

Miscellaneous A/E Design Services within the Mississippi Valley Division for the U.S. Army Corps of Engineers (USACE) Vicksburg District

Solicitation Number W912EE24O0003





June 17, 2024

U.S. Army Corps of Engineers
Vicksburg District
Lawren Boolos
Lawren.Boolos@usace.army.mil

Subject: Miscellaneous A/E Design Services within the Mississippi Valley Division for the U.S. Army Corps of Engineers (USACE), Vicksburg
SOLICITATION NUMBER: W912EE24O0003

Dear Selection Committee,

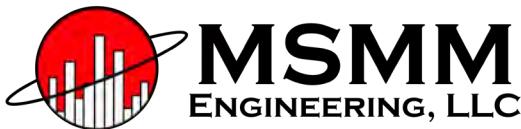
It is MSMM Engineering, LLC's (MSMM) pleasure to respond to the subject Solicitation. Accordingly, enclosed herewith please find a completed Standard Form 330 Parts I and II for your consideration.

MSMM is one of the most trusted Small Business Full-Service A-E design firms in the South for the design and implementation of Civil Works projects. During our short company history, we have completed over 100 task orders for multiple United States Army Corps of Engineers (USACE) Districts including services for environmental, planning, value engineering, Engineering During Construction (EDC), feasibility reports, civil works, and military engineering design.

MSMM has assembled a cadre of experts in response to the subject solicitation who have a history of delivering exceptional Civil Works services to USACE including the Vicksburg District (MVK), Memphis District (MVM), and the Mississippi Valley Division (MVD) overall. Our civil works team, comprised of 12 small- and large- business firms, referred to as Team MSMM provides the needed level of local knowledge, readily available capacity and capability to meet even the most pressing and urgent USACE needs while placing an emphasis on customer care and service. Many of our teams are located within the MVK or MVM Area of Responsibility, and our teams have in-depth knowledge and experience within MVD. Our team's understanding of the needs reflected under this solicitation is informed by decades of experience in the Mississippi Valley. Many of our team members "work, live and play" in the valley and have a personal stake in the successful delivery of the USACE MVD mission.

MSMM alone has the ability and capacity to deliver small and large task orders in simultaneous fashion as evidenced through our current A-E Services prime contracts for multiple districts (New Orleans, Ft. Worth, Tulsa and Louisville). MSMM prides itself on delivery with an emphasis on effective coordination, transparency and most importantly providing customer care and service. Team MSMM and our teaming partners (over 150 qualified subject matter experts) further enhance this capability while adhering to the principles and practices of effective partnering with USACE. The team we have formed has a thorough understanding of supporting multi-year IDIQ contracts for USACE Civil Works projects, and Team MSMM has a combined experience that spans thousands of task orders across the requested specializations and work assignments anticipated under the subject solicitation.

We know Team MSMM will successfully deliver for MVK, MVM and MVD districts for the following reasons:



- **Commitment to Delivery is paramount:** In accordance with the Chief's definition of winning, Team MSMM stands ready to safely deliver quality projects on time and within budget. Our delivery places an emphasis on Program and Project Management in accordance with a Project Management Plan inclusive of Safety and Quality Officers.
- **Customer Care:** MSMM places a great emphasis on commitment and delivery through effective coordination with the client (MVK/MVM). This same emphasis will drive the delivery strategy of Team MSMM.
- **Proven small business:** MSMM, a small business, has a proven track record of performing and delivering civil works efforts for USACE which will be enhanced under Team MSMM and our 12 teaming partners including 6 small businesses.
- **Experience of Team MSMM:** We draw our experience from completing over 2000 task orders across MVD including completing civil works assignments throughout MVD including MVK and MVM. These assignments include, but are not limited to, planning, design, construction management, EDC, and field activities such as surveys and geotechnical investigations across all primary USACE business lines.
- **Deep Resources:** In addition to receiving a proven team, MVK is receiving a team with deep resources and subject matter experts in every discipline requested. Team MSMM provides MVK and MVM with USACE design and investigations experience for every requested project type.
- **Local presence:** MSMM's main office is located within the Mississippi Valley Division, New Orleans District in Metairie, Louisiana. Many of our 12 team members are located within the MVK and MVM AOR's, and every single one of our team members holds experience within the Mississippi Valley Division.

In conclusion, Team MSMM has a proven track record of performing every service requested in this solicitation, as well as a deep understanding of MVK's and MVM's civil works needs across USACE business lines. We are firmly committed to providing the necessary resources to meet all safety, quality, cost, and schedule requirements, ensuring that this contract is consistently delivered with the highest level of consideration and expertise. The bottom line is that the breadth and depth of our experience, ability, and capability provide the Vicksburg District, Memphis District, and MVD with a capable and proven small business that stands ready to meet the mission.

Please feel free to contact us at 504-559-1897 if you require any additional information.

Sincerely,

A handwritten signature in blue ink, appearing to read "Manish Mardia".

Manish Mardia, P.E.
President
MSMM Engineering, LLC

Enclosures



TABLE OF CONTENTS

STANDARD FORM 330, Part I	1
A. Contract Information	2
B. Architect-Engineer Point of Contact	2
C. Proposed Team	2
D. Organizational Chart of Proposed Team	4
E. Resumes of Key Personnel	5
F. Example Projects	25
G. Key Personnel Participation in Example Projects	45
H. Additional Information	46
I. Authorized Representative	65
STANDARD FORM 330, Part II	66



SF330, PART I, SECTIONS A-I

ARCHITECT-ENGINEER QUALIFICATIONS
PART I – CONTRACT-SPECIFIC QUALIFICATIONS

A. CONTRACT INFORMATION

1. TITLE AND LOCATION (CITY AND STATE)

Miscellaneous A/E Design Services within the Mississippi Valley Division for the U.S. Army Corps of Engineers (USACE), Vicksburg District

2. PUBLIC NOTICE DATE
May 16, 2024

3. SOLICITATION OR PROJECT NUMBER
W912EE24O0003

B. ARCHITECT-ENGINEER POINT OF CONTACT

4. NAME AND TITLE Manish Mardia, P.E., President

5. NAME OF FIRM MSMM Engineering, LLC., EIN 45-2655374, UEI: NYLUL4Q5GYF6

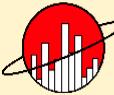
6. TELEPHONE NUMBER
(504) 559-1897

7. FAX NUMBER
(800) 335-8034

8. E-MAIL ADDRESS
mmardia@msmmeng.com

C. PROPOSED TEAM

(Complete this section for the prime contractor and all key subcontractors)

		(Check)		9. FIRM NAME	10. ADDRESS	11. ROLE IN THIS CONTRACT
	Prime	J-V	Sub			
a.				 MSMM <small>ENGINEERING, LLC</small> <input type="checkbox"/> CHECK IF BRANCH OFFICE UEI: NYLUL4Q5GYF6	4640 S. Carrollton Ave. Suite 220 New Orleans, LA 70119	Small Disadvantaged Business Full-Service Engineering, Water/Wastewater Design, Investigations, Modeling, Data Collection, Civil, Structural, Environmental Engineering, Civil Works and Water Resources Planning Studies, Construction Management, Hydraulics and Hydrology, Cost Estimating, Architecture, Engineering During Construction, Project Management, CAD MicroStation, BIM, CIM, GIS
b.				 TETRA TECH <input type="checkbox"/> CHECK IF BRANCH OFFICE UEI: GMW1WKSROWQW3	400 112 th Avenue NE, Ste 300 Bellevue, WA 98004	Structural, Electrical, Geotechnical, Mechanical, Hydraulic, Cost, Environmental, Civil Engineering, CADD, BIM, CIM, Architecture
c.				 <input type="checkbox"/> CHECK IF BRANCH OFFICE UEI: KKJCTMJ3HZJ4	900 Camp Street, Suite 354 New Orleans, LA 70130	Civil, Environmental, Construction, Geotechnical, Electrical, Hydraulic, Mechanical, Structural Engineering, Project Management
d.				 <input type="checkbox"/> CHECK IF BRANCH OFFICE UEI: DHS5ZJSFCSH9	12400 Coit Road, Suite 400 Dallas, TX 75251	Electrical, Fire Protection, Civil, Environmental, Construction, Mechanical, Cost, Hydraulic, Geotechnical Engineering, Project Management, Architecture
e.				 <input type="checkbox"/> CHECK IF BRANCH OFFICE UEI: R83MG9NLTMS4	3011 28 th Street Metairie, LA 70002	Small Business Geotechnical Engineer, Quality Control and Safety Management

C. PROPOSED TEAM (Complete this section for the prime contractor and all key subcontractors)						
	(Check)			9. FIRM NAME	10. ADDRESS	11. ROLE IN THIS CONTRACT
	Prime	J-V	Sub			
f.			✓	BURNS COOLEY DENNIS, INC. [] CHECK IF BRANCH OFFICE UEI: PNF4C7QG7AB4	551 Sunnybrook Road Ridgeland, MS 39157	Small Business Geologist, CADD Technician, Geotechnical Engineer, Geotechnical Lab Technician, Project Management
g.			✓	 [] CHECK IF BRANCH OFFICE UEI: XMXDXXCKN8Q7	111 East Market Street Greenwood, MS 38930	Small Business, HUBZone Surveying, CADD Technician
h.			✓	 [] CHECK IF BRANCH OFFICE UEI: QWXJLZNY6F21	211 Richey St. New Roads, LA 70760	Surveying and Engineering
i.			✓	 BURK-KLEINPETER, INC. [] CHECK IF BRANCH OFFICE UEI: TT9AGM31ZHM5	2400 Veterans Memorial Blvd, Ste 310 Kenner, LA 70062	Small Business Civil & Structural Design, Hydraulic Engineering, DDR, P&S, Cost Estimating, EDC, Project Management, CAD
j.			✓	 [] CHECK IF BRANCH OFFICE UEI: EPUXNLX5EYC4	1555 Poydras Street, Suite 1200 New Orleans, LA 70112	Civil, Electrical, Mechanical, Construction, Fire Protection Engineering, Architecture, Cost Estimating,
k.			✓	 NEEL-SCHAFFER [] CHECK IF BRANCH OFFICE UEI: VSG2MJB3C766	4450 Old Canton Road, Suite 100 Jackson, MS 39211	Hydraulic, Environmental, Structural, Water Resources Engineering, Project Management
l.			✓	 [] CHECK IF BRANCH OFFICE UEI: J1Y5MLA9JMK7	450 Laurel Street, Suite 1700 Baton Rouge, LA 70801	Surveying, Civil, Hydraulic, Construction, Structural Engineering
m.			✓	 STRATEGIC VALUE SOLUTIONS [] CHECK IF BRANCH OFFICE UEI: FAS6ELEG65M5	1650 NE Grand Avenue, Suite 100, Lee's Summit, MO 64086	Woman Owned Small Business Cost Estimation, Project Management



D. ORGANIZATIONAL CHART OF PROPOSED TEAM

		D. ORGANIZATIONAL CHART OF PROPOSED TEAM				TEAM MEMBERS	
PROGRAM MANAGER / DELIVERY OFFICER *M. Wingate, PE (MSMM)		GEOTECHNICAL ENGINEER *T. Bosecker, PE (F&N) *J. Hance, PE (EUS) P. Nix, PE (TT) R. Springer, PE (F&N) T. Bosecker, PE (F&N) S. Whiteside, PE (CDM) J. Williams, PE (EUS) B. Cody, PE (EUS) C. Held, PE (EUS) B. Deschamp, PE (EUS) S. Shahji, PE (EUS) E. Templeton, P.E. (BCD) M. Rodrigues, P.E. (BCD) A. Reeb, Ph.D., P.E. (BCD)	CONSTRUCTION ENGINEER *C. Mills, PE (MSMM) K. Hall, PE (CDM) T. Plinke, PE (CDM) R. Heine, PE (F&N) J. Twombly, PE (AECOM) C. Jeanice, PE (GIS) K. Keiser, PE (GIS) J. Loeske, PE, LSI (GIS) K. Dezarn, PE (GIS)	ARCHITECT *S. Finegan, AIA (MSMM) B. Nieport, RA, LEED®AP (TT) H. Saenz, AIA (F&N) C. Friedemann, AIA, LEED®AP BD+C (F&N) C. Throop, AIA, NCARB, LEED®AP (CDM) D. Trahan, AIA, CSI, SCE, LEED®AP (AECOM) J. Aly, RA, LEED AP B+C (AECOM) C. Bonham, RA, AIA, NCARB (AECOM)	MSMM Engineering, LLC (MSMM) Tetra Tech, Inc. (TT) Freese & Nichols, Inc. (F&N) CDM Smith Federal Programs Corporation (CDM) Eustis Engineering, LLC (EUS) Burns Cooley Dennis, Inc. (BCD) Johnson McAdams (JM) Chustz Surveying, LLC (CSI) Burk-Kleinپeter, Inc. (BKI) AECOM, Inc. (AECOM) Neel-Schaffer, Inc. (NS) GIS Engineering, LLC (GIS) Strategic Value Solutions, Inc. (SVS)		
SENIOR ADVISOR *M. Mardia, PE (MSMM)		SAFETY OFFICER C. Mills, PE (MSMM)	QUALITY OFFICER M. Tittlebaum, Ph.D., PE (MSMM)	PROJECT MANAGER *S. Seiler, PE, PMP (MSMM) J. Wilson, PE, LEED®AP (MSMM) M. Harden, PE (MSMM) S. Chehardy, PE (MSMM) N. Reins, PhD, PE, PMP (F&N) L. Klonsky, PE, PMP (CDM) G. Sanders, PE (EUS) H. Picard, III, PE, PLS (BKI) J. Robinson, CVS, PMP (SVS)	HYDRAULIC ENGINEER *Je. Wilson, PE (MSMM) *B. Watson, PE, PH, D.WRE (TT) C. Soileau, PE (MSMM) P. Sexton, CFM (TT) R. Camacho, PhD, PE (TT) D. Lantz, PhD, PH (TT) J. Keith, PE, CFM (F&N) M. Salmon, PE (F&N) M. Shih, Ph.D., PE, CFM (CDM) M. Schmidt, PE, BCEE, D.WRE (CDM) D. Boyd, PE (BKI) M. Phillips, PE, CFM (NS) A. Rega, PE (GIS) K. Galloway, PE (GIS)	ENVIRONMENTAL ENGINEER *M. Tittlebaum, Ph.D., PE (MSMM) M. Mardia, PE (MSMM) L. Walker, PE (MSMM) S. Weedman, RS (TT) D. McIlvain, CHMM (TT) J. Arevalo, Ph.D., PE (TT) C. Gaddy, PE, PG (F&N) M. White, PE, BCEE (CDM)	LAND SURVEYOR *C. Woods, PLS (JM) L. Anderton, PLS (JM) J. Chustz, Jr., PLS (CSI) Ju. Chustz, PLS (CSI) A. Chustz, PLS (CSI) H. Schwartz, PLS (GIS) E. Chiasson, PLS (GIS)
CIVIL ENGINEER *Ji. Wilson, PE, LEED®AP (MSMM) *S. Chehardy, PE (MSMM) S. Seiler, PE, PMP (MSMM) J. Suh, PE (TT) Y. Chen, PE (TT) N. Chillara, PE (F&N) J. Watts, PE, D.WRE, ENV SP (CDM) R. Chopin, IV, PE (BKI) C. Loyless, PE (AECOM) P. Olivier, PE, LS (AECOM)		MICROSTATION CAD TECHNICIAN E. Curson (MSMM) B. Le (MSMM) C. Lambert (TT) E. Chatwin (TT) B. Keever (TT) K. Higginbotham (JM) D. Wells (JM) B. Guidroz (CSI) G. Vega (BKI) S. Galatas (BKI)	SURVEY TEAM W. Brown (JM) J. Flautt (JM) S. Vaughan (JM) L. Dupont (CSI) B. Conner (CSI) C. Villemarette (CSI) J. Phillips, CST (CSI) M. Voinche, CST (CSI) T. Odom (CSI) D. Reed, BARCH (CSI) L. Hines (CSI)	COST ENGINEER I. Pace, PE, SE, CCP (TT) S. Vose, CCP (TT) M. Schlebusch, PE, PMP (CDM)	CDM Smith 		
STRUCTURAL ENGINEER *B. Yokum, PE (MSMM) *R. Kalvakaalva, PE, CVS (MSMM) *B. Twitchell, PE (TT) A. Tareh, MS, SE (MSMM) M. Yost, PE, SE, LEED®AP (TT) J. Costello, PE (TT) G. Katzenberger, PE, SE (TT) C. Willcox, PE, SE (TT) B. Fehl, DSc, PE (F&N) M. Calvino, PE, SE (CDM) J. Morris, PE, SE, DBIA (CDM) R. Boudreux, PE (NS) J. Donnes, PE, SE (GIS)		ELECTRICAL ENGINEER *J. Hensley, PE (F&N) *I. Petrovic, PE, PMP (CDM) J. Rice, PE, LEED®AP (TT) A. Reantaso, PE (TT) A. Barnes (TT) S. Perry, PE, LEED®AP (CDM) M. Ollinger, PE (AECOM)	BUILDING INFORMATION MODELER (BIM)/ CIVIL INFORMATION MODELER (CIM) B. Le (MSMM) E. Curson (MSMM) M. Enos (TT) D. Hepp (TT)	COST ESTIMATOR N. De Graaff, PE, CFM (AECOM) D. Daigle, CVS, CPE (SVS) T. Clark, PE, CVS (SVS) J. Robinson, PE, CVS-Life, FSAVE (SVS) M. Orel, LCPE (SVS) A. Orel (SVS) S. Overfelt (SVS) M. Schneider (SVS)	BURNS COOLEY DENNIS, INC. GeoTechnical and Materials Engineering Consultants 		
		MECHANICAL ENGINEER *E. Flickinger, PE (TT) S. Borden, PE (TT) C. Grompe, PE (TT) L. Bernard, PE (F&N) C. Frizzell, PhD, PE (CDM) E. Glomski, PE (CDM) C. Walsingham, PE (AECOM)	GIS (Mapping and Analysis) E. Curson (MSMM) B. Le (MSMM) S. Parker (TT) E. Gardiner, LSI (CSI)	VALUE ENGINEER R. Kalvakaalva, PE, CVS (MSMM)	TETRA TECH FRESE AND NICHOLS EUSTIS ENGINEERING L.L.C. SINCE 1946 		

TEAM MEMBERS

MSMM Engineering, LLC (MSMM)

Tetra Tech, Inc. (TT)
Freese & Nichols, Inc. (F&N)
CDM Smith Federal Programs Corporation (CDM)
Eustis Engineering, LLC (EUS)
Burns Cooley Dennis, Inc. (BCD)
Johnson McAdams (JM)
Chustz Surveying, LLC (CSI)
Burk-Kleinپeter, Inc. (BKI)
AECOM, Inc. (AECOM)
Neel-Schaffer, Inc. (NS)
GIS Engineering, LLC (GIS)
Strategic Value Solutions, Inc. (SVS)

KEY

* Resume Included for Role in Section E



E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
 (COMPLETE ONE SECTION E FOR EACH KEY PERSON.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Mark Wingate, PE	Program Manager / Delivery Officer	35	>1

15. FIRM NAME AND LOCATION (*City And State*)

MSMM Engineering, LLC – New Orleans, LA

16. EDUCATION (<i>DEGREE AND SPECIALIZATION</i>)	17. CURRENT PROFESSIONAL REGISTRATION (<i>STATE AND DISCIPLINE</i>)
BS, Civil Engineering, University of New Orleans, 1989	Professional Engineer (2001): LA 29419

18. OTHER PROFESSIONAL QUALIFICATIONS (*Publications, Organizations, Training, Awards, Etc.*)

Mr. Wingate joined MSMM on April 1, 2024, as Executive Vice President (full time) after serving USACE, New Orleans for 31 yrs. with ~9 yrs. (2015-2023) as Deputy District Engineer for Programs/Project Management (DPM). Mr. Wingate has experience delivering small (\$M) to large (\$B) civil works projects and programs across South LA. Mr. Wingate will serve as the Program Manager/Delivery Officer under this contract, providing leadership, advisement, and overall management to the team, ensuring delivery of IAW USACE policy, guidance, and regulation. Mr. Wingate will also ensure that commitments are met IAW the established budget and schedule in full coordination with MVK, MVM, or other MVD Districts.

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
USACE – Delivery of the 14.6B Hurricane and Storm Damage Risk Reduction System (HSDRRS)	2015	2022

(3) DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE

Check if project performed with current firm

a **Scope:** As DPM for USACE, New Orleans (MVN), was responsible for the completion and the delivery of the ~\$14.6B Greater New Orleans Hurricane and Storm Damage Risk Reduction System (HSDRRS), a 130-mile-long perimeter system of levees, flood walls, pump stations, navigation gates, and other structures as well as environmental mitigation to reduce flood risk to SE LA. Coordinated closely with the State of LA, CODEL, landowners, levee districts, NGOs, and other key stakeholders to deliver this USACE-World Class System. Coordinated with MVD and Higher Authority on project issues and associated resolutions.

Cost: ~\$14.6B (total project cost) **Fee:** N/A **Role:** DPM/Program Manager

(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
USACE – New Orleans Branch Chief – Project Management	2007-2015	N/A

(3) DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE

Check if project performed with current firm

b **Scope:** Responsible for delivering USACE Civil Works projects in the areas of Flood Risk Management, Ecosystem Restoration, and Navigation. Areas of responsibility included project delivery under RESTORE Act and Lower MS River Diversions, LA Coastal Area (LCA) Ecosystem Restoration, Mississippi River and Tributaries (MR&T), Continuing Authorities Program (CAP), Flood Plain Management Services (FPMS) and Planning Assistance to States (PAS). Coordinated closely with USACE HQ and Division, State and Federal Agencies, NGOs, Parishes, Municipalities, Tribal Nations, and project Stakeholders throughout Southern LA. **Cost:** multi-billion-dollar program **Fee:** N/A **Role:** Program Manager/Branch Chief

(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
USACE - West Shore Lake Pontchartrain (WSLP) – FRM Construction Project	2018	ONGOING

(3) DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE

Check if project performed with current firm

c **Scope:** As MVN DPM, oversaw and ensured the advancement of the USACE-WSLP project for St. Charles and St. John Parishes to deliver an 18-mile risk reduction system including earthen levees, T-walls, pump stations and control structures iaw with the feasibility and Chief's report. Also drove advancement of small-scale non-structural solutions including various alignments of ring levees with pumps, access points, etc. for St. James Parish. Successfully secured unplanned funds and initiated a USACE General Reevaluation Report (GRR) to consider resiliency features. **Cost:** \$3.6B+ **Fee:** N/A **Role:** DPM/Program Manager

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
 (COMPLETE ONE SECTION E FOR EACH KEY PERSON.)

12. NAME Manish Mardia, PE	13. ROLE IN THIS CONTRACT Sr. Advisor	14. YEARS EXPERIENCE a. TOTAL 30	b. WITH CURRENT FIRM 13
--------------------------------------	---	---	-----------------------------------

15. FIRM NAME AND LOCATION (*City And State*)

MSMM Engineering, LLC – New Orleans, LA

16. EDUCATION (<i>Degree And Specialization</i>) BS, Civil Engineering, University of Jodhpur, 1990 MS, Civil Engineering, Louisiana State University, 1994	17. CURRENT PROFESSIONAL REGISTRATION (<i>State And Discipline</i>) Professional Engineer (1999): LA (28482), MS (18522)
---	---

18. OTHER PROFESSIONAL QUALIFICATIONS (*Publications, Organizations, Training, Awards, Etc.*)

Mr. Mardia is the President, Founder, and 100% Owner of MSMM Engineering, LLC, as well as a professional engineer with 30 years of experience designing and managing civil works projects for USACE. Mr. Mardia has successfully executed over 80 task orders related to flood risk reduction and drainage projects. His design expertise spans earthen levee and floodwall evaluation, inspection and design, drainage pump station evaluation and design, and preparation of engineering reports related to environmental infrastructure projects, drainage evaluation projects, and the evaluation of existing facilities and infrastructure. He currently manages multiple IDIQ Civil Works task orders and MATOC contracts for MSMM at several USACE Districts across the South and Southwest United States.

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (<i>City and State</i>) Ascension Parish Environmental Infrastructure Wastewater Treatment Plant Design, Hillaryville, LA	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
	2022	TBD

(3) DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE

Check if project performed with current firm

a **Scope:** (Full Project Writeup is included in SF330 Section F, Project Number 6) As part of the New Orleans District Environmental Infrastructure Program, MSMM developed a design-bid-build package (plans and specs) for the creation of a 1.8 million gallon per day wastewater treatment plant. Services consisted of civil/structural/mechanical/electrical engineering, cost estimating using MCACES, and a full USACE review process. Mr. Mardia oversaw the delivery of the project and provided QA/QC during the internal and USACE review process. **Cost:** \$21.5M **Fee:** \$1.4M **Role:** Program Manager

(1) TITLE AND LOCATION (<i>City and State</i>) East Baton Rouge Parish Wastewater Treatment Collection System 5 MG Ground Storage Tank and Pump Station, Baton Rouge, LA	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
	ONGOING	TBD

(3) DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE

Check if project performed with current firm

b **Scope:** (Full Project Writeup is included in SF330 Section F, Project Number 9) As part of the New Orleans District Environmental Infrastructure Program, MSMM provided the engineering design of two piles supported above-ground 5 million gallons (MG) prestressed concrete storage tanks, a 14,000 gpm sewer pump station, and a CMU control building. The existing pump station will be connected to the new pump station with a 42" diameter pipe and overflow chamber with automatic slide gates to control when flows will be diverted. Mr. Mardia oversees the execution of the project and provides QA/QC during the internal and USACE review process. **Cost:** TBD **Fee:** \$1.6M **Role:** Sr. Advisor

(1) TITLE AND LOCATION (<i>City and State</i>) Cow Bayou Drainage Pump Station Complex, Orange, TX	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
	2021	TBD

(3) DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE

Check if project performed with current firm

c **Scope:** (Full Project Writeup is included in SF330 Section F, Project Number 1) Our team developed a 35% design package (plans, specs, and DDR) for a new 8,190 cfs drainage pump station and complex consisting of a pump station building, safe house, floodwalls, and sector gate. Main responsibilities consisted of site layout, architectural, civil, structural, and cost engineering. The task order was to provide a 35% level of design with anticipation of changing the project to a Design-Build RFP. Mr. Mardia oversaw the delivery of the project and provided QA/QC during the internal and USACE review process.

Cost: TBD **Fee:** \$1.3M **Role:** Program Manager

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
 (COMPLETE ONE SECTION E FOR EACH KEY PERSON.)

12. NAME Stuart Seiler, PE, PMP	13. ROLE IN THIS CONTRACT Project Manager	14. YEARS EXPERIENCE a. TOTAL 8	b. WITH CURRENT FIRM 1
---	---	--	----------------------------------

15. FIRM NAME AND LOCATION (City And State)

MSMM Engineering, LLC – New Orleans, LA

16. EDUCATION (DEGREE AND SPECIALIZATION) BS, Civil Engineering, Louisiana State University, 2016	17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Professional Engineer (2020): LA 45472 Project Management Professional (2024): LA 3839836
18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, Etc.)	

Mr. Seiler is a licensed project manager and civil engineer with 8 years of experience working in both the public and private sectors. His experience spans a variety of design & construction administration projects, including structural, general utility, roadway, water, sewer, and civil facilities. He has worked heavily on transportation and infrastructure improvements in projects dedicated to reducing traffic congestion, designing multimodal facilities, conducting traffic impact analysis, developing traffic signals, designing roadway signage & striping plans, and producing necessary traffic control device plans. Mr. Seiler has experience designing urban and rural roadways, drainage systems, potable water infrastructure, pump/lift stations, and sewer infrastructure throughout the state of Louisiana.

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
East Baton Rouge Parish Wastewater Treatment Collection System 5 MG Ground Storage Tank and Pump Station, Baton Rouge, LA	ONGOING	TBD

(3) DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Check if project performed with current firm

Scope: (Full Project Writeup is included in SF330 Section F, Project Number 9) As part of the New Orleans District Environmental Infrastructure Program, MSMM provided the engineering design of two piles supported above-ground 5 million gallons (MG) prestressed concrete storage tanks, a 14,000 gpm sewer pump station, and a CMU control building. The existing pump station will be connected to the new pump station with a 42" diameter pipe and overflow chamber with automatic slide gates to control when flows will be diverted. Mr. Seiler's responsibilities include project management, pump station design, and sizing of gravity sewer piping and force mains.

Cost: TBD **Fee:** \$1.6M **Role:** Project Manager and Civil Engineer

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
USACE Silver Jackets, Stormwater Watershed Management Study	ONGOING	N/A

(3) DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Check if project performed with current firm

Scope: The purpose of this project was to assess how flood stages will be affected by projected changes in future rain and sea-level conditions and recommend strategies for mitigating increased flood loss damages. Mr. Seiler performed the hydraulic modeling utilizing the EPA SWMM model to determine the existing and future conditions on over 50 percent of the Parish inside the levees for the 10-year, 25-year, and 100-year storm events.

Cost: NA **Fee:** \$350K **Role:** Project Manager

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
Little Woods (RR100) Neighborhood FEMA Recovery Roads Repair, New Orleans, LA	2024	2024

(3) DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Check if project performed with current firm

Scope: Mr. Seiler was the Project Manager for the +200 block RR100 Little Woods FEMA Recovery Program project. General design features included mill and overlay, complete roadway replacement, ADA-compliant ramps at intersections, traffic engineering for intersections, and design of new sub-surface utilities, including drainage, sewer, and water infrastructure. Mr. Seiler was also responsible for coordinating with Entergy, Cox, and AT&T to mitigate utility conflicts.

Cost: \$14M **Fee:** \$1.5M **Role:** Project Manager

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
 (COMPLETE ONE SECTION E FOR EACH KEY PERSON.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
Jim Wilson, PE, LEED AP	Civil Engineer	a. TOTAL 36	b. WITH CURRENT FIRM 10

15. FIRM NAME AND LOCATION (*City And State*)

MSMM Engineering, LLC – New Orleans, LA

16. EDUCATION (<i>DEGREE AND SPECIALIZATION</i>)	17. CURRENT PROFESSIONAL REGISTRATION (<i>STATE AND DISCIPLINE</i>)
BS, Civil Engineering, Michigan Technological University, 1988	Professional Engineer/Civil (1993): TX (128376), LA (35456), MI (38800), FL (85114) LEED Accredited Professional 2008

18. OTHER PROFESSIONAL QUALIFICATIONS (<i>Publications, Organizations, Training, Awards, Etc.</i>)
--

Mr. Wilson is a Senior civil/drainage/levee engineer with 36 years of civil design experience. He is the designer of record for all civil works designs that MSMM has completed in Texas. Mr. Wilson is fully versed in the USACE civil works and water resources design process and is intimately familiar with the application of UFC 3-201-01 and following USACE CAD/BIM standards. He also provides construction phase services, including engineering design support during construction.

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
Hillaryville Levee Redesign, Pump Station, and Forcemain, Hillaryville, LA	2016	2016

(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE	<input type="checkbox"/> Check if project performed with current firm	
	Scope: (Full Project Writeup is included in SF330 Section F, Project Number 2) As part of the New Orleans District Environmental Infrastructure Program, MSMM completed full engineering design services for this Ascension Parish project. Work involved the design and construction of a sewerage project that consisted of a 562 gpm sewerage pump station and 4,068 feet of discharge pipe that travels underneath two (2) state highways and over the Mississippi River Levee before discharging into the Mississippi River. Mr. Wilson was the engineer of record for the project. Cost: \$2.1M, Fee: \$339k, Role: Engineer of Record, Civil Engineer, Project Manager	
(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
277K Levee Raise and Slope Flattening, and Delta Pump Station, Dallas, TX	2023	2023

(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE	<input type="checkbox"/> Check if project performed with current firm	
	Scope: (Full Project Writeup is included in SF330 Section F, Project Number 3) Raised the top of the levees (22 miles) to meet a 277k cfs water surface elevation and designed new levee access roads; Levee Side Slope Flattening: The existing East and West levees had side slopes varying from approximately 2:8H:1V to 4H:1V. The side slopes will be flattened to 4H:1V along the entire length of the levees. Delta Pump Station: New pumps (2), new electrical building, a new transformer, concrete curb and gutter, truck access, new retaining walls, new security fencing, and gates. Mr. Wilson prepared the plans and specifications for the levee raise, side slope flattening, and new levee access roads. Cost: \$65M Fee: \$2.9M (combination of MSMM / FNI delivery of project) Role: Civil Engineer	
(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
New Orleans International Airport Drainage Pump Station, Kenner, LA	2017	2017

(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE	<input type="checkbox"/> Check if project performed with current firm	
	Scope: MSMM provided full design services for a 600 cfs stormwater drainage pump station and for all landside drainage as part of constructing the new airport terminal at the New Orleans International Airport. MSMM delivered a multi-disciplinary effort spanning civil, structural, electrical, mechanical, and environmental design, hydraulic modeling (HEC-HMS and HEC-RAS), architectural services, and MCACES cost estimating. Mr. Wilson was the designer of record for the project. He provided all the civil site work design and provided engineering support during advertisement, engineering support during construction and provided periodic inspection reports of the construction progress. Cost: \$45M Fee: \$3.2M Role: Civil Engineer	
(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
New Orleans International Airport Drainage Pump Station, Kenner, LA	2017	2017

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
 (COMPLETE ONE SECTION E FOR EACH KEY PERSON.)

12. NAME Scott Chehardy, PE	13. ROLE IN THIS CONTRACT Civil Engineer	14. YEARS EXPERIENCE a. TOTAL 29 b. WITH CURRENT FIRM 8	
---------------------------------------	--	--	--

15. FIRM NAME AND LOCATION (*City And State*)

MSMM Engineering, LLC – New Orleans, LA

16. EDUCATION (<i>Degree And Specialization</i>) BS, Civil Engineering, Southwestern Louisiana University, 1994	17. CURRENT PROFESSIONAL REGISTRATION (<i>STATE AND DISCIPLINE</i>) Professional Engineer/Civil (1999): LA 28532, IN 11700829
--	--

18. OTHER PROFESSIONAL QUALIFICATIONS (*Publications, Organizations, Training, Awards, Etc.*)

Mr. Chehardy has a deep understanding of the USACE Civil Works design process, having managed and executed multiple task orders for multiple USACE Districts. Mr. Chehardy is proficient with navigating USACE reviews utilizing DrChecks, has a long history of executing projects that require ATR/DQC and BCOES reviews, and is extremely proficient in developing USACE specifications utilizing SpecsIntact. Mr. Chehardy's recent experience includes finalizing the design-build RFP package for the 277k Levee and Delta Pump Station and leading the delivery of Plans and Specs for the Ascension and Baton Rouge Parish EI projects.

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (<i>City and State</i>) Ascension Parish Environmental Infrastructure Wastewater Treatment Plant Design, Hillaryville, LA		(2) YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (<i>if applicable</i>) 2022 TBD	
--	--	--	--

a	(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: (Full Project Writeup is included in SF330, Section F, Project Number 6) As part of the New Orleans District Environmental Infrastructure Program, MSMM developed a design-bid-build package (plans and specs) for the creation of a 1.8 million gallon per day wastewater treatment plant. Services consisted of civil/structural/mechanical/electrical engineering, cost estimating using MCACES, and a full USACE review process. Mr. Chehardy is the lead civil engineer for the delivery of the design-bid-build package. He managed a multi-disciplinary team that provided full plans and specifications using CAD MicroStation and Specsintact, as well as a detailed MII cost estimate for USACE. Cost: \$21.5M Fee: \$1.4M Role: Civil Engineer	<input type="checkbox"/> Check if project performed with current firm	

(1) TITLE AND LOCATION (<i>City and State</i>) Cow Bayou Drainage Pump Station Complex Design, Orange, TX		(2) YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (<i>if applicable</i>) 2021 TBD	
---	--	--	--

b	(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: (Full Project Writeup is included in SF330 Section F, Project Number 1) Development of a 35% design package (plans, specs, and DDR) for a new 8,190 cfs drainage pump station complex consisting of multiple flood risk management reduction measures such as a pump station, safe house, floodwalls, and sector gate. Main responsibilities consisted of civil, structural, and architectural analyses. The task order was to provide a 35% level of design with anticipation of changing the project to a Design-Build RFP. Mr. Chehardy managed the Civil, Structural, and Architectural aspects of the project, while USACE led the Electrical and Mechanical aspects. He developed the civil/site work design, developed the utility documentation, prepared the detailed plans and specifications, and coordinated the development of the DDR. Cost: TBD Fee: \$1.3M Role: Civil Engineer	<input type="checkbox"/> Check if project performed with current firm	

(1) TITLE AND LOCATION (<i>City and State</i>) Harahan Drainage Pump to the River, Jefferson Parish, LA		(2) YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (<i>if applicable</i>) 2018 2018	
---	--	---	--

c	(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: (Full Project Writeup is included in SF330 Section F, Project Number 7) Project elements included a 700 ft. suction canal, a 1,200 cfs pumping station, three 9,000 ft. long 84-inch diameter discharge pipes to the Mississippi River levee, levee crossing design, reinforced concrete, and discharge basin in the Mississippi River. MSMM, as a sub to CDM Smith, MSMM principal Mr. Chehardy, was the lead designer for 3 design packages of the overall project, leading the design and implementation of the discharge piping, levee crossing, MS River shift, and the discharge basin. He developed the design documentation report covering these project features and provided engineering support during advertisement and engineering during construction. Cost: \$150M Fee: \$1.8M Role: Civil Engineer	<input type="checkbox"/> Check if project performed with current firm	

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
 (COMPLETE ONE SECTION E FOR EACH KEY PERSON.)

12. NAME Bob Yokum, PE	13. ROLE IN THIS CONTRACT Structural Engineer	14. YEARS EXPERIENCE a. TOTAL 49	b. WITH CURRENT FIRM 11
----------------------------------	---	---	-----------------------------------

15. FIRM NAME AND LOCATION (*City And State*)

MSMM Engineering, LLC – New Orleans, LA

16. EDUCATION (<i>DEGREE AND SPECIALIZATION</i>) MS, Civil Engineering, Tulane University, 1980 BS, Civil Engineering, University of New Orleans, 1975	17. CURRENT PROFESSIONAL REGISTRATION (<i>STATE AND DISCIPLINE</i>) Professional Engineer, Civil (1984): LA 21422
--	--

18. OTHER PROFESSIONAL QUALIFICATIONS (*Publications, Organizations, Training, Awards, Etc.*)

Mr. Yokum, a former USACE New Orleans District Structural Engineer, has over 40 years of experience providing structural design for Federal projects. Mr. Yokum specializes in designing flood risk reduction measures and has designed levees, flood walls, locks, gates, and drainage structures. Mr. Yokum developed the unbalanced load criteria used by USACE for all levee design projects. These criteria set the guiding design calculations for designing heavy structural projects that have water on one side and land on the other.

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (<i>City and State</i>) Ascension Parish Environmental Infrastructure Wastewater Treatment Plant Design, Hillaryville, LA	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2022	CONSTRUCTION (<i>if applicable</i>) TBD
--	--	---

a (3) DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE
Scope: (Full Project Writeup is included in SF330, Section F, Project 6) As part of the New Orleans District Environmental Infrastructure Program, MSMM developed a design-bid-build package (plans and specs) for the creation of a 1.8 million gallon per day wastewater treatment plant. Services consisted of civil/structural/mechanical/electrical engineering, cost estimating using MCACES, and a full USACE review process. Mr. Yokum was the lead structural engineer for the project and was responsible for designing reinforced concrete structures for all process units, pump stations, and slabs on grade. Additional structural design elements completed were the CMU electrical/control buildings and pile design for all structures and buildings while utilizing the results of the Geotechnical analysis to develop his design.
Cost: \$21.5M **Fee:** \$1.4M **Role:** Structural Engineer

(1) TITLE AND LOCATION (<i>City and State</i>) East Baton Rouge Parish Wastewater Treatment Collection System 5 MG Ground Storage Tank and Pump Station, Baton Rouge, LA	(2) YEAR COMPLETED PROFESSIONAL SERVICES ONGOING	CONSTRUCTION (<i>if applicable</i>) TBD
--	---	---

b (3) DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE
Scope: (Full Project Writeup is included in SF330 Section F, Project 9) As part of the New Orleans District Environmental Infrastructure Program, MSMM provided the engineering design of two piles supported above-ground 5 million gallons (MG) prestressed concrete storage tanks, a 14,000 gpm sewer pump station, and a CMU control building. The existing pump station will be connected to the new pump station with a 42" diameter pipe and overflow chamber with automatic slide gates to control when flows will be diverted. Mr. Yokum's main responsibilities consist of structural design elements and analyses, including two large control valve junction boxes, a pump station, and a control building that will house the electrical control systems. Mr. Yokum is the project's lead structural engineer.
Cost: TBD **Fee:** \$1.6M **Role:** Structural Engineer

(1) TITLE AND LOCATION (<i>City and State</i>) Cow Bayou Drainage Pump Station Complex Design, Orange, TX	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2021	CONSTRUCTION (<i>if applicable</i>) TBD
---	--	---

c (3) DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE
Scope: (Full Project Writeup is included in SF330 Section F, Project 1) Our team developed a 35% design package (plans, specs, and DDR) for a new 8,190 cfs drainage pump station and complex consisting of a pump station building, safe house, floodwalls, and sector gate. Main responsibilities consisted of site layout, architectural, civil, structural, and cost engineering. The task order was to provide a 35% level of design with anticipation of changing the project to a Design-Build RFP. Mr. Yokum was the lead structural engineer for the project. He designed the foundation for the pump station, hydraulic gates, floodwall, pump station safe house, and fuel yard. He developed detailed calculations for these design components, which were reviewed and approved by USACE. **Cost:** TDB **Fee:** \$1.3M **Role:** Structural Engineer

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
 (COMPLETE ONE SECTION E FOR EACH KEY PERSON.)

12. NAME Ramesh Kalvakaalva, PE, CVS	13. ROLE IN THIS CONTRACT Structural Engineer	14. YEARS EXPERIENCE a. TOTAL 30 b. WITH CURRENT FIRM 13	
--	---	---	--

15. FIRM NAME AND LOCATION (*City And State*)

MSMM Engineering, LLC – New Orleans, LA

16. EDUCATION (<i>DEGREE AND SPECIALIZATION</i>) PhD Candidate, Civil Engineering, Louisiana State University (1999) MS, Civil Engineering; Louisiana State University (1995) BS, Civil Engineering; NIT, Trichy, India (1991)	17. CURRENT PROFESSIONAL REGISTRATION (<i>STATE AND DISCIPLINE</i>) Professional Engineer/Civil (1997): LA (28219), MS (14876) FL (67030), AL (27347), GA (26993), TN (106893), NC (031348), SC (24777), AZ (43451), MI (2843452), SAVE® Certified CVS (Worldwide) (2010) CVS License (201110500)
---	--

18. OTHER PROFESSIONAL QUALIFICATIONS (*Publications, Organizations, Training, Awards, Etc.*)

Mr. Kalvakaalva is a structural engineer with over 25 years of experience providing structural design solutions to USACE and other federal agencies. He was instrumental in the data evaluation, planning, analysis, and design of several HSDRRS projects following Hurricane Katrina, inclusive of flood protection measures such as pump stations, levees, floodwalls, drainage inlets, and coastal erosion features. More recently, Mr. Kalvakaalva has provided structural engineering solutions for box culverts, design-build levee raise projects, and bridges and elevated structures. Mr. Kalvakaalva is also a Save International Registered CVS and has led more than 20 USACE value engineering studies in the last five years.

19. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (<i>City and State</i>) East Baton Rouge Parish Rehabilitation of Multiple Sanitary Sewer Overflow (SSO) Pump Stations, Baton Rouge, LA	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
a	(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: As part of the New Orleans District Environmental Infrastructure Program, MSMM was tasked to upgrade multiple sewer pump stations. MSMM was responsible for mechanical, site civil, electrical, and structural engineering design to provide 100% bid-ready plans and specifications. Mr. Kalvakaalva was the lead structural engineer and was responsible for designing reinforced concrete structures for all pump stations, base slabs, and slabs on grade. Cost: TBD, Fee: \$433k, Role: Structural Engineer	2024	TBD
b	(1) TITLE AND LOCATION (<i>City and State</i>) New Orleans International Airport (MSY) Drainage Pump Station, Kenner, LA	(2) YEAR COMPLETED	(2) YEAR COMPLETED
b	(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: MSMM completed the design and EDC services for a 600 cfs stormwater drainage pump station and for all landside drainage as part of constructing a new airport terminal. The project involved working under an extremely compressed schedule while successfully delivering a truly multi-disciplinary effort spanning civil, structural, electrical, mechanical, and environmental engineering, hydraulic modeling, architectural services, cost estimating, environmental permitting, drafting, and agency coordination. Mr. Kalvakaalva was the lead structural engineer and was responsible for designing reinforced concrete pump station structure, pile-supported pipe supports, headwalls, sheet pile discharge structures, and slabs on grade. Cost: \$45M, Fee: \$3.2M, Role: Structural Engineer	2017	2017
c	(1) TITLE AND LOCATION (<i>City and State</i>) Lapalco Bridge over Harvey Canal Design Project, Harvey, LA	(2) YEAR COMPLETED	(2) YEAR COMPLETED
c	(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: This bridge design project involved the reconfiguration of an existing four-lane bridge into a bridge containing three eastbound lanes with a new independent three-lane westbound bridge. MSMM provided schematic design, preliminary design, final design, and load ratings. Mr. Kalvakaalva is the lead structural engineer and was responsible for completing the load rating on the existing bridge and for designing the structural components for the bridge expansion. He's developing detailed calculations for these components. Cost: TBD Fee: \$1.11M, Role: Structural Engineer	ONGOING	TBD

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
 (COMPLETE ONE SECTION E FOR EACH KEY PERSON.)

12. NAME Brian Twitchell, PE	13. ROLE IN THIS CONTRACT Structural Engineer	14. YEARS EXPERIENCE a. TOTAL 28	b. WITH CURRENT FIRM 24
--	---	---	-----------------------------------

15. FIRM NAME AND LOCATION (*City And State*)

Tetra Tech Inc. – Bellevue, WA

16. EDUCATION (DEGREE AND SPECIALIZATION) MS, Civil, Structural Dynamics, 1996 BS, Civil, Structural, 1993	17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Professional Engineer, Civil (2023): WA 40905
--	--

18. OTHER PROFESSIONAL QUALIFICATIONS (*Publications, Organizations, Training, Awards, Etc.*)

Mr. Twitchell has 25 years of engineering experience encompassing project management, structural design and analysis, condition assessment, construction inspection, and engineering support during construction. His expertise spans bridges, tunnels, retaining walls, flood walls, drilled shaft foundations, hydraulic structures, navigation lock structures, soil-structure interaction, seismic analysis, and detailing. He has extensively worked on USACE projects requiring special design and construction methods to handle extreme loads, harsh environments, and construction constraints near existing structures with minimal disruption to navigation traffic. Brian is proficient in lift-in and pre-cast concrete construction methods, allowing off-site fabrication and reduced on-site construction time, and is familiar with AASHTO, FHWA, ACI, AISI, and USACE design manuals, including the Hurricane and Storm Damage Risk Reduction System guidelines. Since 2000, Mr. Twitchell has supported the Navigation and Ecosystem Sustainability Program (NESP) in roles of increasing responsibility, from structural engineer to project manager, demonstrating his passion and dedication through participation in over 15 task orders totaling over \$40M.

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (<i>City and State</i>) NESP Plan for Lock Completion, Lock 25, USACE St. Louis District, Winfield, MO		(2) YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (<i>if applicable</i>) 2023 ONGOING	
(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: (Full Project Writeup is included in SF330, Section F, Project 8) Mr. Twitchell was responsible for the project budget, schedule, and team coordination to ensure the many deliverables for each work item were delivered on time. Submitted monthly invoices with a status report, updated schedule, and accrual plan. Lead author for the Lock Completion Plan that provides narratives and a schedule of the design and construction activities required to complete the lock. The narratives describe the design work and critical design decisions that have been completed to date and the design decisions and design work that are required to complete the design and provide estimated costs, resources, and duration to complete the design, as well as duration and costs for the construction contracts. Cost: \$732M Fee: \$3.27M Role: Project Manager and Structural Engineer		<input type="checkbox"/> Check if project performed with current firm	
(1) TITLE AND LOCATION (<i>City and State</i>) Inner Harbor Navigation Canal Lake Borne Surge Barrier, USACE New Orleans District, New Orleans, LA		(2) YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (<i>if applicable</i>) 2016 2014	
(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: (Full Project Writeup is included in SF330, Section F, Project 4) Mr. Twitchell Designed the maintenance bridge located above the GIWW sector gate. The bridge required a complex geometry to provide a roadway alignment that fit on the sector gate, and the bridge support was located at the main support members of the gate. The bridge was designed for wave slamming and wave downfall during a hurricane event. Cost: \$1.2B Fee: \$64M Role: Structural Engineer		<input type="checkbox"/> Check if project performed with current firm	
(1) TITLE AND LOCATION (<i>City and State</i>) IHNC Lock Floating Guidewall, USACE New Orleans District, New Orleans, LA		(2) YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (<i>if applicable</i>) 2021 N/A	
(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: Mr. Twitchell managed the structural and electrical engineering for the design, analysis, and development of plans in MicroStation, specifications in SpecsIntact, and an MCACES MII construction cost estimate for construction of the new floating guidewall and demolition of the existing timber guidewall. Provided quality control review for the DDR. Cost: N/A Fee: \$980k Role: Project Manager and Structural Engineer		<input type="checkbox"/> Check if project performed with current firm	

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
 (COMPLETE ONE SECTION E FOR EACH KEY PERSON.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Tony Bosecker, PE	Geotechnical Engineer	36	34

15. FIRM NAME AND LOCATION (*City And State*)

Freese and Nichols, Inc. – New Orleans, LA

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
BS, Civil Engineering, University of Illinois, 1988 BS, Geology, University of Illinois, 1986	Professional Engineer, Civil 1995: TX 80158

18. OTHER PROFESSIONAL QUALIFICATIONS (*Publications, Organizations, Training, Awards, Etc.*)

Mr. Bosecker has extensive experience in a range of dam and levee rehabilitation projects. His expertise is in geotechnical studies, including embankment evaluation, slope, and stability analysis, and geologic design analysis and design. He manages construction QA programs and provides EDC for geotechnical and foundation construction. He provides geotechnical services in accordance with USACE requirements, including more than 20 civil works task orders for various USACE Districts. His experience includes risk-informed dam safety and probable failure modes analysis of geotechnical aspects for federal clients, including USACE and NRCS.

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
NTMWD, Bois d'Arc Lake Water Supply Program Fannin County, Texas	2021	2022

(3) DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE

Check if project performed with current firm

Scope: (Full Project Writeup is included in SF330 Section F, Project Number 5) Mr. Bosecker was the DOR for the geotechnical design of an 80-foot-tall earthen dam with a slurry trench cutoff wall. Tony led the geotechnical design, which included field exploratory and laboratory testing, seepage and slope stability analysis, settlement analysis, internal drainage design, and embankment configuration. A Terminal Storage Facility was also constructed adjacent to a new treatment plant. Tony was the DOR for the geotechnical design of the 210-MG storage reservoir and is currently serving in the same role for the future expansion of an additional cell with 210-MG of storage.

Cost: \$1.6B **Fee:** \$93M **Role:** Geotechnical Engineer

(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
USACE Fort Worth, Dallas Floodway Extension Lamar Levee, Dallas, Texas	ONGOING	2027 (EST)

(3) DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE

Check if project performed with current firm

Scope: Mr. Bosecker served as a Geotechnical SME, providing QC reviews for the field investigation, geotechnical design analysis and design elements. The project includes H&H modeling, existing utility data gathering and mapping, and levee design (civil and structural) for the new 16,000 SF Lamar Levee.

Cost: \$9.9M **Fee:** \$16.9M **Role:** Geotechnical Engineer

(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
USACE Galveston. Sabine Pass to Galveston Bay CSRM and ER Port Arthur and Vicinity PAV03A/C Floodwall and Levee Raise, Port Arthur, TX	2029 (EST)	2029 (EST)

(3) DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE

Check if project performed with current firm

Scope: Mr. Bosecker is coordinating the geotechnical design and serving as quality control and the SME for geotechnical design for Zones 1 and 3. The project includes levee and floodwall features, pump station fronting wall protection, and vehicular closure structure.

Cost: \$11.8M **Fee:** \$20.6M **Role:** Geotechnical Engineer

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
 (COMPLETE ONE SECTION E FOR EACH KEY PERSON.)

12. NAME James J. Hance, P.E.	13. ROLE IN THIS CONTRACT Geotechnical Engineer	14. YEARS EXPERIENCE a. TOTAL 24	b. WITH CURRENT FIRM 20
---	---	---	-----------------------------------

15. FIRM NAME AND LOCATION (*City And State*)

Eustis Engineering, LLC – Metairie, LA

16. EDUCATION (DEGREE AND SPECIALIZATION) MBA / Business Administration Master of Science / Civil Engineering Bachelor of Science / Civil Engineering	17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Louisiana / Professional Engineer 31270 Mississippi / Professional Engineer 20596 Texas / Professional Engineer 106663
--	--

18. OTHER PROFESSIONAL QUALIFICATIONS (*Publications, Organizations, Training, Awards, Etc.*)

Mr. Hance joined the staff of Eustis Engineering over 20 years ago (August 2003). During his tenure at Eustis Engineering, he has been involved in a multitude of projects for various government agencies as well as private sector clients. Mr. Hance manages geotechnical services associated with commercial, industrial, environmental, and civil works projects. The primary focus of his career has been on flood protection and coastal restoration projects in Louisiana. He has worked extensively on Federal and non-federal projects since the days following Hurricane Katrina. He has even been cited by the U.S. Army Corps of Engineers in their Hurricane and Storm Damage Risk Reduction System Design Guidelines regarding his early analyses on evaluating settlement-induced bending moments in steel piles supporting floodwalls (T-walls).

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (<i>City and State</i>) Coastal Protection and Restoration Authority (CPRA), Mid-Barataria Sediment Diversion Project, Mississippi River Mile 60.7 AHP, Vicinity of Ironton and Lafitte, Plaquemines and Jefferson Parishes, Louisiana		(2) YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (<i>if applicable</i>) ONGOING ONGOING	
(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE a Scope: Mr. Hance, lead geotechnical engineer, has worked with the State of Louisiana's CPRA since December 2017 on a \$1.3 billion project. He has coordinated with CPRA, their program manager, and various design firms, overseeing Eustis Engineering's field program of 162 borings and 98 cone penetration tests. He managed extensive lab testing and participated in risk assessments and design meetings. The 100% design was completed in May 2023, with construction starting in fall 2023. Mr. Hance continues in his role through the construction phase. Cost: TBD Fee: \$5.5M Role: Geotechnical Engineer		<input type="checkbox"/> Check if project performed with current firm	
(1) TITLE AND LOCATION (<i>City and State</i>) Coastal Protection and Restoration Authority (CPRA), Maurepas Diversion and West Shore of Lake Pontchartrain, St. John the Baptist Parish, Louisiana		(2) YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (<i>if applicable</i>) ONGOING N/A	
(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE b Scope: Eustis Engineering reviewed existing data as well as performed a field exploration, laboratory testing, and engineering analyses in order to develop geotechnical soil design reaches and prepare geotechnical design recommendations for the future flood protection and freshwater diversion for the West Shore of Lake Pontchartrain alignment. Mr. Hance provided guidance on recommendations and performed reviews of engineering analyses for this effort. Cost: TBD Fee: \$583K Role: Geotechnical Engineer		<input type="checkbox"/> Check if project performed with current firm	
(1) TITLE AND LOCATION (<i>City and State</i>) USACE – MVD Disaster Relief Supplemental Appropriations Act (DRSAA) Work, Mississippi River Levees, Louisiana		(2) YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (<i>if applicable</i>) ONGOING N/A	
(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE c Scope: Eustis Engineering performed drilling and laboratory testing of borings for the enlargement of Mississippi River levee (MRL) items located within East and West Baton Rouge Parish, Iberville Parish, Ascension Parish, St. James Parish, St. John the Baptist Parish, and Jefferson Parish, Louisiana. As the Project Manager, Mr. Hance provided the Quality Control Plan, Safety Plan, and schedule for the project. He also coordinated the field activities and the laboratory testing assignments. He has made sure that Eustis Engineering has stayed on schedule. Cost: N/A Fee: \$1.09M Role: Geotechnical Engineer		<input type="checkbox"/> Check if project performed with current firm	

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
 (COMPLETE ONE SECTION E FOR EACH KEY PERSON.)

12. NAME Jeff Wilson, PE	13. ROLE IN THIS CONTRACT Hydraulic Engineer	14. YEARS EXPERIENCE a. TOTAL 35	b. WITH CURRENT FIRM 1
------------------------------------	--	---	----------------------------------

15. FIRM NAME AND LOCATION (*City And State*)

MSMM Engineering, LLC – New Orleans, LA

16. EDUCATION (<i>DEGREE AND SPECIALIZATION</i>) BS, Civil Engineering, University of New Orleans (1998) Old Dominion University, Coastal Engineering Certificate (2014)	17. CURRENT PROFESSIONAL REGISTRATION (<i>STATE AND DISCIPLINE</i>) Professional Engineer: LA (16581), MS (31566)
--	--

18. OTHER PROFESSIONAL QUALIFICATIONS (*Publications, Organizations, Training, Awards, Etc.*)

Mr. Wilson brings over 30 years of experience designing and managing land and marine infrastructure projects to this project. He has an extensive history with hydraulics and modeling software, analyzing drainage functions around the country. He is proficient in EPA SWMM, HEC-RAS, Arcview GIS Software, and the LADOTD Hydraulics software. His career consists of projects covering a wide spectrum of work, from roadway improvements to hydraulic studies and the design of commercial and residential sites. In addition to a design background in roadways, drainage, and utilities, he has experience with marine construction. He was employed as a diving professional for 12 years, with experience in the offshore Oil and Gas industry. Jeff is an active member of the American Society for Civil Engineers (ASCE) and the American Concrete Institute (ACI).

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (<i>City and State</i>) Port of New Orleans Hydraulic and Hydrologic Drainage Evaluation		(2) YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (<i>if applicable</i>) 2023 N/A	
(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: The overall scope of this project involved H&H modeling and calibration, proposing high level development drainage improvements, and development of a preliminary drainage report. Mr. Wilson was the project manager on this project. His contribution included liaison with the prime consultant and preparing a drainage study for the Owners using information from historical records. He also played a key role in preparing the drainage model and evaluation. Cost: NA Fee: \$560K Role: Hydraulic Engineer		<input type="checkbox"/> Check if project performed with current firm	
a Scope: The overall scope of this project involved H&H modeling and calibration, proposing high level development drainage improvements, and development of a preliminary drainage report. Mr. Wilson was the project manager on this project. His contribution included liaison with the prime consultant and preparing a drainage study for the Owners using information from historical records. He also played a key role in preparing the drainage model and evaluation. Cost: NA Fee: \$560K Role: Hydraulic Engineer			
(1) TITLE AND LOCATION (<i>City and State</i>) East Baton Rouge Parish Wastewater Treatment Collection System 5 MG Ground Storage Tank and Pump Station, Baton Rouge, LA		(2) YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (<i>if applicable</i>) ONGOING TBD	
(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: (Full Project Writeup is included in SF330 Section F, Project Number 9) As part of the New Orleans District Environmental Infrastructure Program, MSMM provided the engineering design of two piles supported above-ground 5 million gallons (MG) prestressed concrete storage tanks, a 14,000 gpm sewer pump station, and a CMU control building. The existing pump station will be connected to the new pump station with a 42" diameter pipe and overflow chamber with automatic slide gates to control when flows will be diverted. Mr. Wilson is using his civil engineering expertise to prepare 95% of the plans and specifications for the project. Cost: TBD Fee: \$1.6M Role: Civil Engineer		<input type="checkbox"/> Check if project performed with current firm	
b Scope: (Full Project Writeup is included in SF330 Section F, Project Number 9) As part of the New Orleans District Environmental Infrastructure Program, MSMM provided the engineering design of two piles supported above-ground 5 million gallons (MG) prestressed concrete storage tanks, a 14,000 gpm sewer pump station, and a CMU control building. The existing pump station will be connected to the new pump station with a 42" diameter pipe and overflow chamber with automatic slide gates to control when flows will be diverted. Mr. Wilson is using his civil engineering expertise to prepare 95% of the plans and specifications for the project. Cost: TBD Fee: \$1.6M Role: Civil Engineer			
(1) TITLE AND LOCATION (<i>City and State</i>) Freret Group A – Design and Construction Management of Roadway, Drainage and Water Improvements/Restoration, New Orleans, LA		(2) YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (<i>if applicable</i>) 2020 2021	
(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: The project consisted of water and drainage repairs and improvements, followed by the rebuilding of streets in the area bounded by Napoleon Ave., Jefferson Ave., Claiborne Ave., and Lasalle St. Mr. Wilson's drainage analysis was pivotal to the project. It involved overlay, complete road reconstruction, and the repair or upgrading of water and drain lines. This was for approximately a 36-block area, where about 1/3 of streets were repaired or replaced. As the designer and construction administrator with Kyle Associates, LLC, Mr. Wilson was responsible for creating the design concept and detailed plans for the project in addition to overseeing the construction phase to ensure the design was accurately executed. Cost: \$6M Fee: NA Role: Civil Engineer		<input type="checkbox"/> Check if project performed with current firm	
c Scope: The project consisted of water and drainage repairs and improvements, followed by the rebuilding of streets in the area bounded by Napoleon Ave., Jefferson Ave., Claiborne Ave., and Lasalle St. Mr. Wilson's drainage analysis was pivotal to the project. It involved overlay, complete road reconstruction, and the repair or upgrading of water and drain lines. This was for approximately a 36-block area, where about 1/3 of streets were repaired or replaced. As the designer and construction administrator with Kyle Associates, LLC, Mr. Wilson was responsible for creating the design concept and detailed plans for the project in addition to overseeing the construction phase to ensure the design was accurately executed. Cost: \$6M Fee: NA Role: Civil Engineer			

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
 (COMPLETE ONE SECTION E FOR EACH KEY PERSON.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
Brian Watson, PE, PH, D.WRE	Hydraulic Engineer	a. TOTAL 24	b. WITH CURRENT FIRM 24

15. FIRM NAME AND LOCATION (*City And State*)

Tetra Tech Inc. – Bellevue, WA

16. EDUCATION (*Degree and Specialization*)

BS, Civil Engineering
ME, Civil Engineering

17. CURRENT PROFESSIONAL REGISTRATION (*State and Discipline*)

Professional Engineer: AL (#34538-E), FL (#061095), GA (#028485), IL (#062.071856), KY (#35261), LA (#032217), MS (#31845), TX (#140339)
Professional Hydrologist, Surface-Water: (06-H-1669) Certified Design Professional: GA (#52425)

18. OTHER PROFESSIONAL QUALIFICATIONS (*Publications, Organizations, Training, Awards, Etc.*)

Mr. Watson specializes in environmental engineering, water resources engineering, and stormwater management, including hydrodynamic and water quality modeling, total maximum daily load development and implementation, smart stormwater management and design, and innovative water resources planning. Mr. Watson has experience with numerous watershed, groundwater, hydraulic, hydrologic, hydrodynamic, and water quality models and has conducted more than 25 hydraulic model training courses around the country.

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
NESP Lock and Dam 22 Fish Passage Improvements 35% Design, USACE Rock Island District, Saverton, MO	2022	N/A
(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE	<input type="checkbox"/> Check if project performed with current firm	
Scope: Mr. Watson was the Lead Hydraulic Engineer for the project. The Lock and Dam 22 Fish Passage Impoundment is one of 23 initial Navigation and Ecosystem Sustainability Program (NESP) ecological component projects being implemented under the Upper Mississippi River System (UMRS). This initial project will include the design of an approximately 500 feet long, 200 feet wide rock ramp. The primary purpose of the Lock and Dam 22 fish passage project is to increase opportunity for upriver fish passage, thereby increasing access to upstream mainstem river and tributary habitats. Increased access to upriver habitat should result in an increase in the size and distribution of native migratory fish populations. The secondary purpose of this project is to monitor, evaluate, learn from, and adapt future fish passage projects using lessons learned from this initial project. Cost: TBD Fee: \$1.1M Role: Lead Hydraulic Engineer		
(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
Fish Passage at New Savannah Bluff Lock and Dam, USACE Savannah District, Savannah, GA	2021	NA
(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE	<input type="checkbox"/> Check if project performed with current firm	
Scope: As part of the Savannah Harbor Expansion Project, USACE is required to develop design and construction documents for a fish passage and adjacent floodplain bench at the new Savannah Bluff Lock and Dam. The fish passage mitigation feature must allow safe passage over the structure to historic spawning grounds of endangered shortnose sturgeon and other native migratory fish, while maintaining the functionality of the pool for navigation, water supply, and recreational activities. In addition to the design and construction documents, cultural resources, geotechnical and environmental investigations were performed. Conducted a Value Engineering study and this project also included development of HEC-RAS 2D and CFD models. Cost: 2.8M Fee: \$350K Role: Project Manager and Engineer of Record		
(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
Broward Water Detention Facility, USACE Jacksonville District, Broward County, FL	2022	N/A
(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE	<input type="checkbox"/> Check if project performed with current firm	
Scope: The Broward County Water Preserve Area is part of a large Comprehensive Everglades Restoration Plan with the objective to restore the ecological health of the Everglades. The purpose of the BCWPA project is to address the loss of ecosystem function within the Everglades by performing the following functions. The BCWPA project reduces seepage loss from Water Conservation Area 3 to the C-9 and C-11 basins, captures and stores excess surface water runoff from the Western C-11 Basin that is currently discharged into WCA 3, and reduces loading to the Everglades. A pump system will be developed as part of the project, which will pump water from the C-11 canal and seepage canal for storage in the proposed impoundment area. Cost: \$8.5M (Estimated) Fee: \$800k Role: Lead for CFD Modeling		

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
 (COMPLETE ONE SECTION E FOR EACH KEY PERSON.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
Jeff Hensley, PE	Electrical Engineer	a. TOTAL 33	b. WITH CURRENT FIRM 25

15. FIRM NAME AND LOCATION (*City And State*)

Freese and Nichols, Inc. – New Orleans, LA

16. EDUCATION (<i>DEGREE AND SPECIALIZATION</i>)	17. CURRENT PROFESSIONAL REGISTRATION (<i>STATE AND DISCIPLINE</i>)
BS, Electrical Engineering, Kansas State University, 1991	Professional Engineer, Electrical: LA 0046887

18. OTHER PROFESSIONAL QUALIFICATIONS (*Publications, Organizations, Training, Awards, Etc.*)

Mr. Jeff Hensley is FNI's Electrical Group Technical Leader and a firm Principal. He has extensive experience with substations, electrical utility systems, power supply, and electrical distribution systems at military and water/wastewater installations. He has served as task order manager for USACE-Fort Worth District task orders and worked on others at installations, including Fort Hood and Fort Polk. His project experience includes project management, electrical and instrumentation design, motor starting and short-circuit analysis, value engineering, shop drawing review, inspections, start-up testing, witness testing, preliminary design, scope development and preparation of specifications for major electrical and instrumentation equipment.

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
Sabine River Authority (SRA), Sabine River Pump Station, Pipeline and Canal Improvements LA/TX Border	2019	2021

a (3) DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE

Check if project performed with current firm

Scope: Mr. Hensley served as the lead Electrical Engineer for the project. FNI provided preliminary design and permitting services for a new 85-MGD raw water pump station on the Sabine River. FNI provided design and preliminary layouts for the pump station, pipeline, canal connection, and siphon improvements, as well as environmental permitting, geotechnical exploration and analysis, and water quality analysis.
Cost: \$7.1M **Fee:** \$880K **Role:** Electrical Engineer

(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
NTMWD, Bois d'Arc Lake Water Supply Program Fannin County, Texas	2021	2022

(3) DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE

Check if project performed with current firm

Scope: (Full Project Writeup is included in SF330 Section F, Project Number 5) FNI partnered with NTMWD to permit and build a new \$1.6 billion water supply system, providing program management, water rights permitting, project management, and design and construction management services to support the reservoir's development. Significant projects include 17,000 acres of environmental mitigation, a 2-mile earthen dam, spillway and outlet structures, 420-MG terminal storage reservoir, 236-MGD raw water intake and pump station, 330-MGD high-service pump station, and 60 miles of large diameter raw- and treated-water pipelines. Mr. Hensley served as Lead Electrical Engineer for the High Service Pump Station and Terminal Storage Reservoir. **Cost:** \$1.6B **Fee:** \$93M **Role:** Electrical Engineer

(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
Gulf Coast Water Authority (GCWA) Industrial Reservoir Ring Levee, Canal, and Pump Station Upgrade Texas City, Texas	2021	2021

(3) DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE

Check if project performed with current firm

Scope: Freese and Nichols, Inc. (FNI) developed detailed construction drawings and specifications for the extensive realignment of the intake and discharge canals associated with a 25,000-foot homogeneous embankment, classified as a high-hazard ring levee. This levee system plays a critical role in flood prevention and water management. Additionally, a significant portion of the dam and canal structure is integrated with the Texas City Hurricane Protection Levee System, enhancing the region's resilience against severe weather events and flooding. This integration ensures that the infrastructure works in harmony with existing flood protection measures, providing comprehensive safety and reliability for the surrounding communities. Mr. Hensley served as the Lead Electrical Engineer.

Cost: \$8.3M (Estimated) **Fee:** \$1.48M **Role:** Electrical Engineer

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
 (COMPLETE ONE SECTION E FOR EACH KEY PERSON.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
Indira Petrovic, PE, PMP	Electrical Engineer	a. TOTAL 23	b. WITH CURRENT FIRM 23
15. FIRM NAME AND LOCATION (<i>City And State</i>) CDM Smith – Dallas, TX			
16. EDUCATION (<i>Degree and Specialization</i>) BS, Electrical Engineering		17. CURRENT PROFESSIONAL REGISTRATION (<i>State and Discipline</i>) Professional Engineer (PE): TX 99239 (Civil); LA 34245; MS 20328; NM 20469; KS 21914; IA 20767; OK 25396; WY 13279; MO 2012006301; MI 6201067070	
18. OTHER PROFESSIONAL QUALIFICATIONS (<i>Publications, Organizations, Training, Awards, Etc.</i>) Ms. Pjetrovic has provided electrical engineering services on projects for USACE Fort Worth, Tulsa, New Orleans, and Kansas City Districts. She is experienced in the design of medium-voltage and low-voltage power distribution, lighting, and low-voltage systems and controls and plays a pivotal role in the CDM Smith Dallas office.			
19. RELEVANT PROJECTS			
(1) TITLE AND LOCATION (<i>City and State</i>) USACE FWD. Central City Fort Worth District & Tarrant Regional Water District, Fort Worth, TX		(2) YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (<i>if applicable</i>) 2022 2027	
(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: Served as Engineer of Record for electrical design for an irrigation pump station. The design included obtaining power service from a local electric utility, 480V power distribution system, and a control wiring design. Prepared electrical plans and specifications and input to the DDR. Provided electrical design for the preliminary lighting (low-voltage, down lighting) for the recreational features associated with a floodplain storage site. Worked with the project team and USACE to meet the specific lighting needs. Cost: \$150M Fee: \$17M Role: Electrical Engineer		<input type="checkbox"/> Check if project performed with current firm	
(1) TITLE AND LOCATION (<i>City and State</i>) US DOI, Bureau of Reclamation. Pojoaque Basin Regional Water System Design-Build, Santa Fe, NM		(2) YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (<i>if applicable</i>) 2023 2025	
(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: Led electrical designs for a source water intake system on the Rio Grande, a water treatment plant, and water supply transmission/distribution systems. For the intake, completed designs for 4160 V electrical power supply and instrumentation equipment to control four horizontal collector wells, a 9,200-gallon air chamber, and standby generator. Developed electrical plans and specifications for all instrumentation and control systems for the treatment plant, including 4,000 A, 480 V, three-phase power supply and a generator for standby power. Oversaw designers developing electrical plan sheets, one-line diagrams, riser diagrams, control schematics, load calculations, lighting design, and panel schedules. Led efforts for sizing the preliminary electrical room layouts. Size: 6.23 million gallon per day treatment plant and 75+ miles of pipeline. Cost: \$18M Fee: \$1.9M Role: Electrical Engineer		<input type="checkbox"/> Check if project performed with current firm	
(1) TITLE AND LOCATION (<i>City and State</i>) NAVFAC. Electrical Utility Study and Evaluation, Fort Worth Joint Reserve Base, TX		(2) YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (<i>if applicable</i>) 2018 2020	
(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: Led the design team to perform visual assessment, data gathering, and power system analysis for the base substation and medium voltage power distribution system. The power distribution system was modeled using SKM Power Tools software and various analysis were conducted: short circuit, protective device coordination, load flow, reliability, arc flash. The utility study report presented the results of the completed analysis and recommendations for improvements. Arc flash labels were installed on over 400 electrical equipment. As-built one-line diagrams were created for the base medium-voltage power distribution system and substation. Surveys of underground power distribution conduits and cables were completed and the UICAP database was updated to reflect the as-built conditions. Cost: \$10M Fee: \$919K Role: Electrical Engineer		<input type="checkbox"/> Check if project performed with current firm	

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
 (COMPLETE ONE SECTION E FOR EACH KEY PERSON.)

12. NAME Eric Flickinger, PE	13. ROLE IN THIS CONTRACT Mechanical Engineer	14. YEARS EXPERIENCE a. TOTAL 14	b. WITH CURRENT FIRM 14
--	---	---	-----------------------------------

15. FIRM NAME AND LOCATION (*City And State*)

Tetra Tech Inc. – Bellevue, WA

16. EDUCATION (<i>Degree And Specialization</i>) BS, Mechanical Engineering	17. CURRENT PROFESSIONAL REGISTRATION (<i>State And Discipline</i>) Professional Engineer, Mechanical: CO (#0056001), FL (#79554), LA (#PE.0042798), OR (#90719PE), TX (#121372), WA (#51684), MT (#PEL-PE-LIC-84245), ID (#P-21175)
--	---

18. OTHER PROFESSIONAL QUALIFICATIONS (*Publications, Organizations, Training, Awards, Etc.*)

Mr. Flickinger is experienced in the field of mechanical engineering, providing conceptual and detail design services of flood protection, pump stations, water control gates, cranes, hoist and mechanical operating machinery. Eric has experience with multi-disciplinary design integration, design optimization through finite element analysis, designing large-scale mechanical systems, inspection and analysis of existing mechanical machinery, retrofitting of aging mechanical systems, and developing detailed design documents.

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
GIWW Brazos River Crossing Design, USACE Galveston District, Freeport, TX	2023	N/A
(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE		
a Scope: Led the engineering and design of the mechanical systems, including sector gates (125' x 28') for sediment barrier gates at the confluence of the Brazos River and the Gulf Intracoastal Waterway. Designer of record for the effort for the hinge, pintle, operator, seals, and sediment management system for the sector gate. Supervised the development of gate mechanical systems and performed technical analysis of the gate machinery and sediment mitigation system. Participated in a design charrette for sediment management at the gate. Produced 62 detailed design drawings in MicroStation and specifications in SpecsIntact for this design-bid-build project compliant with USACE EMs and ERs. Cost: N/A Fee: \$3.6M Role: Mechanical Engineer	<input type="checkbox"/> Check if project performed with current firm	
(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
IHNC Floating Guide Wall Demolition and Replacement, USACE New Orleans District, New Orleans, LA	2022	N/A
(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE		
b Scope: Designed the hydraulic power and fluid power calculations for the operation of the Gulf Intercoastal Waterway sector gates. Developed plans and specifications used in the procurement of the hydraulic system. Performed analysis on for the kinematics of the gate operation and compared those results to the results of a physical model study to establish operating limits and set points for the fluid power gate operators. Cost: N/A Fee: \$955K Role: Mechanical Engineer	<input type="checkbox"/> Check if project performed with current firm	
(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
NESP Plan for Lock Completion, Lock 25, USACE St. Louis District, Winfield, MO	2023	ONGOING
(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE		
c Scope: (Full Project Writeup is included in SF330, Section F, Project 8) Mr. Flickinger served as Lead Mechanical Engineer and Project Manager for the Lock 25 existing Lock Wall Modification USACE project, St. Louis District. Led preparation of a set of final plans and specifications, detailed cost estimate and development of a DDR for construction of operational and functional modifications to the existing intermediate wall and river wall that are required to function as part of the chamber of the new 1,200-foot main lock at Lock 25. Cost: \$732M Fee: \$3.27M Role: Mechanical Engineer	<input type="checkbox"/> Check if project performed with current firm	

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
 (COMPLETE ONE SECTION E FOR EACH KEY PERSON.)

12. NAME Chris Mills, PE	13. ROLE IN THIS CONTRACT Construction Engineer	14. YEARS EXPERIENCE a. TOTAL 5	b. WITH CURRENT FIRM 5
------------------------------------	---	--	----------------------------------

15. FIRM NAME AND LOCATION (*City And State*)

MSMM Engineering, LLC – New Orleans, LA

16. EDUCATION (<i>DEGREE AND SPECIALIZATION</i>) BS, Civil Engineering, Louisiana State University, 2019	17. CURRENT PROFESSIONAL REGISTRATION (<i>STATE AND DISCIPLINE</i>) Professional Engineer, Civil (2023): LA (47987)
--	---

18. OTHER PROFESSIONAL QUALIFICATIONS (*Publications, Organizations, Training, Awards, Etc.*)

Mr. Mills is a civil engineer with MSMM, where he excels in delivering a wide array of construction administration services for public works projects in Orleans and Jefferson Parish. His expertise encompasses organizing and leading pre-construction meetings, reviewing and approving contractor submittals, tracking and managing RFIs, and addressing technical issues such as rejections, change orders, and field change reports. He diligently attends progress meetings, conducts site visits, reviews quantities, and approves pay applications, ensuring the projects are on schedule and within budget. Mr. Mills is also responsible for preparing final inspection reports and managing warranty inspections, all while providing regular project status reports and updates to the city. In addition to his construction administration duties, Mr. Mills performs various field services, including collecting survey data, manhole location data, GIS data, and field engineering services for diverse construction projects. He is proficient with construction schedules and specification language.

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (<i>City and State</i>) West End Group C (RR195) City of New Orleans Department of Public Works, New Orleans, LA		(2) YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (<i>if applicable</i>) 2022 2023	
(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: Mr. Mills carried out all construction administration activities for the S&WB scope of work. This included organizing and conducting the pre-construction meeting, reviewing and approving submittals, and tracking RFIs. They provided assistance with technical issues such as rejections, change orders, and field change reports while also attending progress meetings and conducting site visits to monitor the work. Additionally, he reviewed quantities, approved pay applications, and ensured effective stakeholder coordination. The project was completed with a final inspection and report, preparation of the overrun/underrun statement, warranty inspections, and regular project management updates to the City. Cost: \$6.4M Fee: \$450K Role: Construction Engineer		<input type="checkbox"/> Check if project performed with current firm	

a

(1) TITLE AND LOCATION (<i>City and State</i>) West End Group C (RR195) City of New Orleans Department of Public Works, New Orleans, LA		(2) YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (<i>if applicable</i>) 2022 2023	
(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: Mr. Mills carried out all construction administration activities for the S&WB scope of work. This included organizing and conducting the pre-construction meeting, reviewing and approving submittals, and tracking RFIs. They provided assistance with technical issues such as rejections, change orders, and field change reports while also attending progress meetings and conducting site visits to monitor the work. Additionally, he reviewed quantities, approved pay applications, and ensured effective stakeholder coordination. The project was completed with a final inspection and report, preparation of the overrun/underrun statement, warranty inspections, and regular project management updates to the City. Cost: \$6.4M Fee: \$450K Role: Construction Engineer		<input type="checkbox"/> Check if project performed with current firm	

b

(1) TITLE AND LOCATION (<i>City and State</i>) Little Woods Group A City of New Orleans Department of Public Works		(2) YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (<i>if applicable</i>) 2024 2024	
(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: Mr. Mills performed Construction Administration (CA) services including review of material submittals; coordination with the City of New Orleans DPW, Community Outreach, and Sewerage, and Water Board; the sewer and water design consultants; administering bi-weekly progress meetings; review and approval of Contractor pay applications; responding to Contractor's RFIs (100 to date); preparing Field Changes (35 to date); preparing multiple Plan Changes; and project close-out. There was a total of fifteen (15) Plan Changes for a total added contract value of \$11,219,380 to a bid amount of \$14,148,934. Cost: \$14M Fee: \$1.5M Role: Construction Engineer		<input type="checkbox"/> Check if project performed with current firm	

c

(1) TITLE AND LOCATION (<i>City and State</i>) Lincoln Manor Subdivision Drainage Improvements, Kenner, LA		(2) YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (<i>if applicable</i>) ONGOING TBD	
(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: During construction, Mr. Mills was responsible for all construction administration services. This included reviewing and addressing the project schedule, Contractor's pay applications, RFIs, material submittals, and progress meetings. Additionally, an inspector was on-site at all times for observation of all work done by the contractor. MSMM reviewed, measured, and recorded all work completed for the production of daily field reports and verification of adequate traffic and site safety procedures. Cost: \$8.3M (Estimated) Fee: \$1.48M Role: Construction Engineer		<input type="checkbox"/> Check if project performed with current firm	

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
(COMPLETE ONE SECTION E FOR EACH KEY PERSON.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Jarron Gass, FPE, CFPS	Fire Protection Engineer	20	3

15. FIRM NAME AND LOCATION (City And State)

CDM Smith – Dallas, TX

16. EDUCATION (DEGREE AND SPECIALIZATION)

BS, Fire Protection Engineering

17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)

Professional Engineer (Fire Protection): GA 045497

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, Etc.)

Mr. Gass is a life safety professional with more than 20 years of experience designing, implementing, and troubleshooting fire protection systems. His expertise includes NFPA Fire Code interpretation, risk assessment and mitigation, design/engineering of fire protection systems, consulting for crisis management, policy interpretation, confidential records management, and staff safety program management. Jarron analyzes customer needs and evaluates fire and life safety code requirements to promote compliance and improve life safety. **Certifications:** NFPA Certified Fire Protection Specialist; US Department of Homeland Security Chemical-Terrorism Vulnerability Information (CVI) Certification

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (City and State)		(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
	USAF. Renovate Building 620 for Intelligence Squadron. Buckley Space Force Base, CO	2021	N/A

(3) DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Check if project performed with current firm

a **Scope:** Served as Engineer of Record for fire protection designs for the project to convert Building 620 from a squadron headquarters facility to a new intelligence facility with ICD/ICS 705 compliant spaces for the Space Command forces, including renovation of administration, operations, and training capabilities. Developed designs and sealed plans for life safety, fire suppression, and fire alarm systems. Visually inspected the building to review existing fire alarm and security systems and established emergency procedures. **Cost:** N/A **Fee:** \$3M **Role:** Fire Protection Engineer

(1) TITLE AND LOCATION (City and State)		(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
	USACE Europe. Design of Deployable Airbase Systems Warehouse. Sanem, Luxembourg	2021	2024

(3) DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Check if project performed with current firm

b **Scope:** Served as the Qualified Fire Protection Engineer for the design of buildings. Reviewed applicable UFCs, NFPA codes, and Host Nation standards. Developed the fire protection and life safety sections for the design submissions. Documented requirements for fire department vehicle access, fire flows for each building, service mains and laterals, facility on-site water storage, fire pumps, mass notification system, and emergency radio enhancement. The project provides an approximately 204,514 sq. ft. storage expansion at the existing location. Facilities include a 95,799 sq. ft. humidity-controlled storage warehouse for shipping containers. A two-story ventilated and partially heated building provides 73,194 sq. ft. for vehicle storage, including R-11 Refuelers, water-storing vehicles, and fire rescue vehicles. A 4-bay, approximately 5,382 sq. ft. vehicle maintenance facility is connected to this structure. The third building provides 23,680 sq. ft. humidity-controlled storage for 463L pallets on a 3-shelf racking system.

Cost: \$80M **Fee:** \$8.5M **Role:** Fire Protection Engineer

(1) TITLE AND LOCATION (City and State)		(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
	USACE Europe. Development of 35% Design Documents for Grafenwoehr Operational Readiness Training Complex. U.S. Army Garrison Bavaria-Grafenwoehr, Germany	2021	N/A

(3) DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Check if project performed with current firm

c **Scope:** Served as the Qualified Fire Protection Engineer for the design of new buildings. Integrated Host Nation Standards with U.S. fire protection codes and life safety codes. Coordinated permit approval by the German regulators required developing and negotiating Host Nation-approved fire protection concepts that went beyond the U.S. code requirements.

Cost: \$310M **Fee:** \$2.5M **Role:** Fire Protection Engineer

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
 (COMPLETE ONE SECTION E FOR EACH KEY PERSON.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
Marty Tittlebaum, PH. D, PE	Environmental Engineer	a. TOTAL 47	b. WITH CURRENT FIRM 9

15. FIRM NAME AND LOCATION (*City And State*)

MSMM Engineering, LLC – New Orleans, LA

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
BE, Civil Engineering, University of Louisville, 1971 ME, Civil Engineering, University of Louisville, 1972 Ph.D., Environmental Engineering, University of Louisville, 1979	Professional Engineer: Civil & Environmental (1980), KY (9563) & LA (28532)

18. OTHER PROFESSIONAL QUALIFICATIONS (*Publications, Organizations, Training, Awards, Etc.*)

Dr. Marty Tittlebaum previously served as the Edward G. Schlieder Chair for Urban Waste Management and Research, as well as the lead professor of Civil and Environmental Engineering at Louisiana State University. Dr. Tittlebaum is a leading engineering expert in water and wastewater treatment and reuse, water quality analysis management planning, solid waste disposal, and hazard toxic radioactive waste (HTRW) investigations, identification, and disposal. Dr. Tittlebaum serves as MSMM's Principal Quality Control Engineer, and he reviews all design products, flood mitigation planning, TMDL development, BMP implementation and evaluation, and resiliency analysis in addition to HTRW field investigations.

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
Ascension Parish Environmental Infrastructure Wastewater Treatment Plant Design, Hillaryville, LA	2022	TBD

(3) DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE

Check if project performed with current firm

Scope: (Full Project Writeup is included in SF330 Section F, Project Number 6) Development of a design-build package (plans and specs) for the creation of a 1.8 million gallon per day wastewater treatment plant as part of the Federal Section 219 Environmental Infrastructure program. Services consisted of civil/structural/mechanical/electrical engineering, cost estimating using MCACES, and a full USACE review process. Dr. Tittlebaum oversaw the design process, developed the wastewater treatment processes and water quality analysis, and provided HTRW research for the chosen site. He also served as the quality control manager, reviewing engineering submittal products that were provided to USACE.

Cost: \$21.5M **Fee:** \$1.4M **Role:** Environmental Engineer

(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
East Baton Rouge Parish North Landfill Leachate Pond Abandonment, Pump Station, and Forcemain, Baton Rouge, LA	ONGOING	ONGOING

(3) DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE

Check if project performed with current firm

Scope: This project was developed as part of the Federal Section 219 Environmental Infrastructure program to eliminate the lagoon treatment and discharge to a local stream, opting to reduce negative environmental impact by pumping leachate landfill instead to a new forcemain that tied into the parish's sanitary sewer treatment facilities. Dr. Tittlebaum is providing the water quality analysis and the quality control design for the project. He is tasked with reviewing all design products before they were submitted to USACE. **Cost:** \$2.7M **Fee:** \$455K **Role:** Environmental Engineer

(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
New Orleans International Airport (MSY) Drainage Pump Station, Kenner, LA	2017	2017

(3) DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE

Check if project performed with current firm

Scope: MSMM completed the design and EDC services for a 600 cfs stormwater drainage pump station and for all landside drainage as part of constructing a new airport terminal. The project involved working under an extremely compressed schedule while successfully delivering a true multi-disciplinary effort spanning various engineering disciplines, hydraulic modeling, architectural services, cost estimating, environmental permitting, drafting, and agency coordination. Dr. Tittlebaum provided the quality control design for the project. He reviewed all design submittals for accuracy/consistency and provided design comments to our engineering team prior to design submissions to the airport and the FAA.

Cost: \$45M **Fee:** \$3.2M **Role:** Environmental Engineer, QC

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
 (COMPLETE ONE SECTION E FOR EACH KEY PERSON.)

12. NAME Steve Finegan, AIA	13. ROLE IN THIS CONTRACT Architect	14. YEARS EXPERIENCE a. TOTAL 34 b. WITH CURRENT FIRM 5	
---------------------------------------	---	--	--

15. FIRM NAME AND LOCATION (*City And State*)

MSMM Engineering, LLC – New Orleans, LA

16. EDUCATION (<i>DEGREE AND SPECIALIZATION</i>) MS, Architecture, Tulane University, 1984 BS, Architecture, Tulane University, 1980	17. CURRENT PROFESSIONAL REGISTRATION (<i>STATE AND DISCIPLINE</i>) Architect (1987): TX (25434), LA (3898), TN (106064), MS (2873), AL (5101)
--	---

18. OTHER PROFESSIONAL QUALIFICATIONS (*Publications, Organizations, Training, Awards, Etc.*)

Mr. Finegan is a licensed architect with extensive recent Federal experience (USACE and the Air Force) providing architectural design services for new construction government office buildings, stand-alone facilities, drainage pump station safe houses and pump buildings, sewer treatment plants, and military facilities, including labs, barracks, and munitions facilities. Additionally, Mr. Finegan has extensive experience providing construction phase services, including leading construction progress meetings, responding to contractor RFI's, reviewing and approving pay requests, and providing design during construction.

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (<i>City and State</i>) East Baton Rouge Parish Wastewater Treatment Collection System 5 MG Ground Storage Tank and Pump Station, Baton Rouge, LA	(2) YEAR COMPLETED PROFESSIONAL SERVICES ONGOING	CONSTRUCTION (<i>if applicable</i>) TBD
--	---	---

(3) DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE

Check if project performed with current firm

Scope: (Full Project Writeup is included in SF330 Section F, Project Number 9) As part of the New Orleans District Environmental Infrastructure Program, MSMM provided the engineering design of two piles supported above-ground 5 million gallons (MG) prestressed concrete storage tanks, a 14,000 gpm sewer pump station, and a CMU control building. The existing pump station will be connected to the new pump station with a 42" diameter pipe and overflow chamber with automatic slide gates to control when flows will be diverted. Mr. Finegan is designing the 3,200 square foot stand-alone administration building (new construction) and all internal features (offices, lab, kitchen, bathrooms, warehouse, etc.) He is also helping develop the project specifications using Specs Intact. **Cost:** TBD **Fee:** \$1.6M **Role:** Architect

(1) TITLE AND LOCATION (<i>City and State</i>) Cow Bayou Drainage Pump Station Complex Design – Orange County, TX	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2021	CONSTRUCTION (<i>if applicable</i>) TBD
---	--	---

(3) DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE

Check if project performed with current firm

Scope: (Full Project Writeup is included in SF330 Section F, Project Number 1) Our team developed a 35% design package (plans, specs, and DDR) for a new 8,190 cfs drainage pump station and complex consisting of a pump station building, safe house, floodwalls, and sector gate. Main responsibilities consisted of site layout, architectural, civil, structural, and cost engineering. The task order was to provide a 35% level of design with anticipation of changing the project to a Design-Build RFP. Mr. Finegan provided the architectural design for the drainage pump station safe house. His design included all facilities required for the safe house, inclusive of restrooms, dormitory housing, and dining hall facilities. To develop the drawings, he followed USACE CADBIM policies and standards.

Cost: TBD **Fee:** \$1.3M **Role:** Lead Architect

(1) TITLE AND LOCATION (<i>City and State</i>) Replacement of Granger Lake Office Building, Granger TX	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2019	CONSTRUCTION (<i>if applicable</i>) 2022
--	--	--

(3) DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE

Check if project performed with current firm

Scope: Development of a design-bid-build package (plans and specs) for the creation of a new Lake office management building and demolition of the existing facilities. Design services included civil, structural, electrical, and mechanical engineering, as well as architectural and landscape architectural design. Mr. Finegan was the lead architectural designer for the project. He worked with USACE, and the Lake Management staff to develop a government office facility that met their needs and complied with the budget constraints. Mr. Finnegan developed the detailed design drawings in compliance with all UFC's and EM's and developed the project specifications in Specs Intact. He provided a detailed architectural design for the facility, inclusive of architectural treatments.

Cost: \$3.2M **Fee:** \$358K **Role:** Architect of Record and Architectural Team Leader

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
 (COMPLETE ONE SECTION E FOR EACH KEY PERSON.)

12. NAME Chad Woods, PLS	13. ROLE IN THIS CONTRACT Surveyor	14. YEARS EXPERIENCE a. TOTAL 30 b. WITH CURRENT FIRM 18	
------------------------------------	--	---	--

15. FIRM NAME AND LOCATION (*City And State*)

Johnson-McAdams Surveying & Mapping, LLC, Greenwood, MS

16. EDUCATION (DEGREE AND SPECIALIZATION) Associates, Degree Engineering Technology - Mississippi Delta Community College, 1992	17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Registered Professional Land Surveyor AI - #23432 / MS - #2716
---	---

18. OTHER PROFESSIONAL QUALIFICATIONS (*Publications, Organizations, Training, Awards, Etc.*)

Mr. Woods possesses extensive experience in a wide range of surveying and geospatial data collection techniques, including 1st Order horizontal and vertical control, GPS, and Automated DGPS for both hydrographic and topographic data collection using total stations and data collectors. His expertise spans land and boundary surveys, geodetic surveys, and advanced methods like On-the-Fly (OTF) and Real-Time Kinematic (RTK) GPS, which provide immediate and highly accurate positioning. Additionally, he is skilled in conducting Multibeam Hydrographic Sweep surveys, crucial for detailed underwater topography mapping. Mr. Woods is proficient in using Trimble's Business Center and other land surveying solution software, enabling him to efficiently process, analyze, and visualize survey data, ensuring high-quality results for a variety of surveying projects.

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (<i>City and State</i>) Sardis Lake Dam Deformation Monitoring, Inspection and Evaluation Survey, Vicksburg District, USACE	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
	2023	N/A

(3) DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE

Check if project performed with current firm

a **Scope:** This project consisted of performing Dam Deformation Monitoring and I&E surveys for the Sardis Lake Dam located in Panola County, MS. This survey included running 1st Order Levels as well as deformation measurements throughout the project site. Mr. Woods, as a Professional Land Surveyor, was the lead project manager for this delivery order.
Cost: N/A **Fee:** \$30K **Role:** PLS

(1) TITLE AND LOCATION (<i>City and State</i>) Upper Yazoo Project (UYP) Channel Improvement, Item 7C, Post-Dredge Surveys - Vicksburg District, USACE	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
	2023	N/A

(3) DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE

Check if project performed with current firm

b **Scope:** This project consisted of performing RTK topo surveys and multibeam hydrographic sweep surveys and mapping for 4.1 miles of the Tallahatchie River. Mr. Woods, as a Professional Land Surveyor, was the lead project manager for this project.
Cost: N/A **Fee:** \$155K **Role:** PLS

(1) TITLE AND LOCATION (<i>City and State</i>) 10-Mile Bayou Channel Enlargement Surveying and Mapping- Memphis District, USACE	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
	2023	N/A

(3) DESCRIPTION (*Brief scope, size, cost, etc.*) AND SPECIFIC ROLE

Check if project performed with current firm

c **Scope:** This project involved a comprehensive range of surveying and mapping tasks for an 8.6-mile segment of the 10 Mile Bayou located in Crittenden County, AR. The scope of work included conducting various topographic surveys to accurately map the land features and elevation changes, as well as single fathometer hydrographic surveys to measure water depths and underwater terrain. Additionally, GPS control surveys were performed to establish precise geospatial coordinates, ensuring the accuracy and consistency of the data collected. The project also required bridge surveys to assess and document the structural and spatial characteristics of bridges within the area, boundary surveys to define property lines and land ownership, and utility surveys to locate and map underground and overhead utility lines. Mr. Woods served as the lead project manager for this multifaceted project, overseeing all surveying and mapping activities to ensure they met the required standards and objectives. His expertise was instrumental in providing valuable data and insights for the management and development of the 10 Mile Bayou area.
Cost: N/A **Fee:** \$273K **Role:** PLS

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT		20. EXAMPLE PROJECT KEY NUMBER
(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)		
21. TITLE AND LOCATION (City and State)	22. YEAR COMPLETED	
Cow Bayou Drainage Pump Station Complex Orange, TX	PROFESSIONAL SERVICES 2021	CONSTRUCTION (If applicable) TBD
23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
USACE New Orleans District	Charlie Brandstetter, Design Manager	(504) 862-2501

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)

Design Fee: \$1.3M, **Construction Cost:** TBD

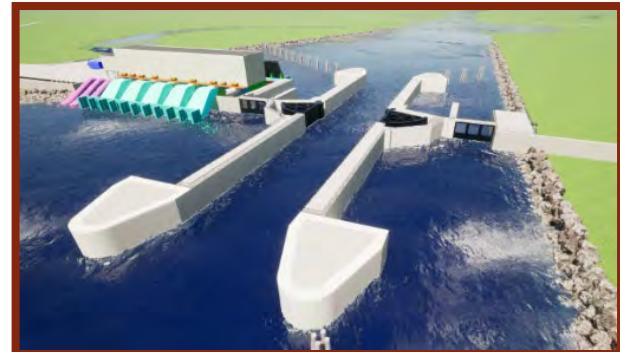
MSMM's team completed 35% design of the 8,190 CFS pump station design as part of the Sabine to Galveston Cow Bayou Complex project. This project includes levee tie-ins, floodwalls, sluice gate structures, and a sector gate for navigational traffic. The pump station consists of five 1,365 CFS horizontal, vacuum-primed pumps with 126-inch suction side and 115-inch discharge side formed concrete intakes and three 455 CFS vertical self-priming pumps with 84-inch discharge piping.

The preliminary design phase was a joint engineering effort between USACE New Orleans District, Galveston District, and our team, and we operated as one integrated design team. Our design responsibilities included structural design, architectural design, civil site work, geotechnical evaluation and design, cost estimating, CAD drafting, and project management. New Orleans District provided the mechanical and electrical design while we coordinated the mechanical and electrical design with the civil, structural, and geotechnical engineering design. Other project features being designed by our team include dolphin structures to protect the facility from possible boat impact, a pump station safe house, a fuel farm, and access roads. We designed the project in Microstation 3D and Civil 3D, utilizing Revit BIM 3D modeling and CIM modeling for the facilities. Preliminary investigations consisted of extensive geotechnical testing to determine soil suitability, initial estimates of dredging based on navigational traffic loads in the Cow Bayou area, structural calculations for the T-walls, and navigational structures. Preliminary architectural work was also completed to design the safe house, including all pump station operators' facilities and workspaces.

The pump station reinforced concrete structure is 250 FT by 128 FT, with eight pump bays, and is supported by a 100 FT long steel H-pile. The vertical pumps, engines, generators, gear boxes, vacuum pumps, and electrical equipment are all housed within the pump station building. The structural steel building above the concrete pump station structure is 43 FT tall and utilizes 8 IN thick precast concrete tilt-up wall panels. Our structural engineers, following USACE EM's, designed permanent project structures associated with the pump station, including the horizontal and vertical pump intakes and discharge structures, engine and pump support slabs, pump station building, pump station safe house, fuel tank foundation/containment, water tank foundation, west access bridge, exterior semi-gantry and overhead bridge crane supports, and protective dolphins. The pump station and safe house were designed utilizing STAAD software.

DEMONSTRATES EXPERIENCE IN:

- ✓ Site exploration, including surveying, geotechnical investigations and reports
- ✓ Hydrology and Hydraulics engineering and design services
- ✓ Structural design
- ✓ Civil works design
- ✓ Navigation design
- ✓ Large complex structure design
- ✓ Vertical design



MSMM's 3D Rendering of Cow Bayou Sector Gate and Pump Station Facility

The pump station safe house is a two-story structure 36 FT by 22 FT. The building is supported by cast-in-place concrete beams and columns. The safe house is a separate structure near the pump station building, houses emergency personnel required during a hurricane, and is designed for tornado-force winds. It required a 1,000-gallon per day onsite wastewater treatment facility due to the lack of facilities in the project area. Our civil engineering team provided the wastewater treatment facility design and layout of the entry roadways and parking lots and provided the site grading and utility layout in compliance with UFC-201-01.

The geotechnical services included engineering analyses of the soil borings data, which the New Orleans District provided our geotechnical engineers. The team provided recommendations regarding site preparation and drainage, estimates of allowable pile load capacity for support of pump station components and the fuel platform, and estimates of settlement. The geotechnical analysis included performing deep-seated stability analyses of the pump station, determining the unbalanced force, designing seepage cutoff beneath the pump station, performing analyses to evaluate potential uplift of the pump station during and after construction, determining lateral earth pressures for the wall design, and providing a preliminary design for temporary retaining structures (TRS). Analyses were also performed for the design of the dolphins to protect the pump station and gates. As part of our PM responsibilities, we prepared a detailed communication plan for our design team and the USACE M/E team, which outlined procedures for the coordination of activities and the transfer of information. The plan addressed scheduling, communication distribution structure, information collection and filing procedures, and a flow chart of personnel and project progression. Following receipt of the 35% design package, SWD engaged CERL/ERDC to complete additional hydrologic and hydraulic modeling and changed the acquisition strategy to Design-Build.



8,190 CFS Pumping Station including Horizontal and Vertical Pumps, Site Paving, Elevated Fuel Farm, Sector Gate and Protective Dolphins

This project received an Excellent CPARS rating from the New Orleans District, and the lead POC (Charlie Brandstetter) offered the following statement in the CPARS evaluation: “The Contractor provided excellent management of the task order contract. There was very little turnover during this effort, which allowed the team to work seamlessly from the beginning to the end of this contract. The Contractor did an excellent job managing his staff and coordinating the work between the Government and the contractor. The contractor's work was highly dependent on government input. On multiple occasions the contractor was forced to make up schedule based on slips resulting from government delays. The contractor was able to manage his assets and successfully recover the schedule. Due to the complexity of the project, the contractor had to work with multiple government offices with multiple disciplines all over the country, the contractor was able to manage his assets to produce highly accurate plans and designs despite the geographical challenges.”

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
a	MSMM Engineering, LLC	New Orleans, LA	Prime (82%) – Civil Design, Structural Design, Architectural Design, Detailed Design Report (DDR), Plans and Specs, Cost Engineering, Site Layout
b	Eustis Engineering, LLC	Metairie, LA	Sub (10%) – Perform Soil Borings, Soil Testing to Determine Soil Properties and Provide Soil Boring Logs in Accordance with USACE MVN Geotechnical Guide
c	Strategic Value Solutions, Inc.	Kansas City, MO	Sub (1%) – Cost Estimating

**F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S
QUALIFICATIONS FOR THIS CONTRACT**

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER

2

21. TITLE AND LOCATION (City and State)

Hillaryville Levee Redesign, Pump Station, and Force main
Hillaryville, LA

22. YEAR COMPLETED

PROFESSIONAL SERVICES

2016

CONSTRUCTION (if applicable)

2016

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER

USACE New Orleans District

b. POINT OF CONTACT NAME

Jasmine S. Williams, Project Manager

c. POINT OF CONTACT TELEPHONE NUMBER

(504) 862-2917

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)

Design Fee: \$339k, **Construction Cost:** \$2.1M

In 2016, MSMM completed full engineering design services for a New Orleans District Environmental Infrastructure Program project in Ascension Parish, LA. This project was designed under a partnership between the USACE New Orleans District and the cost-sharing partner Ascension Parish. The project was constructed because of the antiquated wastewater infrastructure in Ascension Parish, which would not allow the Parish to support future growth. MSMM staff prepared GIS mapping of the Parish's existing and proposed sanitary sewer system and prepared an Environmental Information Document (EID) for its long-term wastewater infrastructure plan. The completed EID led to a decision that Ascension Parish needed to significantly upgrade their public infrastructure system, specifically water lines and sanitary sewer systems, to meet various environmental regulations currently out of compliance.

MSMM identified alternatives that would route effluent drainage away from a neighborhood ditch and properly discharge it in accordance with future permit limitations. This led to the design and construction of a sewerage project that consisted of a 562 gpm sewerage pump station and 4,068 feet of discharge pipe that travels underneath two (2) state highways and over the Mississippi River Levee before discharging into the Mississippi River. The pipe material is ductile iron for above grade application (levee crossing), PVC for open cut installation and HDPE (high density polyethylene) for the directional drill aspect of the project. A concrete ramp was designed and constructed on the levee crown to allow the levee access road to pass over the top of the new 8" forcemain and 20" pipe installed for use under the future regionalization plan.

The project required extensive permitting through LADOTD, LADEQ, CPRA, and USACE New

Orleans District. MSMM completed 100% of the required design and permitting services for the project prepared ROW drawings, performed the construction management and engineering during construction (EDC), and worked with USACE to close out the construction phase of the project and prepare the new cross-sectional drawings of the improved levee. The pump station wetwell utilized precast concrete for the body with reinforced cast-in-place concrete base and top slabs.

**DEMONSTRATES
EXPERIENCE IN:**

- ✓ Site exploration, including surveying, geotechnical investigations and reports
- ✓ Structural design
- ✓ Civil works design
- ✓ Large complex structure design
- ✓ Design of water supply and storage, wastewater treatment and distributions systems and maintenance and repair of these systems



Map of Hillaryville Pump Station and Effluent Force main

As the discharge pipe went over the Mississippi River levee, a redesign of the levee was necessary. For the levee redesign and facilitation of levee crossing, it was imperative for MSMM to preserve the integrity of the levee system and not obstruct the levee access road. Various cases of global and local stability were evaluated and presented for review.

In addition to the design plans and specifications, our team was responsible for soil borings, geotechnical analyses, and detailed MCACES cost estimating and surveying. MSMM was responsible for project coordination and permitting through LDOTD, LDHH, LDEQ, CPRA, and USACE New Orleans District, preparation of ROW drawings, detailed design report (DDR), engineering during construction (EDC), working with USACE to close out the construction phase of the project and preparation of new cross-sectional as-built drawings of the improved levee.



Control Panel and Access Hatches for New Effluent Pump Station



Ribbon Cutting Ceremony at the Mississippi River Levee Crossing



Construction of the New Force main Levee Crossing and Access Road Ramp



Construction of the New Force main Levee Crossing and Access Road Ramp

MSMM was able to offer a higher quality of life to the Ascension Parish population through the improvement of local water quality.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
a	MSMM Engineering, LLC	New Orleans, LA	Prime (85%) – Sewer Pump Station Evaluation/Design, Civil, Structural, Electrical Engineering, Engineer on Record, Cost Estimating, Engineering during Construction
b	Eustis Engineering, LLC	Metairie, LA	Sub (6% of work performed) – Geotechnical

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT <i>(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)</i>		20. EXAMPLE PROJECT KEY NUMBER 3
21. TITLE AND LOCATION (City and State) 277K Levee Raise and Slope Flattening, and Delta Pump Station Dallas, TX	22. YEAR COMPLETED PROFESSIONAL SERVICES 2023	CONSTRUCTION (If applicable) 2023

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
USACE Fort Worth District	Donna Jones / Sarwenaj Ashraf	(817) 886-1056 / (817) 791-1447

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (*Include scope, size, and cost*)

Design Fee: \$2.9M, **Construction Cost:** \$65M (combination of MSMM / FNI delivery of project)

MSMM was tasked with developing two stand-alone 35% Design-Build (DB) RFPs for the USACE Fort Worth District as part of the Dallas Floodway System. The two DB RFP packages included Plans, Technical Specs, a DDR explaining the requirements of the Design-Build firm, a Summary of Work further explaining the project requirements and an MII construction cost estimate.

For the Levee Raise project, USACE selected Southwest Valley Constructors as the design-build contractor, with Freese and Nichols, Inc. (FNI) as the DOR. The project design was completed in 2022 and was recently constructed in 2023, with FNI providing EDC services. The East and West Levees extend for 11.4 miles and 10.7 miles, respectively, and the modifications include levee raise and slope flattening, including new access ramps, crest roads, and maintenance roads in impacted areas. In addition, 18 modifications to either existing drainage features or bridges are included within the project perimeter.

And the \$6M Pump Station project was advertised in February 2022. Services provided by MSMM included an HTRW survey (environmental analyses) of the Delta Pump Station and a value engineering study that produced two stand-alone Value Engineering Reports.

The 277K Levee Raise project scope consisted of the civil design of the existing East and West Dallas floodway levees to raise them to meet a 277K CFS water surface elevation and new levee crest access roads.

The levee raises occurred at 25 locations on the levee where the height is less than the required water surface elevation. MSMM's team utilized the Trinity River HEC-RAS models to establish the water surface elevations at each levee station. The project includes multiple bridge and levee interfaces, including structural bridge sealing plans along the East and West Levees.

Additionally, the project included flattening the levee side slopes to reduce erosion and provide ease of maintenance. The existing East and West levees have side slopes that were as steep as 2:8H:1V. The project will provide all side slopes flattened to 4H:1V along the entire length of the riverside. Numerous sluice gate structures and other protective measures were designed to withstand the additional soil loads. The existing access and levee roads will be demolished as part of the raising/flattening of the levees and will be rebuilt in the same location at a higher elevation. Technical specifications utilizing SpecsIntact were developed for temporary flood protection requirements, stormwater pollution prevention plan, and biological and archaeological monitoring requirements. A conceptual level MII construction cost estimate was also provided, reviewed by USACE during

DEMONSTRATES EXPERIENCE IN:

- ✓ Hydrology and Hydraulics engineering and design services
- ✓ Structural design
- ✓ Civil works design
- ✓ Large complex structure design
- ✓ Vertical design



MSMM's Site Visit of the 277k Levee Raise Project



Construction photo of the 277k Levee Raise Project, Placement of Levee Fill from Borrow Area at West Levee Segment

the DQC/ATR reviews, and updated for the final submission. The team responded to RFI's submitted during the bidding phase and provided all electronic and physical copies of the final edited submission to USACE.

The Delta Pump Station replacement project consists of a stormwater pump station replacement of the high-flow pumps and pump house, as well as the reuse of the structural chamber. Two pumps and associated bearing lubrication equipment, valves, trash rack, and gates will be housed in the new building. A new electrical room has been incorporated into the building design to house the upgraded equipment, SCADA system, and controls. The new Delta Pump House roof is designed to provide access panels for pump maintenance egress and ingress. The civil design accommodates a new debris collection area for small loaders and dump trucks. The trash rack on the high-flow culvert will be replaced with a trash rack to dump in the new collection area. The low-flow pump stairs will be removed and replaced. Site circulation was designed to provide access to the low-flow stairs from the new collection area. Our team worked with the City of Dallas and Oncor to identify electrical equipment added on-site to upgrade the electrical service. The site security fencing and gates will be replaced to secure the site, as well as lighting and security cameras. All existing facilities and structures will be demolished. Communication and electrical conduits, transformers, and conductors will be installed or reconnected for service and coordinated with the City of Dallas. The access road from the pump house to the Canada Drive intersection will be replaced with a 25-foot concrete curb and gutter road. The concrete road is designed to drain to the swale south of the new road through curb openings connected to flume/outfall structures and slope protection. Erosion protection measures were added at the pump station's outfall. This is comprised of a concrete apron and rock riprap.



MSMM's Site Visit of the
Delta Pump Station
replacement project

United Facility Code criteria were followed for the development of the documentation, including UFC 3-201-1 for the Civil Engineering design, 1-200-01 for the design of the pump station building, and UFC 3-250-1 for the roadway and parking lot design. Other criteria utilized consisted of UFC 3-201-01 and 3-410-01.

MSMM's team provided an independent value engineering study via a Virtual Platform. The workshop resulted in the development of Design Alternatives (some mutually inclusive) that were selected for incorporation into the design. There were also Design Suggestions that offered measures to simplify construction, provide various means for reducing costs (in these cases, these savings are hard to quantify), improve the operational requirements for the facility, and reduce the construction duration. In total, 80 alternatives were developed for the two projects, identifying roughly \$11M in cost savings. Following a review of the alternatives, \$200K in cost avoidance was realized, including changing the Delta Pump Station project from a rehabilitation project to a replacement project.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
a	MSMM Engineering, LLC	New Orleans, LA	Prime (60%) – 35% Design-Build Package RFP Development and Bidding Phase, Program and Project Management
b	Strategic Value Solutions, Inc.	Kansas City, MO	Sub (2%) – Cost Estimating
c	Freese and Nichols, Inc.	New Orleans, LA	DB DOR of Levee Raise Project (22%) – Design-Build DOR, EDC

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT		20. EXAMPLE PROJECT KEY NUMBER
(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)		
21. TITLE AND LOCATION (City and State)	22. YEAR COMPLETED	
Inner Harbor Navigation Canal Lake Borgne Surge Barrier, New Orleans, LA	PROFESSIONAL SERVICES 2016	CONSTRUCTION (If applicable) 2014

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
USACE New Orleans District	Jennifer Kline	(504) 862-1992

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)

Design Fee: \$64M, **Construction Cost:** \$1.2B

Following Hurricane Katrina, USACE began development of the \$1.2B Inner Harbor Navigation Canal Lake Borgne Surge Barrier - the largest civil works design-build project in the history of USACE. The 1.8-mile-long, 26-foot-high concrete barrier wall extends from the Mississippi River Gulf Outlet (MRGO) to the Gulf Intracoastal Waterway (GIWW), traversing a sensitive marsh environment. The surge barrier, designed to reduce risk from storm surge originating in Lake Borgne and the Gulf of Mexico during a 100-year event, is positioned with special consideration for New Orleans' most vulnerable areas.

The project eliminated the need for raising 30 miles of existing levees and floodwalls and shifted the first line of defense against storm surge 12 miles away from the city center. Vessel passage through the barrier wall is possible via a buoyant steel sector gate, a concrete barge swing gate, and a vertical lift gate. The project includes complete floodwall closure of the MRGO.

Tetra Tech prepared approximately 80 percent of the overall design of the project. As a subconsultant to the construction contractor, Tetra Tech led the design of the massive surge barrier project.

Tetra Tech provided design project management services and developed preliminary and detailed designs of the GIWW buoyant sector gate, structural monoliths, and foundations of the Bayou Bienvenue vertical lift gate. It also provided value engineering and engineering during construction. This included the barrier wall, two navigable floodgates at GIWW, a floodgate at Bayou Bienvenue, and the complete closure of the MRGO.

Tetra Tech developed the preliminary and detailed designs of the hydraulically operated buoyant steel sector gate at GIWW. This 42-foot-high sector gate closes a 150-foot-wide navigation channel and is composed of two sector leafs, each having a radius of 84 feet and an interior angle of 70 degrees. The leafs, positioned in the recesses of the monolith, stay open to avoid obstructing navigation and will be closed in the event of an approaching hurricane. Tetra Tech prepared extensive modeling and testing of proposed designs to confirm the structure's strength and capabilities in the face of hurricane-force waves and determine whether the passes are safe for navigation.

Tetra Tech also provided a detailed design of the gates' structures, buoyancy tanks, bearings, seals, and operating cylinders. In addition to hand computations, Tetra Tech used SAP software for structural analysis and Solidworks/Cosmos for mechanical analysis. The gate was checked for hydrodynamic loading caused by over-topping waves. The effects of differential temperature and settlement were also studied and considered in

DEMONSTRATES EXPERIENCE IN:

- ✓ Site exploration, including surveying, geotechnical investigations and reports
- ✓ Hydrology and Hydraulics engineering and design services
- ✓ Structural design
- ✓ Civil works design
- ✓ Navigation design
- ✓ Large complex structure design
- ✓ Vertical design



The IHNC alignment was selected to benefit navigation

the design. Tetra Tech also designed the abutments, towers, road access, and vehicular/equipment lift bridges at the Bayou Bienvenue. The 132-ton gate, when raised, allows marine vessels to pass through the surge barrier and is lowered in the event of a hurricane.

Tetra Tech designed an independent vehicular lift bridge system located on the barrier's protected side, which allows O&M vehicles to cross Bayou Bienvenue without lowering the gate. Tetra Tech also provided value engineering and engineering support during construction services.

In-the-wet and in-the-dry methods were used to construct various elements of the project to reduce cost and expedite construction. The barrier wall was designed for in-the-wet construction and included a deep foundation, which consisted of 3-foot-diameter steel batter piles bracing 66-inch-diameter spun cast concrete vertical piles. A pre-cast cap beam was used to integrate the pile foundation at the top of the wall and provide a roadway. This design was developed with contractor participation to meet schedule and cost requirements. The result was a structure that exceeded the owner's requirements for design life, resiliency, and low maintenance.



The GIWW sector gate was fabricated off-site and installed in-the-wet, providing significant schedule savings

The concrete monoliths for housing the GIWW sector gate leafs and the Bayou Bienvenue lift gate were designed to be constructed in the dry within the cofferdams. This construction method was adopted for its low cost and high-quality design of the monoliths as seepage cutoff walls.

Tetra Tech performed analyses for this project, including global stability, unbalanced load determination, evaluation of compression, tension, and lateral pile load capacities, drag load effects, pile drivability, and construction cofferdams. It also performed geotechnical analyses for the Bayou Bienvenue Lift Gate, Advanced Measures at Bayou Bienvenue, and tie-in T-Walls at the GIWW and MRGO levees. These analyses addressed global stability, pile capacities, settlements, seepage, and temporary retaining structures. Specialized analyses included Plaxis, Slope W, and UTexas4.

Design of the IHNC Lake Borgne Surge Barrier project required to conduct hydraulic engineering and analysis for the Gulf Intracoastal Waterway bypass barge, consisting of a 192-ft long, four-story high floating concrete swing gate that can be utilized for emergency closure of the GIWW. Also, an analysis of leakage rates through expansion and isolation joints (rubber flaps, seals, grout bags, closure piles, concrete caps) and an assessment of cavitation effects on concrete structures during storm events. An analysis of the floating stability of the swing gate was performed, which included an assessment of the response of the gate to sustained winds, current, and wave loading to determine its natural periods of oscillation.

The project site's weak soils required geotechnical engineers to perform complex soil-structure interaction analyses with state-of-the-art computer modeling software to investigate global stability and settlement, which helped resolve issues of seepage and piping.

As part of this project, Tetra Tech designed a reinforced concrete barge gate to close a 150-foot-wide navigation channel in the Gulf Intracoastal Waterway.

Tetra Tech received an EXCEPTIONAL rating for overall customer satisfaction.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT		
(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
a Tetra Tech	Bellevue, WA	Prime Designed (80%) – Task Order Management, Hydraulic, Structural, Mechanical, Geotechnical, Electrical, Engineer of Record, DDR Development

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT		20. EXAMPLE PROJECT KEY NUMBER
(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)		
21. TITLE AND LOCATION (City and State)	22. YEAR COMPLETED	
NTMWD Bois d'Arc Lake New Reservoir Water Supply Project Fannin County, TX	PROFESSIONAL SERVICES 2021	CONSTRUCTION (If applicable) 2022

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
North Texas Municipal Water District (NTMWD)	Cesar Baptista, PE	(972) 442-5405

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)

Design Fee: \$93M, **Construction Cost:** \$1.6B

MSMM Team member Freese and Nichols, Inc. (FNI) provided engineering, environmental, and construction management services to permit, design, and build this new reservoir. FNI coordinated extensively with local, state, and federal agencies, including USACE Tulsa District and stakeholders. FNI was the DOR for a new dam, spillway and reservoir, pump stations and intake structure, transmission pipeline, access roads, and a 17,000-acre environmental mitigation site. FNI served as the overall Program and Construction Manager.

FNI partnered with Fannin County to create a comprehensive plan and zoning ordinance. Planning included a public input process of stakeholder and public meetings to identify how residents envision the area's development around the lakeshore. The plan focused on land use, transportation, and parks and recreation.

FNI directed the geotechnical field investigation and laboratory testing, including more than 150 borings, advanced laboratory shear testing, and borrow source analysis.

FNI prepared an Individual Permit Application to USACE under the Section 404 CWA program and a Water Right Permit Application to TCEQ. USACE approved and issued IP was the first Section 404 CWA permit issued by USACE for a major water supply reservoir in the U.S. in approximately 30 years, demonstrating FNI's ability to perform complex environmental studies for a major civil works project. FNI completed an approved jurisdictional determination (AJD) to identify waters of the U.S. for the reservoir footprint and a 15,000-acre cattle ranch acquired for use as a mitigation site. FNI utilized several functional assessment techniques, including Habitat Evaluation Procedures (HEP), East Texas HGM, and the Rapid Geomorphic Assessment, to assess the quality of streams and wetlands to be impacted and support the development of the mitigation plan. The team used the USFWS HEP method to determine existing wildlife habitat value on more than 32,000 acres.

FNI developed and calibrated H&H models using HEC-1, HEC-HMS, HEC-RAS, HEC-GeoRAS, and HEC-2 including a long-term hydrologic model in RiverWare to evaluate historical streamflow response. FNI performed an in-stream flow study, including multidiscipline modeling using HEC-RAS, RiverWare, SAMWIN and River 2D.

DEMONSTRATES EXPERIENCE IN:

- ✓ Site exploration, including surveying, geotechnical investigations and reports
- ✓ Hydrology and Hydraulics engineering and design services
- ✓ Reservoir regulation, water and sediment quality engineering and design services
- ✓ Structural design
- ✓ Civil works design
- ✓ Large complex structure design
- ✓ Vertical design
- ✓ Design of water supply and storage, wastewater treatment and distributions systems and maintenance and repair of these systems



BOIS D'ARC Lake Embankment

FNI was DOR for more than \$1.6 billion of infrastructure. Major features designed by FNI included:

- A \$173 million, 2-mile dam comprised of an earthen embankment more than 90 feet high and 5M cubic yards of fill, which features a soil bentonite slurry trench and an extensive internal drainage system. The 800 LF service spillway is a 60-ft wide, 3-cycle labyrinth weir. This innovative solution provided a more efficient release system and saved more than \$4 million in construction costs over the initially planned ogee weir.
- A \$91 million raw water pump station (incl. 110-foot-tall intake structure) with an initial firm capacity of 100-MGD and a build-out capacity of 236-MGD to transfer untreated water via a 90-in-diameter, 35-mile-long pipeline. FNI designed 6,500 LF of the 300-psi pipeline under the service and emergency spillway to connect from the pump station to the transmission pipeline.
- A \$45 million terminal storage reservoir to store water and provide an emergency supply for a new water treatment plant. The reservoir is a two-celled 420-MG balancing storage reservoir with earthen embankments and one shared embankment.
- A \$65 million 330-MGD high service pump station (HSPS) to serve a new water treatment plant. The HSPS was designed for up to 18 horizontal, split-case pumps set approximately 30 feet below grade in two separate buildings ranging in size from 25 to 45-MGD at up to 4,500 horsepower. The facility and work include coordination with plant structures and underground infrastructure, a 96-inch suction header, an 84-inch discharge header, structural and architectural design for the building and associated structures, HVAC, power supply, and electrical and instrumentation design.

FNI also planned and designed the largest permittee-responsible compensatory mitigation project completed to date in the U.S. FNI prepared a comprehensive mitigation plan as part of the IP application to USACE and developed a conceptual design package to offset the environmental impacts to WOTUS. Major design components include restoration and enhancement of 5,802 acres of forested wetland, 3,082 acres of emergent wetland, 248 acres of shrub wetland, creation of 16,036 acres of open water (including the reservoir site), and restoration and enhancement of 40 miles of stream channels.



BOIS D'ARC Intake Tower

FNI helped the client utilize an alternative project delivery approach to provide cost certainty and minimize risks associated with the ecological function of the mitigation project. FNI prepared an RFP to solicit qualifications and costs to complete design activities and construct and maintain the proposed features for 20 years based on the final Mitigation Plan. The mitigation project construction was completed in 2022.

FNI utilized value engineering principles and activities throughout the design of the program to minimize construction costs on this \$1.6B program.

FNI worked with NTMWD's dedicated real estate team to obtain access to geotechnical investigations, environmental surveys, and other activities by engineering teams prior to property acquisition. With FNI's support, NTMWD was able to minimize the use of eminent domain for property access.

FNI helped procure four CMs at Risk and one full-service provider. During the construction phase, FNI provided program management, bid phase assistance, resident construction management, and inspection services for construction packages. At the peak of construction, FNI led a team of 44 resident engineers, inspectors, and support staff working full-time to support construction activities.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
a Freese and Nichols, Inc.	New Orleans, LA	Prime (78.5%) – Permitting, DOR, EDC

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT <i>(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)</i>		20. EXAMPLE PROJECT KEY NUMBER
		6
21. TITLE AND LOCATION (City and State)	22. YEAR COMPLETED	PROFESSIONAL SERVICES
Ascension Parish Environmental Infrastructure Wastewater Treatment Plant Design Hillaryville, LA	2022	CONSTRUCTION (If applicable)
23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
USACE New Orleans District	Christopher L. Dunn, Ph.D., P.E. / T. (Jerry) Shih, Ph.D., P.E. / George Krausser, P.E.	504-862-1799 / 504-862-2423 / 504-862-1712

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Design Fee: \$1.4M, **MCACES Cost Estimate:** \$21.5M

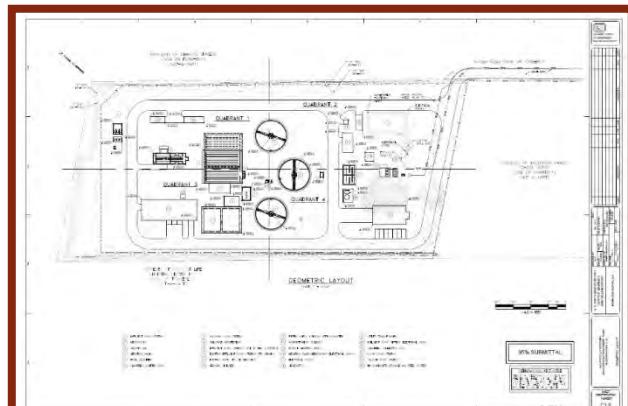
As part of the New Orleans District Environmental Infrastructure Program, our team worked with the Ascension Parish Government to design a new Wastewater Treatment Plant within the area. Our engineers are to provide 100% bid ready plans and specifications (in USACE format) for a new 1.8 million gallon per day (average daily flow) WWTP to increase treatment capacity and facilitate regionalization of the Parish. The Wastewater Treatment Plant would be adjacent to the recent MSMM designed and constructed effluent sewer pump station and forcemain (separate task order). The WWTP is one step of a larger regionalization plan that MSMM developed. This regionalization plan aimed to bring all wastewater in the area to a single advanced treatment facility and discharge the treated effluent into the Mississippi River instead of local ditches.

This area of Ascension Parish utilized a fragmented system of treatment options with subpar results that varied by subdivision. It included septic tanks, package treatment plants, and an oxidation pond, all discharged into local ditches and streams. The regionalization plan was formed to increase the quality of life and rectify the environmental situation by eliminating discharge into local water sources.

The treatment plant design included a new treatment plant on an eight (8) acre parcel of land owned by Ascension Parish. The design consisted of a dual set of treatment processes for redundancy. It included an influent pump station, headworks with screens and grit removal, extended aeration basin, circular clarifier, chlorine contact chamber, aerobic digesters, belt filter sludge press with new building, maintenance/administration building, and emergency generator as well as site fencing, drainage, and internal asphalt roadways. The facility was designed with future expansion in mind so that an aeration basin and clarifier can be constructed to easily upgrade the treatment plant to 2.7 mgd as additional capacity is needed.

DEMONSTRATES EXPERIENCE IN:

- ✓ Site exploration, including surveying, geotechnical investigations and reports
- ✓ Hydrology and Hydraulics engineering and design services
- ✓ Structural design
- ✓ Large complex structure design
- ✓ Design of water supply and storage, wastewater treatment and distributions systems and maintenance and repair of these systems



MSMM's Site Plan for Ascension Wastewater Treatment Plant

MSMM provided full design services, including project management, letter report and PPA preparation, feasibility report, field topographic surveying, geotechnical investigation, structural, mechanical, electrical, civil engineering, instrumentation, process, H&H modeling, environmental, coordination, and permitting support.

Civil engineering design included sizing the influent and effluent pump station, headworks design, and site layout, including site drainage, access roads, and process piping. Structural engineering design included reinforced concrete structures for all process units, pump stations, and slabs on grade. The structural design also consisted of the CMU electrical/control buildings and pile design for all structures and buildings.

The geotechnical investigation included drilling three deep undisturbed sample-type soil test borings, ten shallow auger borings to determine subsoil conditions and stratification, and eleven CPTs to augment the soil test borings. Soil mechanics laboratory tests performed on samples obtained were used to evaluate the physical properties of the various substrata. Based on the available soil boring and laboratory tests, engineering analyses were made to determine recommendations regarding site preparation, excavations and dewatering, lateral earth pressures, estimates of allowable soil bearing values, uplift, pile capacity curves, estimates of settlement and general foundation construction procedures, and recommendations for flexible and rigid pavements.

The WWTP effluent discharge is now routed to the Mississippi River through an effluent pump station and forcemain. In addition to the design documents, our team was responsible for project permitting through USACE, LADEQ, LADHH, LADOTD, and CPRA of Louisiana. Our work also included MCACES cost estimating, presentations at public meetings, and surveying.



3D Rendering by MSMM of Proposed Wastewater Treatment Plant



3D Rendering of Final Clarifiers, Aeration Basins, RAS/WAS Pump Station, Blower Pads, Filter Press Building, Electrical Rooms, and Headworks

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
a	MSMM Engineering, LLC	New Orleans, LA	Sub (90% of work performed) – Design, Civil, Architectural, Electrical, Mechanical & Structural, Design, Plans and Specs, Cost Engineering, Public Information, Preparation of Letter Report, PPA
b	Eustis Engineering, LLC	Metairie, LA	Sub (5% of work performed) – 100% Geotechnical Investigation

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT		20. EXAMPLE PROJECT KEY NUMBER
(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)		
21. TITLE AND LOCATION (City and State)	22. YEAR COMPLETED	
Southeast Louisiana Urban Flood Control – Harahan Pump to the River Jefferson Parish, LA	PROFESSIONAL SERVICES 2018	CONSTRUCTION (if applicable) 2018

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
USACE New Orleans District	Durund Elzey	(504) 862-1674

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)

Design Fee: \$7.1M, **Construction Cost:** \$150M

In March 2004, USACE completed a 533(d) report and environmental assessment for the Harahan Drainage Pump to the River project, thus paving the way for USACE and Jefferson Parish (non-Federal cost share sponsor) to move forward with implementation of this important federally funded \$150M Southeast Louisiana (SELA) Flood Control Project. The Harahan Pump to the River project was a first of its kind in the area since it would pump stormwater from the surrounding area into the nearby Mississippi River in lieu of taking the 7-mile path north through various drainage canals to the two Jefferson Parish pumping stations on Lake Pontchartrain.

The project was initially divided into two parts for the development of the DDR's. The DDR's covered the 1,200 cfs drainage pump station, and the other addressed the remainder of the project, including the 700-foot-long suction canal, 9,000-feet of three side-by-side 84-inch discharge pipes, Mississippi River levee pipe crossing, pile-supported concrete discharge basin, and a 60-foot flood side shift of the Mississippi river levee. This DDR's were primarily completed by three of MSMM's current employees. After acceptance of the DDR's and preliminary design, the project was split into six design packages. These included the intake canal, pump station, three segments of discharge piping, and the final section (piping, levee crossing, and discharge basin).

Our team, comprised of CDM Smith and MSMM Engineering, completed the design packages for the intake canal, pump station, and 1st segment of the discharge piping. In all, the three phases designed included the following constructed features: approximately 21,000 feet of buried 84" steel discharge piping; a 60-foot flood side shift of the Mississippi River levee; an above-ground levee crossing for the three parallel 84" steel pipes supported on concrete bents with spread footings; and a 62-foot wide by 53-foot-long pile supported discharge basin located at the water's edge of the Mississippi River. Additional design features included a combination of relocated and new subsurface drainage and ditches; approximately 4,500 feet of relocated waterline; two submersible pump stations strategically placed at low points to allow all of the 84" piping to be drained when not in use; removal and replacement of multiple concrete and asphalt roadways; development of a three-phase traffic control plan for the open cut pipe crossing of the 4-lane Jefferson Highway (LA Highway 48); cathodic protection design for the buried steel pipes; and dolphin structures in the river to protect the discharge basin.

DEMONSTRATES EXPERIENCE IN:

- ✓ Site exploration, including surveying, geotechnical investigations and reports
- ✓ Hydrology and Hydraulics engineering and design services
- ✓ Structural design
- ✓ Civil works design
- ✓ Navigation design
- ✓ Large complex structure design
- ✓ Vertical design



The pump suction intake design is in accordance with USACE formed suction intake (FSI) type 10 geometries.

A detailed hydraulic feasibility study was completed, including a physical model of the pump station to refine its layout and configuration. The hydraulic study and physical model identified flow problems such as vortices, swirls, and non-uniform velocities during the design stage so the pump station and intake structure could maximize pump efficiency. The results of the hydraulic study were incorporated into the design of the pump station and intake structure.



New Intake Canal

Cofferdam analyses were performed utilizing the USACE program CWALSHT. Soil boring data were compared to the information in the previous feasibility study report, yielding general concurrence on soil strata in the vicinity of the proposed improvements. A geotechnical investigation included five borings for the pump station. Three borings were drilled to 100 feet deep, and 2 borings were drilled to 80 feet below the existing ground surface. Following this fieldwork, soil mechanics laboratory testing evaluated the material properties of the soils contained in each boring. The results determined and recommended allowable soil bearing values, pile loading capacities, settlement estimates, and overall construction procedures such as pile driving and vibration monitoring.

Specifications were created using SpecsIntact and cost estimates were developed per ER 1110-1-1300 and using MII. The cost estimator used supporting databases such as CB12EB-b (English Cost Book), LB12NatFD (National Labor Library), and EP11R03 (Region 3 Equipment Library). Current fuel prices, Davis-Bacon wage rates, and material costs were calculated using vendor quotes supplemented by RS Means CostWorks.

Using MicroStation/InRoads, a CIM tool, guided the development of designs for site civil grading, parking lots, gates, and pipelines. BIM tools and 3-D models were used for design details inside the pump station facility, including the layout of the HVAC, bunker/sleeping quarters, and door safety protection.

Extensive coordination with USACE, Jefferson Parish, the City of Harahan, local property owners, SLFPA-E, the LA Department of Health, the US Coast Guard, and the Louisiana Department of Transportation and Development (LADOTD) was necessary to complete this project. Permits were required from LADOTD to construct the driveways adjacent to Dickory Avenue (LA 3154). Agreements between the city of Harahan and LADOTD were necessary to establish the maintenance responsibility for improvements constructed with LADOTD rights-of-way, most notably site drainage improvements. Additionally, an open-cut installation of LA Highway 48 for installation of the discharge pipes required a complex 3-phase traffic control plan to be coordinated and implemented during construction. Most of the pipes' planned route was obstructed by several thousand feet of Entergy electrical distribution lines as well as a major transmission line that connected the east and west banks. The relocation of the towers and transmission line was a multiyear effort.

In addition to the services described above, our engineering team developed the real estate right-of-way drawings and provided engineering support during advertisement and engineering support during construction (EDC). Engineering services during construction included close coordination with USACE New Orleans District with RFIs to support real-time field decisions, submittal reviews, site inspections, and record drawings during the construction bidding phase.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
a	CDM Smith	New Orleans, LA	Prime (65%) – Civil & Structural Design, Hydrology and Hydraulics engineering, Engineering Support During Advertisement, Engineering Support During Construction
b	MSMM Engineering, LLC	New Orleans, LA	Sub (30%) – Civil Design, DDR Development, P&S Development, Cost Engineering Using MCACES, EDC
c	Eustis Engineering, LLC	Metairie, LA	Sub (5%) – Geotechnical Engineering

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT <i>(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)</i>		20. EXAMPLE PROJECT KEY NUMBER 8
21. TITLE AND LOCATION (City and State)	22. YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (If applicable) Navigation Ecosystem Sustainability Program Plan for Lock Completion, Lock 25 Winfield, MO 2023 ONGOING	
23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
USACE St. Louis District	Lucas Krumwiede, PE	(314) 331-8316

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT *(Include scope, size, and cost)*

Design Fee: \$3.27M, **Construction Cost:** \$732M

This Inland Navigation project demonstrates our team's ability to comprehensively plan and design a new, state-of-the-art 1,200-foot lock as part of the Navigation and Ecosystem Sustainability Program (NESP) within the Upper Mississippi Basin.

Lock and Dam 25 is located on the Mississippi River in Calhoun County, IL, and Lincoln County, MO, at Mile 241.1. The current capacity of the Mississippi River navigation system is limited by the existing lock facilities, which need to be rehabilitated and modernized. Lock 25 was constructed in the 1930s and designed to accommodate smaller tows and only a fraction of the traffic volume that currently transits the system. The existing lock chamber is 600 feet long, requiring 15 barge tows to lock through using a two-step process. This takes approximately 1.5 to 2 hours, causing significant delays to navigation. The new lock chamber will be 1,200 feet long, significantly reducing lockage delays and increasing operational safety.

Site-specific design for Lock 25 was initiated in 2005, and Tetra Tech developed the lock design based on a lift-in construction method that allows the lock wall monoliths to be constructed with only three winter closures, utilizing wintertime construction practices to minimize disruption to navigation. The project was put on hold in 2010 due to a lack of funding but was restarted in 2020. Tetra Tech has completed engineering during the construction of the lock wall modifications, and additional designs for the intermediate wall and riverwall monoliths are ongoing. All drawings and specs created for the completed task orders have been developed utilizing Bentley MicroStation and SpecsIntact.

The Lock Completion Plan Report details a plan and schedule to complete the lock and provides narratives that document observations and key assumptions made during the schedule development. The remaining work has been divided into engineering investigations and special studies, along with four construction contracts with associated major design activities. The investigations and special studies are to review, update, and/or expand and complete environmental studies and documentation as needed, complete geotechnical investigations and studies, and perform additional hydraulic studies to inform the design.

DEMONSTRATES EXPERIENCE IN:

- ✓ Site exploration, including surveying, geotechnical investigations and reports
- ✓ Hydrology and Hydraulics engineering and design services
- ✓ Structural design
- ✓ Civil works design
- ✓ Navigation design
- ✓ Large complex structure design



A lock extension downstream of the existing auxiliary lock gate bay will provide a new 1,200-ft lock that can pass a 15-barge tow in one lockage, significantly reducing navigation delays and increasing overall safety.

The four construction contracts include:

- Contract 1: Existing Lock Wall Modifications
- Contract 2: Pile Load and Installation Test, Civil Site Improvements, and River Wall Transition Monolith
- Contract 3: Scour Hole Remediation and Remainder of the Lock
- Contract 4: Approach Walls (including demolition of the existing upstream approach wall)

Tetra Tech identified critical activities in the design schedule with codes that associate these activities with the design narratives where the activities are described. Each narrative describes the design work and critical decisions that have been completed to date and the decisions and work that are required to complete the design. Activities and decisions on the critical path or tied to other dependencies were documented in the narrative and schedules. The narratives provided estimated costs, resources, and duration to complete the design, as well as duration and costs for the construction contracts.

For the lock wall monolith concept study, Tetra Tech reviewed the lift-in construction method and combined elements of the hanging forms method used for the Charleroi Lock and Dam. The new and improved method of constructing this lock saves time and money. The innovative construction method uses pre-built forms rather than pre-cast concrete segments, which makes the design more flexible and allows the limited design schedule to be shortened, in addition to making less pickweight for the crane. The in-the-wet construction of the lock potentially saves significant design and construction costs as well as provides construction schedule benefits. This work demonstrates experience and knowledge of lock design and construction methods necessary to minimize navigation impacts during construction.

The lift-in gate is 40' tall and 30' wide. Tetra Tech's design allows for a pre-cast concrete finish for the inside of the lock and keeps all of the formwork and working parts of the lock inside the lock wall. This approach confines all of the construction to within the new lock footprint without impacting the existing lock, allowing navigation to remain open during construction. Tetra Tech applied lessons learned from design work at Charleroi Lock to improve the design and construction process, saving time and money. The new proposed method uses steel forms that can be reused once the concrete has been poured, whereas normally, it would be embedded into the concrete and lost after the concrete has been poured. The process calls for the construction of every other monolith segment. Once this is complete, the contractor can come to install formwork and work on the segment in between. Tetra Tech designed formwork that could be dewatered, allowing access to the inside to put in reinforcement if needed and then build up the monolith. Rather than design a panel with blockouts for line hooks, mooring bits, ladders, and other structures, a plywood box can be used as a placeholder for these elements that could be added later after dewatering. This process is much more forgiving because it eliminates the need to design 20 different panels, which are also easier to store. In addition, minor adjustments can be made to the culvert to ensure proper alignment and improve construction tolerance when constructing the monolith segments in between.

The total project costs were developed by escalating the 2010 cost estimate and reallocating funds to the appropriate design and construction contracts. The Lock Completion Plan Report provides the total project cost based on the four construction contracts and the major cost categories: planning, engineering and design, construction management, and construction. The figures included in the report show the annual distribution of costs for design and construction for the duration of the project.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
a	Tetra Tech, Inc.	Bellevue, WA	Prime (65%) – Project Management, Structural, Mechanical, Electrical, and Geotechnical Engineering, The Lock Completion Plan Report, Lock Wall Monolith Concept Study

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT <i>(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)</i>		20. EXAMPLE PROJECT KEY NUMBER 9
21. TITLE AND LOCATION (City and State)	22. YEAR COMPLETED	
East Baton Rouge Parish Wastewater Treatment Collection System 5 MG Ground Storage Tank and Pump Station Baton Rouge, LA	PROFESSIONAL SERVICES ONGOING	CONSTRUCTION (If applicable) TBD
23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
USACE New Orleans District	George Krausser, P.E., Project Manager	504-862-1712

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)

Design Fee: \$1.6M, Construction Cost: TBD

As the lead design firm under the **New Orleans District Environmental Infrastructure Program**, MSMM is in charge of design and construction services involving **wastewater storage** in the collection system at the location of the existing Pump Station 45. The project is intended to reduce the heavy flows into the **North Wastewater Treatment Plant** during extreme rain events when **inflow and infiltration (I/I)** have led to overflows at the treatment plant.

The project includes the design of two pile-supported above-ground 5 million gallons (MG) prestressed concrete storage tanks, a 14,000 gpm sewer pump station, and a CMU control building. The existing pump station will be connected to the new pump station with a 42" diameter pipe and overflow chamber with automatic slide gates to control when flows will be diverted to the new pump station. The new pump station will pump overflow into the storage tanks for temporary holding, and the wastewater will be released slowly back into the existing pump station when the treatment plant is ready using control valves and tank head pressure.

MSMM is providing full design services, including project management, comprehensive planning, field topographic surveying, geotechnical investigation, structural, mechanical, electrical, instrumentation, process, civil engineering, H&H modeling, environmental support, coordination, and permitting support. Services include the development of a PPA and letter report, preliminary studies, engineering design through detailed plans and specifications, design analysis and technical documentation report preparation, and MCACES (MII) cost estimates.

- Civil Information Modeling (CIM) Bentley OpenRoads / OpenBuildings was used to design the storage tank, pump station, piping, and other civil site plans. CIM allowed quick revisions of multiple sheets and sections. It also visualizes the proposed facilities in a 3D model to resolve any conflicts in real-time.
- Civil design included storage tank/pumping station site design, interior drainage, drainage culverts, access roads, and site design.

Additional design features include two large in-ground control valve junction boxes and concrete-paved access roads around the tanks. The project will be built in two phases, with half of the project—one 5 MG ground storage tank and associated site work—to be constructed at a later date. All design elements were planned for

DEMONSTRATES EXPERIENCE IN:

- ✓ Site exploration, including surveying, geotechnical investigations and reports
- ✓ Structural design
- ✓ Large complex structure design
- ✓ Design of water supply and storage, wastewater treatment and distributions systems and maintenance and repair of these systems



Existing Pump Station 45 and Control Building

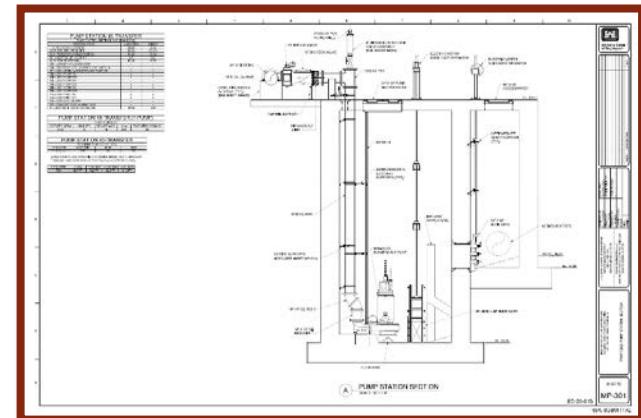
future expansion and will be constructed in preparation for the second storage tank. This includes electrical, pump station, piping, site utility, and control design.

Site work will include fencing, concrete drives around the tank, service water, site lighting, and site drainage. This will require modifications to the current pump station instrumentation and control system in order to allow systems to work together properly. Additional structural design features include two large control valve junction boxes, electrical controls to operate flow between tanks and the treatment plant and a control building that will house the electrical control systems.

The MSMM team also performed geotechnical investigations to develop analyses for soil bearing values, pile load capacities, temporary retaining structure design, and general construction procedures. As part of the loading considerations, we presented several calculations for uplift analyses, soil loads, wind loads, fluid loads, etc.

An additional responsibility for this project will be topographic surveys, which will include the presentation of Right of Way (ROW) Maps with aerial background images, CAD drawings, and property limit determinations. All structural design elements of this project will comply with USACE's Engineering Manuals, Regulations, and Technical Letters for Civil Works Design and Construction.

MSMM is responsible for providing 100% bid-ready plans and specifications (in USACE format). Additional services performed by MSMM will include an MCACES cost estimate, coordination with East Baton Rouge Parish, DHH, and FAA, permitting, preparation of a Letter report for the Project Partnership Agreement between USACE and East Baton Rouge Parish, and eventual assistance to the USACE with bidding and construction services.



MSMM's Preliminary Design Section of Proposed 14,000 gpm Sewer Pump Station

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
a MSMM Engineering, LLC	New Orleans, LA	Sub (78% of work performed) – Design, Structural, Civil, Process, Piping, Engineering, Mechanical Instrumentation, EA Assistance, ROW Maps, MII Cost Estimate, Permitting, Local Sponsor Coordination, Hydraulics, Bidding, EDC

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT <i>(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)</i>		20. EXAMPLE PROJECT KEY NUMBER 10
21. TITLE AND LOCATION (City and State) River Road Aquatic Ecosystem Restoration CAP Section 206 San Antonio, TX	22. YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (If applicable) ONGOING TBD	
23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER USACE Fort Worth District	b. POINT OF CONTACT NAME Maria Valadez-Lopez	c. POINT OF CONTACT TELEPHONE NUMBER (817) 886-1881

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)

Design Fee: \$1.2M, **Construction Cost:** TBD

MSMM was hired by the United States Army Corps of Engineers (USACE) to perform 100% of the Design-Bid-Build services required by the San Antonio River Authority as part of their Continuing Authorities Program (CAP). The project involves the design of pool/riffle/run features; restoration of the riparian habitat in Davis Park; removal of low water crossings (LWC) 1, 2, and 3; and the demolition of Avenue A to be replaced by an Americans with Disabilities Act (ADA) pedestrian and small vehicular path lined with native soil and mature vegetation. The design will also include recreational elements such as pedestrian bridges, asphalt paths, access gates, bird-watching platforms, signage, and trash receptacles.

DEMONSTRATES EXPERIENCE IN:

- ✓ Site exploration, including surveying, geotechnical investigations and reports
- ✓ Hydrology and Hydraulics engineering and design services
- ✓ Structural design
- ✓ Civil works design

MSMM's responsibilities will include a 100% Design-Bid-Build (DBB) RFP, Geotechnical Investigation, Topographic Survey, Hydrology and Hydraulics Analysis, Value Engineering Study, Cost Estimate/Current Working Estimate, Construction Schedule, and a Storm Water Pollution Prevention Plan (SWPPP).

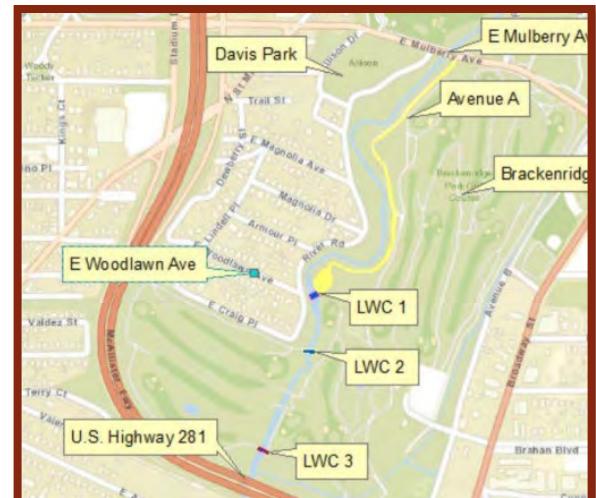
Recreational Elements:

- Design of a 2,450 linear foot by 8-foot ADA-compliant asphalt path located along the original path of Avenue A. New native soil and vegetation are to be located along the new asphalt path of Avenue A.
- Design of 2 recreational fishing piers with complementary plantings along the perimeter of the San Antonio River.
- The design of signs and supports necessary for installation should include information on restoration, recreation, wayfinding, and general rules and regulations.
- Design of trash receptacles. Trash receptacles are to be clustered in specific areas along the new asphalt path. Fishing piers will be installed in public access areas of the project site.
- Defining and locating all staging and laydown areas identified with the help of USACE within the disturbed areas of the SOW.

Funding for additional betterments to be included upon congressional approval:

- Widening of trail from eight feet to ten feet.
- Change the trail surface from asphalt to acid-washed finished concrete with decorative design inlays.
- Providing a twenty-foot by twenty-foot concrete pedestrian trailhead located off Mulberry Ave with low-impact lighting.
- Providing a parking lot with four to five permeable parking spaces delineated with a concrete border.
- Connecting the new trail to the Brackenridge Golf Course access road, installing steel bollards at the trail's entryway, and providing low-impact safety lighting.
- Providing an improved pedestrian crossing on East Mulberry Ave including, but not limited to, painted road crossing, signage, and flashing lights.
- Providing a solar-operated 911 call box.
- Providing an American with Disability Act (ADA) compliant water fountain with dog watering station.
- Providing two dog mitt stations.

- Providing two metal recycling receptacles.
- Providing two shade structures and benches.
- Providing an additional ten feet wide by 4000 LF acid-washed finish concrete trail with decorative design inlays through Brackenridge Golf Course.
- Providing a pre-cast ADA-compliant pedestrian bridge rated for a 7-ton load capacity.
- Providing fifty wooden bollards with steel cable to mark property boundaries in Brackenridge Golf Course.
- Providing twelve metal way-finding markers.
- Providing twelve additional trail signage.
- Providing a five-by-five-foot pedestal for art installation.
- Providing two biofiltration drainage features to purify rainwater from debris and lower the water temperature.



Project Location Map

MSMM's responsibilities also include coordination with the USACE Fort Worth District Project Design Team, San Antonio River Authority, Golf Course, Public, installation personnel, and local utility providers.



Existing Conditions During MSMM's Site Visit



3D Models of Pedestrian Bridge and Bird Watching Platform Developed by MSMM

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
^a MSMM Engineering, LLC	New Orleans, LA	Prime (92%) – 100% Design Bid Build; Stream Restoration; Landscape Analysis; Value engineering; Cost Estimate; Civil & Structural Design

26. NAMES OF KEY PERSONNEL (From Section E, Block 12)		27. ROLE IN THIS CONTRACT (From Section E, Block 13)	28. EXAMPLE PROJECTS LISTED IN SECTION F (Fill in "Example Projects Key" section below before completing table. Place "X" under project key number for participation in same or similar role.)									
			1	2	3	4	5	6	7	8	9	10
Mark Wingate, PE (MSMM Engineering, LLC) New Orleans, LA		Program Manager						X	X		X	X
Manish Mardia, PE (MSMM Engineering, LLC) New Orleans, LA		Senior Advisor	X	X	X				X	X	X	X
Stuart Seiler, PE, PMP (MSMM Engineering, LLC) New Orleans, LA		Project Manager									X	X
Jim Wilson, PE, LEED®AP (MSMM Engineering, LLC) New Orleans, LA		Civil Engineer		X	X							X
Scott Chehardy, PE (MSMM Engineering, LLC) New Orleans, LA		Civil Engineer	X						X	X		X
Bob Yokum, PE (MSMM Engineering, LLC) New Orleans, LA		Structural Engineer	X	X				X				X
Ramesh Kalvakaalva, PE, SE (MSMM Engineering, LLC) New Orleans, LA		Structural Engineer			X					X		X
Brian Twitchell, PE (Tetra Tech, Inc.) Bellevue, WA		Structural Engineer				X					X	
Tony Bosecker, PE (Freese and Nichols, Inc.) New Orleans, LA		Geotechnical Engineer			X		X					
James Hance, PE (Eustis Engineering, LLC) Metairie, LA		Geotechnical Engineer	X	X					X	X		
Jeff Wilson, PE (MSMM Engineering, LLC) New Orleans, LA		Hydraulic Engineer			X							X
Brian Watson, PE, PH, D.WRE (Tetra Tech, Inc.) Bellevue, WA		Hydraulic Engineer					X					X
Jeff Hensley, PE (Freese and Nichols, Inc.) New Orleans, LA		Electrical Engineer							X			
Indira Petrovic, PE, PMP (CDM Smith) New Orleans, LA		Electrical Engineer								X		
Eric Flickinger, PE (Tetra Tech, Inc.) Bellevue, WA		Mechanical Engineer				X						X
Chris Mills, PE (MSMM Engineering, LLC) New Orleans, LA		Construction Engineer			X					X		
Jarron Gass, FPE, CFPS (CDM Smith) New Orleans, LA		Fire Protection Engineer										
Marty Tittlebaum, PE (MSMM Engineering, LLC) New Orleans, LA		Environmental Engineer	X	X	X				X			X
Steve Finegan, AIA (MSMM Engineering, LLC) New Orleans, LA		Architect	X						X			X
Chad Woods, PLS (Johnson-McAdams) Greenwood, MS		Professional Land Surveyor										

29. EXAMPLE PROJECTS KEY													
NO	TITLE OF EXAMPLE PROJECT (FROM SECTION F)				NO	TITLE OF EXAMPLE PROJECT (FROM SECTION F)							
1.	Cow Bayou Drainage Pump Station Complex				6.	Ascension Parish Environmental Infrastructure Wastewater Treatment Plant Design							
2.	Hillaryville Levee Redesign, Pump Station, and Forcemain				7.	Southeast Louisiana Urban Flood Control – Harahan Pump to the River							
3.	277K Levee Raise and Slope Flattening, and Delta Pump Station				8.	NESP Plan for Lock Completion, Lock 25							
4.	Inner Harbor Navigation Canal Lake Borgne Surge Barrier				9.	East Baton Rouge Parish Wastewater Treatment Collection System 5 MG Ground Storage Tank and Pump Station							
5.	NTMWD Bois d'Arc Lake New Reservoir Water Supply Project				10.	River Road Aquatic Ecosystem Restoration CAP Section 206							

H. Additional Information

30. PROVIDE ANY ADDITIONAL INFORMATION REQUESTED BY THE AGENCY. ATTACH ADDITIONAL SHEETS AS NEEDED

INTRODUCTION TO MSMM ENGINEERING, LLC:

Since MSMM Engineering, LLC's (MSMM) inception in 2014, our goal as a small business engineering firm has been to support United States Army Corps of Engineers (USACE) in the delivery of their Civil Works program. To that end, MSMM has been blessed to serve as a USACE Civil Works Prime Contractor for the New Orleans District, Fort Worth District, Tulsa District, and Louisville District. Our passionate, multidisciplinary team of experts and rich history of federal design have allowed us to forge a long-lasting relationship with USACE, for whom we have recently conducted project management, planning, investigations, design, hydraulic modeling, construction oversight services and many other facets of the Civil Works program. Over the course of our partnership with USACE, MSMM has averaged ~\$6.5M annually in USACE work assignments over the last five years.

A. Introduction to Team MSMM

The talents and capabilities required to execute the anticipated assignments under the USACE, Vicksburg District (MVK) subject solicitation have been merged through the thoughtful assembly of our 12-member team, referred to as "Team MSMM." We have assembled this team with the Mississippi Valley Division (MVD), and more specifically Vicksburg and Memphis Districts (MVM), in mind meaning that all of our team members have USACE experience within MVD. As the work anticipated under this solicitation may span a multi-district MVD footprint, Team MSMM offers USACE the depth and breadth of professionals that can safely and efficiently deliver both small- and large-scale USACE Civil Works task orders. For any potential request under this solicitation, Team MSMM has the readily available capacity to meet the needs of MVK, MVM, and MVD overall as specified under this subject solicitation. Team MSMM is further introduced under Section II.

B. Vision of Team MSMM

Our vision for this solicitation was to assemble a team that could effectively deliver the anticipated work assignments required by USACE under this solicitation, in accordance with the Chief's definition of winning, which is to safely deliver quality projects on time and within budget. Team MSMM stands ready to support USACE with site explorations, hydrology and hydraulics services, experience with reservoirs, structural design capabilities, civil works projects experience, navigation expertise, knowledge of water supply and wastewater systems, and experience in vertical design. Furthermore, the construct of Team MSMM has been informed based upon our review of both the Vicksburg and Memphis District Acquisition Forecasts for FY24-FY25. Team MSMM stands ready to provide the anticipated services under this solicitation, including but not limited to levee enlargements, floodwalls, seepage remediation, slide repairs, channel improvements, rock work, P.L.84-99 rehabilitation work, dredging, bank stabilization, erosion control, relief wells, pump stations, water and wastewater treatment systems, and other Civil Works requirements as outlined under this solicitation.

Our program management philosophy includes collaborating with our team members, including MVK/MVM, every step of the way as we work towards our common vision of accomplishing quality work in a safe manner in accordance with the budget and schedule required by USACE.

C. Safety

Safety is Priority 1. While safety is everyone's responsibility, we will employ one of our Professional Engineers as our Safety Officer (SO) (see Organizational Chart) with the intent to plan for and practice safety, promoting a safe environment. The importance of safety will be communicated by our SO on a regular basis. Team MSMM's plan will require activity and position hazard analyses, risk identification, and development of control measures to promote safety and safe work practices, all of which will ensure that our team members, both in-house and field crews, are properly equipped to prevent accidents. Our SO will ensure that health, safety, and environmental policies are followed, so that our plan meets all safety requirements including

OSHA policy. Our SO will also ensure that each team member understands their role in the safety process, while being responsible for communicating any workplace accidents and injuries to USACE MVK/MVM as proper authorities, as needed.

D. Quality

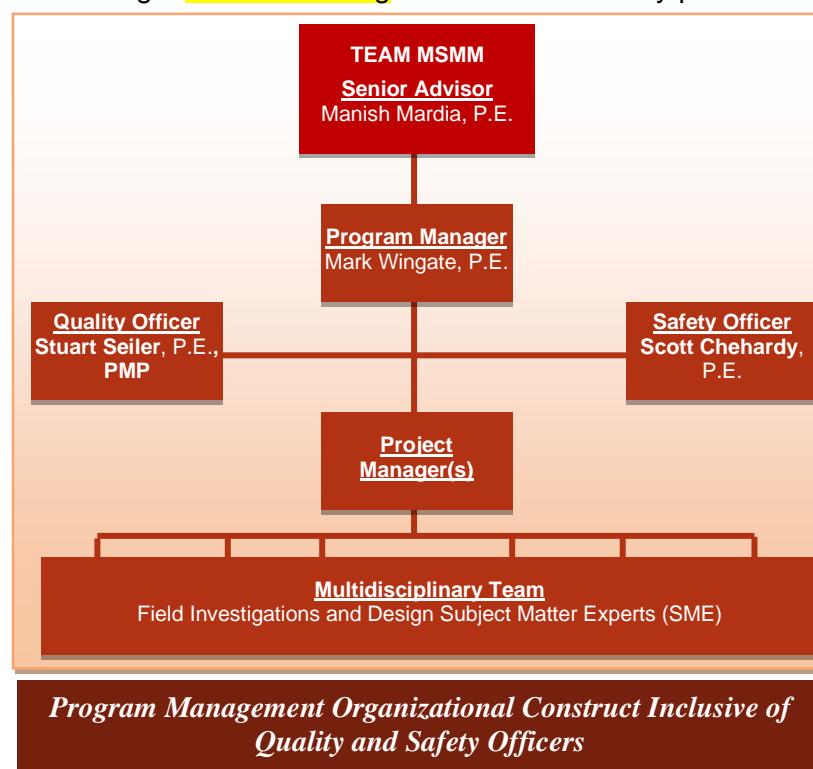
Quality is a requirement of Team MSMM. Our team will employ the tenants of the CIVIL WORKS REVIEW POLICY in accordance with **Engineer Regulation (ER) 1165-2-217** dated May 2021 to deliver Quality to all deliverables produced under the pending contract. Our management plan includes a **Quality Officer** (see Organizational Chart) who will ensure we remain compliant with all USACE regulations in terms of ensuring QUALITY. We will provide a comprehensive review strategy (**DQC, ATR, IEPR, SAR, etc, in coordination with MVK, MVM, or other MVD districts as needed**) for our deliverables, decisions, and implementation throughout the life of the project. We will reinforce to all our team members that quality and comprehensive review(s) are equal to cost and schedule compliance. Our quality plan will include the appropriate level of review(s), including the level of independence from production and the detailed requirements, including documentation and dissemination. Our quality plan will be coordinated with MVK/MVM to ensure compliance with ER 1165-2-217 as well as all other applicable regulations, circulars, pamphlets, manuals, etc.

E. Program Management Delivery Philosophy

Our long-held philosophy for project delivery places safety, quality, cost, and schedule paramount. Team MSMM will drive this philosophy through effective program and project management. Team MSMM's Program Management team, led by Mark Wingate, P.E., the Program Manager and Delivery Officer, consisting of Project Managers, including **Project Management Professionals** (PMGP), will ensure that both day-to-day and long-term tasks and requirements are clearly communicated and understood by the team to meet the requirements (schedule, budget, regulations, etc.) as specified in the USACE contract/task order. This project management philosophy includes the employment of the **Plan-Do-Check-Act Cycle**, aka the Deming Cycle, to manage our teams' activities and seek continuous improvement of our processes and deliverables.



To ensure efficient delivery from the start, Team MSMM's first order of business will call for scheduling and conducting a **kick-off meeting** with USACE and key partners to review the scope of work and ensure that all parties are aligned on the requirements and our delivery method. During this meeting, we will confirm that our approach successfully meets the requirements of the contract/task order, while ensuring that we support MVK, MVM, or any other district within MVD in all project phases from concept to completion.



Team MSMM's Project Managers will hold weekly meetings with all team members to ensure efficient and effective delivery and to identify issues and mitigate them accordingly. As shown in the organization chart, our Project Management team will be supported by a Program Manager, ensuring timely and effective monitoring of the schedule and budget in accordance with the anticipated USACE task order. All work assignments will be issued and tracked by our Project Manager(s) through a Project Management Plan (PMP) that will be developed to include all necessary

components (Quality, Safety, SOW, Schedule, Budget, RAM, WBS, Risk Register, etc.), and will be shared across all disciplines to ensure team alignment.

The Program Management team will ensure that deliverables meet the requirements of the USACE contract/task order including interim and final deliverables. This will be accomplished through effective and timely coordination with MVK/MVM to ensure all parties are aligned on scope requirements, deliverables, and associated timelines/milestones.

The Program Management team will monitor all activities from initiation to completion and will drive quality delivery in a safe manner in accordance with USACE requirements including schedule and budget. The Program Management team will be responsible for identifying potential challenges and developing mitigating measures prior to initiating work activities; this information will be documented in a risk register. Like the budget, schedule and scope of work, the risk register will be communicated with all team members, including MVK/MVM, and monitored and updated, as needed, throughout the life of the contract/task order(s). The intent of developing and maintaining/using the PMP, risk register, and other PM tools is to improve project delivery with safety, quality, schedule, and budget in mind.

Team MSMM, comprised of 12 individual team members who boast existing relationships with MSMM, provides extensive Civil Works experience, capacity, and familiarity across MVD. Our combined resources offer MVK/MVM a multidisciplinary team with the ability to surge and meet the requirements under the subject solicitation. Furthermore, the assembly and direction of our teaming partners under our program management philosophy will ensure seamless delivery of work assignments. Please see a brief introduction to each of our 12 team members shown below.

Team MSMM:



Tetra Tech is a full-service consulting and engineering firm based in Pasadena, CA. With 27,000 associates in 450 offices, their technical knowledge and experience are broad and deep. Engineering News-Record magazine consistently ranks Tetra Tech a national and international leader in multiple markets, including #1 in Environmental Management, #1 in Site Assessment and Compliance, #1 in Water, #2 in Environmental Science, and #2 in Consulting/Studies. Local Tetra Tech managers bring in resources from across the country to address specific issues for clients' needs. Through this cost-effective business practice, their best scientists and engineers serve local (parishes, levee boards), state (CPRA and LaDOTD), federal (USACE, NOAA, EPA), and private clients throughout the MVD.



Freese and Nichols, Inc. (FNI) has been a national leader in full-service A-E work since its founding in 1894. FNI holds long-lasting relationships with public and private sector clients as well as vast experience in flood risk management and other water resources project planning, modeling, design, and construction implementations. They offer unique capabilities in H&H modeling, including riverine and coastal modeling for small- and large- scale projects. FNI most recently has proven their capabilities to MVD on the WSLP design services (Geotech, Mechanical & Electrical) for Reaches 105 and 108, which are now in construction.



CDM Smith is one of the nation's leading multi-disciplinary engineering firms with a long and successful history working with USACE. CDM Smith's experience includes 90+ USACE contracts and 1,200+ task order assignments for 18 Districts and the Institute for Water Resources (IWR). They are currently providing A-E design services for some of the USACE's largest FRM and CSRM projects.



Eustis Engineering L.L.C. is the third oldest, continually operating geotechnical firm in the United States. From a two-man office to its current staffing, the firm has grown to house accounting, administrative, drilling, engineering, laboratory, and construction materials testing departments. These departments work together to provide their clients with high quality work in

a cost-efficient and timely manner. In addition, they self-classify as a small business based on the size/annual revenue guidelines set by the Small Business Association. Headquartered in Metairie, Louisiana, Eustis Engineering has worked on over 28,000 projects since its inception.



Burns Cooley Dennis, Inc. (BCD) is a geotechnical and materials consulting firm that was formed in 1985 by a group of former U. S. Army Corps of Engineers employees. BCD provides complete geotechnical consulting services, including engineering and design analyses; subsurface exploration; laboratory testing; construction materials engineering and observations and testing for earthwork, concrete and asphalt; and pavement research and design. The BCD headquarters is located in Ridgeland, Mississippi with branch offices located in Hattiesburg, Gulfport, Hernando and Starkville, Mississippi. BCD has completed over 170 task orders for soil borings, laboratory testing, and/or engineering design for hurricane and flood protection system projects since Hurricane Katrina in 2005 across the diverse and variable geology of the Lower Mississippi Valley.



Johnson-McAdams Surveying & Mapping, LLC (JMc) was created out of the Johnson-McAdams firm in 1996 to build a company that is exclusively a surveying and mapping contractor. From the original A-E firm to their present-day company, the JMc staff has been providing surveying services to the Corps of Engineers for over 33 years. They are a multi-disciplined firm with total in-house surveying and mapping experience in performing GPS horizontal and vertical control, automated DGPS hydrographic, geodetic, topographic with total stations and data collectors, OTF/RTK GPS and single fathometer and multibeam hydrographic sweep surveys, boundary surveys and CADD/GIS data processing. All of their professional staff have prior Corps of Engineers contract experience.



Chustz Surveying (CSI) is based in New Roads, LA, and was established in 1995 primarily focused on supporting the USACE. CSI maintains a diverse client base, including USACE MVK and MVM, Louisiana Dept. of Natural Resources, Louisiana Dept. of Transportation and Development, the Coastal Protection and Restoration Authority, as well as numerous other public and private firms.



Burk-Kleinpeter, Inc. (BKI), founded in 1910 and headquartered in Kenner, LA, is a small business A-E firm with experience in a variety of USACE Civil Works delivery needs. They have been awarded multiple, and often concurrent, Civil Works design contracts by USACE (a total of 11 IDIQ contracts with the USACE – 8 with the New Orleans District and 3 with the Vicksburg District). BKI's project experience includes major flood reduction projects, water treatment, storage, and distribution projects, wastewater treatment and collection projects, roadway design, bridges, and drainage improvements.



AECOM is the world's premier infrastructure firm, delivering professional services throughout the project lifecycle. With a local office in Jackson, Mississippi, they have vast experience working on projects along the Mississippi Gulf and the greater Coastal Region. With more than 100 years of experience, AECOM is a leader in water, wastewater, dam, and levee design and development. They deliver risk assessment and management, performance evaluation studies, system integrity, inspections for conventional hydro and pumped storage schemes and have extensive experience with all aspects and types of levee systems.



Neel-Schaffer is a multi-disciplined engineering, planning and construction management firm that was founded in 1983 and today is one of the largest private, employee-owned engineering firms in the South, operating out of 38 offices across nine states. The organizational structure enables Neel-Schaffer to maintain a strong commitment to local communities while providing access to the best engineering expertise in the South. Core disciplines include water/wastewater, stormwater, environmental, civil, aviation, structural, and hydraulic engineering. Since their formation, the firm has provided services for 20 USACE contracts involving approximately 120 assignments.



GIS Engineering, LLC. (GIS) is a Louisiana based company with over 74 years of experience in collaborating across geographies and markets to provide engineering, technical, and management solutions to MVD clients. Their 265+ employees service the discipline areas of Water, Drainage and Flood Risk Reduction, Transportation, Governmental Services, Industrial Services, Environmental, and Construction Services. Their key personnel have years of experience providing engineering solutions for critical regional challenges such as hurricane risk reduction, stormwater, water supply, wastewater, transportation, aging infrastructure, and drainage.



Strategic Value Solutions, Inc. (SVS) has over 35 years of rich history providing Value Engineering services. They have performed 300 USACE VE studies in the past 5 years alone, as well as having reviewed \$26 billion in construction projects for USACE in the past 5 years, netting over \$5 billion in savings for USACE clients. This includes work with MVK and MVM. They developed the USACE Value Standard, USACE VE Evaluation Tool, USACE Value Study Guide, and the current guiding document for value engineering of USACE programs (ER 11-1-321). They are nationally acclaimed as leading experts in the SAVE International® Value Methodology.

In summary, Team MSMM offers MVK, MVM, or other MVD districts a proven team that has the capacity to meet both small and large requests in a concurrent fashion. MSMM provides the personalized dedication and responsiveness of a small business with the benefit of both small and large backing firms who bring vast experience in the requested specializations, as well as experience within USACE, including the Memphis and Vicksburg Districts. With a cadre of 150+ professionals, Team MSMM and USACE's shared vision of safe, high-quality project delivery will be conducted with the utmost level of expertise.

Team MSMM Members with Small Business Designations:

- MSMM Engineering, LLC
- Burns Cooley Dennis, Inc.
- Johnson-McAdams Surveying & Mapping, Inc.
- Eustis Engineering, LLC.
- Burk-Kleinپeter, Inc.
- Strategic Value Solutions, Inc.

A. Specialized Experience and Technical Competence

In addition to Section E (featured resumes) and F (featured project examples), please see additional examples of our teams' recent accomplishments highlighting further experience and technical competence across all areas as described in the subject solicitation.

1 | Site Exploration, including Surveying, Geotechnical Investigations, and Reports

Survey

Team MSMM provides MVK and MVM a total of 13 survey teams spread across two individual survey team members. Our surveyors are licensed across the MVD with Professional Land Surveyors credentials.

Our survey teams have a history of work experience with USACE and DoD, having completed **15+ contracts with exceptional ratings**. Their dedication to completing projects on time, within or under budget, and with exceptional quality control procedures has earned them exceptional recommendations from various districts, including MVK and MVM. All work is completed in compliance with the applicable manuals, including EM 1110-2-1003, EM 1110-1-1003, and EM 1110-1-1005.



RTK-GPS Levee Topo

Mississippi River MRL Levee Enlargement, Berm and Borrow Area Surveys – USACE Vicksburg District

Our team members performed a 3.8-mile-long Mississippi River Levee (MRL) Enlargement, Berm and Borrow Area survey from November 2023 to February 2024. This levee survey included automated conventional and OTF/RTK levee cross sections, profiles, levee baseline control, miscellaneous topographic surveys, single

fathometer hydrographic surveys, and soil boring locations. As many as five (5) different crews worked on this project simultaneously due to its short, time sensitive delivery requirement.

Topographic surveys were performed using Automated Data Collectors and Total Stations (formatted for entry into CADD/GIS computer systems) or vehicle mounted OTF/RTK systems. Automated single fathometer hydrographic surveys were performed in the borrow area. Our firm submitted all data in the current version and file formats used by the Vicksburg District Office. They provided the processed data and preliminary mapping for this survey using Civil 3D 2022 with USACE Civil 3D Template v5.0.

Mississippi River Revetments, Construction and Maintenance Operations: Clearing, Snagging, and Grader Support

One of our teaming partners performed all necessary surveys associated with the **Memphis District's Revetment Construction and Maintenance Operations, Bank Protection Party**. This work included **projects within the Memphis, Vicksburg, and New Orleans Districts**. Hydrographic surveys were obtained using Marinestar G2+ GNSS and Trimble RTX for horizontal positioning of the survey vessel. RTK GPS/GNSS surveys from known monuments were used for vertical control and horizontal control for RTK GPS/GNSS surveys. Two survey parties were deployed: the advanced grader party equipped with RTK GPS/GNSS gear and a CEESCOPE single beam echosounder on board our 22 foot survey vessel; and the grader party, an additional hydrographic survey crew equipped with RTK GPS/GNSS gear. The survey parties traveled with the grading crew, conducting the surveys as needed for the length of the project at 11 revetment locations.

Survey Services Offered

- Horizontal and Vertical Control Surveys
- Boundary Surveys
- Multibeam and Single Beam Hydrographic Surveys
- Topographic, RTK GPS, and Planimetric Surveys
- Aerial Photogrammetry
- As-Built Surveys
- Magnetometer Surveys
- Side Scan Surveys
- Sub-Bottom Profiling
- Image Processing and Orthorectification
- Digital Orthoimagery
- Total Station and Data Collectors
- GPS Receivers
- Construction Layout
- Progress Payment Surveys
- Digital Leveling Equipment
- 3D Terrestrial LiDAR Scanning
- 3DAerial LiDAR Scanning to Produce CAD Finals



Team MSMM's Partner Performing Channel Improvement Works for the Memphis District

Additional multibeam hydrographic sweep data was collected in Venice, LA, along with an emergency multibeam sweep and mobile laser scanning survey with our vessel mounted LiDAR system of a bank failure at Helena Revetment. LWRP single beam hydrographic surveys were also collected along the sailing line of the Mississippi River from Cairo to the Gulf of Mexico, with water surface and soundings recorded every 300 feet. All hydrographic data was processed on site with the latest version of HYPACK where the data was plotted and volume computations were made at the time of the survey.

Geotechnical Investigations

Team MSMM's geotechnical investigation partners have a long history of providing services for USACE, totaling 1200+ geotechnical subsurface exploration, laboratory testing, and engineering design projects across USACE districts. These projects have included levees, drainage structures, floodgates, floodwalls, pump stations, channel improvement, geostructural stabilization of loess bluffs, landslide remediation, and marsh stabilization/restoration projects. Projects completed by our geotechnical teams for various districts, including MVK and MVM, include small backwater levees, hurricane protection levees, levee enlargements along the Mississippi River, drainage structure projects, floodwater retarding structures, high drop structures, low drop structures, and riser pipe structures.

Our teams' soils and materials laboratories are USACE validated and are staffed with experienced technicians. These laboratories are equipped to handle high volumes of both routine index tests and material properties tests, including shear strength, compressibility, and permeability. Team MSMM's drill crews are experienced in both land and overwater drilling, 3-inch and 5-inch undisturbed sampling, and the installation of various types of geotechnical instrumentation. These projects follow all applicable manuals, including EM 1110-2-1902, EM 1110-2-1913, EM 1110-1-1904, and EM 1110-1-1905.

Item 368-R, Mississippi River Levee Enlargement – USACE Vicksburg District

This project required the enlargement of approximately 3.8 miles of Mississippi River Mainline Levee. One of our team members completed soil borings and performed laboratory testing for the project. Field investigations included 11 foundation borings ranging up to 160 feet in depth and 63 borrow borings. Borehole advancement, soil sampling, and borehole abandonment were performed in accordance with EM 1110-1-1804, Geotechnical Investigations. Laboratory testing included water content tests, Atterberg limit tests, sieve analyses, consolidation tests, unconfined compression tests and unconsolidated-undrained triaxial compression tests.

Laboratory testing was performed in accordance with EM 1110-2-1906 and appropriate ASTM standards. One hundred and twenty-one cone penetration test (CPT) soundings were performed to a depth of 50 feet along the river side toe, land side toe, and 300 feet beyond the land side toe of the levee. The CPT testing was performed by another one of our team members. The scope of work included an evaluation of site geology; a review of high-water inspection reports; developing design shear strength, seepage, and settlement parameters; and performing settlement, slope stability, and underseepage analyses, including an evaluation of potential uplift and heave, in accordance with current criteria.

Geotechnical analyses were performed in accordance with the following Engineering Manuals and Technical Memorandum: EM 1110-2-1902, EM 1110-2-1913, EM 1110-2-1904, TM 3-424.



***Mississippi River Mainline Levee to be
Designed for Enlargement by Team
MSMM Partners***

2 | Hydrology and Hydraulics Engineering

Team MSMM's individual team members have provided extensive H&H services to USACE, including USACE Memphis and Vicksburg Districts, NRCS, and FEMA for the design of pump stations and other hydraulic structures. Team MSMM's H&H experts have years of experience in delivering successful Federal projects involving H&H design, analysis, and review, as well as utilizing the latest USACE-approved engineering

software to perform H&H modeling. Team MSMM is able to provide single and multi-dimensional modeling completed by experts in hydraulic and hydrologic modeling who are well versed in both standard and innovative modeling approaches.

Within water resources, we have experts in watershed assessments, hydrologic and hydraulic modeling, bridge and highway hydraulic design, stream restoration, coastal engineering, scour assessments, FEMA analysis, and other water resource investigation requirements anticipated under this solicitation. Many of our firms have a **strong local presence across the Mississippi River watershed**, which is complemented by their capacity to serve as a conduit to technical experts and professional water resource personnel as part of Team MSMM.

Our team is trained in the latest and most innovative techniques and software in the field of H&H modeling and design, **shown to the right**. We also demonstrate additional H&H capability under Part 3 of Section H, *Reservoir Regulation, Water and Sediment Quality Engineering and Design*.

In addition to the projects highlighted in Section F, we have included a few short summaries of key projects to further exemplify the specialized experience and technical competence of Team MSMM.

Alligator-Catfish Bayou Water Control Structure, Leflore County, MS – USACE Vicksburg District

One of our teaming partners performed various professional services required for the design and preparation of a feature design memorandum (FDM) for the **Alligator-Catfish Bayou Water Control Structure in LeFlore County, MS**. Disciplines for this project included hydraulic, civil, structural, foundation, mechanical, and electrical engineering; professional surveying and computer-aided drafting and design (CADD) compatible with Vicksburg District's system.

Indefinite Delivery Contract for Hydrologic/Hydraulic Services – USACE Memphis District

One of our teaming partners performed work involving various **hydrologic and hydraulic engineering projects**. This work primarily took place in southeastern Arkansas and included a navigation study on the White River, development of hydraulic models for St. Francis Floodway, and flood protection for Helena. **HEC-1 and HEC-RAS** were used extensively by our teaming engineers on these task orders.

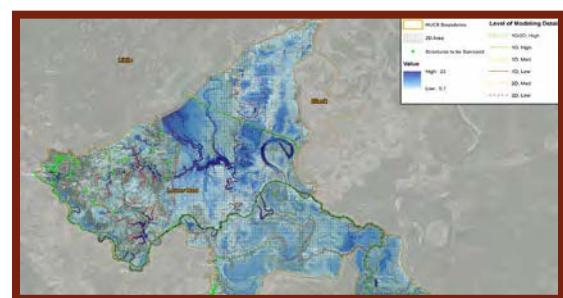
Louisiana Watershed Initiative Modeling Contract – Louisiana Department of Transportation and Development

Louisiana launched the Louisiana Watershed Initiative in 2018 with an initial focus on improving hydraulic and hydrologic (H&H) watershed models to more effectively reduce flood risk through improved decision making. Our team members supported LADOTD in this effort to develop and improve flood modeling and support evaluation and alternative analysis of nature-based solutions. This was a five-year, \$18M contract involving the development of calibrated **1-D/2-D HEC-RAS models** for consequence and risk assessment. It also included analyzing over 9,500 sq. mi in **HEC-HMS** for hydrology, 975 miles of 1D **HEC-RAS** and approximately 1,500 miles of 2D stream centerline

Team MSMM H&H SMEs

Experienced In:

- SMS/SRH-2D
- Delft3D
- HEC-RAS 1D/2D
- CivilStorm/StormCAD/ORD Drainage and Utilities
- Bentley Haestad (Pondpack, Storm Cad Connect V8i)
- Bentley Haestad HEC-RAS 5.0
- HEC-GeoHMS
- HEC-GeoRAS
- PCSWMM
- FHWA Hydraulic Toolbox
- HY-8
- HEC-HMS
- RiverCAD
- TR 20
- TR 22



Inundation Mapping Developed by MSMM Team Member for Louisiana Watershed Initiative

in HEC-RAS for multiple recurrence intervals (2-yr, 5-yr, 10-yr, 25-yr, 50-yr, 100-yr, 100+-yr, 500-yr, and 1000-yr events).

3 | Reservoir Regulation, Water and Sediment Quality Engineering and Design

Our team has extensive experience in water resource management and the necessary capabilities to perform reservoir regulation services, as well as water and sediment quality engineering and design based upon their USACE experience in performing water resources initiatives including flood risk management, water quality, fresh water supply, navigation, recreation, and fish and wildlife, and to alleviate sediment and erosion problems. In addition to the projects highlighted in Section F, we have included a few short summaries of key projects to further exemplify the specialized experience and technical competence of Team MSMM.

Mid-Breton Sediment Diversion Facility – Coastal Protection and Restoration Authority

Our team members evaluated back structure alternatives and performed the conceptual design of the alternatives for the Mid-Breton Sediment Diversion Project, located on the left descending bank of the Lower Mississippi River immediately downstream of New Orleans, Louisiana. The subject project addresses water management activities required in reservoir management, including flood risk management, water quality, fresh water supply, navigation, recreation, and fish and wildlife, and to alleviate sediment and erosion problems. Team MSMM's team members' work included civil, structural, mechanical, and electrical engineering. The purpose of the project was to convey fresh water and sediment into deteriorating marshes that drain into middle Breton-Chandeleur Basin. The swamps and marshes in the influence area have disappeared due to a combination of changes in the supply and distribution of fresh water, subsidence, saltwater intrusion, sediment starvation, and storm events. Another important purpose of this project was to reconnect the influence area with the river and divert sediment and fresh water, building new land and sustaining existing marsh. An additional benefit includes storm surge buffering for Plaquemine Parish. Our team members reviewed hydraulic model studies concerning the water quality impact and the volume and distribution of sediment transported by the system with and without a back structure. Upon construction, the Mid-Breton Sediment Diversion's maximum capacity will be 75,000 cfs. It was designed to achieve this rate when the Mississippi River flow reaches 1,000,000 cfs. Even at peak flow, Mid-Breton will divert around 7 percent of the total flow of the river.

Bois d'Arc Lake New Reservoir Water Supply Project – North Texas Municipal Water District

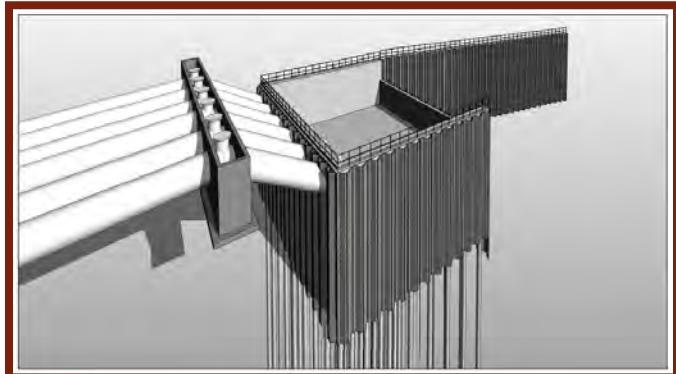
Team MSMM's partner provided engineering, environmental, and construction management services for this reservoir project, highlighted in Section F (see Project #5). Our partner provided engineering, environmental, and construction management services to permit, design, and build this new reservoir. They coordinated extensively with local, state, and federal agencies, including USACE Tulsa District and stakeholders. Our partner was the DOR for a new dam, spillway and reservoir, pump stations and intake structure, transmission pipeline, access roads, and a 17,000-acre environmental mitigation site and served as the overall Program and Construction Manager. They developed and calibrated H&H models using HEC-1, HEC-HMS, HEC-RAS, HEC-GeoRAS, and HEC-2 including a long-term hydrologic model in RiverWare to evaluate historical streamflow response and also performed an in-stream flow study, including multidiscipline modeling using HEC-RAS, RiverWare, SAMWIN and River 2D.

4 | Structural Design

Team MSMM is familiar with all requested requirements and regulations involving Structural Design. Our projects have been developed in compliance with all requested manuals, including EM 1110-2-2000, EM 1110-2-2100, EM 1110-2-2104, ER 1110-2-1150, ETL 1110-2-584, EM 1110-2-2502, and EM 1110-2-2906. Though these manuals are only required for USACE projects, our structural engineers use them as guidelines in all projects, both federal and non-federal. In addition to the projects highlighted in Section F, we have included a few short summaries of key projects to further exemplify the specialized experience and technical competence of Team MSMM.

Pump Capacity Improvements for Mississippi River Re-Introduction into Bayou Lafourche – Bayou Lafourche Freshwater District

Our team members developed a permanent structural seepage barrier, an innovative solution to prevent seepage of river water through the levee, both during and after the in-the-wet construction phase. The seepage barrier isolates the intake pipes buried in the levee from the exposed intake pipes that penetrate the riverbank into the river. The seepage barrier includes a permanent steel sheet pile system that is installed in the wet and is hydraulically sealed with a combination of cement grout and polymer joint sealant. The large intake pipes penetrate through this barrier and are sealed in place using a series of tremie grout donuts, which are installed underwater. The entire intake pipe system is backfilled following placement of the intake pipes, to restore the original profile of the levee, using layers of sand cement grout, then sand, and finally an impervious layer of clay at the top surface. Our team members designed the intake hoods in the river with trash screens that will be removable via a barge mounted crane with a lifting beam for periodic inspection and maintenance. This design simplifies the inspection process and ensures that any structural repairs to the intake hood boxes can occur in the dry. Our teaming structural engineers utilized IBC, ASCE, and USACE design standards.



Pump Station on the Lower Mississippi River Re-Introduction into Bayou LaFourche Designed by Team MSMM Partner

Cow Bayou Drainage Pump Station Complex – USACE New Orleans District



8,190 CFS Pumping Station including Horizontal and Vertical Pumps, Site Paving, Elevated Fuel Farm, Sector Gate and Protective Dolphins Delivered by MSMM

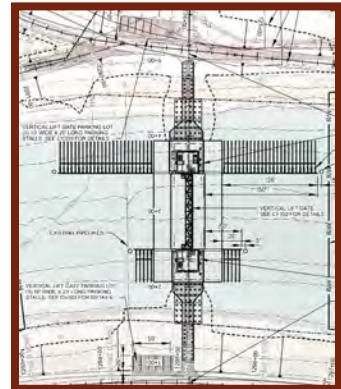
MSMM aided in the design of this 8,190 CFS pump station as part of the Sabine to Galveston Cow Bayou Complex project. This project included levee tie-ins, floodwalls, sluice gate structures, and a sector gate for navigational traffic. The pump station consists of five 1,365 CFS horizontal, vacuum primed pumps with 126-inch suction side and 115-inch discharge side formed concrete intakes; and three 455 CFS vertical self-priming pumps with 84-inch discharge piping. MSMM's structural engineers, following the applicable USACE EM's (EM 1110-2-2000, EM 1110-2-2100, EM 1110-2-2104, ER 1110-2-1150), designed permanent project structures associated with the pump station including the horizontal and vertical pump intake and discharge structures, engine and pump support slabs, pump station building, pump station safe house, fuel tank foundation/containment, water tank foundation, west access bridge, exterior semi-gantry and overhead bridge crane supports, and protective dolphins.

5 | Civil Works (Levees, Dams, etc.)

As many of our team members live and work within the MVD AOR, flood reduction is both a personal and professional priority. Our team members have worked on Civil Works projects such as levees and dams across the Southern U.S., with many of these projects having been completed for USACE. Most of our Civil Works projects in the requested areas (levees, dams, etc.) have been USACE projects, and have been compliant with the applicable Engineering Manuals, including EM 1110-2-1901, EM 1110-2-1902, EM 1110-2-1913, EM 1110-1-1904, EM 1110-1-1905, and TM 3-424. In addition to the projects highlighted in Section F, we have included a few short summaries of key projects to further exemplify the specialized experience and technical competence of Team MSMM.

Sabine Pass to Galveston Bay Coastal Storm Risk Management Design Project – USACE Galveston District

Our team members were awarded this \$72M contract for the design and construction phase services of the improvements to 18.5 miles of the Freeport Levee System. This includes the raise of 13 miles of existing embankment levee, replacement of 5.5 miles of floodwall, development of an RFP package for a new 100-ft-wide vertical lift gate and overflow structure system, and fronting protection at pump stations. The team used historical design criteria as well as multiple EMs to ensure that the project met the Sabine to Galveston Design Criteria. The project is broken into multiple contracts. Our team members began by preparing 35% designs for a new vertical lift gate, improvements to a pump station, and a critical overflow structure that mitigated the risk of interior levees overtopping. The second contract involved the design of 6.5 miles of floodwall and earthen levee, including 9 vehicle floodgates, design of a cutoff wall and toe drain system, and a large sluice gate structure. The third encompasses 12 miles of floodwall and earthen levee, including a marsh area along more than 5 miles of the levee that was built on oxbows causing major seepage concerns. The final contract involved the design of a new floodwall and levee through the Port of Freeport.



FPV02 Vertical Lift Gate Layout Designed by Team MSMM Partner

Magna Vista-Brunswick Levee Enlargement and Berms – USACE Vicksburg District

This project required the enlargement of approximately 2.7 miles of Mississippi River mainline levee. Analyses and recommendations were based on a combination of data furnished by the Government and data generated during this study. The Government furnished data consisted of soil borings, laboratory tests, and Cone Penetration tests. Additional data generated during the study included thirteen foundation borings, fifty-three seepage borings and sixty-seven borrow borings. The scope of work included an evaluation of site geology; a review of high-water inspection reports; developing design shear strength and settlement parameters; and performing settlement, slope stability and underseepage analyses in accordance with current criteria. Design consisted of a riverside enlargement. Landside stability berms were required along 3,500 linear feet of levee, and seepage berms were required along 4,250 linear feet of levee.

A report was prepared to provide: (1) a narrative description of the geotechnical design process; (2) a discussion of all the current geotechnical Corps Design Criteria used in preparation of the geotechnical design and how the design was developed in meeting each of the criteria; (3) a general discussion on the field investigation, laboratory tests and soil conditions; (4) recommendations for utilization of borrow materials and restrictions on borrow pit excavation; and (5) the results of the stability analyses, seepage analyses, plotted soil borings, shear and wet density plots, and plates with results of analyses.



Mississippi River Levee Improvements Designed by Team MSMM Partner

6 | Navigation Related Projects

Our team members have extensive experience completing large Navigation related projects in MVD, as evidenced by our below projects. Team MSMM has a combined capability to perform large scale Navigation projects involving such services as planning, design, H&H modeling, alternatives analysis and far more. In addition to the projects highlighted in Section F, we have included a few short summaries of key projects to further exemplify the specialized experience and technical competence of Team MSMM.

NESP Plan for Lock Completion, Lock 25 – USACE St. Louis District

This Inland Navigation project demonstrates our team members' capability to perform comprehensive planning and design of a new, state-of-the-art 1,200-foot lock as part of the Navigation and Ecosystem Sustainability Program (NESP) within the Upper Mississippi Basin. The current capacity of the Mississippi River navigation system is limited by the existing lock facilities, which need to be rehabilitated and modernized. The existing lock chamber is 600-feet long, requiring 15 barge tows to lock through using a two-step process. This takes approximately 1.5 to 2 hours, causing significant delays to navigation. The new lock chamber will be 1,200-feet long, significantly reducing lockage delays and increasing operational safety. Our team members have completed three task orders involving this project so far, including: 1) Preparation of Plans and Specs for Existing Lock Wall Modification, Lock Concept Validation Study, 2) Plan for Lock Completion, 3) 2021 Advancement of Design. Over the course of these three task orders, our team members have provided a number of services which include 3D Seepage Modeling, Comprehensive Lock Dewatering Design, 2D Hydrodynamic Modeling, Cofferdam and Dewatering System Planning and much more.

IHNC Lock Floating Guidewall – USACE New Orleans District

Under a previous design contract, the government designed a steel sheet pile impact end cell and pier support structures for a new floating guidewall wall. The new floating guidewall was designed to be flush with the lock wall (canal side) and provides anchorages to attach the guidewall to the government designed pier support structures and the existing lock wall. Our team member was selected to complete the floating guidewall design because of our post-tensioned concrete floating guidewall design at Olmsted Lock and Dam. They also had a long working history with the Louisville and New Orleans Districts from their involvement with the Olmsted Lock and Dam and IHNC Lake Borgne Surge Barrier Projects. The Louisville District managed the design phase for this project and the New Orleans District managed the Construction Contract.



**Floating Guidewall Designed
by Team MSMM Partner**

7 | Large Complex Structures (Plants, Locks, etc.)

MSMM has been the Prime contractor on multiple large complex structures, mostly involving wastewater treatment plants. A large majority of these projects were completed for USACE, and all necessary Engineering Manuals and Regulations were followed closely. Our teams complied with EM 1110-2-2602 and EM 1110-2-2610 on these projects. In addition to the projects highlighted in Section F, we have included a few short summaries of key projects to further exemplify the specialized experience and technical competence of Team MSMM.

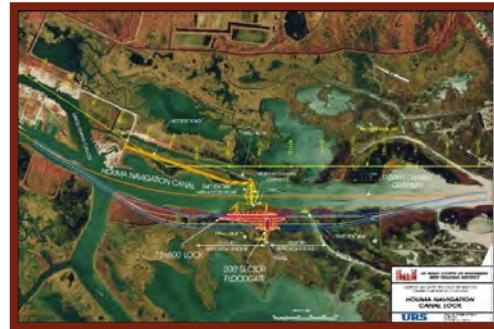
Permanent Canal Closures and Pumping Stations (PCCP) Design-Build

One of our teaming partners assisted USACE in the Design-Build procurement and delivery of three major gated closure structures and pump stations, and associated floodwalls and levee improvements in New Orleans, including the 12,500 cfs 17th St., the 2,700 cfs Orleans Ave., and the 9,000 cfs London Ave. stations. Construction was successfully completed on all three projects in 2018. Our team member augmented the USACE Staff while performing numerous Parallel Engineering Designs, Design Reviews and Analysis, Civil, Mechanical, Electrical, Geotechnical, Structural and Architectural. Parallel Designs, Studies, Reports, H&H Models and Analysis were required to verify concepts of new structures proposed by the Design Build Contractor (e.g., floodwalls, floodgates, cofferdams, mechanical systems, electrical systems, buildings, levees, and pump station facilities). Our teaming partner worked with USACE to develop the D-B request for proposal (RFP) package. Under a prior contract, our partner also prepared D-B RFP packages for the successful expansion of the temporary pumping stations at these locations. They worked closely with the New Orleans District to develop the design-build RFP for PCCP, and after award, co-located with the contractor and USACE to remain engaged with the design and to perform design reviews and at times develop parallel designs, hydraulic and other models, on the design-build contractor's designs for conformance and verification.

Houma Navigation Canal Lock and Floodgate Design – USACE New Orleans District

The Houma Navigation Canal Lock Complex Project is a large-scale, long-term protection and restoration feature recommended for implementation in Louisiana's Comprehensive Master Plan.

The Project, a component of the USACE Morganza to the Gulf project, will consist of a lock, a floodgate (barge gate), and adjacent floodwalls. Our team members prepared a preliminary Design Criteria document, including 15 percent design submittal to support the development of the final design. This included the structural design of the 110-foot-wide flood side lock sector gate and monolith, approach structures, and floodwall protection dolphins. Mechanical and electrical tasks included all operating and control systems for sector gate operations, sluice gates, pumping and controls for the 250-foot-wide barge gate, and backup power. Our team members also supported the cost estimate, and O&M requirements, and performed the structural Independent Technical Reviews for the floodwalls, lock chamber, inland lock sector gate and monolith, and dewatering bulkheads.



Houma Navigation Canal Lock Complex Designed by Team MSMM Partner

New Orleans International Airport (MSY) Drainage Pump Station – New Orleans Aviation Board

MSMM completed full engineering design on the highly anticipated \$45 million drainage mitigation for New Orleans International Airport. This work involved full investigation, analysis, and design for a 600 cfs stormwater drainage pump station and for all landside drainage. The project was a multidisciplinary effort, spanning civil, structural, electrical, mechanical, and environmental design, hydraulic modeling (HEC-HMS and HEC-RAS), architectural design, cost estimating, environmental permitting, CAD drafting, and extensive FAA coordination. The expedited schedule by MSMM was ultimately possible because of our ability to cross reference more than 400 as-built drawings with GIS shape files, LiDAR data, USGS Quad Maps, aerial photos, survey data, and past H&H model data. MSMM was responsible for all civil/structural site work design, inclusive of earthwork and site layout; engineering during construction (EDC) inclusive of coordination with the construction contractor; hydrologic and hydraulic modeling (UNET, SWMM); and developing all plans and specs.



Aerial View of MSY Pump Station Designed by MSMM

8 | Vertical Design Projects (Architecture, Fire Protection, Interior Design, etc.)

MSMM and our partners have a thorough understanding of the tools and processes that go into successful delivery of Vertical Design Projects. Our team comprises numerous experts in CAD as well as BIM/CIM. Their expertise spans architecture, fire protection, landscaping, and interior design services for both existing structures and newly constructed structures. In addition to the projects highlighted in Section F, we have included a few short summaries of key projects to further exemplify the specialized experience and technical competence of Team MSMM.

Allen Hall Repairs – USACE Savannah District

As the Designer of Record, our teaming partner prepared full drawings and specifications for a full building remodel and modernization of the two-story, 73,473-SF Fort Gordon Allen Hall facility housing classrooms and ancillary support functions within a 1966-vintage concrete column and waffle slab frame structure that hadn't undergone modernization. Their design will transform Allen Hall into a facility capable of meeting the mission of the Cyber Center of Excellence to train, educate, and develop world-class, highly skilled Signal,

Cyber, and Electronic Warfare professionals that support operations at the strategic, operational, and tactical level. Our partner provided full A-E design services including 35%, 65%, 95%, 100% and Ready to Advertise design phase submittals using BIM/REVIT. They also designed this project utilizing the LEED BD+C version 2009 for Schools On-Line Rating system and currently project LEED Silver certification. The design also complies with EO 13423 and 13514. The building is a certified LEED Silver facility.



*Remodel of Allen Hall
Designed by Team MSMM
Partner*

Granger Lake Management Office Building Design – USACE Fort Worth District

In 2021, MSMM completed the full architectural design for a new 6,000-square-foot lake management office building for the USACE Ft. Worth District in Granger Lake, Texas. The MSMM design consisted of site development and new construction, including all required services (i.e., electrical/mechanical/ fire protection, life safety, civil/structural/architecture). The new facility also includes the design of landscaping, new paving, paving repairs, and force protection. Site lighting design was also provided, including parking for visitors and staff and the fencing required for the government vehicle and equipment compound behind the new office. A septic field was designed and incorporated into the compound. Considerable design considerations were given to domestic water and water supply as the area is very remote, and the active utilities would not support the size of the facility, given the number of plumbing fixtures. After considerable effort working with the local water purveyor, MSMM civil engineering staff decided to design a storage tank within the government compound for domestic water and fire suppression. A BIM model was completed for the facility, incorporating the mechanical platform added above the ceiling. The building also features a safe room for extreme weather events. MSMM architectural staff completed engineering support during advertisement (EDA) services and engineering support during construction (EDC), including site visits, reviewing submittals and RFI's, and providing periodic inspections.



Construction of 6,000-square-foot Office Building, Architecture/Design by MSMM

9 | Water Supply and Storage, Wastewater Treatment and Distribution Systems

In addition to the projects highlighted in Section F, we have included a few short summaries of key projects to further exemplify the specialized experience and technical competence of Team MSMM.

East Baton Rouge Parish Wastewater Treatment Collection System 5 MG Ground Storage Tank and Pump Station – USACE New Orleans District

This project included the design of two pile supported above-ground 5 million gallon (MG) prestressed concrete storage tanks, a 14,000 gpm sewer pump station, and a CMU control building. Our team was responsible for providing full design services for this Wastewater Treatment Collection System, inclusive of structural, mechanical, electrical, and civil engineering. Our services also included project management, field topographic surveying, geotechnical investigation, instrumentation, H&H modeling, environmental support, coordination, and permitting support. We also prepared a PPA and letter report, plans and specifications, design analysis, and MCACES (MII) cost



*Existing Pump Station 45 and Control Building,
Designed by MSMM*

estimates. Civil Information Modeling (CIM) Bentley OpenRoads/OpenBuildings was used to design storage tank, pump station, piping, and other civil site plans.

Ascension Parish Environmental Infrastructure Wastewater Treatment Plant Design – USACE New Orleans District

Our team worked with the Ascension Parish Government to design this new 1.8M gallon per day (average daily flow) Wastewater Treatment Plant. Our engineers provided 100% bid-ready plans and specifications for the WWTP, which will be adjacent to our recently designed and constructed effluent sewer pump station and force main (separate task order). This Wastewater Treatment Plant was one step of a larger regionalization plan that was developed by our team. Our engineers provided full design services, including structural, mechanical, electrical, and civil engineering. We also provided project management, letter report and PPRA preparation, feasibility report development, field topographic surveying, geotechnical investigation, H&H modeling, environmental support, coordination, and permitting support.



3D Rendering of Final Clarifiers, Aeration Basins, RAS/WAS Pump Station, Blower Pads, Filter Press Building, Electrical Rooms, and Headworks, Completed by MSMM

B. Professional Qualifications

Team MSMM has been built around an experienced cadre of technical experts from our 12 teaming partners. This assembly is an indication of the commitment and priority we place on supporting delivery of the USACE Civil Works program for MVK/MVM and those districts within MVD. MSMM's teaming relationships offer the breadth and depth to satisfy the Civil Works requirements anticipated under this solicitation, with the ability to surge as needed to meet the most urgent requirements. Our team has taken a thoughtful and disciplined approach to identifying the key personnel for this solicitation, presented in Section E, that will be responsible for safety, quality, and delivery in accordance with budget and schedule and other task order requirements.

Discipline	# per Discipline	Credentials
Program Manager / Delivery Officer	1	PE
Senior Adviser	1	PE
Project Manager	13	PE, PMP, LEED AP, PhD, OMP, PLS, CVS
Safety Officer	1	PE
Quality Officer	1	PE
Civil Engineer	11	PE, LEED AP, PMP, D.WRE, ENV SP, LS
Structural Engineer	14	PE, CVS, MS, SE, LEED AP, DBIA,
Geotechnical Engineer	14	PE, Ph.D
Hydraulic & Hydrologic Engineer	14	PE, PH, D.WRE, CFM, Ph.D, BCEE,
Electrical Engineer	7	PE, PMP, LEED AP
Mechanical Engineer	7	PE, Ph.D
Construction Engineer	9	PE, LSI
Fire Protection Engineer	2	FPE, CTPS
Environmental Engineer	8	PE, Ph.D, RS, CHMM, PG, BCEE
Microstation CAD Technician	10	
Building Information Modeler (BIM)/Civil Information Modeler (CIM)	4	

Discipline	# per Discipline	Credentials
GIS (Mapping and Analysis)	4	LSI
Architect	8	AIA, RA, LEED AP, BD+C, NCARB, CSI, SCE, B+C
Land Surveyor	7	PLS
Survey Team	11	CST, BARCH
Cost Engineer	3	PE, SE, CCP, PMP
Cost Estimator	8	PE, CFM, CVS, CPE, CVS-Life, FSAVE, LCPE
Value Engineer	1	PE, CVS

of Disciplines: 157

C. Capacity

MSMM has a proven track record on an annual basis of successfully executing multiple USACE task orders in simultaneous fashion, while also fulfilling commitments for other clients. In 2023, MSMM delivered ~\$9 million in USACE task orders, ranging in scope (small to large task orders) and complexity, with 70-80% of these activities completed using in-house MSMM personnel. Based upon our CPARS ratings (see Paragraph E below) it is evident that MSMM has been able to deliver in accordance with USACE requirements including budget and schedule with the majority of ratings ranging from very good to exceptional. Based upon the anticipated workload under the subject solicitation, MSMM has the existing capacity to fulfill the majority of the anticipated contract requirements.

Team MSMM and our full complement of team members provides MVK and MVM with the depth and breadth of capacity and experience that stems from completing over **2,000 Task Orders for USACE**, easily exceeding \$1B in delivered assignments including the delivery of multiple task orders during the same period in accordance with USACE budget and schedule. Our organizational chart in Section D showcases our team's strength, comprising 150+ qualified professionals who are positioned to successfully deliver on the anticipated MVK and MVM requirements.

D. Knowledge of the Locality

All MSMM team members have office locations in MVD, including many of our team members being located in the MVK and MVM area of responsibility. As exhibited in Sections E, F, and H, Team MSMM has thorough knowledge of the above-ground terrain, subsurface conditions, subsidence, coastal and water resource characteristics, climate conditions including flooding sources, navigational requirements, permitting and our sensitive environmental setting and disaster mitigation and recovery of the region. Many of our teaming partners reside and work within the Mississippi Valley and have a personal stake in the region's wellbeing.

Most of the staff members of the MSMM team have received their academic degrees and professional experience working in the unique terrain of the Gulf Coast. We have included two well-seasoned geotechnical firms that have extensive experience in the MVK and MVM areas of responsibility—Eustis Engineering, LLC and Burns Cooley Dennis, Inc. – as well as two well established survey teams with extensive experience in the area of responsibility—Johnson-McAdams Surveying and Mapping, LLC and Chutz Surveying, LLC. These team members ensure that Team MSMM can meet all requisite fieldwork and investigation requirements in a timely fashion.



*Office Locations of
MSMM Team Members
Throughout Lower
Mississippi River Valley*

The capacity to accomplish the requested work in this solicitation is further enhanced when considering the number of offices our team offers within the solicitation footprint. The landscapes covered by the boundaries of the Vicksburg and Memphis Districts offer a unique set of physical and environmental conditions that must be considered when undertaking project planning and design. Team MSMM has over 150 professionals that have worked in this geographic setting. Please reference the adjacent map showing our team members' office locations within the AOR.

E. Past Performance

Team MSMM partners have prided themselves on providing quality professional services with the utmost responsiveness. This has garnered many accolades and “repeat calls” for service from clients as evidenced by the testimonials found in this section. We have an enviable performance history, especially in terms of our engineering solutions and deliverables we have provided under previous and ongoing USACE contracts. This reliability is a direct result of years of demonstrated ability to deliver safely, within budget, on time, and with the highest level of quality. These traits are apparent in the federal and local client Letters of Recommendation below and in customer feedback provided in MSMM’s CPARS ratings.

“MSMM Engineering continuously and repeatedly meets and beats schedule, even with the delay in schedule due to weather (act of God). The firm adjusts and continues to adjust to circumstances out of their control.”

Kolawole Anifowoshe | Design Manager USACE Ft. Worth District. | Dallas Floodway Extension Project

Contract Number	Task Order Number	CPARS Quality Rating	CPARS Name and Title of Assessing Official / Phone Number
W912P819D0011	W912P819F0250	Exceptional	Ione Cataldo; Supvr Contract Specialist, USACE MVN; 504-862-2882
W912P816D0006	W912P818F0053	Very Good	George Krausser; Civil Engineer, USACE MVN; 504-862-1712
W912P819D0011	W912P821F0146	Exceptional	Veronica F. Garner-Flint; Contracting Officer USACE MVN; 504-862-1515
W912P816D0006	W912P818F0260	Very Good	George Krausser; Civil Engineer, USACE MVN; 504-862-1712
W912P819D0011	W912P819F0247	Exceptional	Ione Cataldo; Supvr Contract Specialist, USACE MVN; 504-862-2882
W912P816D0006	W912P817F0087	Very Good	George Krausser; Civil Engineer, USACE MVN; 504-862-1712
W912P819D0011	W912P820F0150	Exceptional	Christopher Nuccio; Contracting Officer, USACE MVN; 504-862-2704
W912P816D0006	W912P818F0052	Very Good	George Krausser; Civil Engineer, USACE MVN; 504-862-1712
W912P820D0007	W912P822F0165	Very Good	George Krausser; Civil Engineer, USACE MVN; 504-862-1712
W912P819D0011	W912P822F0025	Exceptional	Veronica F. Garner-Flint; Contracting Officer USACE MVN; 504-862-1515
W912P819D0011	W912P822F0098	Exceptional	Karen Hargrave; Contracting Officer USACE MVN; 504-862-1561
W912P819D0011	W912P821F0182	Exceptional	Veronica F. Garner-Flint; Contracting Officer USACE MVN; 504-862-1515

Contract Number	Task Order Number	CPARS Quality Rating	CPARS Name and Title of Assessing Official / Phone Number
W912P819D0011	W912P819F0230	Exceptional	Veronica F. Garner-Flint; Contracting Officer USACE MVN; 504-862-1515
W912P819D0011	W912P819F0246	Exceptional	Ione Cataldo; Supvr Contract Specialist, USACE MVN; 504-862-2882
W912P819D0011	W912P820F0148	Exceptional	Christopher Nuccio; Contracting Officer, USACE MVN; 504-862-2704
W912P819D0011	W912P819F0171	Exceptional	Christopher Nuccio; Contracting Officer, USACE MVN; 504-862-2704
W912P819D0011	W912P820F0079	Exceptional	Veronica F. Garner-Flint; Contracting Officer USACE MVN; 504-862-1515
W912P819D0011	W912P820F0172	Exceptional	Christopher Nuccio; Contracting Officer, USACE MVN; 504-862-2704
W912P819D0011	W912P820F0182	Exceptional	Christopher Nuccio; Contracting Officer, USACE MVN; 504-862-2704
W912P819D0011	W912EQ20F0074	Very Good	Samantha Harper; Contracting Officer USACE MVM; 901-828-0562
W9126G16D0017	W912P819F0215	Exceptional	Veronica F. Garner-Flint; Contracting Officer USACE MVN; 504-862-1515
W9126G16D0017	W9126G18F0294	Very Good	James Wright; Professional Engineer USACE SWF; 817-886-1305
W9126G16D0017	W9126G18F0286	Very Good	James Wright; Professional Engineer USACE SWF; 817-886-1305
W9126G16D0017	W9126G20F0033	Satisfactory	James Wright; Professional Engineer USACE SWF; 817-886-1305
W9126G16D0017	W9126G19F0004	Exceptional	Jacob Walsdorf; Landscape Architect USACE SWF; 409-766-3817
W9126G16D0017	W912HY19F0031	Exceptional	Kalli Clark-Egan; Civil Engineer USACE SWG; 469-367-6036
W9126G16D0017	W9126G18F0348	Satisfactory	James Wright; Professional Engineer USACE SWF; 817-886-1305
W9126G16D0017	W9126G18F0159	Exceptional	Jacob Walsdorf; Landscape Architect USACE SWF; 409-766-3817
W9126G16D0017	W9126G18F0322	Satisfactory	James Wright; Professional Engineer USACE SWF; 817-886-1305
W912QR23D0008	W912QR23F0094	Very Good	Bruce Doughten; Chief, Engineering Management Branch; 502-315-6425
W912BV20D0027	W912BV23F0002	Very Good	Rudolfo Morales; Contracting Officer, USACE SWT; 918-669-7275

Below is a table of DOD contract awards for MSMM Engineering, LLC within the last 12 months.

Project Name	Agency	Task Order	Amount	Date
Project Management Support to USACE, MVN for the Mississippi River and Tributaries, BBA-18, Mississippi River Ship Channel, Sediment Diversions	USACE New Orleans	W912P824F0046	\$ 2,269,188.20	Jan-24

Project Name	Agency	Task Order	Amount	Date
Project Management and Quality Assurance Support for the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA)	USACE New Orleans	W912P824F0040	\$ 411,746.65	Jan-24
River Road Aquatic Ecosystem Restoration- San Antonio	USACE Fort Worth	W9126G24F0052	\$ 1,243,936.69	Jan-24
Project Management Support for the U.S. Army Corps of Engineers (USACE), New Orleans District (CEMVN) Ascension and Livingston Parish Environmental Infrastructure.	USACE New Orleans	W912P823F0113	\$ 750,702.66	Aug-23

“I have worked with MSMM for the last 8 years on several Environmental Infrastructure projects and the services provided were exceptional. Even with the complexity of some projects, MSMM successfully produced high quality products with heavy focus on maintaining schedule and budget. They maintain a high level of professionalism and ensure their customers are pleased with the services provided. I look forward to working with them on future endeavors.”

Jasmine Williams | Project Manager - USACE New Orleans District | Environmental Infrastructure Program | Jasmine.s.Williams@usace.army.mil | 504-862-2917 | Testimonial Provided June 2024

KEY TAKEAWAYS

MSMM Engineering, LLC is a **Small Business that delivered ~\$9M in 2023** USACE requirements and ~\$6.5M in USACE requirements annually over the last five years.

- ✓ MSMM Engineering, LLC has **established partner relationships** combined with the flexibility and agility of a Small Business to respond MVK's and MVM's most pressing needs, small or large, that are enhanced through the assembly of Team MSMM.
- ✓ Team MSMM provides MVK and MVM with a thoughtful cadre of team members, and subject matter experts across 12 separate firms, with a vast amount of **USACE Civil Works** experience (2000+ USACE task orders at ~\$1B).
- ✓ Team MSMM is located throughout the MVK and MVM AOR with offices in all 7 states including our geotechnical and survey partners that are positioned for rapid deployment with the breadth and depth of knowledge for the area.
- ✓ Team MSMM will employ **Program/Project Management principles** to ensure **safety, quality**, and in accordance with the established **schedule and budget**.

- ✓ Team MSMM will manage all work in accordance with a **Project Management Plan**. This process will drive effective communications between team members to ensure MVK and MVM requirements are clearly understood while **risk identification and risk management** will be paramount.
- ✓ Team MSMM's organizational structure and execution strategy includes **Quality and Safety Officers as our top priority**. Our full team is comprised of over 150 technical and professional experts across the required specializations. This gives us an incredible reach back capacity that will allow us to meet any needs of MVK, MVM, or MVD.
- ✓ MSMM and our team members that practice in the Federal space are in **very good standing** with USACE based upon **CPARS ratings**/reviews.
- ✓ MSMM and our team members understand the importance of task order execution and delivery while complying with all **USACE regulations, policies, procedures** underpinned by authorizations and appropriations.
- ✓ Team MSMM stands ready to serve as a contract partner and team member with MVK, MVM and other MVD districts to **deliver the vital Mississippi Valley Division Civil Works mission**.

I. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts

31. SIGNATURE



32. DATE SIGNED

June 17, 2024

33. NAME AND TITLE

Manish Mardia, P.E., President



SF330, PART II

ARCHITECT-ENGINEER QUALIFICATIONS				1. SOLICITATION NUMBER (<i>If any</i>) W912EE24O0003		
PART II – GENERAL QUALIFICATIONS <i>(If a firm has branch offices, complete for each specific branch office seeking work)</i>						
2a. FIRM (Or Branch Office) NAME MSMM Engineering, LLC				3. YEAR ESTABLISHED 2011	4. UNIQUE ENTITY IDENTIFIER NYLUL4Q5GYF6	
2b. STREET 4640 South Carrollton Avenue, Suite 220				5. OWNERSHIP		
2c. CITY New Orleans		2d. STATE LA	2e. ZIP CODE 70119	a. TYPE Limited Liability Corporation		
6a. POINT OF CONTACT NAME AND TITLE Manish Mardia, P.E., President/Owner				b. SMALL BUSINESS STATUS SDB		
6b. TELEPHONE NUMBER 504-559-1897		6c. EMAIL ADDRESS mmardia@msmmeng.com		7. NAME OF FIRM (<i>If block 2a is a branch office</i>)		
				8. FORMER NAME(S) (<i>If any</i>)	8b. YEAR ESTABLISHED	8c. UNIQUE ENTITY IDENTIFIER
9. EMPLOYEES BY DISCIPLINE				10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS		
a. Function Code	b. Discipline	c. No. of Employees		a. Profile Code	b. Experience	c. Revenue Index Number (see below)
		(1) FIRM	(2) BRANCH			
02	Administrative	4	3	C07	Coastal Engineering	2
05	Architect	1	1	C13	Computer Facilities; Computer Service	2
08	CADD Technician	5	2	C15	Construction Management	4
12	Civil Engineer	5	3	D01	Dams (Concrete; Arch)	1
15	Inspector	3	3	D02	Dams; Dikes; Levees	5
18	Cost Engineer /Estimator	1	1	E03	Electrical Studies and Design	1
21	Electrical Engineer	1	1	L06	Lighting (Exteriors; Streets; Memorials Athletic Fields)	1
23	Environmental Engineer	1	1	P06	Planning (Site, Installation, and Project)	6
32	Hydraulic Engineer	2	1	R11	Rivers; Canals; Waterways; Flood Control	5
39	Landscape Architect	1	1	S09	Structural Design; Special Structures	5
48	Project Manager	7	6	S13	Storm Water Handling & Facilities	5
57	Structural Engineer	2	2	W02	Water Resources; Hydrology Ground Water	3
				W03	Water Supply; Treatment and Distribution	3
Total		33	25			
11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS <i>(Insert revenue index number shown at right)</i>		PROFESSIONAL SERVICES REVENUE INDEX NUMBER				
a. Federal Work	7	1. Less than \$100,000 6. \$2 million to less than \$5 million				
b. Non-Federal Work	5	2. \$100,000 to less than \$250,000 7. \$5 million to less than \$10 million				
c. Total Work	7	3. \$250,000 to less than \$500,000 8. \$10 million to less than \$25 million				
		4. \$500,000 to less than \$1 million 9. \$25 million to less than \$50 million				
		5. \$1 million to less than \$2 million 10. \$50 million or greater				
12. AUTHORIZED REPRESENTATIVE <i>The foregoing is a statement of facts.</i>						
a. SIGNATURE 					b. DATE May 30, 2024	
c. NAME AND TITLE Manish Mardia, P.E., President/Owner						

ARCHITECT – ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (*If any*)

W912EE23O0003

PART II – GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME Tetra Tech, Inc.			3. YEAR ESTABLISHED 2012	4. UNIQUE ENTITY IDENTIFIER GMW1WKSRRWQW3
2b. STREET 400 112th Avenue NE, Suite 300			5. OWNERSHIP	
2c. CITY Bellevue		2d. STATE WA	2e. ZIP CODE 98004	a. TYPE Corporation
6a. POINT OF CONTACT NAME AND TITLE Michael Hough, PE – Operations Manager			b. SMALL BUSINESS STATUS N/A	
6b. TELEPHONE NUMBER (425) 635-1000		6c. E-MAIL ADDRESS michael.hough@tetrtech.com		7. NAME OF FIRM (<i>If block 2a is a branch office</i>) Tetra Tech, Inc.
8a. FORMER FIRM NAME(S) (<i>If any</i>) Inca Engineers			8b. YEAR ESTABLISHED 1983	8c. UNIQUE ENTITY IDENTIFIER 10-339-2619

9. EMPLOYEES BY DISCIPLINE

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Function Code	b. Discipline	c. No. of Employees		a. Profile Code	b. Experience	c. Revenue Index Number (<i>see below</i>)
		(1) FIRM	(2) BRANCH			
02	Administrative	1,802	7	B02	Bridges	2
08	CADD Technician	522	5	C07	Coastal Engineering	2
12	Civil Engineer	2,399	3	D01	Dams (Concrete; Arch)	3
20	Economist	30	1	D02	Dams (Earth; Rock; Dikes; Levees)	4
21	Electrical Engineer	706	4	D04	Design-Build - Preparation of RFPs	3
42	Mechanical Engineer	788	4	E03	Electrical Studies & Design	1
48	Project Manager	3,193	10	E11	Environmental Planning	4
57	Structural Engineer	240	11	F03	Fire Protection	2
	Graphic Artist/Designer	84	1	F04	Fisheries; Fish Ladders	5
				G06	Graphic Design	1
				H01	Harbors; Jetties; Piers, Ship Term. Fac.	2
				N02	Navigation Structures; Locks	2
				R10	Risk Analysis	2
				R11	Rivers; Canals; Waterways; Flood Control	6
				S09	Structural Design; Special Structures	1
				S10	Survey; Plot; Map; Flood Plain Studies	1
				S11	Sustainable Design	1
				S13	Storm Water Handling & Facilities	2
	Other Employees	18,198	0	T03	Traffic & Transportation Engineering	1
	Total	27,962	46	W02	Water Resources; Hydrology; Ground Water	1

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

(Insert revenue index number shown at right)

		PROFESSIONAL SERVICES REVENUE INDEX NUMBER	
1. Less than \$100,000	6. \$2 million to less than \$5 million		
2. \$100,000 to less than \$250,000	7. \$5 million to less than \$10 million		
3. \$250,000 to less than \$500,000	8. \$10 million to less than \$25 million		
4. \$500,000 to less than \$1 million	9. \$25 million to less than \$50 million		
5. \$1 million to less than \$2 million	10. \$50 million or greater		

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE 	b. DATE 4/8/2024
---	---------------------

c. NAME AND TITLE

Kristi Clemens, Marketing Manager

ARCHITECT-ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (if any)

W912EE23O0003

PART II - GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (or Branch Office) NAME Freese and Nichols, Inc.			3. YEAR ESTABLISHED 1894	4. UNIQUE ENTITY IDENTIFIER KKJCTMJ3HZJ4
2b. STREET 900 Camp Street, Suite 354			5. OWNERSHIP	
2c. CITY New Orleans		2d. STATE LA	2e. ZIP CODE 70130	a. TYPE Corporation
6a. POINT OF CONTACT NAME AND TITLE Robert W. Chambers, PG Vice President/Principal			b. SMALL BUSINESS STATUS Other Than Small Business	
6b. TELEPHONE NUMBER 504-478-1065	6c. EMAIL ADDRESS rwc@freese.com		7. NAME OF FIRM (if Block 2a. is a Branch office) N/A	
8a. FORMER NAME(S) (if any) None			8b. YEAR ESTABLISHED N/A	8c. UNIQUE ENTITY IDENTIFIER N/A

9. EMPLOYEES BY DISCIPLINE

10. PROFILE OF FIRM'S EXPERIENCE AND AVERAGE ANNUAL REVENUES FOR LAST 5 YEARS

a. Function code	b. Discipline	c. Number of Employees		a. Profile code	b. Experience	c. Revenue Index Number (see below)
		(1) Firm	(2) Branch			
02	Administrative	51		A06	Airports; Terminals and Hangars	6
06	Architect	12		C07	Coastal Engineering	5
08	CADD Technician	80		C15	Construction Management	9
12	Civil Engineer	278	3	D01	Dams (Concrete; Arch)	5
16	Construction Manager	123		D02	Dams (Earth; Rock); Dikes; Levees	8
18	Cost Engineer/Estimator	9		E03	Electrical Studies and Design	5
21	Electrical Engineer	33		E09	Environmental Impact Studies/Assessments	5
23	Environmental Engineer	20	2	E11	Environmental Planning	5
24	Environmental Scientist	47		E12	Environmental Remediation	5
27	Foundation/Geotechnical Eng	5		H07	Highways; Streets; Parking Lots	8
29	GIS Specialist	29		M05	Military Design Standards	5
30	Geologist	5		O01	Office Buildings; Industrial Parks	6
32	Hydraulic Engineer	110		P04	Pipelines: X-Country-Liquid & Gas	6
34	Hydrologist	8		P05	Planning (Community, Regional, Area)	7
39	Landscape Architect	6		R03	Railroad; Rapid Transit	5
42	Mechanical Engineer	18	1	R10	Risk Analysis	5
47	Planner: Urban/Regional	28		R11	Rivers; Canals; Waterways; Flood Control	7
48	Project Manager	66	1	S04	Sewage Collection, Treatment & Distribution	9
57	Structural Engineer	21		S13	Storm Water Handling & Facilities	8
60	Transportation Engineer	40		T03	Traffic & Transportation Engineering	8
62	Water Resources Engineer	41		W02	Wtr Resources; Hydrology; Ground Wtr	6
	Other Employees	189	1	W03	Wtr Supply; Treatment & Distribution	10
Total		1219	6	Z01	Zoning; Land Use Studies	5

11. AVERAGE ANNUAL PROFESSIONAL SERVICES OF FIRM FOR LAST 3 YEARS (insert revenue index number shown at right)

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

- | | |
|---|---|
| 1. Less than \$100,000 | 6. \$2 million to less than \$5 million |
| 2. \$100,000 to less than \$250,000 | 7. \$5 million to less than \$10 million |
| 3. \$250,000 to less than \$500,000 | 8. \$10 million to less than \$25 million |
| 4. \$500,000 to less than \$1 million | 9. \$25 million to less than \$50 million |
| 5. \$1 million to less than \$2 million | 10. \$50 million or greater |

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts

a. SIGNATURE

DocuSigned by:

Gwen E. Green Perez

c. NAME AND TITLE

Gwen E. Green Perez | CFO

b. DATE

02/28/2024



ARCHITECT - ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (if any)
W912EE24O0003

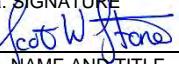
PART II – GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME CDM Federal Programs Corporation (CDM Smith)			3. YEAR ESTABLISHED 1986	4. UNIQUE ENTITY IDENTIFIER DHS5ZJSFCSH9
2b. STREET 12400 Coit Road, Suite 400			5. OWNERSHIP	
2c. CITY Dallas		2d. STATE TX	2e. ZIP CODE 75251	a. TYPE Corporation
6a. POINT OF CONTACT NAME AND TITLE Scott Stone, PE, CFM, Senior Vice President			b. SMALL BUSINESS STATUS Large Business	
6b. TELEPHONE NUMBER 1.214.346.2800		6c. E- MAIL ADDRESS StoneSW@cdmsmith.com		7. NAME OF FIRM (if block 2a is a branch office) CDM Federal Programs Corporation
8a. FORMER FIRM NAME(S) (If any)			8b. YR. ESTABLISHED	8c. UNIQUE IDENTIFIER

9. EMPLOYEES BY DISCIPLINE			10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS			
a. Function Code	b. Discipline	c. No. of Employees		a. Profile Code	b. Experience	c. Revenue Index Number (see below)
		(1) Firm	(2) Branch			
	Program Manager	25	-	B02	Bridges	8
48	Project Manager	332	5	C15	Construction Management	10
12	Civil Engineer	660	9	C14	Conservation & Resource Management	8
27	Geotechnical Engineer	168	5	C18	Cost Estimating; Cost Engineering	8
32	Hydraulic Engineer	203	5	D02	Dams (Earth; Rock); Dikes; Levees	8
21	Electrical Engineer	241	15	E03	Electrical Studies and Design	8
42	Mechanical Engineer	92	6	E09	Environmental Impact Studies, Assessmt.	8
	Construction Engineer	36	1	E11	Environmental Planning	8
25	Fire Protection Engineer	7	1	G04	Geographic Information System Services	8
23	Environmental Engineer	658	15	P06	Planning (Site, Installation, and Project)	9
06	Architect	67	3	P07	Plumbing & Piping Design	9
18	Cost Estimator	59	3	R06	Rehabilitation (Bldgs.; Structures; Facil.)	10
08	CADD Technician	251	5	R11	Rivers; Canals; Waterways; Flood Control	9
15	Construction Inspector	327	1	S04	Sewage Collection, Treatment & Disposal	10
16	Construction Manager	186	7	S05	Soils & Geologic Studies; Foundations	9
24	Environmental Scientist	266	2	S09	Structural Design; Special Structures	8
30	Geologist	216	-	S10	Surveying; Mapping; Flood Plain Studies	8
47	Planner	256	8	S11	Sustainable Design	8
57	Structural Engineer	202	11	S13	Storm Water Handling and Facilities	9
58	Technician	917	7	T02	Testing & Inspection Services	8
	Other Employees	1,170	12	W02	Water Resources; Hydrology; Grndwtr.	10
	Total	6,339	121	W03	Water Supply; Treatment, Distribution	10

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS (Insert revenue index number shown at right)		PROFESSIONAL SERVICES REVENUE INDEX NUMBER	
a. Federal Work	10	1. Less than \$100,000	6. \$2 million to less than \$5 million
b. Non-Federal Work	10	2. \$100,000 to less than \$250,000	7. \$5 million to less than \$10 million
c. Total Work	10	3. \$250,000 to less than \$500,000	8. \$10 million to less than \$25 million
		4. \$500,000 to less than \$1 million	9. \$25 million to less than \$50 million
		5. \$1 million to less than \$2 million	10. \$50 million or greater

12. AUTHORIZED REPRESENTATIVE The foregoing is a statement of facts.	
a. SIGNATURE 	b. DATE May 31, 2024

c. NAME AND TITLE
Scott Stone, PE, CFM, Senior Vice President

**CDM
Smith**

ARCHITECT-ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (if any)

W912EE2400003

PART II – GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME			3. YEAR ESTABLISH	4. UNIQUE ENTITY IDENTIFIER
Eustis Engineering L.L.C.			2006	R83MG9NLTMS4
2b. STREET			5. OWNERSHIP	
3011 28 th Street			a. TYPE	
2c. CITY		2d. STATE	2e. ZIP CODE	Corporation
Metairie		LA	70002	b. SMALL BUSINESS STATUS
6a. POINT OF CONTACT NAME AND TITLE			Small Business	
Gwendolyn P. Sanders, P.E. / President			7. NAME OF FIRM (If Block 2a is a branch office)	
6b. TELEPHONE NUMBER	6c. E-MAIL ADDRESS			
504-834-0157	gsanders@eustiseng.com			
8a. FORMER FIRM NAME(S) (if any)			8b. YEAR ESTABLISHED	8c. UNIQUE ENTITY IDENTIFIER
Eustis Engineering Company, Inc.			1946	03-439-1870
Eustis Engineering Services, L.L.C.			2006	78-481-0959

EMPLOYEES BY DISCIPLINE

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Function Code	b. Discipline	c. No of Employees		a. Profile Code	b. Experience	c. Revenue Index Number (see below)
		(1) FIRM	(2) BRANCH			
27	Geotechnical Engineer (P.E.)	18	12	S05	Soils & Geologic Studies: Foundations	7
	Assistant Engineer (E.I.)	5	3			
	Engineering Graduate	3	3			
	Engineering Technician	2	1		Testing & Inspection Services	
	Engineering Intern	0				
30	Geologist (P.G.)	1	0			
30	Geoscientist-in-Training (G.I.T.)	1	1			
30	Field Geologist	0				
	AutoCAD Technician	0	0			
	Administrative	16	14			
	Drilling Personnel	18	17			
	Laboratory Personnel	8	8			
	CMT Personnel	17	13			
	Safety Manager	1	1			
	Quality Control Manager	1	1			
	Operations Manager	1	1			
	Total	92	75			

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

(Insert revenue index number shown at right)

a. Federal Work		7	PROFESSIONAL SERVICES REVENUE INDEX NUMBER	
b. Non-Federal Work		7	1. Less than \$100,000	6. \$2 million to less than \$5 million
c. Total Work		8	2. \$100,000 to less than \$250,000	7. \$5 million to less than \$10 million
			3. \$250,000 to less than \$500,000	8. \$10 million to less than \$25 million
			4. \$500,000 to less than \$1 million	9. \$25 million to less than \$50 million
			5. \$1 million to less than \$2 million	10. \$50 million or greater

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE	b. DATE
	05/30/2024

c. NAME AND TITLE

Gwendolyn P. Sanders, P.E. / President

Eustis Engineering supplements its workforce with more than 30 fulltime subcontractors throughout the company and offices.

ARCHITECT ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (If any)

W912EE-24-O-0003

PART II - GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME Johnson-McAdams Surveying & Mapping, LLC		3. YEAR ESTABLISHED 1996	4. UNIQUE ENTITY IDENTIFIER XMXDXXCCKN8Q7
2b. STREET 111 East Market Street		5. OWNERSHIP	
2c. CITY Greenwood		2d. STATE MS	2e. ZIP CODE 38930
a. POINT OF CONTACT NAME AND TITLE Lawrence Wm. Anderton, PLS, President			
6b. TELEPHONE NUMBER (662) 455-0200	6c. E-MAIL ADDRESS landerton@johnsonmcadams.com		
8a. FORMER FIRM NAME(S) (If any) The Johnson-McAdams Firm, P.A.			8b. YR. ESTABLISHED 1986
			8c. DUNS NUMBER 15-391-5913

9. EMPLOYEES BY DISCIPLINE			10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS		
a. Function Code	b. Discipline	c. No. of Employees	a. Profile Code	b. Experience	c. Revenue Index Number (see below)
		(1) FIRM			
02	Administration	2	C01	Cartography	1
08	CADD Technician	4	C16	Construction Surveying	3
38	Land Surveyor	2	D05	Terrain Model	1
	Surveyors	20	G05	Geospatial Data	1
			H13	Hydrographic Surveying	2
			L02	Land Surveying	1
			S10	Surveys - Mapping	3
			T04	Topographic Surveying	3
	Other Employees				
	Total	28			

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS <i>(Insert revenue index number shown at right)</i>		PROFESSIONAL SERVICES REVENUE INDEX NUMBER					
		1. Less than \$100,000.	6. \$2 million to less than \$5 million	2. \$100,000 to less than \$250,000	7. \$5 million to less than \$10 million	3. \$250,000 to less than \$500,000	8. \$10 million to less than \$25 million
a. Federal Work	6	4. \$500,000 to less than \$1 million	9. \$25 million to less than \$50 million	5. \$1 million to less than \$2 million	10. \$50 million or greater		
b. Non-Federal Work	2						
c. Total Work	6						

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE

b. DATE

June 3, 2024

c. NAME AND TITLE

ARCHITECT ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (*If any*)
W912EE-24-O-0003

PART II - GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (or Branch Office) NAME Chustz Surveying, LLC			3. YEAR ESTABLISHED 1995	4. UNIQUE ENTITY IDENTIFIER QWXJLZNY6F21
2b. STREET 211 Richey Street			5. OWNERSHIP	
2c. CITY New Roads		2d. STATE LA	2e. ZIP CODE 70760	a. TYPE Corporation
6a. POINT OF CONTACT NAME AND TITLE James H. Chustz, PLS, Manager			b. SMALL BUSINESS STATUS N/A	
6b. TELEPHONE NUMBER 225-718-7103		6c. E-MAIL ADDRESS jchustz@chustz.com		7. NAME OF FIRM (<i>If Block 2a is a Branch Office</i>)
8a. FORMER FIRM NAME(S) (<i>If any</i>) N/A				8b. YEAR ESTABLISHED
				8c. UNIQUE ENTITY IDENTIFIER

9. EMPLOYEES BY DISCIPLINE

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Function Code	b. Discipline	c. Number of Employees		a. Profile Code	b. Experience	c. Revenue Index Number (see below)
		(1) FIRM	(2) BRANCH			
02	Administrative	3		G03	Geodetic Surveying	2
03	Aerial Photographer	2		H13	Hydrographic Surveying	6
08	CADD Technician	5		L02	Land Surveying	4
12	Civil Engineer	4		S10	Surveying, Platting, Mapping, Flood Plain Studies	2
28	Geodetic Surveyor	3		T04	Topographic Surveying and Mapping	4
29	G.I.S.S.	1				
38	Professional Land Surveyor	3				
48	Project Manager	3				
58	Technician/Analyst	15				
	Other Employees	9				
Total		48				

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

(Insert revenue index number shown at right)

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

- 1. Less than \$100,000.
- 2. \$100,000 to less than \$250,000
- 3. \$250,000 to less than \$500,000
- 4. \$500,000 to less than \$1 million
- 5. \$1 million to less than \$2 million
- 6. \$2 million to less than \$5 million
- 7. \$5 million to less than \$10 million
- 8. \$10 million to less than \$25 million
- 9. \$25 million to less than \$50 million
- 10. \$50 million or greater

a. Federal Work

7

b. Non-Federal Work

2

c. Total Work

7

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE

b. DATE

06/03/2024

c. NAME AND TITLE

James H. Chustz, PLS, Manager

ARCHITECT - ENGINEER QUALIFICATIONS

 1. SOLICITATION NUMBER (if any):
 Announcement No.W912EE24O0003

PART II - CONTRACT SPECIFIC QUALIFICATIONS
(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (or branch office) NAME: BKI BURK-KLEINPETER, INC.		Kenner, LA		3. YEAR ESTABLISHED 1910	4. UNIQUE ENTITY IDENTIFIER TT9AGM31ZHM5
2b. STREET: 2400 Veterans Memorial Blvd., Suite 310				5. OWNERSHIP	
2c. CITY: Kenner		2d. STATE: LA	2e. ZIP CODE: 70062	a. TYPE: Corporation	
6a. POINT OF CONTACT NAME AND TITLE: Henry M. Picard, III, PE, PLS - Senior Vice President				b. SMALL BUSINESS STATUS: YES	
6b. TELEPHONE NUMBER: (504) 486-5901		6c. EMAIL ADDRESS: hpicard@bkiusa.com		7. NAME OF FIRM (If block 2a is a branch office): N/A	
8a. FORMER FIRM NAME(s) (if any) William R. Burk, Architect 1910-1943 • William R. Burk, Associated Architects & Engineers 1943-1956 Burk, LeBreton & Lamantia Architects and Engineers 1956-1962 • Burk & Associates, Inc. 1962-1990				8b. YR. ESTABLISHED 1910	8c. UNIQUE ENTITY IDENTIFIER TT9AGM31ZHM5

9. EMPLOYEES BY DISCIPLINE
10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST FIVE YEARS

a. Function Code	b. Discipline	c. Number of Employees (1) FIRM (2) BRANCH		a. Profile Code	b. Experience	c. Revenue Index Number (see below)
02	Administrative	8	8	B02	Bridges	5
06	Architect	0	0	C15	Construction Management	5
08	CADD Technician	4	4	D02	Dams Earth Levee	1
12	Civil Engineering	5	5	E09	EIS	1
14	Computer Programmer	0	0	H01	Harbors, Piers	3
15	Construction Inspection	3	3	H07	Highways, Streets	5
16	Construction Manager	0	0	I06	Irrigation, Drainage	1
18	Cost Engineering	0	0	P05	Planning, Regional	1
21	Electrical Engineering	1	1	R03	Railroad	1
23	Environmental Engineering	1	1	R06	Rehab Building	1
29	GIS Specialist	0	0	R11	Rivers, Canals	1
32	Hydraulic Engineer	3	3	S04	Sewage Collection & Treatment	3
42	Mechanical Engineer	0	0	S09	Structural Design	5
47	Planner	0	0	S13	Stormwater Facilities	5
52	Sanitary Engineer	0	0	T03	Traffic Engineering	1
56	Spec Writer	0	0	W03	Water Supply & Treatment	3
57	Structural Engineer	3	3	D04	Design Build	1
60	Transportation Engineer	0	0	E03	Electrical Design	3
58	Technician/Analyst	2	2	E12	Environmental Remediation	1
				I01	Industrial Buildings	1
	Other Employees	0	0	G04	GIS Services	1
	Total	30	30	R04	Recreation Facilities	1

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM
FOR THE LAST 3 YEARS
(insert revenue index number shown at right)

		PROFESSIONAL SERVICES REVENUE INDEX NUMBER	
a. Federal Work	1	1. Less than \$100,000	6. \$2 million to less than \$5 million
b. Non-Federal Work	8	2. \$100,000 to less than \$250,000	7. \$5 million to less than \$10 million
c. Total Work	8	3. \$250,000 to less than \$500,000	8. \$10 million to less than \$25 million
		4. \$500,000 to less than \$1 million	9. \$25 million to less than \$50 million
		5. \$1 million to less than \$2 million	10. \$50 million or greater

12. AUTHORIZED REPRESENTATIVE
The foregoing is a statement of facts.

a. SIGNATURE		b. DATE 06/05/2024
c. NAME & TITLE	Henry M. Picard, III, PE, PLS - Senior Vice President	

ARCHITECT – ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (If any)

PART II - GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME AECOM Technical Services, Inc.		3. YR ESTABLISHED 1970	4. UNIQUE ENTITY IDENTIFIER 003184462 (ATS HQ DUNS) EPUXNLX5EYC4 (Unique Entity Number)
2b. STREET 1555 Poydras Street, Suite 1200		5. OWNERSHIP	
2c. CITY New Orleans	2d. STATE LA	2e. ZIP CODE 70112	a. TYPE Corporation
6a. POINT OF CONTACT NAME AND TITLE Michael Patorno, PE, Vice President Business Line Leadership		b. SMALL BUSINESS STATUS Large	
6b. TELEPHONE NUMBER 504.586.8111	6c. E-MAIL ADDRESS mike.paterno@aecom.com		7. NAME OF FIRM (If block 2a is a branch office) AECOM Technical Services, Inc.
8a. FORMER FIRM NAME(S) (If any) No firm name changes during the last six years		8b YR. ESTABLISHED	8c. UNIQUE ENTITY IDENTIFIER

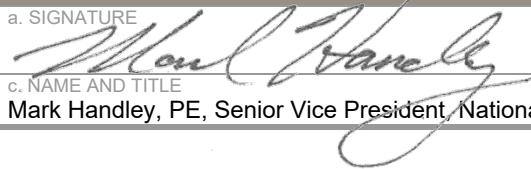
9. EMPLOYEES BY DISCIPLINE			10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS			
a. Function Code	b. Discipline	c. No. of Employees (1) FIRM GLOBAL #'s (2) BRANCH OFFICE #'s	a. Profile Code	b. Experience		c. Revenue Index Number (see below)
02	Administrative	1,310	3	A05/A06	Airports; Terminals and Hangars; Lighting; Fueling	10
08	CADD Technician	2,236	12	C15	Construction Management	10
10	Chemical Engineer	187	3	C18	Cost Estimating; Cost Eng. & Analysis	6
12	Civil Engineer	7,256	12	D01/D02	Dams (Earth; Rock); Dikes; Levees	10
15	Construction Inspector	977	1	D04	Design-Build – Preparation of RFPs	8
16	Construction Manager	991	2	E02	Educational Facilities; Classrooms	10
20	Economist	166	1	E07	Energy Conservation; New Energy Sources	9
21	Electrical Engineer	1,864	6	E09	Env. Impact Studies, Assessments or Statements	10
27	Foundation/Geotechnical Engineer	757	1	E12	Environmental Remediation	10
39	Landscape Architect	545	2	G01	Garages; Vehicle Maint. Facilities; Parking Decks	6
42	Mechanical Engineer	1,626	13	G04	GIS: Development, Analysis, & Data Conversion	8
47	Planner: Urban/Regional	783	3	H01	Harbors; Jetties; Piers; Ship Terminal Facilities	7
48	Project Manager [subset of other disciplines]	[7,539]	[15]	H07	Highways; Streets; Airfield Paving; Parking Lots	10
53	Scheduler	86	1	H09	Hospital; Medical Facilities	9
57	Structural Engineer	2,206	15	M05	Military Design Standards	7
58	Technician/Analyst	2,457	6	O01	Office Buildings; Industrial Parks	9
60	Transportation Engineer	1,203	1	P05/P06	Planning (Community, etc.; Site, Installation & Project)	10
62	Water Resources Engineer	523	1	P12	Power Generator; Transmission	10
				R06	Rehabilitation (Buildings; Structures; Facilities)	8
				S04	Sewage Collection, Treatment and Disposal	10
				S05	Soils & Geologic Studies; Foundations	7
	Other technical staff	24,431	13	S09	Structural Design; Special Structures	7
				S10	Surveying; Platting; Mapping; Flood Plain Studies	7
				S13	Storm Water Handling & Facilities	7
			96	T03	Traffic & Transportation Engineering	10
				W02/W03	Water Resources; Water Supply Treatment/Distribution	10

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS (Insert revenue index number shown at right)		PROFESSIONAL SERVICES REVENUE INDEX NUMBER	
a. Federal Work	10	1. Less than \$100,000	6. \$2 million to less than \$5 million
b. Non-Federal Work	10	2. \$100,000 to less than \$250,000	7. \$5 million to less than \$10 million
c. Total Work	10	3. \$250,000 to less than \$500,000	8. \$10 million to less than \$25 million
		4. \$500,000 to less than \$1 million	9. \$25 million to less than \$50 million
		5. \$1 million to less than \$2 million	10. \$50 million or greater

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE



c. NAME AND TITLE

Mark Handley, PE, Senior Vice President, National Governments

b. DATE

01 June 2024

ARCHITECT – ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (if any)
W912EE23O0003

PART II – GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME Neel-Schaffer, Inc.	3. YEAR ESTABLISHED 1983	4. UNIQUE ENTITY IDENTIFIER VSG2MJB3C766
2b. STREET 4450 Old Canton Road, Suite 100	5. OWNERSHIP	
2c. CITY Jackson	2d. STATE MS	2e. ZIP CODE 39211
6a. POINT OF CONTACT NAME AND TITLE Melinda McGrath, PE, Executive VP/Central Region Manager		b. SMALL BUSINESS STATUS No
6b. TELEPHONE NUMBER (601) 948-3071	6c. E-MAIL ADDRESS melinda.mcgrath@neel-schaffer.com	7. NAME OF FIRM (If block 2a is a branch office)
8a. FORMER FIRM NAME(S) (If any) N/A		8b. YR. ESTABLISHED N/A
		8c. UNIQUE ENTITY IDENTIFIER N/A

9. EMPLOYEES BY DISCIPLINE

10. PROFILE OF FIRM'S EXPERIENCE AND
ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Function Code	b. Discipline	c. No. of Employees		a. Profile Code	b. Experience	c. Revenue Index Number (see below)
		(1) Firm	(2) Branch			
02	Administrative	70	16	A05	Airports; Navaids; Airport Lighting; Aircraft Fueling	6
03	Aerial Photographer	2	0	B02	Bridges	7
04	Aeronautical Engineer	2	0	C10	Commercial	6
07	Biologist	1	0	C16	Construction Surveying	2
08	CADD Designer/Technician	50	2	D02	Dams (Earth; Rock); Dikes; Levees	2
12	Civil Engineer	64	0	E02	Educational Facilities; Classrooms	4
14	Computer Programmer	0	0	E09	Environmental Impact Studies; Assessments or Statements	5
15	Construction Inspector	105	3	E12	Environmental Remediation	4
16	Construction Manager/Engineer	17	1	G04	Geographic Information System Services: Development, Analysis, and Data Collection	1
21	Electrical Engineer	2	0	H07	Highways; Streets; Airfield Paving; Parking Lots	8
23	Environmental Engineer	8	1	I01	Industrial Buildings; Manufacturing Plants	4
24	Environmental Scientist	4	0	I04	Intelligent Transportation Systems	3
29	Geographic Information System Specialist	3	0	L02	Land Surveying	3
30	Geologist	3	0	L03	Landscape Architecture	1
32	Hydraulic Engineer	12	3	P02	Petroleum and Fuel (Storage and Distribution)	1
38	Land Surveyor	11	0	P05	Planning (Community, Regional, Areawide)	5
39	Landscape Architect	4	0	P06	Planning (Site, Installation, and Project)	5
47	Planner: Urban/Regional	9	0	R03	Railroad; Rapid Transit	3
48	Project Manager	50	9	R04	Recreation Facilities (Parks, Marinas, Etc.)	5
52	Sanitary Engineer	1	0	R09	Resources Recovery; Recycling	6
55	Soils Engineer	0	0	R11	Rivers; Canals; Waterways; Flood Control	3
57	Structural Engineer	27	10	S04	Sewage Collection; Treatment and Disposal	7
58	Technician/Analyst	10	5	S07	Solid Wastes, Incineration, Landfills	5
60	Transportation Engineer	62	6	S09	Structural Design; Special Structures	4
62	Water Resources Engineer	24	4	S13	Storm Water Handling & Facilities	6
	Other Employees	4	0	T03	Traffic & Transportation Engineering	8
	Total	545	60	T05	Towers (self-Supporting and Guyed Systems)	6
				U02	Urban Renewals; Community Development	4
				W02	Water Resources; Hydrology; Ground Water	6
				W03	Water Supply; Treatment and Distribution	6

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR THE LAST 3 YEARS

(Insert revenue index number shown at right)

a. Federal Work	5	1 Less than \$100,000	6 \$2 million to less than \$5 million
b. Non-Federal Work	10	2 \$100,000 to less than \$250,000	7 \$5 million to less than \$10 million
c. Total Work	10	3 \$250,000 to less than \$500,000	8 \$10 million to less than \$25 million
		4 \$500,000 to less than \$1 million	9 \$25 million to less than \$50 million
		5 \$1 million to less than \$2 million	10 \$50 million or greater

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE 	b. DATE June 4, 2024
---	-----------------------------

c. NAME AND TITLE

Melinda McGrath, PE, Executive VP/Central Region Manager

ARCHITECT - ENGINEER QUALIFICATIONS

3. SOLICITATION NUMBER (*if any*)

W912EE23O0003

PART II – GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME GIS Engineering, LLC			3. YEAR ESTABLISHED 2015	4. UNIQUE ENTITY IDENTIFIER J1Y5MLA9JMK7
2b. STREET 450 Laurel Street, Suite 1700			5. OWNERSHIP	
2c. CITY Baton Rouge	2d. STATE LA	2e. ZIP CODE 70801	a. TYPE Manager Managed Limited Liability Company	b. SMALL BUSINESS STATUS N/A
6a. POINT OF CONTACT NAME AND TITLE Dustin M. Malbrough, PE, MBA - President			7. NAME OF FIRM (<i>If block 2a is a branch office</i>)	
6b. TELEPHONE NUMBER (225) 408 - 0700	6c. E-MAIL ADDRESS dustinn@gisy.com		8. FORMER FIRM NAME(S) (<i>if any</i>)	8b. YEAR ESTABLISHED
				8c. UNIQUE ENTITY IDENTIFIER J1Y5MLA9JMK7

9. EMPLOYEES BY DISCIPLINE

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Function Code	b. Discipline	c. No. of Employees		a. Profile Code	b. Experience	d. Revenue Index Number <small>see below</small>
		(1) FIRM	(2) BRANCH			
02	Administrative			B02	Bridges	3
03	Ariel Photographer	3		C07	Coastal Engineering	3
08	CADD Technician	5		C15	Construction Management	6
12	Civil Engineer	35		D02	Dams (Earth; Rock); Dikes; Levees	6
17	Corrosion Engineer	1		E09	Environmental Impact Studies, Assessments or Statements	3
23	Environmental Engineer	1		G03	Geodetic Surveying: Ground and Air-borne	3
24	Environmental Scientist	1		H07	Highways; Streets; Airfield Paving; Parking Lots	4
28	Geodetic Surveyor	1		H13	Hydrographic Surveying	7
29	G.I.S.S.	1		I01	Industrial Buildings; Manufacturing Plants	8
30	Geologist	1		I06	Irrigation; Drainage	6
33	Hydrographic Surveyor	1		L02	Land Surveying	5
38	Land Surveyor	5		R06	Rehabilitation (Buildings; Structures; Facilities)	3
48	Project Manager	10		R11	Rivers; Canals; Waterways; Flood Control	8
57	Structural Engineer	4		S04	Sewage Collection, Treatment and Disposal	3
62	Water Resources Engineer	1		S09	Structural Design; Special Structures	7
	Survey Party Chief	7		S10	Surveying; Platting; Mapping; Flood Plain Studies	5
	Survey Technicians	14		T04	Topographic Surveying and Mapping	5
	Other Employees	174				

Total	265			
11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS <i>(Insert revenue index number shown at right)</i>		PROFESSIONAL SERVICES REVENUE INDEX NUMBER		
a. Federal Work	7	1. Less than \$100,000	6. \$2 million to less than \$5 million	
b. Non-Federal Work	9	2. \$100,000 to less than \$250,000	7. \$5 million to less than \$10 million	
c. Total Work	9	3. \$250,000 to less than \$500,000	8. \$10 million to less than \$25 million	
		4. \$500,000 to less than \$1 million	9. \$25 million to less than \$50 million	
		5. \$1 million to less than \$2 million	10. \$50 million or greater	

12. AUTHORIZED REPRESENTATIVE
The foregoing is a statement of facts.

a. SIGNATURE

b. DATE

6/3/2024

b. NAME AND TITLE
Dustin M. Malbrough, PE, MBA - President

AUTHORIZED FOR LOCAL REPRODUCTION

ARCHITECT-ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (If any)

W912EE23O0003

PART II – GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (or branch office) NAME Strategic Value Solutions, Inc.		3. YEAR ESTABLISHED 2000	4. UNIQUE ENTITY IDENTIFIER FAS6ELEG65M5
2b. STREET 1650 NE Grand Avenue, Suite 100		5. OWNERSHIP a. TYPE Corporation	
2c. CITY Lee's Summit	2d. STATE MO	2e. ZIP CODE 64086	b. SMALL BUSINESS STATUS Yes 541690 WOSB
6a. POINT OF CONTACT NAME AND TITLE Korene V. Robinson, PE, VMA, LEED AP/President		7. NAME OF FIRM (if block 2a is a branch office)	
6b. TELEPHONE NUMBER 816-795-0700	6c. E-MAIL ADDRESS Korene.Robinson@SVS-inc.com		
8a. FORMER FIRM NAME(S) (if any)		8b. YR. ESTABLISHED	8c. UNIQUE ENTITY IDENTIFIER

9. EMPLOYEES BY DISCIPLINE

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

**11. ANNUAL AVERAGE PROFESSIONAL
SERVICES REVENUES OF FIRM
FOR LAST 3 YEARS**

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

- | | |
|---|---|
| 1. Less than \$100,000 | 6. \$2 million to less than \$5 million |
| 2. \$100,000 to less than \$250,000 | 7. \$5 million to less than \$10 million |
| 3. \$250,000 to less than \$500,000 | 8. \$10 million to less than \$25 million |
| 4. \$500,000 to less than \$1 million | 9. \$25 million to less than \$50 million |
| 5. \$1 million to less than \$2 million | 10. \$50 million or greater |

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

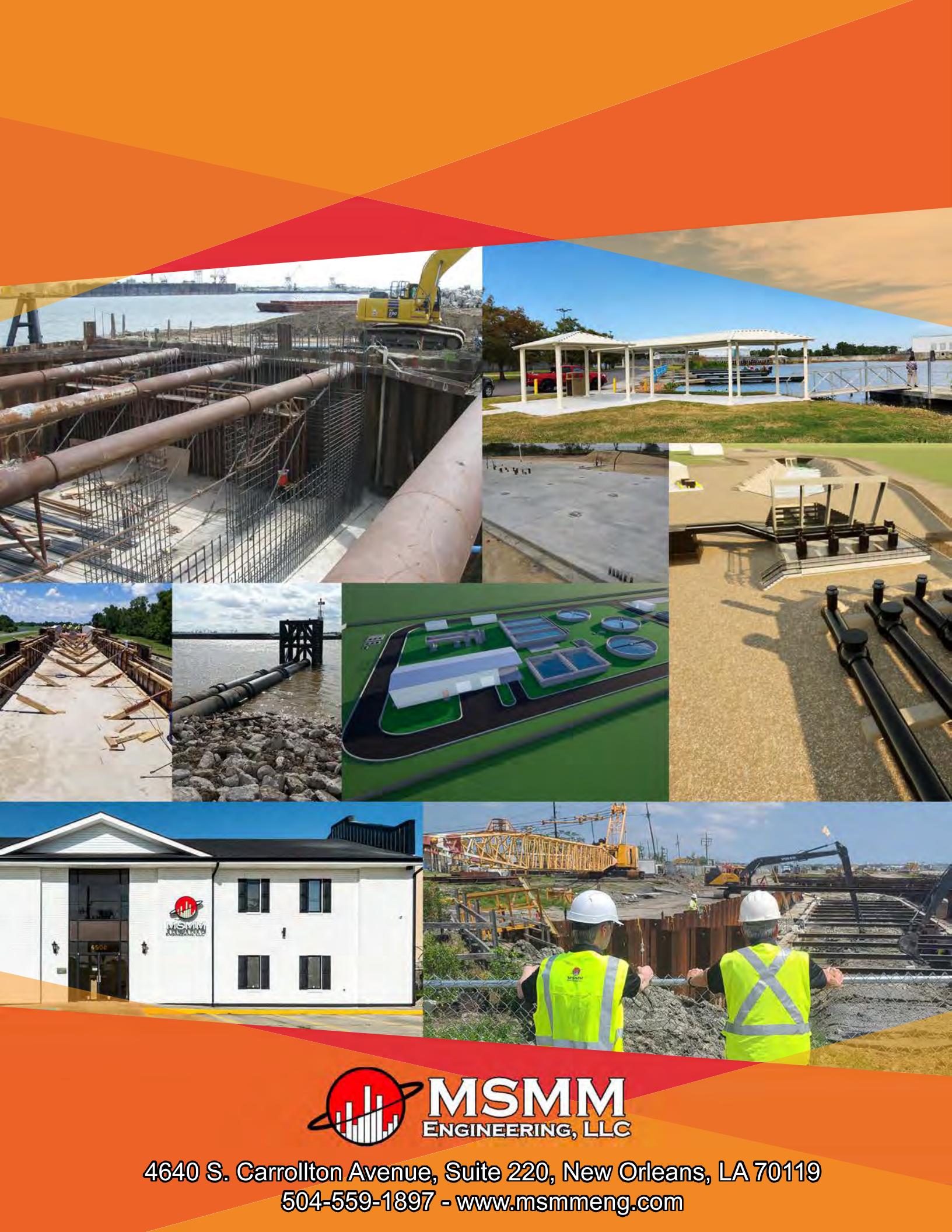
a SIGNATURE

Krene O'Robinson

b. DATE

c. NAME AND TITLE

Korene V. Robinson, President/Principal



MSMM
ENGINEERING, LLC

4640 S. Carrollton Avenue, Suite 220, New Orleans, LA 70119
504-559-1897 - www.msmmeng.com