, SC	
<b>Other experience and qualifications relevant to the proposed Project:</b>	
Mr. Forest joined Modjeski and Masters, Inc. in 2002, and is a Mechanical Project Manager with the firm. He has experience in design and inspection of machinery for movable bridges, both hydraulic and electro-mechanical. Mr. Forest participates in various inspections of fixed and movable bridges and has experience in bridge construction monitoring, inspection, and condition reporting; detailing bridges for rating capacity; development of contract plans, specifications, and letter bids.	



## **TEC Professional Services Questionnaire**

### **In-Depth Inspection of Complex Structures Retainer – Various Bridges (Statewide), LA | LA DOTD (2014-2017)**

As a member of a multi-firm team, Modjeski and Masters was tasked to provide Structural, Mechanical, Electrical, and Coatings inspection services to perform multiple In-Depth Bridge Inspections for various bridges throughout the state of Louisiana, as a part of the ongoing statewide Complex Structures Inspection Retainer with the LADOTD. The inspections were performed using technical rope access and rappelling, aerial work platforms, and standard climbing techniques. Bridge conditions, including specific defects, were documented and presented in an inspection report and PONTIS/Inspect-Tech forms, along with repair recommendations and a full coatings evaluation report. Mr. Forest performed an in-depth condition inspection of the operating machinery for the movable bridges and authored the mechanical section of the inspection report.

### **4th Street Harvey Bridge Rehabilitation, Harvey, LA | LA DOTD (2013- 2015)**

Categorized as a high priority project for DOTD, M&M was engaged to develop a scope for the rehabilitation of the structural, electrical and mechanical systems for extending the life of the bridge 30-40 years. Plans include replacing the grid deck, new track and tread plates, replacing hydraulic system, new electrical control system, generator, and repainting the bridge. Mr. Forest designed a new hydraulic span drive system to replace the existing hydraulic system. The new span drive was modeled after other LADOTD hydraulic span drives for consistency, but tailored specifically for this bridge. The design also included replacement of the center locks and tail locks with components that better retain the alignment of the spans. - Mr. Forest performed mechanical design for the rehabilitation. The work consisted of replacing the hydraulic span drive system in its entirety, as well as the track and tread plates. A staggered gear tooth profile was using in the track and tread design, which was modeled in 3D to create and verify the complex shapes.

### **US 11 Bridge over Lake Pontchartrain, New Orleans, LA | LA DOTD (2014-Present)**

M&M led a team providing structural, mechanical, electrical, and architectural rehabilitation services to extend the service life of the US 11 North and South bascule spans. The North bascule span is the only routinely operated span. In addition to repairs and improving the structural capacity to eliminate the weight posting of the bridge, the operator's house will be enlarged, and the span converted to hydraulic operation. The South bascule span is only opened manually (with a crane) when access is needed to service electrical utility lines crossing the lake. The span toes will be replaced to improve the structural capacity to eliminate the weight posting of the bridge. The operator houses will be rehabilitated to retain their historic appearance. The bascule spans comprise the largest spans (149') of the overall 4.7-mile bridge over Lake Pontchartrain. Mr. Forest led the mechanical design team for this unique bridge rehabilitation. The original machinery design included electric motors, open gearing, and a final rack and pinion set to move the bascule leaves. The span drive system was converted to hydraulic operation using linear hydraulic cylinders acting directly on the bascule girders. The bascule leaf superstructure and pier were modeled in 3D to aid in locating clearances and interferences with the new operating machinery

### **Rehabilitation of Houma Navigation Canal Swing Bridge, Houma, LA | LA DOTD (2010-2016)**

The Houma Navigation Canal Bridge is a swing bridge operated by hydraulic slewing cylinders. M&M is providing engineering design services for the rehabilitation of the drive machinery of this bridge. Mr. Forest performed field inspection and strain gage balancing of the existing operating machinery and design of the new machinery for the upgrade of the span drive system. Mr. Forest performed shop drawing review and response to Contractor RFI's. He also performed on site machinery installation support and inspection during construction.

### **Electrical Rehabilitation of Louisville Street Bascule Bridge & East Pearl River Swing Bridges. Monroe and St. Tammany Parish, Louisiana | LA DOTD (2009-2011)**

M&M prepared the electrical plans with specification notes for the rehabilitation of the Louisville Street Bridge over the Ouachita River in Monroe, LA and the East Pearl River Bridge over the Pearl River in LA. Both bridges were in need of an electrical rehabilitation including lighting, gears and generator replacement. M&M also provided construction support services.

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>	
<b>Name &amp; Title:</b>  <b>Ralph J Eppehimer, PE</b> Senior Vice President Director of Field Services	
<b>Project Assignment:</b>  Field Services / Inspection / Construction Related Services	
<b>Name of Firm with which associated:</b>  	
<b>Years' experience with this Firm:</b>  With this Firm: 40 Total: 41	
<b>Education: Degree(s)/Year/Specialization:</b>  B.S., Civil Engineering, Pennsylvania State University (1982)	
<b>Active registration: Year first registered/discipline:</b>  1989/Professional Engineer (Civil) – LA, MI	
<b>Other experience and qualifications relevant to the proposed Project:</b>  <p>Mr. Eppehimer has over 38 years field services experience with Modjeski and Masters, Inc. and is the Director of Field Services. He has vast experience in all aspects of field services including new bridge construction, safety and maintenance inspections of existing bridges, repair and rehabilitation of bridges, and emergency response to bridge accidents. He has been the construction project manager, resident engineer, assistant resident engineer and technical advisor on a number of significant movable bridge projects, primarily railroad bridges. Mr. Eppehimer's technical specialties are the field inspection of all types of bridge, field monitoring of movable bridge construction, repair and rehabilitation of bridges, and the repair and retrofit of movable bridges.</p>	

## **TEC Professional Services Questionnaire**

### **In-Depth Inspection of Complex Structures Retainer Various Bridges, Statewide (Louisiana) | LA DOTD (2013-2018)**

As a member of a multi-firm team, Modjeski and Masters was tasked to provide Structural, Mechanical, Electrical, and Coatings inspection services to perform multiple In-Depth Bridge Inspections for various bridges throughout the state of Louisiana, as a part of the ongoing statewide Complex Structures Inspection Retainer with the LADOTD. The inspections were performed using technical rope access and rappelling, aerial work platforms, and standard climbing techniques. Bridge conditions, including specific defects, were documented and presented in an inspection report and PONTIS/Inspect-Tech forms, along with repair recommendations and a full coatings evaluation report. Mr. Eppehimer served as Principal-in-Charge for these inspections.

### **Mississippi River Bridge (Cleaning, Painting, Repairs [Phase 1 & 2]) Baton Rouge, LA | LA DOTD (2012-2018)**

M&M was retained by the LADOTD to provide construction contract administration and construction engineering and inspection services required during the repairs to the US 190 Mississippi River Bridge in Baton Rouge, Louisiana. Included in the project are assorted repairs and replacement of elements in the steel approach spans and main span, navigation light repair, construction of retaining walls, guard rail placement and miscellaneous pavement repair. Mr. Eppehimer was the Principal-in-Charge for the CE&I services involved with this project.

### **Lapalco Bridge Repairs Jefferson Parish, LA | LA DOTD (2008- Present)**

This project involved the rehabilitation, repairs (structural, mechanical, electrical and architectural), and repainting of this four-lane, bascule highway bridge. Modjeski and Masters provided the development of plans and specifications and construction services. Mr. Eppehimer was the Project Manager for all repair/rehab and construction engineering support services associated with this project.

### **Port of New Orleans Seabrook Bridge Link Pin Joints Emergency – Construction Services, New Orleans, LA | Port of New Orleans (2017)**

After M&M completed the initial investigation and developed emergency repair contract documents for the partially failed 2nd Link joint on the Seabrook Strauss Bascule Bridge, the Port of New Orleans called upon M&M to provide Construction Support Services for the project. M&M reviewed all Contractor RFIs, shop drawings, and procedure submittals for the project. M&M also provided on-site construction inspection services throughout the repair effort. Mr. Eppehimer was Principal-in-Charge for this project.

### **Port of New Orleans Seabrook Bridge Floor System Replacement, New Orleans, LA | Port of New Orleans (2016-2017)**

Modjeski and Masters prepared the plans and specifications to replace the railroad floor system between the trusses of the Seabrook Railroad Bridge for the Port of New Orleans. M&M also developed the sequence of construction to minimize the impacts to the rail and marine traffic as well as maintain the span balance throughout construction. Mr. Eppehimer was Principal-in-Charge for this project.

### **Cline Avenue Bridge Review, Analysis and Construction Support, East Chicago, IN | United Bridge Partners (2020-Present)**

The Cline Avenue Bridge is 6,236-foot long precast segmental bridge that spans over several rail lines, Riley Road, and the Indiana Harbor Canal in East Chicago, IN. The new structure will consist of 29 cast-in-place concrete columns that support 685 post-tensioned concrete single cell box girders segments which form the bridge's deck. Completion of this project will restore entrance into the Northwest Indiana area. Modjeski and Masters, Inc. was contacted by United Bridge Partners to perform a fully independent review on the design, review of construction documents, and provide an on-site presence for completion of construction of the 1.7 mile long segmental bridge. Design and construction work is ongoing. Mr. Eppehimer served as the Principal-in-Charge for the Construction Engineering and Inspection of this project.

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>	
<b>Name &amp; Title:</b>  <b>Anthony E. Schoenecker, PE</b> Senior Project Manager – Field Services	
<b>Project Assignment:</b>  Field Services / Inspection / Construction Related Services	
<b>Name of Firm with which associated:</b>  <div style="text-align: center;">  </div>	
<b>Years' experience with this Firm:</b>  With this Firm: 14 Total: 18	
<b>Education: Degree(s)/Year/Specialization:</b>  B.S., Civil Engineering, University of Minnesota, 2005 Assoc. of Art, Anoka-Ramsey Comm. College, 2001	
<b>Active registration: Year first registered/discipline:</b>  2010/Professional Engineer (Civil) – AR, FL, LA, MN, MS, NY, TX	
<b>Other experience and qualifications relevant to the proposed Project:</b>  <p>Mr. Schoenecker is a Louisiana licensed Professional Engineer and will serve as Field Services Manager. He is the M&amp;M New Orleans office Field Services Manager and is an NBIS Inspection Team Leader responsible for the coordination and execution of inspections and condition reporting. He is trained in Technical and Rope Access techniques and has numerous inspection certifications including: NHI 130055 - Safety Inspection of In-Service Bridges (and NHI 130053 Refresher Course), NHI 130078 - Fracture Critical Inspection Techniques for Steel Bridges; Level I and II Liquid Penetrant and Magnetic Particle Inspection; SPRAT Level II Rope Access Technician, and UAV Remote Pilot (Drone) Operator Permit.</p>	



## **TEC Professional Services Questionnaire**

### **Huey P. Long Bridge Widening at New Orleans, LA | LA DOTD (2009-2018)**

The Huey P. Long Bridge is a steel cantilever through-truss railroad and highway bridge across the Mississippi River, with a main bridge crossing of 3,525 feet and several miles of steel plate girder approaches. The main bridge features four deck truss spans, two anchor spans of 529 feet and 532 feet, two cantilever spans of 144 feet, a simple span of 531 feet, and a suspended span of 503 feet. Mr. Schoenecker was an inspection team member from 2009-2012 and inspection team leader from 2013-2018 for this annual inspection which included a 100% hands-on visual inspection of all structural elements, including fatigue-sensitive and fracture-critical members, comprising the main bridge structure and approaches, for both the railroad and highway.

### **Nineteen Complex Bridges Load Rating and Evaluation, Statewide, Louisiana | LA DOTD (2017-2018)**

Modjeski and Masters, Inc. is performing plan and document retrieval, bridge inspection and analysis, and load and resistance factor rating of complex bridge structures, mainly steel vertical lifts. Gusset, truss, floorsystem and substructure components are being rated. Bridge inspections are focusing on gusset plates and existing member conditions for rating. AASHTOWare BrR is being used for the ratings, which follow current AASHTO *Manual for Bridge Evaluation*, the LADOTD *Policies and Guidelines for Bridge Rating and Evaluation*, and LADOTD *Bridge Design and Evaluation Manual*. Mr. Schoenecker served as an inspection team leader for the Gramercy and Crescent City Connection #2 Bridges, both Mississippi River Crossings.

### **In-Depth Inspection of Complex Structures Retainer, Statewide, Louisiana | LA DOTD (2013-2018)**

As a member of a multi-firm team, Modjeski and Masters was tasked to provide Structural, Mechanical, Electrical, and Coatings inspection services to perform multiple In-Depth Bridge Inspections for various bridges throughout the state of Louisiana, as a part of the ongoing statewide Complex Structures Inspection Retainer with the LADOTD. The inspections were performed using technical rope access and rappelling, aerial work platforms, and standard climbing techniques. Bridge conditions, including specific defects, were documented and presented in an inspection report and PONTIS/Inspect-Tech forms, along with repair recommendations and a full coatings evaluation report. Mr. Schoenecker has participated as Team Leader in the inspection of five bridges and is Project Manager for two bridges under this contract. Mr. Schoenecker additionally served as office support for two bridges under this contract.

### **Stennis Bascule Bridge, Stennis, MS | Stennis Space Center (2010 & 2015)**

In 2010, Modjeski and Masters provided inspection and structural assessment services for the condition of piles supporting the LH Barge Dock at B-Complex and recommended repair concepts. In 2015, Modjeski and Masters, Inc. was selected to perform an in-depth engineering inspection of the movable bridge and provide an report of findings and recommendations. An underwater inspection was included as part of the structural assessment.

### **Lapalco Double Leaf Bascule Bridge Rehabilitation Jefferson Parish, LA | Jefferson Parish Department of Public Works (2021)**

The Lapalco Boulevard Bridge over the Harvey Canal is a four-lane highway bridge. The main bridge portion of the Lapalco Boulevard Bridge is a welded plate girder, double leaf, trunnion type bascule with an open grid deck. The approach spans are comprised of steel girder spans and concrete girder spans with concrete decks, and concrete slab spans with curtain walls. Modjeski and Masters performed an in-depth inspection of structural, mechanical and electrical components and approach spans including a coatings inspection of the steel metalwork. M&M also performed a load capacity rating analysis of the structure and developed a written condition report detailing findings and recommendations. M&M performed UT investigations of the girder hanger pins, assessed the different brake systems for the bridge and developed mechanical and electrical contract documents for various repairs as well as provided construction monitoring services. Mr. Schoenecker serves as the project manager for the CE&I services.

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>	
<b>Name &amp; Title:</b>  <b>Matthew J. Miller, PE</b> Project Manager – Field Services	
<b>Project Assignment:</b>  Field Services / Construction Related Services	
<b>Name of Firm with which associated:</b>  <div style="text-align: center;">  </div>	
<b>Years' experience with this Firm:</b>  With this Firm: 13 Total: 13	
<b>Education: Degree(s)/Year/Specialization:</b>  B.S., Civil Engineering, Pennsylvania State University, 2010	
<b>Active registration: Year first registered/discipline:</b>  2014/Professional Engineer (Civil) – LA, TX, IN	
<b>Other experience and qualifications relevant to the proposed Project:</b>  <p>Mr. Miller joined M&amp;M in 2011 and works in the firm's Field Service Business Unit-Southeast Region, where he leads construction engineering and inspection efforts. Mr. Miller is experienced in bridge construction, construction contract administration, bridge inspection and repairs, and bridge emergency response. Mr. Miller has served as resident engineer and an assistant resident engineer on several highway and rail bridge construction projects and has served as lead field engineer for various bridge rehabilitation and repairs projects. As a NBIS-certified bridge inspector, Mr. Miller has been the team leader on numerous movable, long-span, steel, and timber bridge inspection projects. Most notably, Mr. Miller led the inspection of more than 1,300 steel bridges throughout Union Pacific Railroad's entire track system, which covers 22 states west of the Mississippi River. In addition, Mr. Miller has also served as lead field engineer on railroad bridge emergency projects including structural and mechanical failure resulting from train derailments, natural disasters, marine vessel collisions, natural member deterioration, and construction errors.</p>	

## **TEC Professional Services Questionnaire**

### **Cline Avenue Bridge Review, Analysis and Construction Support | United Bridge Partners (2020 - 2021)**

The Cline Avenue Bridge is 6,236-foot long precast segmental bridge that spans over several rail lines, Riley Road, and the Indiana Harbor Canal in East Chicago, IN. The new structure will consist of 29 cast-in-place concrete columns that support 685 post-tensioned concrete single cell box girders segments which form the bridge's deck. Completion of this project will restore entrance into the Northwest Indiana area. Modjeski and Masters, Inc. was contacted by United Bridge Partners to perform a fully independent review on the design, review of construction documents, and provide an on-site presence for completion of construction of the 1.7 mile long segmental bridge. Design and construction work is ongoing. Mr. Miller is the on-site resident engineer for this project.

### **UPRR 305.45 Angleton Sub San Bernard Bridge. Sweeney, TX | Union Pacific Railroad (2016-2018)**

M&M provided the design for a new vertical lift bridge that replaced an existing swing span bridge over the San Bernard River in the Angleton Subdivision of the Union Pacific Railroad. M&M coordinated with the UPRR to accommodate an accelerated construction schedule and provided construction support for the project. The new bridge was designed to be "remote control ready." Mr. Miller served as the Assistant Resident Engineer and Chief Construction Inspector. Mr. Miller was involved in all aspects of the project's construction engineering and inspection duties from the fabrication and erection phase through the bridge change out, commissioning and project close out phases. Mr. Miller took part in reviewing submittals and RFI's, assisting Union Pacific Railroad with changes and disputes, and confirming that the as-built condition was in compliance with the plans and specifications.

**Lapalco Double Leaf Bascule Bridge Rehabilitation | Jefferson Parish Dept of Engineering (2012-2014)** The Lapalco Boulevard Bridge over the Harvey Canal is a four-lane highway bridge. The main bridge portion of the Lapalco Boulevard Bridge is a welded plate girder, double leaf, trunnion type bascule with an open grid deck. The approach spans are comprised of steel girder spans and concrete girder spans with concrete decks, and concrete slab spans with curtain walls. Modjeski and Masters performed an in-depth inspection of structural, mechanical and electrical components and approach spans including a coatings inspection of the steel metalwork. M&M also performed a load capacity rating analysis of the structure and developed a written condition report detailing findings and recommendations. M&M performed UT investigations of the girder hanger pins, assessed the different brake systems for the bridge and developed mechanical and electrical contract documents for various repairs as well as provided construction monitoring services. Mr. Miller assisted with the CE&I services.



**Sunshine Bridge Emergency Inspection and Repairs. Donaldsonville, LA | LADOTD (2018-2019)** In 2018, a barge mounted crane was traveling upstream in the western most channel of the river. The crane's height exceeded the vertical clearance of the span, and the back-stay of the crane impacted the downstream bottom chord of the truss. The impact caused significant damage to a bottom chord member, tearing off the bottom plate of the box member and inducing severe out of plane distortion. The member in question was a primary load path compression member, designed to carry 1,700 kips of dead load. LADOTD closed the bridge immediately and began the task of investigation and repair. Modjeski and Masters, Inc. (M&M) was selected as the lead consultant for bridge repairs. After closing the bridge directly after the incident, LADOTD engaged M&M to perform an emergency hands-on inspection using technical rope access techniques. The inspection team documented the primary damaged member as well as a host of other damaged elements, including bottom laterals, stringer bearings, and gusset plates. Technical rope access was critical in locating and documenting all damaged bridge elements. M&M also provided construction engineering and inspection of the repair efforts. Mr. Miller provided emergency inspection and CE&I services.

### **UPRR Systemwide Inspections – Northern, Southern and Western Regions | Union Pacific Railroad (2016 - 2017)**

Modjeski and Masters provided professional services to inspect designated steel railroad bridges across the Union Pacific Railroad System. The firm was responsible for leading the inspections, assisting the UP inspectors in comparing the inspection findings against past findings, and formulating overall condition ratings of bridge systems. The firm also compiled the condition rating data and prepared summary reports indicating the overall health of the bridges inspected in this project. Mr. Miller was the lead bridge inspector for this project.




## TEC Professional Services Questionnaire

<b>L. Work by Firm or Joint-Venture members which best illustrates current qualifications relevant to this Project. Please include any and all work performed for Jefferson Parish. Please attach additional pages if necessary.</b>		
<b>PROJECT NO. 1</b>		
<b>Project Name, Location and Owner's contact information:</b>  <b>Cline Avenue Bridge Review, Analysis, and Construction Support</b> <i>East Chicago, IN</i>  <b>United Bridge Partners</b> <i>Ken Szeliga</i> <i>303-257-4745</i>	<b>Nature of Firm's Responsibility:</b>  <p>The Cline Avenue Bridge is a 6,236-foot long precast segmental bridge that spans over several rail lines, Riley Road, and the Indiana Harbor Canal in East Chicago, IN. The new structure consists of 29 cast-in-place concrete columns that support 685 post-tensioned concrete single cell box girders segments which form the bridge's deck. Completion of this project restored entrance into the Northwest Indiana area.</p> <p>The Bridge was designed by another engineering firm and when the construction of the bridge was approximate 70% complete Modjeski and Masters, Inc. was contacted by United Bridge Partners to perform a fully independent review on the design, review of construction documents, and provide an on-site presence for completion of construction of the 1.2 mile long segmental bridge. The bridge was opened to traffic on December 23, 2021.</p> <p>M&amp;M's New Orleans Highway Section developed temporary traffic control plans to improve traffic flow and safety for the initial bridge opening and performed an independent technical review (ITR) of the permanent striping, pavement markings and signage for the bridge and approaches to evaluate conformance with DOT, MUTCD and AASHTO design guidelines and criteria. (total project length = 3 mi.) M&amp;M Prepared roadway striping and signage plan to improve the safety and operational efficiency of the facility. M&amp;M also performed a feasibility study for two (2) proposed new interchanges which included conceptual exit/entrance ramp geometric layouts, roundabouts and structural bridge concepts. Prepared plans for the installation of Supplemental Guide Signs in accordance with the Manual of Uniform Traffic Control Devices (MUTCD).</p>	
 		
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2021	\$100M (Const.)	\$6M (Engr.)




## TEC Professional Services Questionnaire

### PROJECT NO. 2

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p><b>Huey P. Long Bridge Widening</b> <i>Jefferson, LA</i></p> <p><b>Louisiana Department of Transportation and Development</b> <i>Jenny Fu, PE</i> <i>225-379-1321</i></p>	<p>The Huey P. Long Bridge is a high-level, combination highway and railroad bridge which crosses the Mississippi River in New Orleans, Louisiana. The total structure length, including approaches, is approximately 23,000 ft. The main span unit is 3,524 ft. long, consisting of a 750-ft. cantilever through truss span, two 530-ft. anchor truss spans, one 530-foot simple through truss span, and four deck truss spans. All consist of riveted steel construction. The firm designed the structure and provided construction supervision from 1925 until 1936. The original design called for two 9' vehicular lanes (in each direction) to be bracketed from the trusses. The firm also provides an in-depth annual inspection for the New Orleans Public Belt Railroad.</p> <p>Phase 1 – Conceptual study of the widening including: line and grade studies, geometric design, corridor upgrading. The widening was to provide three 11 ft. vehicular lanes and shoulders in each direction.</p> <p>Phase 2 – For the Structure (approaches, main bridge and substructure) preliminary and final design for new auxiliary trusses, main river pier top widening, drilled shaft and pile supported approach piers and modifications to railroad approach superstructure to accommodate vehicular lane shifts, and cost estimates.</p> <p>Phase 2A – For the Interchanges (East and West Bank) line and grade plans, geometric design preliminary and final plans and cost estimates.</p> <p>Phase 3 – Construction Engineering Office support was provided to check thousands of shop drawings, handle RFI's and consult as needed in support of a construction monitoring team By Others for the project.</p> <p>Phase 4 – Bridge rating</p>	
	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2013	\$1.2B (Const.)	\$22M (Engr.)

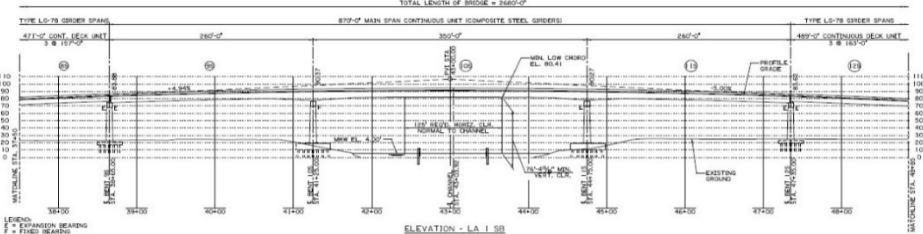
## TEC Professional Services Questionnaire

### PROJECT NO. 3

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p><b>Port of New Orleans Bridges – Inspection, Load Rating, and Rehab</b> <i>New Orleans, LA</i></p> <p><b>Port of New Orleans</b> <i>Randy Songy, PE</i> <i>504-528-3502</i></p>	<p>For over 40 years, Modjeski and Masters has provided various bridge engineering services for the four Port owned movable bridges: Seabrook Bridge, Almonaster Bridge and St. Claude Avenue Bridge (Strauss Bascule Bridges) and Florida Ave (Vertical Lift)</p> <p>Modjeski and Masters, Inc. provided the following services for these bridges:</p> <p><b>Bridge Inspections</b></p> <ul style="list-style-type: none"> <li>Inspections of the four bridges per NBIS and AREMA standards and in-house knowledge of items for special attention during inspections</li> <li>Emergency inspections</li> <li>Reports detailing general and specific conditions along with recommendations, and a prioritized listing of repair items/costs</li> </ul> <p><b>On-Call Services/Repairs</b></p> <ul style="list-style-type: none"> <li>Bridge malfunctions (gearing, seating, other)</li> <li>Marine allisions (fenders, dolphins, trusses, operator house)</li> <li>Hurricanes (Katrina, Gustav, others before and after)</li> <li>Emergency call-outs on a 24/7 basis including availability on weekends and holidays (local responses)</li> </ul> <p><b>New Bridge Designs</b></p> <ul style="list-style-type: none"> <li>Design of Florida Avenue Vertical Lift Bridge</li> </ul> <p><b>Repair/Maintenance</b></p> <ul style="list-style-type: none"> <li>Design and Construction Engineering &amp; Inspection (CE&amp;I) rehabilitation services of major bridge pin joints</li> <li>Development FRA Bridge Management Plans for Bridges and Wharves</li> <li>Removal of Highway Floor System from the Seabrook Bascule Bridge</li> <li>Replacement of the Railroad Floor System on the Seabrook Bascule Bridge</li> <li>Prepared and monitored bridge repair and painting projects</li> </ul> <p><b>Load Capacity Rating</b></p> <ul style="list-style-type: none"> <li>Multiple scheduled Load capacity ratings completed of the Seabrook, Almonaster, and Florida Avenue Bridges</li> </ul> <p><b>Construction Administration and Inspection</b></p> <ul style="list-style-type: none"> <li>Construction Administration and Inspection of the Florida Avenue Vertical Lift Bridge</li> </ul>	
	<b>Estimated Cost:</b>	
	Entire Project:	Work for which Firm was Responsible:
Ongoing	Varied by Task Order	Varied by Task Order

## TEC Professional Services Questionnaire


### PROJECT NO. 4

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p><b>LA 1 Port Allen Bridge Replacement</b> Port Allen, LA</p> <p><b>Louisiana Department of Transportation and Development</b> Brian Delatte, PE 225-379-1823</p>	<p>The project consisted of replacing the existing northbound and southbound bridge structures on LA 1 over the Intracoastal Canal Waterway (ICWW). The proposed LA 1 SB Bridge will consist of 3 – 12' travel lanes and 2 – 10' shoulders and will be approximately 2,680' long. The proposed LA 1 NB Bridge will consist of 2 – 12' travel lanes and 2 – 10' shoulders (LA 1 NB roadway), a permanent 2' wide median barrier and 1 – 12' travel lane with 2 – 6' shoulders (I-10 EB Exit Ramp roadway). The Exit Ramp and LA 1 NB roadway will be separated by a permanent 2' wide median barrier until the LA 1 NB – ridge will bifurcate where the LA 1 NB roadway and I-10 EB Exit Ramp roadway will be carried on separate bridge structures. The LA 1 NB Bridge and I-10 EB Exit Ramp Bridge will be approximately 2,700' and 354' long, respectively. Both LA 1 NB and LA 1 SB Bridges will consist of a 870' long haunched three span continuous steel plate girder main span unit over the ICWW and prestressed concrete LG girder approach spans.</p> <p>M&amp;M is responsible for the design, plans, quantities and cost estimate of the bridge structures from abutment to abutment including:</p> <ol style="list-style-type: none"> <li>1. Foundation Design, Plans and Details</li> <li>2. Substructure Design including Piers, Columns and Bent Caps</li> <li>3. Prestressed Girder Approach Spans including Exit Ramp</li> <li>4. Main Channel Spans including Haunched Three Span Continuous Steel Plate Girder Main Span Unit over the ICWW</li> <li>5. Abutments, wingwalls and approach slabs</li> <li>6. Bridge Deck Drainage</li> <li>7. As-Designed Rating</li> </ol>	
		
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2023 (est.)	\$62.5M	\$1.3M (Engr.)



## TEC Professional Services Questionnaire

### PROJECT NO. 5

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p><b>Load Rating of 354 Off System Bridges</b>  <i>Statewide, LA</i></p> <p><b>Louisiana Department of Transportation and Development</b>  <i>Dana Feng, PE</i>  <i>225-379-1060</i></p>	<p><b>Modjeski and Masters, Inc.</b> performed plan and document retrieval, bridge inspection (as needed), analysis and load rating, sampling/instrumentation and non-destructive testing (as needed), and retrofit design plan production (as needed) for 354 off system bridges, including over 40 bridges with timber substructures, bent caps and piles. The bridge types included concrete slabs, concrete precast slab units, and lightweight precast slab units. For the analysis and load rating task, M&amp;M generated a system structural model and performed an analysis of each bridge to determine dead and live load forces in the members. For the bridge superstructures, the "Girder System" in AASHTOWare BrR software was used. For the complex bridges, a three-dimensional structural model was needed. M&amp;M also developed influence lines and COMPSTIL2 input files for complex substructures including hammerheads and inverted-T pier caps. All load rating analysis followed current AASHTO Manual for Bridge Evaluation and LADOTD Bridge Design and Evaluation Manual.</p>	
		
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2021	\$2.2M	\$2.2M



## TEC Professional Services Questionnaire

### PROJECT NO. 6

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p><b>Westbank Expressway</b>  <b>MacArthur Ramps</b>  <i>Jefferson Parish, LA</i></p> <p><b>Louisiana Department of Transportation and Development</b>  <i>Chris Guidry, PE</i>  <i>225-379-1328</i></p>	<p>The heavily traveled Westbank Expressway (US 90 Business) serves a number of suburban communities and commercial developments in Jefferson Parish on the west bank of the Mississippi River and provides a link for industrial traffic headed to the Harvey Canal. The existing elevated Westbank Expressway consists of special PCC trapezoidal box girders and piers with table top caps and bents. This project called for the existing structure to be modified through the addition of an on-ramp and off-ramp near Manhattan Blvd. As a sub-consultant, Modjeski and Masters performed a peer review of the proposed plans for the modification. Modjeski and Masters also designed and developed details for the new substructure which included steel pile footings and reinforced concrete columns and bent caps. The design of the reinforced columns and complex reinforcing details were detailed to match the architectural elements of the flared columns supporting the existing structure.</p> <p><b>PROJECT FEATURES:</b></p> <ul style="list-style-type: none"> <li>Peer Review:</li> <li>Existing plans and details and quantities.</li> <li>Superstructure and substructure analysis and design.</li> <li>Foundation design.</li> <li>Special details including longitudinal joints and cap ledges.</li> <li>Design modifications:</li> <li>Substructure.</li> <li>Other design checks.</li> </ul>	
		
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2016	\$35M (Constr.)	\$345K (Engr.)

## TEC Professional Services Questionnaire

### PROJECT NO. 7


Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p><b>LA 16 over Tangipahoa River Bridge Replacement</b>  <i>Tangipahoa Parish, LA</i></p> <p><b>Louisiana Department of Transportation and Development</b>  <i>Stephanie Doolittle, PE</i>  <i>225-379-1329</i></p>	<p>M&amp;M developed all necessary topographic surveys, preliminary and final plans for this bridge replacement project on LA 16, between LA 51 and LA 1054, in Amite City, LA. This project included reconstruction of the approach slabs and roadway on the east and west sides of the bridge. It was anticipated that traffic shall be maintained during construction with an on-site diversion roadway and bridge. The plans were prepared in accordance with AASHTO LRFD Bridge Design Specifications and the Bridge Design and Evaluation Manual (BDEM), DOTD 2017 Design Guidelines, DOTD 2016 Standard Specifications for Roads and Bridges, DOTD Road Design Manual, and DOTD Hydraulics Manual. QC/QA was provided in accordance with Part 1, Chapter 3 of BDEM. Construction Related Engineering Support was provided and is currently on-going.</p> <p>M&amp;M developed and delivered the following project documentation:</p> <ul style="list-style-type: none"> <li>• Final Roadway Plans</li> <li>• Final Bridge Design</li> <li>• Final Bridge Plans</li> <li>• Final Temporary Diversion Road and Bridge</li> <li>• Transportation Management Plan (TMP) Level 2</li> <li>• Construction Signing Plan</li> <li>• As Design Load Rating</li> <li>• Construction Cost Estimate</li> <li>• Final Roadway and Bridge Quantities</li> <li>• Special Provisions</li> <li>• Design Waivers and Exceptions</li> </ul>	
<p><b>Completion Date (Actual or estimated):</b></p>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2021	\$7.7M (Constr.)	\$388K (Engr)






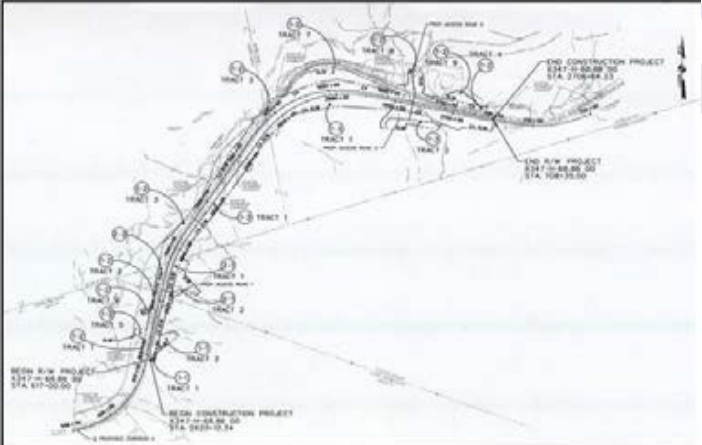

## TEC Professional Services Questionnaire

### PROJECT NO. 8

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p><b>New River Parkway Design</b>  <i>Raleigh and Summer counties, WV</i></p> <p><b>West Virginia Department of Transportation</b>  <i>Greg Bailey</i>  <i>304-379-1329</i></p>	<p>Expanding a roadway through rural West Virginia might sound like a routine assignment for an experienced design firm like Modjeski and Masters. It is anything but typical. The New River Parkway project requires more than expertise in several highway bridge service disciplines. It also demands an increased level of client communications.</p> <p>The Middle River Basin offers motorists a series of diverse and dramatic landscapes. Planned additions to the number of recreational facilities in the area will mean more tourists. Making these areas more accessible, without detracting from the attractive vistas, is one challenge. Another is creating designs that meet the criteria of the client, the West Virginia Division of Highways, as well as satisfy the project's other shareholders, including the National Park Service. To accomplish all these objectives, we were tasked with developing essentially a new kind of roadway improvement plan.</p> <p>The current roadway is mostly a one-lane asphalt road with no shoulders. Our designs for The New River Parkway will create two lanes with shoulders that allow slow speed touring. The project scope also takes advantage of our expertise in hydraulics (for draining studies), retaining wall structure, and highway bridge design and engineering services that will culminate in the construction of a 2-span steel bridge. A number of other structures will be required and include a small precast concrete bridge, open bottom box culverts, oversized countersunk pipe culverts and retaining walls. Especially challenging is the client's directive to minimize the use of cuts and fill.</p>	
		
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2016	N/A	\$3.6M

## TEC Professional Services Questionnaire

### PROJECT NO. 9

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p><b>Corridor H, Section 3 Design (Davis to Elkins)</b>  <i>Tucker County, WV</i></p> <p><b>West Virginia Department of Transportation</b>  <i>Greg Bailey</i>  <i>304-379-1329</i></p>	<p>Corridor H is a limited access, four-lane divided arterial with a design speed of 65 MPH. Corridor Section 3, approximately two miles in length, is in a previously heavily mined area of the Beaver Creek Valley, where the topography includes unmitigated strip mine areas, ponds, and small streams in addition to the Creek. An abandoned railroad grade lies between Route 93 and Beaver Creek and is under design by others for use as a bicycle trail. At one location Beaver Creek swings close to the alignment requiring that grading for the bicycle trail be incorporated in the design. Over much of the project bifurcated horizontal and vertical alignments are used to avoid other fill slope interferences with the trail. Major drainage courses requiring culvert pipes over 60 inches in diameter, are encountered in multiple locations. An extremely busy coal mine access road joins the alignment near the eastern end of the project, requiring an at-grade intersection with turning lanes.</p> <p>Modjeski and Masters, Inc. provided highway/interchange design, drainage design, maintenance and protection of traffic, and construction services for this project.</p>	
		
		
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2013	N/A	\$1.3 M



## TEC Professional Services Questionnaire

### PROJECT NO. 10

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p><b>I-12 at LA 447 Interchange – Roundabout Lighting</b> Walker, LA</p> <p><b>Louisiana Department of Transportation and Development</b> Michael Armentor, PE 225-379-1388</p>	<p>As part of the Louisiana Department of Transportation Bridge Preservation Retainer Contract, M&amp;M was selected to prepare final plans, specifications, photometric calculations and a construction cost estimate for the I-12 @ LA 447 Interchange which includes two roundabouts.</p> <p>The project involved the design of roadway lighting at the I-12 interchange in Walker, LA. The design included providing roadway lighting for two roundabouts at the ramp terminals and was coordinated with the local government agencies as well as the electrical utility company in order to provide desired aesthetics and provide an optimum, low-maintenance lighting system. M&amp;M performed a photometric analysis of the interchange conforming to LADOTD Illumination Standards. M&amp;M developed plans &amp; construction estimates and provided construction-related engineering services including shop drawing review and field inspections.</p> <p><b>“M&amp;M was tasked by LADOTD under two separate contracts, respectfully, to provide essential roadway lighting engineering and construction support services and successfully re-engineered a new fully functional lighting system final accepted by the LADOTD.”</b></p> <p><i>Michael Armentor, Illumination &amp; Facilities Electrical Engineer, LADOTD</i></p> 	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2019	\$831K	\$315K

## TEC Professional Services Questionnaire

**M. List all prior and/or on-going litigation between Firm and Jefferson Parish. Please attach additional pages if necessary.**

Parties:		Status/Result of Case:
Plaintiff:	Defendant:	
1. Jefferson Parish	Modjeski and Masters, Inc.	No current litigation. Prior litigation settled amicably in 2022. Parish of Jefferson v. Modjeski and Masters, Inc., No. 793-959, Division C.
2.		
3.		
4.		

**N. Use this space to provide any additional information or description of resources supporting Firm's qualifications for the proposed project.**



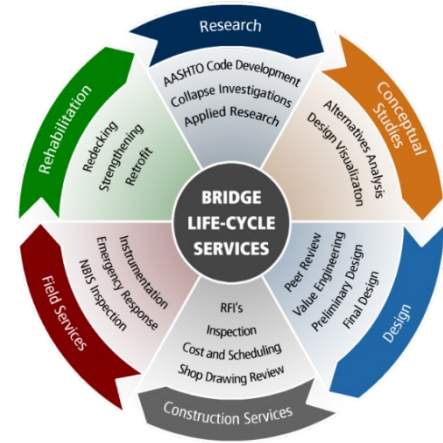
**Modjeski and Masters, Inc. (M&M)**, a 100% employee-owned company, is a nationwide leader in the design, inspection, and rehabilitation of all bridges types, including long-span and movable structures. The firm primarily serves state transportation departments, port and turnpike authorities, and railroads. Additional lifecycle services include: field instrumentation and nondestructive testing, bridge security and vulnerability analysis, vessel collision analysis, scour analysis, suspension bridge cable and suspender investigations, fatigue evaluations, emergency evaluations and forensic studies, seismic evaluation and design, and bridge research/code/course development.

We believe that developing a long-term relationship with you - a relationship built on trust, innovation and value - leads to great work and great bridges for you, your organization and the communities you serve. It is our responsibility to make your life easier; to do things right the first time; and strive to exceed your expectations.

## TEC Professional Services Questionnaire

When you work with us, you can expect:

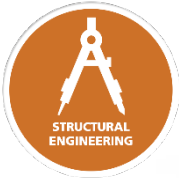
- The highest degree of integrity and ethical standards
- A collaborative dialogue and direct, anytime access to our technical experts
- Technical excellence and innovation - driven by function and value
- Comprehensive, life-cycle bridge services (shown at right)



### How M&M Can Help You

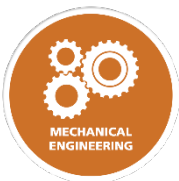
With every service we offer, we apply our extensive technical knowledge and experience, giving our clients a complete understanding of the scope of work and project approach to successfully achieve the project goals. Whether it's utilizing the latest in computer technology, training our field personnel in climbing and rappelling, or utilizing non-destructive testing techniques, M&M will do everything necessary to assure that the bridge's safety, and the safety of the people who use it, are never compromised.

### Structural Engineering



M&M offers integrated in-house structural, electrical, and mechanical disciplines for the design of all types of bridges under a unified project management approach. Over the past decades, we have completed hundreds of bridge design projects. Included are designs for replacement, upgrading and repair based on investigation and inspection of existing conditions, and new designs. In addition to performing bridge design, repair and rehabilitation, rating and special evaluations, we also perform bridge inspections, monitoring of construction, and emergency damaged bridge response. Specialty services include instrumentation in conjunction with load rating, analysis, and movable bridge balance. Instructional course development and presentation services are offered on a variety of topics.

### Mechanical Engineering

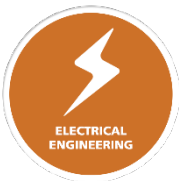


The mechanical engineers at M&M have worked on more than 200 movable bridge projects: from one-of-a-kind swing spans dating back to the 1880s, to the latest technologically-advanced structures. With specialized engineering services that include machinery design, testing and construction support, our mechanical staff provides comprehensive mechanical services.

We use both traditional and computer-aided methods for analysis, and incorporate our considerable experience and engineering judgment to achieve optimized designs.

M&M routinely performs in-depth inspections and rehabilitation designs on mechanical systems. We frequently provide the full range of mechanical engineering assistance, from trouble-shooting and problem definition through design and detailing of the solution, to providing field engineering support during implementation of the design. Special services include shop inspection and testing, on-site startup assistance, strain gage and accelerometer testing, and on-site emergency trouble-shooting.

### Electrical Engineering



M&M offers state-of-the-art specialized engineering services to preserve and maintain the future safety and operating reliability of movable bridges. For decades, M&M has been respected as one of the leaders in providing electrical system design and inspection services for movable bridges. We also provide electrical services for the lighting of bridges, roadways, and plazas, as well as remote control and monitoring, and CCTV installations. The firm maintains a staff of experienced electrical engineers in-house, competent in the use of the latest computer software for both

lighting and electrical design and analysis. In addition to the electrical staff's numerical analytical competence,



## TEC Professional Services Questionnaire

the firm's practice of regularly exposing electrical staff to both electrical field services and design ensures that common sense and practical judgment are also a strong part of the professional skills mix. M&M is committed to the continued advancement of the state of current practice by linking emerging needs with technological advances, using our history of practical success and good, deliberate professional judgment.

### Highway Engineering



Even before the beginning of the Federal Interstate Highway System, M&M had established itself as an expert in the planning and design of major expressways and interchanges. M&M continues to be an invaluable partner to transportation agencies trying to keep pace with growing demands. We offer a full array of comprehensive highway bridge and interchange bridge services — from alignment surveys and geometric designs to noise surveys and environmental impact studies. And we provide solutions that not only meet today's needs, but also accommodate future requirements

### Construction Engineering



We pride ourselves in our extensive experience working with contractors to deliver innovative bridge engineering solutions that are both constructible and efficient. Equally skilled with concrete, steel and cable-supported structures, we apply our construction experience and engineering knowledge to create efficient and cost-effective designs for bridge erection, demolition and temporary works. Our services also include the design of falsework and formwork; development of erection procedures; analysis of construction loads; and much more.

### Bridge Inspection



We stop at nothing to provide the industry's best bridge inspections and assessments, whether that means exploiting the latest technology or rappelling from impossible heights. Our field staff has been inspecting highways and railroad bridges well before the establishment of governing regulations and mandates. We diagnose ailments with instrumentation and testing, predict structural behavior with strain gauge sensors, and use technical and rope access to reduce the cost of inspections and their impact on travelers.

### Technical and Rope Access Inspection

With the completion of our most recent training, we now have 26 individuals active in the Technical Access (TA) program, including seven supervisors. TA work is used by M&M as an alternative method for inspection of bridges and other structures. Unlike traditional bridge inspection methods that require heavy equipment and operators, TA inspection is performed by an individual via specialized equipment and techniques typically used by rock and mountain climbers. TA minimizes and/or eliminates the need for rail service interruptions, aerial lifts, "snooper" vehicles, and traditional rigging. It offers the client a savings in inspection time and overall cost and offers bridge users uninterrupted service during the inspection process.

TA offers the following advantages over traditional methods of access for inspection:

**Zero impact to bridge users:** there is no need to close rail lines or interrupt rail traffic due to under-bridge inspection equipment or basket lifts.

**Overall reduced cost:** limiting the amount of large equipment means saving direct costs on rental and operator fees.

**Time on bridge:** less time mobilizing equipment allows inspection time on bridge to be maximized.

**"Hands-on" inspection assured:** our agile bridge inspectors go where bulky equipment cannot. This provides peace of mind by assuring our clients that we are in compliance with FRA guidelines.



## **TEC Professional Services Questionnaire**

M&M's in-house TA training program includes both classroom and field components. Some of the highlights include:

- Yearly training in techniques and high-angle rescue and certifications within the program are good for 3 years (after which, re-testing required).
- Various positions within M&M's TA program require testing (written & practical exams): Worker, Rigger, Supervisor.
- M&M's written program requires a minimum of 2 TA individuals to be on-site for a TA job with 1 being a TA Supervisor.
- Unique techniques adaptable to unique structures.
- High Angle Rescue Teams: available at four M&M offices (Poughkeepsie, Mechanicsburg, Louisiana, and Edwardsville).

### **Non-destructive Testing (NDT)**

#### **Dye Penetrant Testing**



M&M's Bridge Inspection Personnel are well trained and have extensive NDT capabilities. Thirty staff members have been trained in dye penetrant testing methods. Dye penetrant is a widely applied and low-cost inspection method used to locate surface-breaking defects in all non-porous materials, including steel. Dye penetrant is used to identify and verify casting, forging and weld defects. The firm has six kits available.

#### **Magnetic Particle Testing**



Since 2010, M&M has had the capability to perform magnetic particle testing. Thirty staff members have been trained in magnetic particle inspection methods. Six testing yokes are also stocked. Magnetic particle inspection is an NDT process for detecting surface and slightly subsurface discontinuities in ferromagnetic materials such as iron, nickel, cobalt, and some of their alloys. The process puts a magnetic field into the piece or part being evaluated. The piece can be magnetized by direct or indirect magnetization. The presence of a surface or subsurface

discontinuity in the material allows the magnetic flux to leak, since air cannot support as much magnetic field per unit volume as metals. Ferrous iron particles are then applied to the part. The particles may be dry or in a wet suspension. If an area of flux leakage is present, the particles will be attracted to this area. The particles will build up at the area of leakage and form what is known as an indication. The indication can then be evaluated to determine what it is, what may have caused it, and what action should be taken, if any.

#### **Ultrasonic Testing**



Since 2004, M&M has had the capability to perform ultrasonic testing. In ultrasonic testing (UT), very short ultrasonic pulse-waves with center frequencies ranging from 0.1-15 MHz and occasionally up to 50 MHz are transmitted into materials to detect internal flaws or to characterize materials. A common example is ultrasonic thickness measurement, which tests the thickness of the test object. Ultrasonic testing is often performed on steel and other metals and

alloys, though it can also be used on concrete, wood and composites, albeit with less resolution. It is a form of NDT used in many industries including aerospace, automotive and transportation sectors. M&M's Level I and II certified UT personnel regularly conduct testing of bridge pins, gussets, and other components. Three UT Flaw Detector Units and six D-Meters are stocked and available for immediate use. Mechanical and Instrumentation Engineer Dave Barrett is a certified Level II UT, magnetic particle and dye penetrant inspector.

### **NUMEROUS PROJECT AWARDS**

M&M consistently receives excellent past performance ratings from LADOTD's Project Evaluation Team (PET). The best measure of the quality of work performed by M&M is demonstrated by the repeat clients

## **TEC Professional Services Questionnaire**

throughout M&M's history, along with the numerous project awards M&M has received. (LA awards shown in bold in the list below)

**2020** Outstanding New Medium Span Bridge for San Bernard River Bridge Replacement Project (ABCD Susquehanna Chapter)

**2020** 2020 RT&S Top Project for San Bernard River Bridge Replacement Project (Railway Track and Structures Magazine)

**2020** Prize Bridge Merit Award (Major Span Category) for Portageville Bridge Replacement (NSBA)

**2020** Diamond Award for Portageville Bridge Replacement (ACEC of New York)

**2020** Transportation Excellence Award (Bridge Design Project Development Category) for Sunshine Bridge Emergency Repairs (Louisiana Transportation Conference)

**2020** Engineering Excellence Distinguished Award for Hackensack Vertical Lift Bridge Sheave Project (ACEC of New Jersey)

**2019 Honor Award for Sunshine Bridge Emergency Repairs (ACEC of Louisiana)**

**2019** Outstanding Rehabilitated Bridge for RFK Bridge Manhattan Approach Ramps Reconstruction and Rehabilitation Project (ABCD Susquehanna Chapter)

**2019** Gold Award (Structural Systems Category) for RFK Bridge Manhattan Approach Ramps Reconstruction and Rehabilitation Project (ACEC New York)

**2019** Merit Award for Portageville Bridge Replacement (ACEC of Pennsylvania)

**2018** Top 10 Bridge Projects (#4) for Portageville Bridge Replacement (Roads & Bridges Magazine)

**2018** Highway/Bridge Award of Merit for Portageville Bridge Replacement Project (ENR New York)

**2018** Prize Bridge Award (Reconstructed Category) for RFK Bridge Manhattan Approach Ramps Reconstruction and Rehabilitation Project (NSBA)

**2018** Harry H. Edwards Honorable Mention Award for the I-95/J.T. Butler Interchange Design (PCI)

**2018** Outstanding New Bridge over \$2M for Portageville Bridge Replacement Project (ABCD Western New York Chapter)

**2018** Outstanding New Long Span Bridge for Portageville Bridge Replacement Project (ABCD Susquehanna Chapter)

**2018** Engineering Excellence Distinguished Award for Paulsboro Bridge Replacement Project (ACEC of New Jersey)

**2018** Engineering Excellence Merit Award for Martin Luther King Bridge Rehabilitation Project (ACEC of Illinois)

**2018** Engineering Excellence Merit Award for IDOT Legal Loads Parametric Evaluation Project (ACEC of Illinois)

**2017** Outstanding Rehabilitated Bridge for Portage Lake Bridge Rehabilitation Project (ABCD Susquehanna Chapter)

**2017** Outstanding New Short Span Bridge for Elizabeth City Bascule Replacement Bridge Project (ABCD Susquehanna Chapter)

**2016** Prize Bridge Merit Award (Movable Span Category) for Gilmerton Bridge Replacement Project (NSBA)

**2016** Prize Bridge Merit Award (Reconstructed Category) for Freeport Bridge Rehabilitation Project (NSBA)

**2015** Grand and Pinnacle Awards for Gilmerton Bridge Replacement Project (ACEC of Virginia)

**2014** Outstanding New Long Span Bridge for Gilmerton Bridge Replacement Project (ABCD Susquehanna Chapter)

**2014** Transportation Engineering Award for Gilmerton Bridge Replacement Project (Virginia Transportation Construction Alliance)

**2014** Outstanding Rehabilitated Bridge for Freeport Bridge Rehabilitation Project (ABCD Susquehanna Chapter)

**2014** Engineering Excellence Honor Award for Florence Lift Bridge Rehabilitation project (ACEC of Illinois)

**2014 Prize Bridge Award (Reconstructed Category) for the Huey P. Long Bridge Widening (NSBA)**

## **TEC Professional Services Questionnaire**

**2013 Texas & Louisiana Best Projects (Merit Award) for the Huey P. Long Bridge Widening (ENR)**  
**2013 Award for Best Project and Highway/Bridge Construction for the Huey P. Long Bridge Widening (Alliant Build America)**  
**2013 Transportation Excellence Award (Bridge Construction less than \$10M) for the LA 160 Integral Abutment (Louisiana Transportation Conference)**

226 Dedicated Employees in seventeen (17) offices nationwide of which thirty-seven (37) are full-time professional engineers registered in the state of Louisiana in civil, mechanical, and electrical disciplines.

**45 Project Manager**

**20 Bridge Inspectors**

**55 Structural Engineers**

**7 Construction Inspectors**

**11 Electrical Engineers**

**7 Civil Engineers**

**13 Mechanical Engineers**

**4 Transportation Engineers**

**55 Engineer Interns**

**33 Administrative**




### **Our Promise to You**

From small projects to large, complex engagements; from practical design to innovative, smart infrastructures, you can count us to be agile; to scale our teams and efforts to projects of any size and complexity. The relationship we build with you is the product of our people, systems and culture, which are dynamic and have been created over our many years in the bridge business. We believe that success means staying true to our simple professional beliefs: trust, innovation and value. It's how we turn challenges into opportunities. It's how we help build and maintain great bridges.

All projects performed for Jefferson Parish will be managed out of M&M's New Orleans office. In addition to New Orleans personnel, M&M will make available any of its qualified and knowledgeable staff to complete all projects on time.

**TEC Professional Services Questionnaire**

**O. To the best of my knowledge, the foregoing is an accurate statement of facts.**

Signature:  Print Name: Cullen J. Ledet, PE

Title: Vice President Date: 07/16/2024



**Jefferson  
Parish**  
State of Louisiana