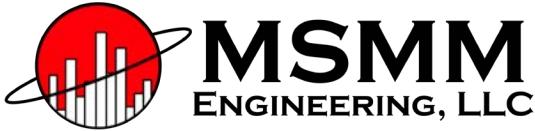


Unrestricted with a Small Business Reserve -
Architect and Engineering (A-E) Services to Support the
Planning, Engineering, and Engineering During
Construction, U.S. Army Corps of Engineers (USACE),
Southwestern Division (SWD), Galveston District (SWG)
W912HY23R3601 Small Business



And Associated Team

July 12, 2023



July 12, 2023

Ms. Carol Hodges
U. S. Army Corps of Engineers, Galveston District
KO Contracting Division
2000 Fort Point Road
Galveston, TX 77550-1229

Subject: Unrestricted with a Small Business Reserve – Architect and Engineering (A-E) Services to Support the Planning, Engineering, and Engineering During Construction, U.S. Army Corps of Engineers (USACE), Southwestern Division (SWG), Galveston District (SWG);
Solicitation Number: W912HY-23-R-3601, Small Business

Dear Ms. Hodges:

It is our pleasure to respond to the above subject Solicitation. Accordingly, enclosed herewith please find a completed Standard Form 330 Parts I and II for your consideration.

MSMM Engineering, LLC (MSMM) is one of the most trusted **Small Business Full Service A-E design firms** in the Southwest region for the design and implementation of civil works projects. We have completed over 100 civil works/military engineering design, value engineering, EDC, feasibility reports, planning and environmental task orders for multiple USACE Districts (New Orleans, Galveston, Fort Worth, Tulsa, and Louisville) during our short company history. The expertise and talent of our staff is displayed through our ability to handle high profile and time sensitive large scale design task orders. A few of the examples of those recently completed for various USACE districts are:

- Cow Bayou Drainage Pump Station Complex, 35% design complete, Task Order 100% complete.
- Texas City I-Wall to T-Wall Conversion, 95% design complete.
- 277k Levee Raise and Delta Pump Station Design-Build RFP's, Task order 100% complete.
- Project Management/Planning Task Order, ongoing New Orleans District
- Seven (7) VE Studies for Galveston, Fort Worth, Louisville, and Tulsa Districts

We have long proven our ability to perform civil works design on several large task orders at once, as we are currently doing on our A-E Services prime contracts for multiple districts. The bottom-line, is that the breadth and depth of our experience, ability, and capability provides SWG with a capable and proven small business that stands ready to meet the mission of providing excellent design solutions for upcoming design challenges associated with funded projects through the Bipartisan Infrastructure Law, the ongoing MRL and MR&T programs, and other Civil Works programs/projects.

Additionally, we have added the best combination of mission knowledge, full-service capabilities, previous experience, proven track record, and solid working relationships through subconsultants Tetra Tech, Moffat & Nichol, HNTB, BKI, Eustis Engineering, Terracon, ETTL, Strategic Value Solutions, CMET, ARS, and Chustz Surveying. This powerhouse team has



joined forces for one simple reason: to assist USACE in providing robust design solutions to the nation. We know our team can achieve this goal because of the following:

- No Risk: This team knows the SWG engineering team, has extensive horizontal design experience for the district and is trusted to provide excellent quality design services.
- Proven small business: MSMM has a proven track record of performing design for large IDIQ's and has the backing of a host of large businesses that also have a proven track record working for USACE.
- Deep Resources: In addition to receiving a proven team, SWG is receiving a team with deep resources and subject matter experts in every discipline requested.
- This team has provided extensive civil works design for every type of project listed in the solicitation.
- Local presence: MSMM's Houston office is approximately 40 minutes from the SWG. Backed by a large presence of local subs, our understanding of the challenges of this region, the non-Federal sponsor opinions/interests, and the ability to provide design that meets the expectations of the district's engineering team are unparalleled.

The MSMM team offers an enviable combination of firm qualification, personnel capability, local knowledge, and proven experience. All team members have design experience related to USACE Civil Works and Water Resources projects. Our teams strength was built to service flood damage risk reduction; floodplain modeling; coastal erosion; storm damage risk reduction and beach nourishment; shoreline and stream bank erosion protection; shallow and deep draft navigation; environmental and ecosystem habitat restoration; comprehensive watershed evaluations; infrastructure; and multi-purpose water resources projects.

We have completed several design task orders that required the implementation of measures to minimize flood risk. Members of our team have used HSDRRS guidelines since their inception to provide foundation and structural designs throughout the New Orleans area after Hurricane Katrina. Due to this familiarity, MVN tasked MSMM with providing the 35% civil and structural design for the Cow Bayou Pump Station Complex for the SWG. MVN engineering personnel were very pleased with the professionalism of our employees, and the work products we produced, giving us an Exceptional CPARS rating on the project.

In conclusion, the MSMM small business team has a proven track record of performing every service requested in this solicitation. The specialized design experience and technical competence this team possesses is un-paralleled when evaluating design experience within the program, within USACE, and within the contract footprint. We are strongly committed to providing the necessary resources to meet all scheduling demands, and to deliver the engineering design services to make this a successful mission.

Please feel free to contact us at 504-570-6098 if you require any additional information.

Sincerely,

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

Marish Mardia, P.E.
President

Enclosures



SF330, PART I, SECTIONS A-I

ARCHITECT-ENGINEER QUALIFICATIONS

PART I – CONTRACT-SPECIFIC QUALIFICATIONS

A. CONTRACT INFORMATION

1. TITLE AND LOCATION (CITY AND STATE)

Unrestricted with a Small Business Reserve - Architect and Engineering (A-E) Services to Support the Planning, Engineering, and Engineering During Construction, U.S. Army Corps of Engineers (USACE), Southwestern Division (SWD), Galveston District (SWG)

2. PUBLIC NOTICE DATE

February 27, 2023

3. SOLICITATION OR PROJECT NUMBER

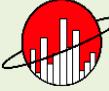
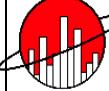
W912HY23R3601 SMALL BUSINESS

B. ARCHITECT-ENGINEER POINT OF CONTACT

4. NAME AND TITLE **Manish Mardia, P.E., President**5. NAME OF FIRM **MSMM Engineering, L.L.C., UEI: NYLUL4Q5GYF6, CAGE: 6SKR5, EIN 45-2655374**6. TELEPHONE NUMBER
(504) 559-18977. FAX NUMBER
(800) 335-80348. 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 ENGINEERING, LLC <input type="checkbox"/> CHECK IF BRANCH OFFICE	4640 S. Carrollton Ave., Suite 220 New Orleans, LA 70119 UEI: NYLUL4Q5GYF6	Small Business Full-Service Engineering, Design, Modeling, Data Collection; Civil, Structural, Electrical & Environmental Engineering, Civil Works and Water Resources Planning Studies Construction Management Cost Estimating, Engineering During Construction, Development of Design-Bid-Build Packages Request for Proposal (RFP) Packages for Design-Build Construction
b.	✓			 MSMM ENGINEERING, LLC <input type="checkbox"/> CHECK IF BRANCH OFFICE	13850 Gulf Freeway, Suite 202A Houston, TX 77034 UEI: JVL4KTEBNRX9	Small Business Data Collection, Civil and Environmental Engineering, Cost estimating, Project Management
c.			✓	 TETRA TECH <input type="checkbox"/> CHECK IF BRANCH OFFICE	400 112 th Avenue NE, Suite 300 Bellevue, WA 98004 UEI: GMW1WKSRWQW3	Civil Engineering, Mechanical Engineering, Electrical Engineering, Structural Engineering
d.			✓	 TETRA TECH <input type="checkbox"/> CHECK IF BRANCH OFFICE	17885 Von Karman Avenue, Suite 500 Irvine, CA 92614 UEI: JBJTPCXMTYH5	Cost Estimating
e.			✓	 TETRA TECH <input type="checkbox"/> CHECK IF BRANCH OFFICE	251 C. Recinto Sur, Suite 200 San Juan, PR 00901 UEI: DNA3V45LNKN5	Coastal Engineering

C. Proposed Team (*Complete this section for the prime contractor and all key subcontractors*) (Continued)

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.			✓	 TETRA TECH [<input type="checkbox"/>] CHECK IF BRANCH OFFICE	2003 Western Avenue, Suite 700 Seattle, WA 98121 UEI: FN3KJ67ZG226	Economics
g.			✓	 moffatt & nichol [<input type="checkbox"/>] CHECK IF BRANCH OFFICE	1780 Hughes Landing Blvd, Suite 575 The Woodlands, TX 77380 UEI: CTTMKG7EFDK1	Coastal, Structural, Hydraulic Engineering, Project Management
h.			✓	 moffatt & nichol [<input type="checkbox"/>] CHECK IF BRANCH OFFICE	4700 Falls of Neuse Rd, Suite 300 Raleigh, NC 27609 UEI: CTTMKG7EFDK1	Coastal, Structural, Civil & Cost Engineering, Beach Nourishment, Water-Resources Projects
i.			✓	 moffatt & nichol [<input type="checkbox"/>] CHECK IF BRANCH OFFICE	2185 N California Blvd, Suite 500 Walnut Creek, CA 94596 UEI: LZDBJT88LJM3	Coastal, Structural, Civil & Cost Engineering, Beach Nourishment, Water-Resources Projects
j.			✓	 HNTB HNTB Corporation [<input type="checkbox"/>] CHECK IF BRANCH OFFICE	10000 Perkins Rowe, Suite 640 Baton Rouge, LA 70810 UEI: RHXDZZEKQ3X7	Civil Engineering, Structural Engineering
k.			✓	 HNTB HNTB Corporation [<input type="checkbox"/>] CHECK IF BRANCH OFFICE	1301 Fannin Street, Suite 1800 Houston, TX 77002 UEI: RHXDZZEKQ3X7	Project Management, Civil Engineering, Structural Engineering, Hydraulic Engineering, Planning
l.			✓	 HNTB HNTB Corporation [<input type="checkbox"/>] CHECK IF BRANCH OFFICE	715 Kirk Drive, Kansas City, MO 64105 UEI: RHXDZZEKQ3X7	Project Management, Mechanical Engineering, Electrical Engineering, Hydraulic Engineering, Planning
m.			✓	 HNTB HNTB Corporation [<input type="checkbox"/>] CHECK IF BRANCH OFFICE	777 108 th Avenue, NE, Suite 1000 Bellevue, WA 98004 UEI: RHXDZZEKQ3X7	Coastal Engineering

C. Proposed Team (*Complete this section for the prime contractor and all key subcontractors*) (Continued)

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			
n.			✓	HNTB HNTB Corporation [✓] CHECK IF BRANCH OFFICE	250 E. Wisconsin Avenue, Suite 2000 Milwaukee, WI 53202 UEI: RHXDZZEKQ3X7	Structural Engineering, Geotechnical Engineering
o.			✓	BKI BURK-KLEINPETER, INC. [] CHECK IF BRANCH OFFICE	4176 Canal St. New Orleans, LA 70119 UEI: TT9AGM31ZHM5	Small Business Civil & Structural Design, DDR, P&S, Cost Estimating, EDC, Project Management
p.			✓	EUSTIS ENGINEERING L.L.C. SINCE 1946 [✓] CHECK IF BRANCH OFFICE	4116 Rose Way Houston, Texas 77025 UEI: R83MG9NLTMS4	Small Business Geotechnical Engineer
q.			✓	EUSTIS ENGINEERING L.L.C. SINCE 1946 [✓] CHECK IF BRANCH OFFICE	3011 28th Street Metairie, LA 70002 UEI: R83MG9NLTMS4	Small Business Subsurface Exploration (Soil Borings, Cone Penetration Testing, Downhole Vane, Geoprobe®); Soil Mechanics Laboratory Tests; Field Instrumentation and Monitoring; Non-Destructive Testing of Piles and Shafts (Dynamic Pile Testing, Crosshole Sonic Logging, Single- Hole Sonic Logging, Low Strain Pile Integrity Testing, Thermal Integrity Profiling); Geotechnical Engineering Design; Construction Quality Control, Materials Testing Services
r.			✓	Terracon [✓] CHECK IF BRANCH OFFICE	6460 Hiller Street, Suite A El Paso, TX 79925 UEI: MG15GZJ9BES5	Geotechnical Engineering
s.			✓	Terracon [✓] CHECK IF BRANCH OFFICE	6911 Blanco Road San Antonio, TX 78216 UEI: VT1LSL4EWND3	Environmental Engineering

C. Proposed Team (*Complete this section for the prime contractor and all key subcontractors*) (Continued)

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			
t.			✓	ETTL Engineers & Consultants <input type="checkbox"/> CHECK IF BRANCH OFFICE		1717 East Erwin, Tyler, TX 75702 UEI: J7Z3ZT1N16K2
u.			✓	 <input type="checkbox"/> CHECK IF BRANCH OFFICE		1650 NE Grand Avenue, Suite 100, Kansas City, MO 64086 UEI: FAS6ELEG65M5
v.			✓	 <input type="checkbox"/> CHECK IF BRANCH OFFICE		16018 LA Highway 73, Suite A Prairieville, LA 70769 DUNS: 969989370
w.			✓	 <input type="checkbox"/> CHECK IF BRANCH OFFICE		3440 Sojourn Drive, Suite 230 Carrollton, TX 75006 UEI: 151196813
x.			✓	 <input type="checkbox"/> CHECK IF BRANCH OFFICE		211 Richy Street New Roads, LA 70760 UEI: QWXJLZNY6F21

D. ORGANIZATIONAL CHART OF PROPOSED TEAM

PROJECT MANAGER	CIVIL ENGINEER	STRUCTURAL ENGINEER	ENVIRONMENTAL ENGINEER (Cont.)
*M. Mardia, PE ^(MSMM) *M. Chopin, PE ^(BKI) C. Brannon, PE, PMP ^(MSMM) C. Carriere ^(MSMM) C. Erwin ^(MSMM) D. Shulman ^(MSMM) M. Harden ^(MSMM) J. Wilson, PE, LEED®AP ^(MSMM) S. Chehardy, PE ^(MSMM) S. Shilu, PE ^(MoffN) T. Poer, PE, PMP , ENV SP, F.SAME ^(HNTB) B. Powell, PE ^(HNTB) B. Goodner, PE ^(HNTB) S. Shahji, PE ^(EUS) R. Benoit, AS ^(CHU)	*J. Wilson, PE, LEED®AP ^(MSMM) *S. Chehardy, PE ^(MSMM) C. Mills, PE ^(MSMM) L. Yorke, PE ^(MSMM) H. Picard, PE, PLS ^(MSMM) M. Gonski, PE ^(MSMM) M. Hough, PE ^(TT) A. Baines, PE ^(TT) D. Stuard, PE ^(TT) S. Morrison ^(MoffN) C. Williams, PE ^(MoffN) G. Songy, PE ^(MoffN) M. Kennedy, PE ^(HNTB) J. Monzon, PE ^(HNTB) A. Gaines, PE ^(HNTB) A. Jensen, PE ^(BKI) R. Chopin, IV, PE ^(BKI) C. Held, PE ^(EUS) J. Loeske, PE ^(CHU)	*B. Yokum, PE ^(MSMM) *J. Costello, PE ^(TT) R. Kalvakaalva, PE, CVS ^(MSMM) T. Hassenboehler, PE ^(MSMM) G. Katzenberger, PE, SE ^(TT) B. Twitchell, PE ^(TT) S. Saiedi, PhD, PEng ^(TT) C. Willcox, PE, SE ^(TT) T. Spencer, PE ^(MoffN) J. Thomas, PE ^(MoffN) D. Hanna, PE ^(MoffN) J. Bile, PE ^(MoffN) J. Swyres, PE ^(MoffN) M. Mathu, PE ^(HNTB) J. Bernard, PE ^(HNTB) S. Knox, PE ^(HNTB) C. Schipfmann, PE ^(HNTB) C. Kadera, PE ^(HNTB)	R. Bricker, PLA, ASLA, ENV SP ^(HNTB) C. Handzel, PLA, ASLA, LEED AP, ENV SP ^(HNTB) B. Madsen, PLA, LEED AP ^(HNTB)
HYDRAULIC ENGINEER	COST ESTIMATOR	MECHANICAL ENGINEER	LAND/TOPOGRAPHIC/GPS SURVEYOR
*T. Willis, PE, MBA ^(MSMM) *P. Sexton, PE, CFM ^(TT) C. Mills, PE ^(MSMM) C. Soileau, PE ^(MSMM) J. Martin, PE ^(MoffN) C. Long, PE ^(MoffN) J. Crump, PE ^(MoffN) F. Halterman, PE ^(MoffN) J. Smithheart, PE ^(MoffN) J. Davenport, PE ^(MoffN) N. Sewell, EIT ^(MoffN) K. Goodman, EIT ^(MoffN) A. Weber ^(MoffN) P. Jarchow, PE ^(HNTB) S. Flormann, PE ^(HNTB) J. Evans, PE ^(HNTB)	*J. Fink, PE ^(MoffN) *D. Daigle, CVS, CPE ^(SVS) C. McDuff ^(MSMM) S. Vose, CCP ^(TT) I. Pace, PE, SE, CCP ^(TT) S. Jessup, PE ^(MoffN) M. McIntyre ^(MoffN) S. Perez ^(MoffN) M. Taylor, PE ^(MoffN)	*E. Flickinger, PE ^(TT) *D. Applebaum, PE ^(HNTB) C. Grompe, PE ^(TT) D. Parker, PE ^(HNTB) M. Green, PE ^(HNTB)	D. Davidson, RPLS ^(ARS) J. Chustz, PLS ^(CHU) C. Woods, PLS ^(CHU) M. Voinche, CST ^(CHU) B. Conner ^(CHU) L. Dupont ^(CHU) C. Villemarette ^(CHU) T. Odom ^(CHU) J. Phillips, CST ^(CHU)
COASTAL ENGINEER	GEOTECHNICAL ENGINEER	ELECTRICAL ENGINEER	CAD/MICROSTATION DRAFTER
*F. Pages, PE, D.CE ^(TT) *J. Shelden, PE ^(MoffN) R. Holcombe, PE, QSD ^(TT) P. Kotulak, PE ^(MoffN) S. Alfageme, PE D.CE ^(MoffN) M. Kluijver, PE ^(MoffN) T. Ribakovs ^(MoffN) O. Mouraenko, PhD ^(MoffN) C. Lu, PE ^(MoffN) B. Joyner, PE ^(MoffN) J. Weixia, PE ^(MoffN) H. Hu, PhD, PE ^(HNTB) K. Tenke-White, PE ^(HNTB)	*T. Koutnik, PhD, PE ^(HNTB) *J. Hance, PE ^(EUS) M. Woodward, PE ^(TT) A. Shethji ^(MoffN) B. Wilder, PE ^(HNTB) J. Sommers, PE ^(HNTB) K. Kuhl, PE ^(HNTB) H. Jovani, PE ^(HNTB) B. Cody, PE ^(EUS) C. Held, PE ^(EUS) T. Richards, PE ^(EUS) G. Sanders, PE ^(EUS) I. Avelar, PE ^(TERR) K. Berg, PE ^(TERR) S. Somsky, PE ^(TERR) C. Quinn, PE, PG, CAPM ^(ETTL)	*A. Reantaso, PE ^(TT) *A. Barnes ^(TT) H. Hawney, PE ^(MSMM) D. Wills, PE ^(MoffN) P. Hunter, PE ^(HNTB) M. Durning, PE ^(HNTB) L. Dermyer, PE ^(HNTB)	E. Curson ^(MSMM) W. Bradford ^(MSMM) T. Ellsworth ^(MSMM) C. Phelps ^(MSMM) B. Guidroz ^(CHU) E. Gardiner, LSI ^(CHU) M. Dupre, LSI ^(CHU)
PLANNER	ENVIRONMENTAL ENGINEER	GEOLOGIST	RESIDENT INSPECTION
			G. Grimes Jr. ^(MSMM) O. Brennan ^(MSMM) D. Spears ^(MSMM) D. Jones ^(MSMM) B. Peterman ^(MSMM)
			ENVIRONMENTAL SCIENTIST
			M. Schwertner ^(MoffN)
			DRILLING OPERATIONS MANAGER
			R. Herman ^(ETTL)



SUBCONTRACTORS
Tetra Tech, Inc. ^(TT)
Moffatt & Nichol ^(MoffN)
HNTB Corporation ^(HNTB)
Burk-Kleinپeter, Inc. ^(BKI)
Eustis Engineering, LLC ^(EUS)
Terracon Consultants, Inc. ^(TERR)
ETTL Engineers & Consultants, Inc. ^(ETTL)
Strategic Value Solutions, Inc. ^(SVS)
CMET Engineering, LLC ^(CMET)
ARS Engineers, Inc. ^(ARS)
Chustz Surveying, LLC ^(CHU)

KEY
* = Resume Included 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
Manish Mardia, PE	Project Manager	29	12

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 Jodhpur, 1990 MS, Civil Engineering, Louisiana State University, 1994	Professional Engineer (1999): LA (28482), MS (18522)

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

Mr. Mardia is a professional engineer with 29 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>)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
Texas City and Vicinity Hurricane Flood Protection Project, I-Wall Repair, Texas City, TX	ONGOING	ANTICIPATED 2026
(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 F1) MSMM was tasked by the USACE Galveston District to complete engineering design services for the replacement of a portion of an I-wall to a T-wall within a chemical refinery in Texas City, Texas. The Texas City Hurricane Flood Protection is in Galveston County, Texas about 30 miles southeast of Houston. Services rendered consist of Architectural, Civil, Geotechnical Engineering, Cost Estimating, and BCOES review, and will consist of Construction Management and Engineering During Construction. Mr. Mardia provided project management services consisting of the construction approach for driving sheetpile beneath an active chemical fuel line and rack, as well as the movement and transport of materials within an active chemical refinery. Cost: \$20.5M, Fee: \$1.9M Role: Project Manager		
(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
Southeast Louisiana Urban Flood Control – Harahan Pump to the River, Jefferson Parish, LA	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
(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 F5) MSMM provided engineering design for this important flood risk management project. 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 a discharge basin in the Mississippi River. Mr. Mardia served as the Project Manager for 3 design packages of the overall project. He was tasked with managing the design and implementation of the discharge piping, levee crossing, MS River shift, and the discharge basin, and coordinating these aspects of the project with the overall design. Cost: \$47M Fee: \$1.8M Role: Project Manager	2018	2018
(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
New Orleans International Airport Drainage Pump Station, Kenner, LA	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE	<input type="checkbox"/> Check if project performed with current firm	
Scope: MSMM completed 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 civil, structural, electrical, mechanical, and environmental engineering, hydraulic modeling, architectural services, cost estimating, environmental permitting, drafting, and agency coordination. Cost: \$45M, Fee: \$3.2M Role: Project Manager	2017	2017

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

12. NAME Michael Chopin, PE	13. ROLE IN THIS CONTRACT Project Manager	14. YEARS EXPERIENCE	
		a. TOTAL 31	b. WITH CURRENT FIRM 31

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

Burk-Kleinپeter, Inc. – New Orleans, LA

16. EDUCATION (<i>DEGREE AND SPECIALIZATION</i>) BS, Civil Engineering, University of New Orleans, 1991	17. CURRENT PROFESSIONAL REGISTRATION (<i>STATE AND DISCIPLINE</i>) Professional Engineer/Civil (1996): LA (26797)
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18. OTHER PROFESSIONAL QUALIFICATIONS (*Publications, Organizations, Training, Awards, Etc.*)

Mr. Chopin is experienced in water resource projects including numerous earthen levees, T-walls, floodgates, pumping stations, utility relocations, roadway realignments, and agency stakeholder coordination. Mr. Chopin has served as Project Manager for multiple IDIQ contracts and task orders for the New Orleans District of the USACE. In addition, he has provided Project Management on several other Federal USACE projects in the capacity of representing the Local Sponsors of those projects.

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (<i>City and State</i>) Harvey Canal Floodwalls, Frontal Protection, and Earthen Levees, Jefferson Parish, LA	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES 2012	CONSTRUCTION (<i>if applicable</i>) 2012

(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: (Full Project Writeup is included in SF330 Section F6) Development of plans, specifications, cost estimates, and a design documentation report for 2,775 linear feet of a new 18-foot-high pile supported concrete T-wall and 4,230 linear feet of a new earthen levee along the Harvey Canal. In addition, a new pile supported T-wall was used to provide frontal protection to the Hero Pumping Station. Air suppression on the horizontal pump discharge tubes and butterfly valves on the vertical pump discharge tubes were used on the Hero Pumping Station to prevent backflow. Three 35-foot and one 60-foot roller floodgates were required for access through the floodwall for various industrial sites. Numerous utility relocations were necessary to facilitate the flood protection features. The project was broken into two bid packages and engineering during advertising and construction services were provided. Cost: \$94.3M Fee: \$1.6M Role: Project Manager	<input checked="" type="checkbox"/> Check if project performed with current firm	
	2012	

(1) TITLE AND LOCATION (<i>City and State</i>) Upper Barataria Risk Reduction / St. Charles Westbank Levee, St. Charles Parish, LA	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES ONGOING	CONSTRUCTION (<i>if applicable</i>) ONGOING

(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: Development of hydrologic and hydraulic models and reports, permitting, plans and specifications, and cost estimates for a new nine-mile flood protection project. Design features include earthen levees, pile support concrete T-walls, drainage pumping stations, frontal protection T-walls and valves for the existing drainage pumping stations discharge lines, access roads, and a navigation structure consisting of a 15.5-foot by 22.5-foot vertical lift gate. The three new drainage pumping stations consist of one 300 CFS capacity station and one 500 CFS station made up of vertical axial/mix flow pumps driven by electric motors, and one 500 CFS capacity station made up of vertical pumps driven by diesel engines. In addition to the design, advertising, bidding, construction administration, and resident inspection services were provided. The project was constructed under multiple bid packages. Cost: \$75M Fee: \$9M Role: Project Manager	<input checked="" type="checkbox"/> Check if project performed with current firm	
	ONGOING	

(1) TITLE AND LOCATION (<i>City and State</i>) Cousins Pump Station Complex, Lapalco, LA	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES 2013	CONSTRUCTION (<i>if applicable</i>) 2013

(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: Development of plans and specifications, cost estimates, and design documentation reports for a new flood protection project with 2,100 linear feet of floodwalls (braced and T-wall), a new 2,000 CFS drainage pumping station, and frontal protection of the existing stations (pile supported T-wall) with both valves and sluice gates to prevent backflow. The new 2,000 CFS pumping station consists of two 1,000 CFS horizontal pumps with diesel engine drives. In addition, engineering during advertising and construction services were provided for several construction phases. Cost: \$40M Fee: \$4M Role: Project Manager	<input checked="" type="checkbox"/> Check if project performed with current firm	
	2013	

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

12. NAME Tom Willis, PE, MBA	13. ROLE IN THIS CONTRACT Hydraulic Engineer	14. YEARS EXPERIENCE a. TOTAL 42	b. WITH CURRENT FIRM 12
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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, 1981 MBA, Louisiana State University, 1989	17. CURRENT PROFESSIONAL REGISTRATION (<i>STATE AND DISCIPLINE</i>) Professional Engineer/Civil (1991): LA (28205)
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18. OTHER PROFESSIONAL QUALIFICATIONS (*Publications, Organizations, Training, Awards, Etc.*)

Mr. Tom Willis is a Senior Hydraulic Engineer at MSMM where he primarily conducts H&H analyses of drainage mitigation projects for USACE. Mr. Willis has provided hydraulic analyses and modeling, inclusive of HEC-RAS and HEC-HMS for the USACE MVN district under programs such as Silver Jackets, Section 219 Environmental Infrastructure, and the PAS Program.

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (<i>City and State</i>) Southern University Drainage Outfall Ravine and Riverbank Instability Study, Baton Rouge, LA	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
	2020	ANTICIPATED 2024

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

Check if project performed with current firm

a **Scope:** As part of the Silver Jackets program at the USACE New Orleans District, MSMM performed a feasibility study to identify the appropriate courses of action to resolve ongoing erosion and flooding problems on the Southern University campus. Mr. Willis ran a HEC-RAS model and developed project alternative designs to address erosion problems covering several areas on campus. His analysis provided solutions for the following issues: paving repairs and ravine side deterioration area, Baranco-Hill health center perimeter and outfall bank land-loss areas, and the outfall ravine channel degradation area. Through his analysis our design team was able to show positive benefits of these design alternatives and provided Southern University with detailed project alternatives. **Cost:** \$4M **Fee:** \$220K **Role:** Hydraulic Engineer

(1) TITLE AND LOCATION (<i>City and State</i>) Louisiana Intermodal Terminal, Port of New Orleans, Chalmette, LA	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
	ONGOING	ANTICIPATED 2025

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

Check if project performed with current firm

b **Scope:** MSMM is currently providing hydraulic modeling and drainage design solutions to the Port of New Orleans as part of their new Intermodal Terminal in St. Bernard Parish. The existing storage has been modeled in subbasins utilizing the HEC-HMS model. Mr. Willis performed this analysis by using rainfall runoff modeling to develop flow hydrographs which were used in the unsteady HEC-RAS models. Rather than provide tables with the flow hydrograph information at various locations, the user (Port) is referred to the digital HEC-RAS model output that contains the flow hydrographs. This allowed the Port to make alternative selections. With a selected alternative, detailed modeling will commence, and Mr. Willis will lead the design of the drainage mitigation solution. **Cost:** \$135M **Fee:** \$1.8M **Role:** Hydraulic Engineer

(1) TITLE AND LOCATION (<i>City and State</i>) USACE Silver Jackets, Stormwater Watershed Management Study, Jefferson Parish, LA	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
	2021	N/A

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

Check if project performed with current firm

c **Scope:** Through a Silver Jackets project sponsored by USACE MVN and Jefferson Parish, MSMM provided a Watershed Management Plan (WMP). The purpose was to provide an assessment of how flood stages will be affected by projected changes in future rain and sea-level conditions and to recommend strategies for mitigating increased flood loss damages. Mr. Willis 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. Comparative future conditions were assessed using Technical Paper 40 versus NOAA's 2100 intermediate Sea Level Rise Project which anticipates a 5.8-feet rise in sea level. Future land use was based on the newly updated Jefferson Parish Edge 2040 land use information. The Parish EPA SWMM numerical hydrologic-hydraulic models were used in assessing impacts. The model analysis indicated that the existing pump system has sufficient capacity despite rising sea levels, but the utilization and power usage are increased so maintenance and power provisions should be considered. **Cost:** \$21.5M **Fee:** \$1.5M **Role:** Hydraulic 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	
		a. TOTAL	b. WITH CURRENT FIRM
Patti Sexton, PE, CFM	Hydraulic Engineer	32	25

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

Tetra Tech Inc. – Irvine, CA

16. EDUCATION (<i>DEGREE AND SPECIALIZATION</i>)	17. CURRENT PROFESSIONAL REGISTRATION (<i>STATE AND DISCIPLINE</i>)
MS Water Resource and Environmental Engineering, George Washington University, 1995 BS Civil Engineering, Virginia Tech, 1991	Professional Engineer/Civil: CA (58643); LA (37416) Certified Floodplain Manager (CFM)

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

Ms. Sexton leads Tetra Tech's levee work nationwide with a focus on levee certification and FEMA processing. She has performed inspections of more than 50 miles of levees using inspection tools and guidance developed by USACE since 2009. She has designed new levees and levee improvements for numerous systems, including ongoing work along the Santa Ana River near Prado Dam. Her experience includes hydraulic analyses and design for numerous watersheds in Southern California. She is highly experienced with all hydraulic models for analyzing both natural and improved channels, including HEC-RAS, HEC-2, WSP2, TR-55, StormCAD, HEC-1, TR-20, PEAKFQ, and SAS.

19. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
a	Periodic Inspections and Screenings, Orange, San Diego, and Santa Barbara Counties, CA	2019	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: Performed levee inspections on 6 systems and risk screenings for 14 systems. The inspection process included physical inspection of the levees (including embankments, floodwalls, interior drainage systems, and pump stations) using the LIS tablet and software, preparation of the Period Inspection Report (including ratings for all features), and outbriefs with the Levee Safety Officer. Screenings were completed using the USACE risk assessment tool and presented to local USACE management, the National Cadre, and Headquarters. The screening information was used to develop the Levee Safety Action Classification rating. Cost: N/A Fee: \$734k Role: Hydraulic Engineer and Project Manager		
b	(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
	Gowanus Canal and Newtown Creek Alternative Study, New York, NY	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
		2016	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: Developed the levee and floodwall alignment alternatives (conceptual design and costing) to tie into the proposed surge barriers and the economic analysis to support the benefit-cost ratio as part of the New York Rising Plan funded through the Governor's Office of Storm Recovery. Cost: N/A Fee: \$192k Role: Hydraulic Engineer		
c	(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
	Potomac Park Flood Protection, Washington, DC	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
		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: Provided analysis and design of improvements, including a removable post-and-panel system, floodwalls, and earthen levees. Completed an interior drainage analysis that assessed a variety of pump stations and gravity drains. Performed a joint probability analysis to determine the 1% annual chance of flooding of the interior. Prepared the Levee Safety Evaluation Report that included a risk and uncertainty analysis and assessment of sea level rise impacts. Cost: \$9.4M Fee: \$552k Role: Hydraulic Engineer		
d	(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
	East Garden Grove-Wintersburg Flood Risk Management System Analysis, Garden Grove, CA	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
		2018	2022
	(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE	<input type="checkbox"/> Check if project performed with current firm	
	Scope: Directed the development of hydraulic models to evaluate alternatives to support the local sponsor for this USACE watershed study. Reviewed the hydraulic models and developed alternative design alignments. The results were presented as maps and videos showing the progression of flooding and were used to inform upper management and the public on the flood impacts. Under a subsequent task order for USACE, Tetra Tech evaluated and optimized bridge crossing on the channels throughout the East Garden Grove Flood Risk Management System. Cost: \$83M Fee: \$2.4M Role: Hydraulic Engineer		

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

12. NAME Jeff Shelden, PE	13. ROLE IN THIS CONTRACT Coastal Engineer	14. YEARS EXPERIENCE a. TOTAL 39
		b. WITH CURRENT FIRM 37

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

Moffatt & Nichol – Raleigh, North Carolina

16. EDUCATION (<i>Degree and Specialization</i>) BS, Civil Engineering	17. CURRENT PROFESSIONAL REGISTRATION (<i>State and Discipline</i>) Professional Engineer, Alabama: (#26262), Louisiana: (#29462), Mississippi: (#16219), and Texas: (#145426)
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18. OTHER PROFESSIONAL QUALIFICATIONS (*Publications, Organizations, Training, Awards, Etc.*)

Mr. Shelden has 39 years of coastal engineering experience, including extensive experience in the analysis and evaluation of coastal processes for coastal storm risk management, floodwalls, levees and shoreline protection projects. His work includes leading major navigation structure design and analyses, including Cape Fear (Section 203), Coos Bay (Section 204/208), and Corpus Christi, through which he led the deep draft channel design. His work in Texas includes subject matter expert input to shoreline protection projects, coastal storm surge analysis modeling, and levee failure risk assessments. He has detailed experience in the application of various numerical models used for those analyses, including the MIKE Suite GENESIS models in 1, 2, or 3D applications to determine sediment transport, scour and deposition; tidal hydraulics, salinity intrusion, winds, waves, and currents; shoreline evolution; and hydraulic and storm surge effects on coastal structures.

19. RELEVANT PROJECTS

a	(1) TITLE AND LOCATION (<i>City and State</i>) Bogue Banks Beach Nourishment Master Plan, Carteret County, NC	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2021	CONSTRUCTION (<i>If applicable</i>) 2021
	(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: (Full Project Writeup is included in SF330 Section F9) Moffatt & Nichol was tasked by Carteret County to provide all final design, bidding, and engineering during construction services for three projects. The projects consisted of developing a multidecadal programmatic EIS, master plan, engineering report, and GENESIS/SBEACH modeling. Cost: \$79.6M Role: Coastal Engineer	<input type="checkbox"/> Check if project performed with current firm	
b	(1) TITLE AND LOCATION (<i>City and State</i>) Port Freeport, Velasco Terminal Berths 8 and 9, Freeport, Texas	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2019	CONSTRUCTION (<i>If applicable</i>) 2023
	(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: Mr. Shelden provided subject matter expert input into the detailed design, and preparation of construction documents for the coastal engineering and dredging components for this new 1,600- foot wharf navigation structure and floodwall. Jeff reviewed coastal engineering aspects, which included the design of the navigation channel template, sea level rise allowances, and submerged scour protection beneath the wharf. Cost: \$4M Role: Coastal Engineer	<input type="checkbox"/> Check if project performed with current firm	
c	(1) TITLE AND LOCATION (<i>City and State</i>) Lightning Point Restoration, Bayou La Batre, Alabama	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2019	CONSTRUCTION (<i>If applicable</i>) 2020
	(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: Mr. Shelden provided the quality control review for determining environmental design criteria for the shoreline protection component using hydrodynamic, spectral wave, and Boussinesq wave modeling. This included the review of wave height thresholds for restored marsh edge erosion and modeled wave generation, propagation, and transmission at shoreline protection features using advanced numerical modeling. The project also included a statistical evaluation to determine the necessary elevation of the living shoreline to increase the resiliency of the restored marsh platform and breakwater armor stone for resiliency when exposed to extreme storms. Cost: \$14M Role: Coastal 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 Fernando Pagés, PE, D.CE	13. ROLE IN THIS CONTRACT Coastal Engineer	14. YEARS EXPERIENCE a. TOTAL 35	b. WITH CURRENT FIRM 33
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15. FIRM NAME AND LOCATION (*City And State*)

Tetra Tech, Inc. – San Juan, PR

16. EDUCATION (<i>DEGREE AND SPECIALIZATION</i>) ME, Ocean/Coastal Eng., Texas A&M, 1987 BS, Ocean/Coastal Engineering, Texas A&M, 1985 BS, Mathematics/Physics, Beaver College, 1984	17. CURRENT PROFESSIONAL REGISTRATION (<i>STATE AND DISCIPLINE</i>) Professional Engineer, Civil: CA (No. 56821); FL (68874), PR (18953). National Council of Examiners for Engineering and Surveying, Civil (18937).
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18. OTHER PROFESSIONAL QUALIFICATIONS (*Publications, Organizations, Training, Awards, Etc.*)

Mr. Fernando Pagés is a professional **coastal and environmental engineer** specializing in project management, engineering analysis, and design of environmentally sensitive coastal and impacted port areas. He has been involved in the conceptualization and development of ports and waterfront projects, from permitting through construction support and has been responsible for the planning, engineering analysis, feasibility studies, design and preparation of plans and specifications for the assessment and restoration of marinas, wharves, seawalls, breakwaters, dikes, piers, shorelines, lagoons, and estuaries. He has a thorough understanding of the regulatory requirements and design guidelines of the IBC, USACE under Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403), Section 404 of the Clean Water Act (33 U.S.C. 1344) and Section 103 of the Marine Protection Research and Sanctuaries Act of 1972 (33 U.S.C. 1413). He has also supported regional programs for marine spatial planning and developing sea level rise adaptation tools.

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (<i>City and State</i>) Caribe Tuna Pier Post Hurricane Damage Assessment and Engineering Support, Municipality of Ponce, Ponce, PR	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
	2020	N/A

a Scope: Conducted third-party Damage Descriptions and Dimensions (DDD), scopes of work to repair, replace, or reconstruct items identified in the FEMA DDD (e.g., eligible damages), cost estimates for the scope of work, and potential mitigation measures to reduce risks for future disasters (406 FEMA Mitigation Program). Cost: N/A Fee: \$55k Role: Coastal Engineer and Project Manager	(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE	
	<input type="checkbox"/> Check if project performed with current firm	

(1) TITLE AND LOCATION (<i>City and State</i>) Strengthening Coastal Resiliency Handbooks, Puerto Rico	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
	2019	N/A

b Scope: Led development of coastal engineering guidelines describing the general principles of coastal engineering and how to analyze and design coastal stabilization projects. The guidelines are for planners, regulators, and engineers to systematically address the coastal erosion and shoreline stabilization issues currently experienced in Puerto Rico. Cost: N/A Fee: \$50k Role: Coastal Engineer and Project Manager	(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE	
	<input type="checkbox"/> Check if project performed with current firm	

(1) TITLE AND LOCATION (<i>City and State</i>) Sea Level Rise Adaptation Assessment for Coastal Communities and Infrastructure, San Juan, PR	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
	2015	N/A

c Scope: Supported a design code assessment for coastal communities and infrastructure vulnerable to sea level rise. Conducted an initial assessment of the Building Code with emphasis on sea level rise adaptation for transportation and utilities infrastructure as well as public works design criteria for coastal communities. A Sea Level Rise Adaptation Critical Issues Analysis document was compiled to include a brief summary of vulnerable infrastructure, develop design criteria guidelines, and conduct a desktop study of other relevant Coastal Zone Management programs. Cost: N/A Fee: \$50k Role: Coastal Engineer and Project Manager	(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE	
	<input type="checkbox"/> Check if project performed with current firm	

(1) TITLE AND LOCATION (<i>City and State</i>) Dorado del Mar Breakwater Assessment, Dorado, PR	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
	Ongoing	N/A

d Scope: Providing oversight of a beach erosion assessment, numerical simulation of hydrodynamic characteristics, and developing conceptual and final designs for halting erosion and stabilizing the shoreline while mitigating construction impact and creating habitat. Developed long-term solutions with rubble-mound submerged reef structures and presented to the USACE Jacksonville District for review and approved for permit issuance. In addition to the ecological benefits of the project, its implementation will strengthen coastal resiliency. Cost: N/A Fee: \$62k Role: Coastal Engineer and Project Manager	(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE	
	<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 Jim Wilson, PE, LEED AP	13. ROLE IN THIS CONTRACT Civil Engineer	14. YEARS EXPERIENCE	
		a. TOTAL 35	b. WITH CURRENT FIRM 10

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

MSMM Engineering, LLC - Houston, TX

16. EDUCATION (*Degree And Specialization*)

BS, Civil Engineering, Michigan Technological University, 1988

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

Professional Engineer/Civil (1993): TX (128376), LA (35456), MI (38800), FL (85114)
LEED Accredited Professional 2008

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

Mr. Wilson is a Senior civil/drainage/levee engineer with 35 years of civil design experience. He is the designer of record for all of civil works design 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 inclusive of 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>)
Texas City I-Wall to T-Wall Conversion Design, Texas City, TX	ONGOING	ANTICIPATED 2026
(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 F1) MSMM was tasked by the USACE Galveston District to complete engineering design services for the replacement of a portion of an I-wall to a T-wall within a chemical refinery in Texas City, Texas. Services rendered consist of Architectural, Civil, Geotechnical Engineering, Cost Estimating, and BCOES review, and will consist of Construction Management and Engineering During Construction. Mr. Wilson is the lead civil engineer and designer of record for the project. He was responsible for developing the project plans using CADBIM Policies, developing the Civil Information Model, ensuring the bid documents were in compliance with UFC 3-201-01, and developing the project specifications in Specs Intact. Mr. Wilson has also provided engineering design support during advertisement and will provide the engineering design support during construction when the project begins construction. Cost: \$20.5M Fee: \$1.9M Role: Civil Engineer		
(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
Design-Build RFP Development: 277K Levee Raise and Delta Pump Station – Dallas, TX	PROFESSIONAL SERVICES 2021	CONSTRUCTION (<i>if applicable</i>) TBD
(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 F8) 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, 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: \$35M Fee: \$1.4M Role: Civil Engineer		
(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
New Orleans International Airport Drainage Pump Station, Kenner, LA	PROFESSIONAL SERVICES 2017	CONSTRUCTION (<i>if applicable</i>) 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		

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 28 b. WITH CURRENT FIRM 11
15. FIRM NAME AND LOCATION (<i>City And State</i>) 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 (<i>Publications, Organizations, Training, Awards, Etc.</i>) <p>Mr. Chehardy will serve at the lead Project Manager for engineering tasks associated with this contract. Mr. Chehardy has a deep understanding of the USACE Civil Works design process, having managed and executed multiple task orders for multiple USACE Districts across Louisiana and Texas. 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 Specs Intact. Mr. Chehardy's recent experience includes finalizing the design-build RFP package for the Delta Pump Station project and leading the development of P&S for the Ascension and Baton Rouge Parish Environmental Infrastructure projects.</p>		
19. RELEVANT PROJECTS		
(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
(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: (Full Project Writeup is included in SF330 Section F2) Development of a 35% design package (plans, specs, and DDR) for a new 8,000 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 development of the DDR. Cost: \$325M Fee: \$1.3M Role: Civil Engineer		
(1) TITLE AND LOCATION (<i>City and State</i>) Harahan Drainage Pump to the River, Jefferson Parish, LA		(2) YEAR COMPLETED PROFESSIONAL SERVICES 2018 CONSTRUCTION (<i>if applicable</i>) 2018
(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: (Full Project Writeup is included in SF330 Section F5) MSMM provided engineering design for this important flood risk management project. 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. Mr. Chehardy was the designer of record for 3 design packages of the overall project. He was tasked with leading the design and implementation of the discharge piping, levee crossing, MS River shift, and the discharge basin. He also developed the design documentation report covering these project features and provided engineering support during advertisement and engineering support during construction. Cost: \$47M Fee: \$1.8M Role: Civil Engineer		
(1) TITLE AND LOCATION (<i>City and State</i>) Ascension Parish Environmental Infrastructure Sewer Treatment Plant Design, Hillaryville, LA		(2) YEAR COMPLETED PROFESSIONAL SERVICES 2022 CONSTRUCTION (<i>if applicable</i>) 2024
(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: Development of a design-bid-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 detailed civil/structural/mechanical/electrical/architectural/geotechnical analyses, cost estimating, value engineering, and full USACE review process including BCOES review. Mr. Chehardy is the Engineer of Record for delivery of the design-bid-build package. He managed a multi-disciplinary team that will provide full plans and specifications and a detailed MII cost estimate to USACE. Fiscal Year. Cost: \$21.5M Fee: \$1.5M Role: Civil Engineer		

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

12. NAME Don Daigle, CVS, CPE	13. ROLE IN THIS CONTRACT Cost Estimator	14. YEARS EXPERIENCE	
		a. TOTAL 44	b. WITH CURRENT FIRM 5

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

Strategic Value Solutions, Inc - Kansas City, MO

16. EDUCATION (<i>DEGREE AND SPECIALIZATION</i>) AAS, Mechanical Engineering, 1984 AAS, Electro-Mechanical Engineering, 1982	17. CURRENT PROFESSIONAL REGISTRATION (<i>STATE AND DISCIPLINE</i>) Certified Value Specialist (CVS): #201203044 Certified Professional Estimator (CPE) #1.4-0009821-1214
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18. OTHER PROFESSIONAL QUALIFICATIONS (*Publications, Organizations, Training, Awards, Etc.*)

Mr. Daigle has a wide range of experience providing value engineering, cost estimating and cost management, life cycle cost analysis, scheduling, quality control techniques, and design construction cost reconciliation for USACE Civil Works projects. He is a Certified Value Specialist and proficient in estimating using MCACES and PACES software. Mr. Daigle has provided MII cost estimating for multiple USACE districts including all recent Civil Works design task orders completed by MSMM. He also has experience providing detailed cost estimating for the Air Force on several projects.

19. RELEVANT PROJECTS

(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

(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: (Full Project Writeup is included in SF330 Section F2) Development of a 35% design package (plans, specs, and DDR) for a new 8,000 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. Daigle performed very preliminary MCACES cost estimating for the project. He worked extensively within the workbooks and through contractor contacts, to gain an understanding of regional pricing for major design features of the project and relayed quotes and information to the design team as they prepared design submittals. The design team also coordinated project features with him as they developed the design. Cost: \$ 325M Fee: \$1.3M Role: Cost Estimator	<input type="checkbox"/> Check if project performed with current firm	
(1) TITLE AND LOCATION (<i>City and State</i>) Design-Build RFP Development: 277K Levee Raise and Delta Pump Station – Dallas, TX	(2) YEAR COMPLETED	
PROFESSIONAL SERVICES 2021	CONSTRUCTION (<i>if applicable</i>) TBD	

(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: (Full Project Writeup is included in SF330 Section F8) Development of two design-build RFP packages for flood risk reduction measures along the Dallas Floodway, consisting of the 277K levee raise and Delta Pump Station replacement. Other services consisted of cost estimating, value engineering, design, drafting and planning for demolition of existing facilities, and Civil/Structural/Mechanical/Electrical/Architectural engineering analyses and design. Mr. Daigle led the development of two stand-alone cost estimates (design-build packages bid separately). He developed detailed MCACES cost estimates to a 35% level for both the levee raise and pump station replacement projects. Cost: \$320M Fee: \$1.2M Role: Cost Estimator	<input type="checkbox"/> Check if project performed with current firm	
(1) TITLE AND LOCATION (<i>City and State</i>) Ascension Parish Environmental Infrastructure Sewer Treatment Plant Design, Hillaryville, LA	(2) YEAR COMPLETED	
PROFESSIONAL SERVICES 2022	CONSTRUCTION (<i>if applicable</i>) 2024	

(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: Development of a design-bid-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 detailed civil/structural/mechanical/electrical/architectural/geotechnical analyses, cost estimating, value engineering, and full USACE review process including BCOES review. Mr. Daigle provided the detailed cost estimating for the project. He was tasked with producing cost estimates in MCACES (MII) for each of the design submittals. He was also tasked with responding to DrChecks comments related to the estimate and participated in design review meetings. He was also responsible for identifying features to reduce project costs and identifying bid options. Cost: \$21.5M Fee: \$1.5M Role: Cost Estimator	<input type="checkbox"/> Check if project performed with current firm	
(1) TITLE AND LOCATION (<i>City and State</i>) Strategic Value Solutions, Inc - Kansas City, MO	(2) YEAR COMPLETED	
PROFESSIONAL SERVICES 2022	CONSTRUCTION (<i>if applicable</i>) 2024	

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

12. NAME Jack Fink, PE	13. ROLE IN THIS CONTRACT Cost Estimator	14. YEARS EXPERIENCE	
		a. TOTAL 36	b. WITH CURRENT FIRM 22

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

Moffatt & Nichol – Walnut Creek, California

16. EDUCATION (<i>DEGREE AND SPECIALIZATION</i>) BS, Civil Engineering	17. CURRENT PROFESSIONAL REGISTRATION (<i>STATE AND DISCIPLINE</i>) Professional Engineer/Civil: CA (60931)
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18. OTHER PROFESSIONAL QUALIFICATIONS (*Publications, Organizations, Training, Awards, Etc.*)

Mr. Fink provides more than 35 years of diverse project management and civil engineering experience with emphasis on marine construction and dredging, including several long-term management strategies for dredged material placement. As a former project manager/cost estimator for a major marine construction, dredging, and heavy civil construction contractor, he possesses a comprehensive background in hard dollar cost estimating, as well as constructability analysis, construction management, quality assurance/quality control, and project engineering. Jack provides expert-level cost estimates consistent with the best estimating practices of the Government construction industry, including federal acquisition regulations and unified facilities criteria. He has developed construction cost estimates for large military construction or major maintenance type projects.

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
Texas City Channel Design-Build, Texas City, TX	2012	2012

(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE a Scope: Task leader for two of the design packages for channel deepening, upland confined disposal sites, and channel maintenance dredging in a design-build relationship with a major U.S. dredging contractor. Dredging included both new work deepening and maintenance dredging with beach placement, placement for levee construction, and upland confined disposal site placement. Other project requirements included design of new rock slope protection, increasing levee height and confined disposal capacity, and repairs to existing slope protection. Fee: \$1.52M Role: Cost Estimator	<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>)
Large-Scale Barataria Marsh Creation, Upper Barataria Component, Jefferson and Plaquemines Parish, LA	2021	2022

(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE b Scope: Responsible for the cost estimating on the Deepwater Horizon/National Resource Damage Assessment-funded project involving restoration planning and large-scale marsh creation restoration planning, design, and implementation. The project included the development of sediment budgets, coastal protection, restoration authority/NOAA restoration planning coordination, interagency and interproject coordination, coastal engineering, coastal science, dredge engineering, cost estimating, and hydrodynamic and morphological modeling. Fee: \$3.9M Role: Cost Estimator	<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>)
USACE Military Ocean Terminal Concord Replace/Upgrade Pier 2, Concord, CA	2019	2021

(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE c Scope: Responsible for the construction cost estimate and schedule for replacement of Pier 2, including landside facilities for USACE, Sacramento District. The design involves demolition and removal of the existing timber pier and construction of a new reinforced concrete pier that will have two container cranes for handling containerized ammunition. Design also includes new approach trestle and strengthening of an existing approach trestle. A new electrical substation for power to the new container cranes and new utility services (storm drainage, firewater, potable water, and sewer) were also included in the design. This \$90 million project was bid in 2017, and the engineer's estimate was within three percent of the low bid contractor. Fee: \$17M Role: Cost Estimator	<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 James J. Hance, PE	13. ROLE IN THIS CONTRACT Geotechnical Engineer	14. YEARS EXPERIENCE a. TOTAL 23 b. WITH CURRENT FIRM 19	
15. FIRM NAME AND LOCATION (<i>City And State</i>) Eustis Engineering, LLC - Metairie, LA			
16. EDUCATION (<i>Degree and Specialization</i>) MBA / Business Administration M.S. / Civil Engineering B.S. / Civil Engineering	17. CURRENT PROFESSIONAL REGISTRATION (<i>State and Discipline</i>) TX / Professional Engineer (106663) LA / Professional Engineer (31270) MS / Professional Engineer (20596)		

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

Mr. Hance joined the staff of Eustis Engineering 19 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. He has worked extensively on Federal and non-Federal projects since the days following Hurricane Katrina. He has even been cited by the USACE in their Hurricane Storm Damage Risk Reduction System with regard to 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>) Harvey Canal Floodwalls, Frontal Protection, and Earthen Levees, Jefferson Parish, LA	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION (<i>If applicable</i>)
		2012	2012

a	(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: (Full Project Writeup is included in SF330 Section F6) Development of plans, specifications, cost estimates, and a design documentation report for 2,775 linear feet of a new 18-foot-high pile supported concrete T-wall and 4,230 linear feet of a new earthen levee along the Harvey Canal. In addition, a new pile supported T-wall was used to provide frontal protection to the Hero Pumping Station. Three 35-foot and one 60-foot roller floodgates were required for access through the floodwall for various industrial sites. Numerous utility relocations were necessary to facilitate the flood protection features. The project was broken into two bid packages and engineering during advertising and construction services were provided. Cost: \$94.3M Fee: \$1.6M Role: Geotechnical Engineer	<input type="checkbox"/> Check if project performed with current firm	
		PROFESSIONAL SERVICES	CONSTRUCTION (<i>If applicable</i>)
		2012	2012

	(1) TITLE AND LOCATION (<i>City and State</i>) U.S. Army Corps of Engineers - Constructability Study and Preparation of Plans and Specifications, Charenton Floodgate Flood Control, Mississippi River, and Tributaries, Lower Atchafalaya Basin, St. Mary Parish, LA	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION (<i>If applicable</i>)
		2022	N/A

b	(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: Mr. Hance, with his good working relationship with USACE New Orleans District engineers, was brought in to help prepare the design quality control plan and detailed design review for a new floodgate and associated flood control structures at the existing Charenton Floodgate. Engineering design services included stability and settlement analyses, pile capacity curves, lateral load analyses for piles, seepage analyses, and settlement induced bending moment analyses for inclined piles supporting T-walls. Mr. Hance is currently reviewing contractor submittals during construction, including temporary retaining structures. Fee: \$250,000 Role: Geotechnical Engineer	<input type="checkbox"/> Check if project performed with current firm	
		PROFESSIONAL SERVICES	CONSTRUCTION (<i>If applicable</i>)
		2022	N/A

	(1) TITLE AND LOCATION (<i>City and State</i>) Gulf Coast Water Authority - Proposed Shannon Pump Station, Fort Bend County, Texas (H0040)	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION (<i>If applicable</i>)
		2022	N/A

c	(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: In support of the new Shannon Pumping Station, Eustis Engineering performed a field/marine exploration comprising four underwater borings within the Brazos River, associated laboratory testing of samples from the borings, and a report to the client detailing our findings and conclusions. Mr. Hance handled coordination, both internal and with the client; reviewed field logs; reviewed contracts and subcontracts; and published the final data report. Fee: \$220,000 Role: Geotechnical Engineer	<input type="checkbox"/> Check if project performed with current firm	
		PROFESSIONAL SERVICES	CONSTRUCTION (<i>If applicable</i>)
		2022	N/A

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

12. NAME Therese Koutnik, PhD, PE	13. ROLE IN THIS CONTRACT Geotechnical Engineer	14. YEARS EXPERIENCE a. TOTAL 23	b. WITH CURRENT FIRM 23
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15. FIRM NAME AND LOCATION (*City And State*)

HNTB Corporation (Milwaukee, Wisconsin)

16. EDUCATION (*Degree and Specialization*)

PhD, Geotechnical Engineering
MS, Civil Engineering

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

Professional Engineer/Civil: WI, MI, OH

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

Ms. Koutnik has participated in \$50M worth of federal projects, serving eight USACE Districts in 15 states. Her experience includes request for proposal development, testing soils; coordinating, documentation for Right of Entry, supervising, and performing quality reviews of geotechnical investigations, drilling, piezometers, instrumentation (inclinometers and settlement plates) and laboratory operations; and technical analysis and design. Her design experience includes foundations, earthen structures and slopes, dams, channels, storm damage risk reduction and beach nourishment, shoreline and stream bank erosion protection, beaches, dunes, and coastal structures, excavations and levee stability, stormwater basins, pump stations, and retaining and floodwalls.

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
WBV-09 Eastern Tie-In Preliminary Design and WBV-09a Hero to Oakville Final Design, First Lift Levee Enlargement, Plaquemines Parish, LA	2013	2013

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

Check if project performed with current firm

a **Role & Scope:** (Full Project Writeup is included in SF330 Section F7) Geotechnical task lead responsible for the design of levee slope stability and settlement analyses, including a soil-bentonite slurry trench cutoff wall, I-wall analyses, and deep foundation support for a T-wall and pump station. This project consisted of preparing geotechnical reports, plans and specifications, design documentation report preparation, engineering during advertisement, and engineering during construction for 5,600 feet of new levee and floodwall through the cypress. **Cost:** \$33.4M **Fee:** \$4.0M

(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
USACE New Orleans, Chalmette Loop Levee - LPV 144-149, Orleans and St. Bernard Parishes, LA	2015	2016

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

Check if project performed with current firm

b **Role & Scope:** Geotechnical task lead who developed geotechnical design criteria, oversaw soil exploration including 5-inch undisturbed fixed-piston sampling, vane shear, piezometers on land and in the canal, laboratory testing for Chalmette Loop reaches LPV144 and LPV147, and performed review of USACE field, lab and in-situ testing for remaining reaches to characterize soil interfaces and derive material properties. Led preliminary and final geotechnical engineering and design, and generated plans, specifications, cost estimates and geotechnical design reports, according to the HSDRRS Chalmette Loop reaches LPV144-149, which is 23 miles of flood damage risk reduction (levees, floodwalls, gates) crossing Bayou Dupre and Carnarvon Canal. She coordinated with USACE geotechnical engineers, developed a pile load test (PLT) program, including plans and specifications, and oversaw PLT construction for the 14 sites and 63 test piles, with static pile load testing and pile driving analysis. She also provided engineering during construction, input into O&M manuals, and prepared post-construction foundation reports. **Cost:** \$131.5M **Fee:** \$14.8M

(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
USACE Rock Island, New Pumping Station for Rice Lake State Fish and Wildlife Area Habitat Rehabilitation and Enhancement Project, Fulton County, IL	2011	N/A

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

Check if project performed with current firm

c **Role & Scope:** Geotechnical engineering task lead who oversaw the geotechnical investigation, laboratory testing, and geotechnical report and supported engineering design through detailed plans, specifications, and cost estimates for construction of a new 300 cfs pump station facility along the Illinois River. The pump station pumps water from the Illinois River into Rice Lake to raise water levels to support migratory waterfowl habitat and increase overall preferred habitat quality and quantity by attenuating seasonal flooding impacts and increasing native floodplain grassland and forest cover. USACE and HNTB collaborated while USACE completed other project tasks. **Cost:** \$NA **Fee:** \$242K

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 42	b. WITH CURRENT FIRM 11

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

MSMM Engineering – 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 (1984) First Year Registered, LA, (21422)
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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 for his entire career. 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 of a project feature and land on the other.

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (<i>City and State</i>) Texas City & Vicinity Hurricane Flood Protection Project, I-Wall to T-Wall Conversion, Texas City, Texas	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES ONGOING	CONSTRUCTION (<i>if applicable</i>) ANTICIPATED 2026

(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 F1) Development of a design-bid-build package (plans and specs) for approximately a mile of failed Federal floodwall conversion from an I-Wall to a T-wall on an active chemical refinery. Services rendered consist of Architectural, Civil and Geotechnical

a Engineering, Cost Estimating, BCOES review and will consist of Construction Management, and Engineering Design Support During Construction. Mr. Yokum was the lead structural engineer for the project and was responsible for designing the floodwall conversion from an I-Wall to a T-wall. To do this, he developed a pile-founded wall with a seepage cut-off, a temporary line of protection utilizing sheetpile and Hesco Baskets, and he also designed two large swing gates utilizing USACE CADBIM policies and procedures. He utilized frame analysis, pile group analysis and the results of the Geotechnical analysis to develop his design, which was accepted by the Galveston District. **Cost:** \$20.5M **Fee:** \$1.9M **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

(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 F2) Development of a 35% design package (plans, specs, and DDR) for a new 8,000 cfs drainage pump station complex consisting of multiple flood

b risk management reduction measures such as pump station, safe house, floodwalls, and sector gate. Mr. Yokum's 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. 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:** \$325M **Fee:** \$1.3M **Role:** Structural Engineer

(1) TITLE AND LOCATION (<i>City and State</i>) Jefferson Lakefront Floodwalls & Structures: West Return Floodwall, Jefferson Parish and St. Charles Parish, LA	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES 2012	CONSTRUCTION (<i>if applicable</i>) 2012

(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 F3) The design for the west return floodwall and the recurve I-Wall northwest of Kenner consisted of replacing the existing floodwall with a new T-wall alignment approximately 35 linear feet offset to the west. Mr. Yokum provided the structural design for the project which consisted of a detailed drainage analysis, Pile Group Analysis, unbalanced load analysis, and detailed calculations for the conversion of the Federal floodwall from an I-Wall to a T-Wall. **Cost:**

\$4.7M **Fee:** \$422K **Role:** Structural Engineer

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

12. NAME James Costello, PE	13. ROLE IN THIS CONTRACT Structural Engineer	14. YEARS EXPERIENCE a. TOTAL 36	b. WITH CURRENT FIRM 31
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15. FIRM NAME AND LOCATION (City And State)

Tetra Tech, Inc. – Bellevue, WA

16. EDUCATION (DEGREE AND SPECIALIZATION) MS, Civil Engineering, Univ. of Washington, 1991 BS, Civil Engineering, Univ. of California, 1985	17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Professional Engineer/Civil: LA (PE.0035319), WA (31737)
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18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, Etc.)
Mr. Costello provides expert structural analysis, design, and project management services. His academic research background includes finite element methods and non-linear stability. He has developed methods for designing large-diameter steel encased reinforced concrete shafts, has extensive experience in soil-structure interaction analysis, and has performed advanced seismic analyses using non-linear time history methods. He has designed and retrofitted locks, dams, bridges, tunnels, and marine structures and conducted extensive design work for floating and float-in structures. Structure types also include in-the-wet hydraulic steel and concrete structures such as floating lock guide walls, dams, and gates. He has completed a significant amount of work on high-profile projects for USACE.

19. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (City and State) IHNC Lake Borgne Surge Barrier, New Orleans, LA	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES 2012	CONSTRUCTION (if applicable) 2012
a	(3) DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Scope: (Full Project Writeup is included in SF330 Section F4) Led a team of 60 designers and delivered more than 40 contract packages. Led the development of the design criteria for structural, civil, mechanical, and electrical disciplines. Designed the U-shaped, float-in section of new lock chamber. Performed buoyancy calculations, floating stability calculations for float out and set down, and reinforced concrete design. Designer of Record for the steel sector gate at GIWW, the GIWW bypass approach wall, and the Bayou Bienvenue approach walls. Following construction, Project Manager for writing the 2016 Design Documentation Report which included descriptions of the approach, design criteria, analysis, physical modeling, and design changes for the flood wall, GIWW sector gate and bypass barge gate, and the Bayou Bienvenue lift gate. Cost: 1.3B Fee: \$27M Role: Structural Engineer	<input type="checkbox"/> Check if project performed with current firm	
b	(1) TITLE AND LOCATION (City and State) Coastal Texas Protection and Restoration Feasibility Study, Sabine River to Rio Grande River, TX	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2021	CONSTRUCTION (if applicable) N/A
b	(3) DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Scope: Developed an energy dissipation piping concept for the pump station; designed an innovative 1,200-foot sector gate using replaceable floatation barges; and developed design criteria for the gates and floodwalls on the Gulf Coast for this planning study. Coordinated with the Galveston District using USACE criteria and the HSDRRS Design Guidelines. Cost: N/A Fee: \$774k Role: Principal Structural Engineer	<input type="checkbox"/> Check if project performed with current firm	
c	(1) TITLE AND LOCATION (City and State) GIWW Brazos River Crossing Design, Freeport, TX	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2023	CONSTRUCTION (if applicable) N/A
c	(3) DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Scope: Provided lead structural design for the gates and gate monoliths on this design-bid-build contract. Designer of Record for the structural components of the gate including the foundation, superstructure, and steel sector gate. Developed 80 drawings, with specifications, design report, and Engineering Considerations report for the final design. Revised the design approach on the monolith to utilize precast prestressed concrete piles and to optimize the gate height to achieve cost savings on the order of \$10M. Cost: \$205M Fee: \$3.5M Role: Structural Engineer	<input type="checkbox"/> Check if project performed with current firm	
d	(1) TITLE AND LOCATION (City and State) Panama Canal Third Set of Locks Design-Build Project, Cocolí and Gatún, Panama	(2) YEAR COMPLETED PROFESSIONAL SERVICES 2018	CONSTRUCTION (if applicable) 2016
d	(3) DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Scope: Reviewed the approach structures, the water saving basins, conduits, trifurcations and valve structures, and the wing walls inlet and outlet monoliths for both the Atlantic and Pacific Lock Complexes. The seismic analyses of these structures included a nonlinear time history analysis that includes the hydrodynamic effects of chamber water, yielding backfill, nonlinear foundation interaction, and accounts for the surrounding large concrete monoliths that affect the seismic motions. Cost: \$3.4B Fee: \$32M Role: Senior Structural Technical Reviewer	<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 Daniel Appelbaum, PE	13. ROLE IN THIS CONTRACT Mechanical Engineer	14. YEARS EXPERIENCE a. TOTAL 16 b. WITH CURRENT FIRM 15
15. FIRM NAME AND LOCATION (<i>City And State</i>) HNTB Corporation (Kansas City, Missouri)		
16. EDUCATION (<i>DEGREE AND SPECIALIZATION</i>) MS, Mechanical Engineering		17. CURRENT PROFESSIONAL REGISTRATION (<i>STATE AND DISCIPLINE</i>) Professional Engineer/Mechanical: LA, AZ, MI, IL, WA, FL
18. OTHER PROFESSIONAL QUALIFICATIONS (<i>Publications, Organizations, Training, Awards, Etc.</i>) Mr. Appelbaum primarily designs and inspects electromechanical and hydraulically driven machinery for heavy movable structures. He has participated on USACE periodic/formal levee inspection teams and has inspected numerous pump stations and flood control structures.		
19. RELEVANT PROJECTS		
(1) TITLE AND LOCATION (<i>City and State</i>) USACE New Orleans, Chalmette Loop Levee - LPV 144-149, Orleans and St. Bernard Parishes, LA		(2) YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (<i>if applicable</i>) 2015 2016
a	(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Role & Scope: Mechanical engineer for the new bobtail swing bridge operating machinery. This new bridge is located at Bayou Bienvenue navigation structure sector gate along the HSDDRS Chalmette Loop Levee, LPV-145A reach. He was responsible for the calculations of the external loading on the movable structure, with subsequent sizing and design of all components of the operating machinery, including hydraulic motors, rack and pinion, pinion shaft, bearings, balance wheels, end lifts, and center wedges. He provided interdisciplinary coordination among the structural, mechanical and electrical disciplines. He was also involved with the project's construction phase, providing shop drawing reviews, RFI responses, and shop and site visits through an EDC contract. Cost: \$131.5M Fee: \$14.8M	
	<input type="checkbox"/> Check if project performed with current firm	
b	(1) TITLE AND LOCATION (<i>City and State</i>) USACE Kansas City, Kansas Cities Levees, Levee and Floodwall Raises, Kansas City, KS & MO	
	(2) YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (<i>if applicable</i>) ONGOING ANTICIPATED 2026	
c	(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Role & Scope: Lead senior mechanical engineer for sluice gate modifications at over 30 drainage structures. The project includes raising 17 miles of levees and floodwalls along the Kansas River. He evaluated the existing gate lifting mechanism's capacity and designed modifications to accommodate the increased lift height. He also performed finite element analysis of gates to evaluate structural integrity against the increased flood loading. Professional and construction services are ongoing and completion is anticipated in 2026. Cost: \$529M Fee: \$21.7M	
	<input type="checkbox"/> Check if project performed with current firm	
c	(1) TITLE AND LOCATION (<i>City and State</i>) SLFPA-W, OMRR&R Sector Gate Corrosion Assessment and Unwatering and Rehabilitation, New Orleans, LA	
	(2) YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (<i>if applicable</i>) ONGOING ANTICIPATED 2025	
c	(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Role & Scope: Senior mechanical engineer responsible for mechanical upgrades and rehabilitation during the non-federal sponsor's first 10–15-year OMRR&R unwatering cycle at the WCC, Harvey Canal Complex, and Bayou Segnette Complex navigation structure sector gates constructed by the USACE New Orleans District as part of the Hurricane Storm Damage and Risk Reduction system. He is responsible for preparing construction documents, including preparing the DDR, plans and specifications, cost estimates, permits, agency comment responses, and EDA. Professional services are ongoing and are anticipated to be complete at the end of construction in 2025. Cost: NA Fee: \$464K	
	<input type="checkbox"/> Check if project performed with current firm	
c	(1) TITLE AND LOCATION (<i>City and State</i>) Formal Inspections Within the MVN and E&D Support for the Levee Safety Program Concerning the MRL, South Louisiana	
	(2) YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (<i>if applicable</i>) ONGOING ANTICIPATED 2025	
c	(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Role & Scope: Senior mechanical engineer responsible for formal inspections, as part of 11 levee segment formal inspections, observing and reporting conditions for pump stations , drainage structures and closure gates to verify non-federal sponsor OMRR&R requirements are in conformance with the PPA. Professional services are ongoing and are anticipated to be completed in 2025. Cost: NA Fee: \$2.4M	
	<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 (<i>City And State</i>) Tetra Tech, Inc. – Bellevue, WA		
16. EDUCATION (<i>Degree and Specialization</i>) BS, Mechanical Engineering, Seattle University, 2009		17. CURRENT PROFESSIONAL REGISTRATION (<i>State and Discipline</i>) Professional Engineer/Mechanical: TX (121372), CO (56001) FL (79554), LA (PE.0042798), OR (90719PE), WA (51684), MT (PEL-PE-LIC-84245), ID (P-21175), NM (24445), OH (PE.89024), IL (062.074981), VA (0402066490)
18. OTHER PROFESSIONAL QUALIFICATIONS (<i>Publications, Organizations, Training, Awards, Etc.</i>) Mr. Flickinger is experienced in the field of mechanical engineering, providing conceptual and detailed design services for flood protection, pump stations, water control gates, cranes, hoist and mechanical operating machinery. He specializes in multi-disciplinary design integration, design optimization through finite element analysis, designing large scale mechanical systems, inspection and analysis of existing mechanical machinery, retrofit of aging mechanical systems, and developing detailed design documents.		
19. RELEVANT PROJECTS		
(1) TITLE AND LOCATION (<i>City and State</i>) Mid-Breton Sediment Diversion Project - Back Structure Concept Design, Wills Point, LA		(2) YEAR COMPLETED PROFESSIONAL SERVICES 2021 CONSTRUCTION (<i>if applicable</i>) N/A
a	(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: Provided design of the segmented lift vertical lift wheel gates operated by an onsite gantry crane. Each gate slot includes embedded items and dogging devices. The design is being completed in AutoDesk Inventor and exported into AutoDesk Revit. Cost: N/A Fee: \$453k Role: Lead Mechanical Engineer	<input type="checkbox"/> Check if project performed with current firm
(1) TITLE AND LOCATION (<i>City and State</i>) Coastal Texas Protection and Restoration Feasibility Study Engineering, Sabine River to Rio Grande River, TX		(2) YEAR COMPLETED PROFESSIONAL SERVICES 2021 CONSTRUCTION (<i>if applicable</i>) N/A
b	(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: Responsible for preliminary design of pump stations protecting Galveston Island and sounding areas. Established the pump driver methodology and the preliminary layout of the fuel storage system. Design took into consideration the local environmental conditions of the Galveston area. Cost: N/A Fee: \$774k Role: Mechanical Engineer	<input type="checkbox"/> Check if project performed with current firm
(1) TITLE AND LOCATION (<i>City and State</i>) GIWW Brazos River Crossing Design, Freeport, TX		(2) YEAR COMPLETED PROFESSIONAL SERVICES 2023 CONSTRUCTION (<i>if applicable</i>) N/A
c	(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: Led the engineering and design of the mechanical systems, including 125' x 28' 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 development of gate mechanical systems and performed technical analysis. Produced 62 detailed design drawings and specifications compliant with USACE EMs and ERs. Cost: \$205M Fee: \$3.5M Role: Lead Mechanical Engineer	<input type="checkbox"/> Check if project performed with current firm
(1) TITLE AND LOCATION (<i>City and State</i>) Panama Canal Third Set of Locks Design-Build Project, Cocolí and Gatún, Panama		(2) YEAR COMPLETED PROFESSIONAL SERVICES 2018 CONSTRUCTION (<i>if applicable</i>) 2016
c	(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: Designed the trash racks and embedded items for control valves and developed 3D models and plans for the valve systems. During the construction phase, provided QA and engineering during construction of the valves that control the water flow in the new navigation locks. Performed QA audits on the control system and conducted regular spot checks of the construction installation and operation of the water control valves, bulkheads, and hydraulic operators. Reviewed shop drawings of hydraulic cylinders that operate the control valves. Cost: \$3.4B Fee: \$32M Role: Mechanical Engineer	<input type="checkbox"/> Check if project performed with current firm
(1) TITLE AND LOCATION (<i>City and State</i>) Bayou Lafourche Pump Station Improvements, Donaldsville, LA		(2) YEAR COMPLETED PROFESSIONAL SERVICES 2017 CONSTRUCTION (<i>if applicable</i>) N/A
e	(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE Scope: Oversaw analysis to determine the required pipeline thickness for the intake design. Cost: N/A Fee: \$206k 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 Albert Barnes, PE, P.Eng	13. ROLE IN THIS CONTRACT Electrical Engineer	14. YEARS EXPERIENCE a. TOTAL 30 b. WITH CURRENT FIRM 14	
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15. FIRM NAME AND LOCATION (City And State)

Tetra Tech Inc. – Bellevue, WA

16. EDUCATION (DEGREE AND SPECIALIZATION) BASc, Electrical Engineering, University of British Columbia, 1993	17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Professional Engineer, Electrical: TX (131780), CA (E19001), FL (77107), GA (PE037247), ID (P-21099), IL (062-071713), LA (PE.0039340), NM (24417), OR (85808PE), WA (42893), PR (28470)
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18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, Etc.)

Mr. Barnes is experienced in planning, designing, managing, constructing, and commissioning of the electrical and controls portions of multi-discipline water resource projects. His experience includes defining project scope, writing design criteria, estimating capital and labor costs, project management, design calculations, permitting, reviewing budgets, writing specifications, reviewing construction bid documents, reviewing shop drawings, PLC programming, construction supervision, shop and site inspections, and commissioning. His extensive design experience includes detailed drawings for power distribution including substations, motor controls including variable frequency drives, grounding, lighting, grounding, conduit and cable tray layout, instrumentation and panel layouts, schematics, and wiring diagrams.

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
IHNC Lake Borgne Surge Barrier, New Orleans, LA	2012	2012

(3) DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Scope: (Full Project Writeup is included in SF330 Section F4) Developed design for electrical and controls plans for the Bayou Bienvenue Floodgate on the IHNC as part of the overall floodwall protection system. Design included approximately 25 electrical and controls drawings and 5 electrical and controls specifications. Completed the drawings in MicroStation and the specifications in SpecsIntact. Following the electrical design work, supported development of the electrical portion of the Design Documentation Report. Cost: 1.3B Fee: \$27M Role: Electrical Engineer	<input type="checkbox"/> Check if project performed with current firm

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
GIWW Brazos River Crossing Design, Freeport, TX	2023	N/A

(3) DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Scope: Responsible for the electrical and controls design for the new sector gate. The work includes plans in MicroStation, specifications in SpecsIntact, electrical calculations and the electrical portion of the Design Documentation Report. Also included in the work is the electrical portion of the cost estimate in MCACES. Cost: \$205M Fee: \$3.5M Role: Electrical Engineer	<input type="checkbox"/> Check if project performed with current firm

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
Panama Canal Third Set of Locks Design-Build Project, Cocolí and Gatún, Panama	2018	2016

(3) DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Scope: Provided electrical and controls support to the design of the conduit, culvert, and equalization valves for the water-saving basin at the Atlantic and Pacific locks complexes. Provided EDC support for the valves including construction site visits. Cost: \$3.4B Fee: \$32M Role: Electrical Engineer	<input type="checkbox"/> Check if project performed with current firm

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
Coastal Texas Protection and Restoration Feasibility Study Engineering, Sabine River to Rio Grande River, TX	2021	N/A

(3) DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Scope: Prepared a design memorandum and provided input to the structural engineering appendix for the preliminary design of four pump stations. Developed plans in MicroStation. The flood gates, flood walls, and T-Walls were designed to HSDRRS and USACE criteria; the pump stations were designed to USACE criteria. Pump station capacity is based on the interior drainage analysis. Also prepared 3-D models using Inventor. Cost: N/A Fee: \$774k 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 Alma Reantaso, PE	13. ROLE IN THIS CONTRACT Electrical Engineer	14. YEARS EXPERIENCE a. TOTAL 24	b. WITH CURRENT FIRM 3
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15. FIRM NAME AND LOCATION (*City And State*)

Tetra Tech, Inc. – Bellevue, WA

16. EDUCATION (<i>Degree and Specialization</i>) BS, Electrical Engineering, Purdue University, 1998	17. CURRENT PROFESSIONAL REGISTRATION (<i>State and Discipline</i>) Professional Engineer/Electrical: TX (109121), AK (EE-207399), CA (17285), NV (026435), OH (PE89140), PA (PE089597), WA (56714)
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18. OTHER PROFESSIONAL QUALIFICATIONS (*Publications, Organizations, Training, Awards, Etc.*)
 Ms. Reantaso has experience designing, constructing, managing, and commissioning the electrical and controls portions of multi-discipline civil works projects. Her experience includes control design, short circuit analysis, arc flash analysis, load flow calculations, cost estimates, permitting, PLC and HMI programming, defining project scope, and control specifications. Her extensive design experience includes design drawings, control specifications including sewer overflow facilities and wastewater treatment plant upgrades, motor controls wiring schematics, instrumentation and panel layouts, calculations including short circuit and voltage drop, and lighting systems including single line diagrams.

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, Freeport, TX	2023	N/A

(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE a Scope: Performed Independent Technical Review for electrical and control system design elements. Reviewed design documents at the 30%, 60%, and 95% design submittal stages, including the Design Document Report, electrical power, lighting, and control plans, installation details, electrical schematics, and load calculations. Design was reviewed for technical accuracy, conformance to project standards, and proper coordination with other disciplines. Cost: \$205M Fee: \$3.5M Role: Electrical 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>)
Soo Locks Hands-Free Mooring, Sault Ste. Marie, MN	2022	N/A

(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE b Scope: Developed panel layout drawings and schematics for power and control system components for hands free mooring equipment, including selection of VFDs, motor starter and protective devices to be housed in dedicated enclosures. Control system design included selection of PLC system, power supplies, and Ethernet and fiber optic communication system components. Prepared control room layout design and cable tray layout sizing and installation details. Cost: N/A Fee: \$779M Role: Electrical 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>)
Broward Water Detention Facility, Broward County, FL	2022	N/A

(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE c Scope: Assisted in organization and management of electrical, instrumentation, and control system design for new pump station. Developed electrical equipment room conceptual layout for use in overall building design. Coordinated with mechanical discipline lead to prepare high-level cost estimates for electrical construction work for process design alternative technical memorandums. Developed process and instrumentation diagrams in accordance with water management district design guidelines. Worked with the lead communications system engineer to develop SCADA system architecture and control system hierarchy that met the end user's new requirements for electrical and control system configurations that varied from their existing facilities. Cost: N/A Fee: \$7M Role: Electrical 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>)
Loyalhanna Lake Gantry Cranes Rehabilitation Project, Pittsburgh, PA	Ongoing	N/A

(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE d Scope: Led electrical design for new control system to operate existing dam gantry cranes travel and load hoist systems. Designed new control system with enclosures selected to fit within space constraints of existing gantry crane operator cabins and to meet operational criteria. Designed new low voltage power distribution system to replace existing aging. New electrical system layout included cabin interior lighting suitable for control rooms and equipment room as well as replacement of exterior fixtures with new LED flood lighting. Cost: N/A Fee: \$466k 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 Dani Alexander	13. ROLE IN THIS CONTRACT Planner	14. YEARS EXPERIENCE a. TOTAL 26	b. WITH CURRENT FIRM 5
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15. FIRM NAME AND LOCATION (*City And State*)

MSMM Engineering, LLC – New Orleans, LA

16. EDUCATION (*DEGREE AND SPECIALIZATION*)

AS, Civil Engineering; Bishop State University (1998)

17. CURRENT PROFESSIONAL REGISTRATION (*STATE AND DISCIPLINE*)

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

Ms. Alexander is an experienced Planner with experience in water resources, with over 25 years of experience in the engineering and construction industry. In her current role, she helps lead high-profile projects such as the Mississippi River and Tributaries (MR&T), Mississippi River Levees (MRL) and is responsible for coordinating, planning, scheduling, budgeting, and managing an interdisciplinary project delivery team (PDT) responsible for Civil Works projects including levees, floodwalls, and seepage remediation. This PDT has been recognized at the District, Division and Headquarters USACE levels, including the National PDT of the Year for Honor. Before joining MSMM, Ms. Alexander served as civilian contractor for the U.S. Army Corps of Engineers (USACE), New Orleans District (MVN) for over 10 years. Supporting the Hurricane and Storm Damage Risk Reduction System (HSDRRS) \$14.6B program. Ms. Alexander is extremely proficient at technical writing, the management of Environmental documents, and the leadership of PDT teams.

19. RELEVANT PROJECTS

	(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
a	Mississippi River Mainline Levee (MRL) Supplemental Environmental Impact Statement (SEIS II), New Orleans, LA	2020	N/A
	(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE	<input checked="" type="checkbox"/> Check if project performed with current firm	
a	Scope: Ms. Alexander was an integral part of the MRL SEIS II effort. Ms. Alexander led the New Orleans team that was responsible for conducting an inventory, initial design, planning, environmental impacts, and cultural resources of the remaining authorized MRL work items within the Districts area of responsibility. She was responsible for preparing documents and presentations, briefings, and upward reporting to include In-Process Reviews (IPRs) to the Commander. Ms. Alexander led the coordination of public scoping meetings and the virtual public meetings for the draft final SEIS II. She was part of the team that ensured timely completion, which led to the MVD Commander's signature of the Record of Decision (ROD). Cost: \$3M Fee: \$600K Role: Planner		
	(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
	HSDRRS – Independent External Peer Review (IEPR), Greater New Orleans Area, LA	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
	(3) DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE	<input type="checkbox"/> Check if project performed with current firm	
b	Scope: Ms. Alexander was the Planner of the HSDRRS IEPR program, including interpretation of WRDA 2007 language and development of draft interim implementation guidance; peer review plan development execution. Ms. Alexander was responsible for the development of information sheets, briefings, and upward reporting. During the review plan phase, Ms. Alexander was responsible for technical writing and editing of the main document and appendices in accordance with the Federal GPO style manual guidelines and guidance, researching current regulations and policies to ensure compliance and coordination with NFS and stakeholders. She led the interdisciplinary PDT and was responsible for tracking estimates, schedules, and monitoring activities for multiple IEPR's. Cost: \$56M Fee: \$1.7M Role: Planner	2015	N/A

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

12. NAME Ridge Robinson	13. ROLE IN THIS CONTRACT Planner	14. YEARS EXPERIENCE a. TOTAL 31	b. WITH CURRENT FIRM 25
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15. FIRM NAME AND LOCATION (*City And State*)

Tetra Tech, Inc. – Seattle, WA

16. EDUCATION (<i>Degree and Specialization</i>) BS, Economics, Radford University, 1991 BB, Administrative Management, Radford University, 1991	17. CURRENT PROFESSIONAL REGISTRATION (<i>State and Discipline</i>) N/A
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18. OTHER PROFESSIONAL QUALIFICATIONS (*Publications, Organizations, Training, Awards, Etc.*)

Mr. Ridge Robinson is a plan formulation specialist with civil works experience in flood risk management, coastal storm risk management, navigation, ecosystem restoration, hydropower, and water supply. He has authored six feasibility-level decision documents resulting in Chief's Reports and Congressional authorizations for construction. He has experience working on five projects under the USACE SMART planning paradigm, including for purposes of coastal storm risk management, flood risk management, navigation, and ecosystem restoration. Mr. Robinson spent seven years with USACE Institute for Water Resources, where he developed and applied innovative techniques for civil works water resources planning and economic evaluation, including the initial development of USACE IWR-Planning Suite plan formulation and evaluation software platform. Central to the development of USACE standard methodology for plan formulation and comparison of alternatives for ecosystem restoration projects and served as an instructor for USACE PROSPECT Course: Planning, Principles, and Procedures.

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
Portland Metro Levee System Feasibility Study, Portland, OR	2020	N/A

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

Check if project performed with current firm

a **Scope:** Oversaw planning, environmental compliance, engineering analysis and design, and economic studies for this flood risk management feasibility study that characterized flood risk and evaluated opportunities to reduce flood risk by modifying the existing 27-mile levee system along the Columbia River. Oversaw plan formulation and documentation of alternatives and identification of the TSP. Oversaw development of draft feasibility report, including all technical appendices and MCACES cost estimate. Oversaw development of economic depth damages functions for use in HEC-FDA modeling, including a damage function for emergency flood response activities of USACE, drainage districts, and the City of Portland. Oversaw socioeconomic analysis necessary for the NEPA analysis. Oversaw H&H studies, including assessment of climate change impacts and effects of projected sea level rise in the project area which is within the tidally influenced reach of the lower Columbia River. Developed risk assessment framework to quantify future pump station failures under project conditions. The feasibility report was approved. **Cost:** N/A **Fee:** \$1M **Role:** Planner

(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
Barrow Coastal Storm Risk Management, Barrow, AK	2019	N/A

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

Check if project performed with current firm

b **Scope:** This coastal storm risk management project did not have positive NED benefits. Mr. Robinson developed a supplemental plan formulation and evaluation framework to support the evaluation of project alternatives and justification of recommended alternative based upon other than NED benefits. The plan formulation framework was based OSE, NER, and RED plan contributions to community resilience. Prepared report, developed new evaluation methodology, obtained certifications for one-time use, and provided basis for project justification. Plan formulation framework was approved by HQUSACE, and project was approved to advance to preconstruction engineering and design. Received commendation from District Commander for outstanding service on the project. **Cost:** N/A **Fee:** \$333k **Role:** Planner

(1) TITLE AND LOCATION (<i>City and State</i>)	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION (<i>if applicable</i>)
Elliott Bay Seawall Replacement, Seattle, WA	2014	2017

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

Check if project performed with current firm

c **Scope:** Supported USACE and their sponsor by preparing integrated feasibility report and environmental impact statement for this coastal storm risk management project to replace the seawall protecting downtown Seattle. Managed development of unique risk and reliability-based damage assessment model that incorporated seismic vulnerability of existing structure into evaluation of without project conditions. Led the planning team for this large infrastructure project. **Cost:** \$330M **Fee:** \$18M **Role:** Planner

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 1
21. TITLE AND LOCATION (City and State)	22. YEAR COMPLETED	CONSTRUCTION (if applicable)
Texas City and Vicinity Hurricane Flood Protection Project, I-Wall Repair <i>Texas City, TX</i> Contract Number: W9126G16D0017 Task Order Number: W912HY19F0031 CPARS Quality Rating: Exceptional	PROFESSIONAL SERVICES Ongoing	Anticipated to start in 2026

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
USACE Galveston District	Ryan Schwartzengraber	(409) 502-7884

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

Design Fee: \$1.9M, **Construction Cost:** \$20.5M, **% Complete:** 77%,
% of Design Complete: 95%, **% of EDC Complete:** 0%

Our team was tasked by the USACE Galveston District to complete engineering design services for the replacement of a portion of an I-wall to a T-wall within a chemical refinery in Texas City, Texas. The Texas City Hurricane Flood Protection is in Galveston County, Texas about 30 miles southeast of Houston. The existing Hurricane Flood Protection System protects roughly 36 square miles of the greater Texas City-La Marque – Hitchcock area from a 15-ft hurricane storm surge with accompanying waves. Based on our inspection of the site, the design of this project is required because a portion of the I-wall has shown recent indications of failure including joint separation, spalled concrete at the joints, portions of the wall leaning, leaning infrastructure along the I-wall, cracking in the ground surface behind the I-wall, and recent history of settlement of the soils between the I-wall and a bulkhead that is located in front of the wall. The design consists of the removal of the existing, approximately 600-foot damaged I-Wall and the construction of a new T-Wall section that meets current USACE and HSDRRS standards, including a base slab, earthen scour protection, and floodgate. Design challenges require the contractor to maintain an interim line of protection throughout the duration of construction, work in an active refinery with an active ship schedule, and the relocation of several utilities.

Following our team's extensive field investigation activities, we completed an engineering evaluation report detailing and assessing the existing infrastructure and documenting the known performance issues, while developing optimized project features. Our team then worked with USACE, the non-Federal sponsor (Galveston County), and the chemical refinery leadership to develop an acceptable framework for the project design to move forward. Following the investigations, we developed detailed engineering and design, prepared a Design Documentation Report (DDR), provided civil design plans and specifications (Specsintact), prepared Engineering Considerations and Instructions to Field Personnel (ECIFP), and performed an independent value engineering (VE) study and preparation of a VE report. Our design activities also included preparing preliminary and detailed quantity estimates, MII cost estimates, and providing the final construction bid documents. CIM modeling was utilized to show the Refinery Owner how the layout would have little to no impact on their operations, and our engineering team also worked with the refinery owner on ingress/egress operations the contractor must follow.

Areas of Emphasis:

- 1) Navigation Structures (Lock and Dams, Floodgates, etc.)
- 2) Floodwalls and Closure Structures

Project Relevancies:

- ✓ USACE Civil Works Task Order
- ✓ Utilized Civil Information Modeling
- ✓ Used USACE CADBIM Policies
- ✓ Completed Construction Cost Estimating
- ✓ Utilized Specs Intact
- ✓ Conducted a Value Engineering Study
- ✓ Stability Analysis of Floodwalls
- ✓ Seepage and Dewatering Analysis

Exemplifies Experiences in:

- ✓ Hydraulics
- ✓ Geotechnical Design, Investigation and Analysis
- ✓ Civil Design Plans and Specifications
- ✓ Structural Engineering
- ✓ Fire Protection Engineering
- ✓ Environmental Analyses
- ✓ GIS/Survey/Mapping
- ✓ Construction Cost Estimating
- ✓ Planning & Project Management

Additionally, a **design charrette** held at the beginning of the design phase included the non-Federal sponsor and refinery owner to review the shipping schedule the refinery follows and how the floodwall operations would be impacted by those operations. These constraints were built into the MII cost estimate as lost workdays. Other discussions at the design charrette centered on construction laydown areas, certification of crew members, and the number of **utility relocations** that our team could envision.

The design included the development of a **conceptual design** for interim flood protection measures for the contractor to design and construct prior to dismantling the wall to maintain the existing flood protection levels during **construction**. The major structural design features designed by our team included the **concrete floodwall and foundation**, and the **structural steel floodgate**. The **floodwall design** included pile foundation design due to lateral loading and the soil conditions at the project site. Steel H-piles were selected as the best support piles due to lower costs and less vibration during installation. Our team utilized **CPGA** to develop the pile layout for the floodwall. **GROUP 2019** was used to analyze the **floodwall designs** to verify the pile forces obtained by CPGA.



Civil design included site work, roadway access, construction laydown and site trailer identification and placement, construction sequencing plan, and the relocation of multiple utilities. Site design was prepared utilizing the **topographic and utility location survey** provided by the team's survey subconsultant. The team also utilized **GPR** (ground penetrating radar) to locate the existing soldier piles on the flood side of the wall. Utility relocations were identified and included in the project plans. These utilities included fire suppression towers and firewater lines, storm drain and manholes, security lighting and electrical conduit (on wall), miscellaneous electrical control boxes (on wall), miscellaneous tank foundations (landside), underground electrical conduit, and on-grade steel piping.

Detailed **geotechnical investigation, analysis and design** were completed, and a report documenting the subsurface conditions plaguing the site was developed. **Geotechnical investigations** included subsurface soil conditions, groundwater conditions, site and subgrade preparation, **deep foundation design and construction**, axial capacity for piles, lateral pile analysis, seepage analysis, global stability analysis, and seismic site classifications per IBC. Geotechnical field services consisted of three test borings on land, drilled with a truck-mounted drill rig to a depth of 100 feet, and two test borings on water to a depth of 75 feet. **Seepage Analyses** were performed utilizing the commercial seepage analysis software program, **SEEP/W**. Based on the soil conditions found, silty sand layers were encountered between depths of 0 and 6 feet below the existing grade and between depths of 18 feet and 28 feet below the existing grade. These layers of granular soils are considered permeable compared to the clayey soils encountered at the site. Since the sheetpile cut-off wall will be driven to a depth of 40 feet below the existing grade, it will penetrate through the above silty sand layers and will prevent any seepage flow through these layers. The design depth determined that steady seepage conditions would likely not exist during any major hurricane event. Instead of steady seepage analyses, our team performed a transient seepage analysis for this project.

Our team has completed all design deliverables and closed out all DrChecks comments. Our task order includes all **construction phase services**, inclusive of engineering support during advertisement and engineering support during construction, review and approval of shop drawings, response to RFI's, and bi-weekly progress meetings.

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; Houston, TX	Prime (77%) – Civil & Structural Design, DDR, P&S, Project Management
b	Terracon Consultants, Inc.	Houston, TX	Sub (7%) – Geotechnical Engineering
c	Strategic Value Solutions, Inc.	Kansas City, MO	Sub (1%) – Cost Estimating

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 2
21. TITLE AND LOCATION (City and State)	22. YEAR COMPLETED	PROFESSIONAL SERVICES CONSTRUCTION (If applicable)
Cow Bayou Drainage Pump Station Complex <i>Orange, TX</i> Contract Number: W9126G16D0017 Task Order Number: W912P819F0215 CPARS Quality Rating: Exceptional	2021	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	(504) 862-2501

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

Design Fee: \$1.3M, **Construction Cost:** \$325.5M, **% Complete:** 100%,
% of Design Complete: 35%, **% of EDC Complete:** 0%

MSMM's task was to complete 35% design for the 8,190 CFS pump station as part of the Sabine to Galveston Cow Bayou Complex project. The Cow Bayou Complex includes levee tie-ins, floodwalls, sluice gate structures, and a sector gate for navigational traffic. The pump station consists of five 132-inch diameter discharge, vacuum-primed horizontal pumps with a capacity of 1,320 CFS each and formed concrete intakes; and three 530 CFS vertical pumps with 84-inch discharge piping.

The task was a joint engineering effort between USACE New Orleans District, Galveston District, and our team in which we operated as one integrated design team. Our design responsibility included structural, architectural, civil site work, geotechnical evaluation and design, cost estimating, CAD and project management. A unique feature of this project was the integrated design team with the New Orleans District who provided the mechanical and electrical design while we were responsible for coordinating the M/E design with the civil, structural, and geotechnical engineering design. Other project features designed by our team included dolphin structures to protect the facility, a pump station safe house, an elevated fuel farm and access roadway. We designed the project in Microstation 3D and Civil 3D, also utilizing Revit BIM 3D modeling and CIM modeling for the facilities.

The pump station concrete structure is 250 FT wide by 128 FT long with 8 pump bays and supported by 100 FT long steel H-pile. The pumps, engines, generators, gear boxes, and electrical equipment are all housed within the pump station building. The structural steel building located above the concrete substructure is 43 FT tall and utilizes 8 IN thick precast concrete tilt up wall panels on all four sides of the building. The roof consists of 6 IN concrete slab on metal roof deck attached to the supporting members maintaining a 1:12 slope.

Our structural engineers, following USACE engineering manuals, designed all project structures associated with the pump station including the horizontal and vertical pump intake and discharge structures, support slabs, pump station building, safe house, fuel and water tank foundation, west access ramp, exterior semi-gantry and overhead bridge crane supports, and protective dolphins on the intake and discharge side of the pump station. The pump station and safe house were designed utilizing STAAD software.

Areas of Emphasis:

- 1) Navigation Structures (Lock and Dams, Floodgates, etc.)
- 2) Floodwalls and Closure Structures
- 3) Beaches, Dunes, and Coastal Structures
- 4) Dams and Levees

Project Relevancies:

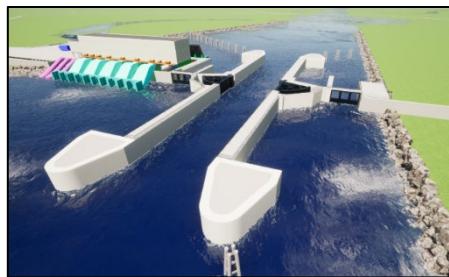
- ✓ USACE Civil Works Task Order
- ✓ Flood Risk Management and Hurricane and Storm Damage Risk Reduction Project
- ✓ Use of CIM and BIM Modeling
- ✓ Use of USACE CADBIM Policies
- ✓ Use of Specs Intact
- ✓ Construction Cost Estimating
- ✓ Perform Soil Borings
- ✓ 3D Modeling of Buildings, Structures, Sites

Exemplifies Experiences in:

- ✓ Hydrology
- ✓ Hydraulics
- ✓ Geotechnical Design, Investigation and Analysis
- ✓ Civil Design Plans
- ✓ GIS/Survey/Mapping

The pump station safe house is a two-story structure 36 FT long by 22 FT wide. The building is supported by cast-in place concrete beams and cast-in place concrete columns. The safe house is a separate structure but abuts the pump station building. The safe house provides housing for four to six emergency personnel that shall be required to man the facility during a hurricane, and it is designed for tornado force winds.

The safe house 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, 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 on the soil boring data the New Orleans District provided to 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 on the pump station, 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) to construct the pump station. Analyses were also performed for the design of the dolphins to protect the pump station and gates.



As part of our project management activities and coordination between our design team and the USACE mechanical/electrical design team, we prepared a detailed communication plan which outlined procedures for coordination of design activities and the transfer of information between all parties. The plan addressed scheduling, communication distribution structure, information collection and filing procedures, and a flow chart of personnel and project progression. Our team was responsible for providing the design data, plan sheets and DDR section write ups related to our portions of the design for incorporation into the overall 35% design package deliverable. We also prepared the ROM cost estimate for the 35% design package for the entire pump station, safe house, site civil work and levee to floodwall tie-ins. Following receipt of the 35% design package, SWD engaged CERL/ERDC to complete additional hydrologic and hydraulic modeling. Subsequent discussions between SWD and the local sponsor led the acquisition strategy to be changed to Design-Build.

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; Houston, TX	Prime (82%) – Civil & Structural Design, Architectural Design, DDR, P&S, Site Layout
b	Eustis Engineering, LLC	Houston, TX; Metairie, LA	Sub (10%) – Geotechnical Engineering
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 <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) Jefferson Lakefront Floodwalls & Structures: West Return Floodwall Jefferson Parish and St. Charles Parish, LA Contract Number: W912P808D0002 Task Order Number: TO.0014 PPQ Quality Rating: Exceptional	22. YEAR COMPLETED PROFESSIONAL SERVICES 2012	CONSTRUCTION (if applicable) 2012	
23. PROJECT OWNER'S INFORMATION			
a. PROJECT OWNER USACE New Orleans District	b. POINT OF CONTACT NAME Durund Elzey	c. POINT OF CONTACT TELEPHONE NUMBER (504) 862-1674	
24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost) Design Fee: \$3M, Construction Cost: \$58M, % Complete: 100%, % of Design Complete: 100%, % of EDC Complete: 100%			
<p>As part of the project to raise the hurricane protection in Jefferson Parish to the Phase II 100 year level, this project was tasked with upgrading the flood protection along the west and north side of Kenner in Jefferson Parish. The project extended from the New Orleans International Airport located south of I-10, northerly along the LaBranche wetlands and then turning easterly along Lake Pontchartrain to transition into the lakefront levee system. Specific Project Components included the Kenner West Return Floodwall (18,300 ft in length and included various T-wall and I-wall monoliths with a levee tie-in sheet pile to the south and a Re-curve Floodwall tie-in to the north); new pedestrian access floodgate within the T-wall monolith at the end of West Esplanade; and a Re-curve Floodwall in Northwest Kenner (850 ft in length including I-wall monoliths, wave buffers, and a vehicular floodgate).</p> <p>The design for the west return floodwall and the recurve I-Wall northwest of Kenner consisted of replacing the existing floodwall with a new T-wall alignment approximately 35 linear feet offset to the west. The new T-wall was constructed to an elevation of +17.5 feet NAVD88 north of Interstate 10 and +16.5 feet NAVD88 south of I-10. At the I-10 bridge, rock breakwaters were constructed on a geotextile fabric. The breakwaters were at an elevation of approximately +19.5 ft with a width of approximately 105 linear feet and a length of approximately 500 linear feet. As an additional feature, armoring was incorporated to protect against erosion and scour on the protected and flood sides of critical portions of the levees and floodwalls. These critical areas included: transition points (where the levees and floodwalls transitioned into any hardened feature such as other levees, floodwalls, pump stations, etc.), utility pipeline crossings, floodwall protected side slopes, and where earthen levees could be exposed to wave and surge overtopping during a 500-year hurricane storm event. Flood side berms were also incorporated into the construction design of the floodwall. Additional specialty items incorporated during this project included the design and coordination of three 84" discharges pipe penetrations through one of the T-wall sections at the existing Parish Line Pump Station, and "bulkhead" design spanning each interstate girder where the floodwall crossed beneath Interstate 10.</p> <p>The overall project design involved Risk Informed Decision Based Computational Analyses and Services to meet the Standard Project</p>			
<div style="background-color: #c0392b; color: white; padding: 5px;"> Areas of Emphasis: <ol style="list-style-type: none"> 1) Navigation Structures (Lock and Dams, Floodgates, etc.) 2) Floodwalls and Closure Structures 3) Beaches, Dunes, and Coastal Structures 4) Dams and Levees </div> <div style="background-color: #d9ead3; color: #333; padding: 10px;"> Project Relevancies: <ul style="list-style-type: none"> ✓ USACE Civil Works Task Order ✓ Utilized Civil Information Modeling ✓ USACE CADBIM Policies ✓ MCACES Construction Cost Estimating ✓ Seepage and Dewatering Analysis ✓ Stability Analysis of Flood Walls ✓ Cantilever Retaining or Floodwall Analysis ✓ Topographic Maps ✓ Contour Maps </div> <div style="background-color: #d9ead3; color: #333; padding: 10px;"> Exemplifies Experiences in: <ul style="list-style-type: none"> ✓ Geotechnical Design, Investigation and Analysis ✓ Civil Design Plans and Specifications ✓ Structural Engineering ✓ GIS/Survey/Mapping ✓ Construction Cost Estimating ✓ Project Management ✓ Engineering During Advertisement ✓ Engineering During Construction </div>			

Hurricane (SPH) protection based on the Hurricane Storm Risk Reduction Analyses in order to bring the protection to a 100-year level. The professional services our team completed consisted of investigations, data evaluation, analysis, technical writing, and design of the features identified above. The project also required field investigations, which consisted of topographic and hydrographic surveys, the collection of soil borings, soil testing to determine soil properties, and providing boring logs in accordance with USACE New Orleans District geotechnical criteria. Full quality control and compliance verification was completed with the final plans and specifications detailing geotechnical, structural and civil design, and ensuring coordination with the appropriate engineering manuals and USACE New Orleans District design requirements. The design of the project's components involved Geotechnical Analysis (Seepage and Dewatering Analysis, Stability Analysis for levees using Method of Planes and Spencer's Method, Settlement Analysis, Numerical Analysis, and settlement induced bending moments in piles), Structural Analysis (T-wall to I-wall conversion, Cut-off Wall design, pile group analysis, and frame analysis), Civil Design Analysis including civil / sitework design and drainage analysis, and Hydraulic Analysis (Mongoose Modeling for Wave Overtopping of I-10 floodwall, Rainfall Run-off, Drainage calculations, and Wave Loading).



MSMM Engineering principals and other current employees were involved throughout the project design and construction with Mr. Bob Yokum serving as the engineer of record. Services furnished on this project included the preparation of Design Documentation Reports (DDR), plans and specifications (P&S), engineering and design (E&D), engineering support during advertisement, and engineering support during construction (EDC). EDC responsibilities included attending the pre-construction conference, responding to the contractor's requests for information and clarifications, reviewing submittals from the construction contractor; and our engineering team conducted bi-weekly site visits. Other tasks included the development of a design quality control plan (DQCP), preparation of right-of-way drawings, MII cost estimating, participation and presentations at public meetings, and coordination with authorities having jurisdiction for the hurricane protection projects in Jefferson Parish following Hurricane Katrina including USACE, LDOTD, New Orleans International Airport, East Jefferson Levee District, St. Charles Parish, City of Kenner, and private utilities.



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	JV Member (75%) – Civil & Structural Design, Engineering During Construction
b	(1) FIRM NAME Tetra Tech, Inc.	(2) FIRM LOCATION (City and State) Bellevue, WA	(3) ROLE Sub to JV (9%) – ITR, Design Support
c	(1) FIRM NAME Eustis Engineering, LLC	(2) FIRM LOCATION (City and State) Houston, TX; Metairie, LA	(3) ROLE Sub to JV (8%) – 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 4
21. TITLE AND LOCATION (City and State)	22. YEAR COMPLETED PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)
Inner Harbor Navigation Canal Lake Borgne Surge Barrier New Orleans, LA Contract Number: W912P8-08-C-0038, W912P8-10-D-0060 (DDR) PPQ Quality Rating: Exceptional	2012	2012
23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER USACE New Orleans District	b. POINT OF CONTACT NAME Craig Waugaman	c. POINT OF CONTACT TELEPHONE NUMBER (504) 862-2673

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

Design Fee: \$27M, **Construction Cost:** \$1.2B, **% Complete:** 100%,
% of Design Complete: 100%, **% of EDC Complete:** 100%

The project was designed and constructed to reduce the risk of storm damage from surges coming from Lake Borgne and the Gulf of Mexico, increasing resiliency to some of the region's most vulnerable areas. The barrier is constructed near the confluence of the Gulf Intracoastal Waterway (GIWW) and the Mississippi River Gulf Outlet (MRGO), a natural funnel identified as an area of critical vulnerability in the Hurricane and Storm Damage Risk Reduction System. The project design includes two 150-foot-wide flood control gates at GIWW (a buoyant sector gate and a concrete barge swing gate), a 56-foot-wide vertical lift gate with vehicular bridge at Bayou Bienvenue, and complete floodwall closure of the MRGO. Other project design features include hydraulic modeling to prove all structures safe for navigation, and flood control gates for navigation passes designed to open and close in a timely manner in the event of hurricane. At GIWW, the temporary bypass barge gate was designed to allow navigation to continue at GIWW for the duration of the construction.

Tetra Tech (formally INCA Engineers) led the design of the \$1.2 billion Lake Borgne Surge Barrier hurricane risk reduction project at the Inner Harbor Navigation Canal (IHNC) – the largest civil works design-build project in USACE's history. Tetra Tech is the Designer of Record for the detailed design and drawings of the surge barrier, gates, structural monoliths, and foundations. In addition to engineering design services, Tetra Tech also provided project management, value engineering, and engineering during construction services for the project. Tetra Tech's engineering design services included:

- Design of the permanent shallow draft navigation pass at GIWW, 150-foot-wide by 42-foot-high sector gate supported by buoyant tanks along the bottom of the skin plate, used to regulate both tidal flows and storm surge into the IHNC.
- Design of the lift gate abutments and towers and the vehicular and equipment lift bridges spanning the 56-feet-wide by 34-feet-deep opening at Bayou Bienvenue.
- Design consideration for the hydrodynamic effects of the wave overtopping.
- Design of foundations to support the recommended barriers and/or flood control structures. Road access is provided along the entire length for inspection and maintenance, including a one-lane access bridge for 16,300lb GVW across each of the gates.
- Design of project features using the latest Corps criteria and in accordance with appropriate USACE design manuals, regulations, and guides. Many features have required developing extended criteria with the embedded USACE staff. Engineering during construction services included review of shop drawings, answering requests for information, on-site observation, shop visits, and commissioning.

Areas of Emphasis:
1) Navigation Structures (Lock and Dams, Floodgates, etc.)
2) Floodwalls and Closure Structures
4) Dams and Levees

Project Relevancies:
✓ Task Order Services Completed for USACE
✓ Design-Build RFP Development
✓ Fee over \$1M
✓ Completed in last 11 years
✓ Value Engineering Studies
✓ Cost Estimating Using MCASES
✓ Utilized SpecsIntact

Exemplifies Experiences in:
✓ Hydraulics
✓ Structural Engineering
✓ Civil Engineering
✓ Geotechnical Engineering
✓ Technical Reviews
✓ Engineering Support During Construction

- Participation in value engineering, including evaluating buoyant versus wheel supported sector gate, in-the-dry storage of the sector gate, instrumentation versus field verification floodwall testing, lift gate vs sector gate at Bayou Bienvenue.

Tetra Tech was the Designer of Record for the Steel Sector Gate at GIWW, the GIWW Bypass Approach Wall, and the Bayou Bienvenue Approach Walls. Tetra Tech provided 100% design and EDC. Other services performed by Tetra Tech include:

- Technical analysis and investigations of runaway empty barges, 300 ft sector gate, alternative alignments, and Design Documentation Report (under a separate contract to the New Orleans District in 2016), risk and reliability assessment with O&M procedural recommendations (under separate contract to the Southeast Louisiana Flood Protection Authority), commissioning
- Geotechnical investigation and Geotechnical Report for the Bayou Bienvenue site



The GIWW sector gate is currently USACE's highest-loaded gate and features a unique bearing design which accommodates both the high gate weight and large surge forces for both direct and reverse head conditions. In addition, by providing a fully buoyant gate the cost of maintenance for removal of the gate are greatly reduced since a long reach in-the-dry lift is not necessary. The GIWW sector gates can be released from their pintle with pressurized air and floated out of the monolith.

The challenging environment of the Gulf Coast demanded unique design approaches to achieve design life and durability goals in a marine environment with material selections, to accommodate sea level rise and land subsidence by designing for future conditions, and to meet the design requirements under the Design-Build delivery method and schedule driven goal of achieving 100-year protection by June 2011 utilizing the design approach to achieve cost-effective design and meet the aggressive design schedule as well as incorporating low maintenance and operability goals were achieved by co-locating the design staff with the Hurricane Protection Office as well as the Contractor in New Orleans. The co-location, along with over-the-shoulder reviews, periodic design summits for all stakeholder to meet the lead designers, created a cooperative atmosphere to build succeed on a complex and challenging project. Extraordinary efforts were made to accommodate local subsidence, settlement, and downdrag with the use of advanced soil structure interaction analysis utilizing FLAC and PLAXIS to determine the structural induced forces and account for mitigating effects such as optimal construction sequencing, placement of geotextile material, and pile type and tip elevation. The analysis and design considerations were developed to achieve a design that minimized cost and was constructible within the schedule limits. In addition, Tetra Tech's design accounted for local effects from climate change by designing for the future effects on surge elevations and wave forces, marine corrosion, and the unique in-the-wet construction favored by the Contractor at this site by providing increased top of wall elevations, more robust structural members, and utilizing corrosion resistant steel or advanced coatings.

As a result of the team's outstanding project management to maintain the design schedule and quality, innovative design to support accelerated construction efforts, USACE announced the attainment of 100-year-level of risk reduction on May 24, 2011. As costs increased, the design team participated with the USACE Value Engineering Tiger Team (composed of SME experts from USACE, international experts, and Tetra Tech) review. Significant cost saving options were developed for approach wall redesign to utilize precast concrete, stay-in-place forms at the GIWW Bypass, as well as the decision to change from a vertical axis sector gate at Bayou Bienvenue to a vertical lift gate.

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	A-E Prime JV Partner (56%): Design Project Management, Geotechnical Lead at Bayou Bienvenue, Mechanical Lead for GIWW Sector Gate, Structural Lead GIWW Steel Sector Gate

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 5
21. TITLE AND LOCATION (City and State)	22. YEAR COMPLETED	
PROFESSIONAL SERVICES	CONSTRUCTION (<i>If applicable</i>)	
Southeast Louisiana Urban Flood Control – Harahan Pump to the River Jefferson Parish, LA Contract Number: W912P808D0002 EDC Task Order Number: W912P813C0015 PPQ Quality Rating: Exceptional	2018	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: \$1.8M, **Construction Cost:** \$47M, **% Complete:** 100%,
% of Design Complete: 100%, **% of EDC Complete:** 100%

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 SELA 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. One DDR 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 second DDR was 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 completed the design packages for the intake canal, pump station, and 1st segment of the discharge piping. Several of MSMM's current employees including all principals, structural engineer, and lead CAD tech were the primary team members (including the designer of record) for the completion of the final design packages. In all, the three phases designed by MSMM employees 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

Areas of Emphasis:

- 1) Navigation Structures (Lock and Dams, Floodgates, etc.)
- 4) Dams and Levees
- 5) Pump Stations

Project Relevancies:

- ✓ USACE Civil Works Task Order
- ✓ Flood Risk Management and Hurricane and Storm Damage Risk Reduction Project
- ✓ Completed Construction Cost Estimating
- ✓ Seepage and Dewatering Analysis
- ✓ Stability Analysis of Levees
- ✓ Uplift Analysis
- ✓ Heave Analysis
- ✓ Topographic Maps
- ✓ Contour Maps
- ✓ Profiles and Sections

Exemplifies Experiences in:

- ✓ Hydraulics
- ✓ Geotechnical Design, Investigation and Analysis
- ✓ Civil Design Plans and Specifications
- ✓ Structural Engineering
- ✓ Electrical Engineering
- ✓ GIS/Survey/Mapping
- ✓ Construction Cost Estimating
- ✓ Planning & Project Management
- ✓ Engineering Support During Advertisement
- ✓ Engineering Support During Construction

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.

In addition to the services described above, our engineering team developed the real estate right-of-way drawings, ran pile group analysis, produced specifications, produced cost estimates in MCACES (MII), and provided engineering support during advertisement and engineering support during construction for the project. These responsibilities included attending the pre-construction conference, responding to the contractor's requests for information and clarifications, reviewing submittals from the construction contractor; conducting routine site visits; and final inspection walkthroughs. EDC was done for all three construction projects.

The coordination effort was immense on this project and covered numerous agencies, organizations, and property owners. LDOTD: Much of the piping was to be in the median and beneath the future Dickory Avenue Extension. 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. Entergy: 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 bank. The relocation of the towers and transmission line was a multiyear effort. Coordination was also required with USACE, Jefferson Parish, City of Harahan, local property owners, SLFPA-E, LA Department of Health, and the US Coast Guard.



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 (55%) – Civil & Structural Design, DDR Development, P&S Development, Cost Engineering Using MCACES, Engineering Support During Advertisement, Engineering Support During Construction
b	Burk-Kleinپeter, Inc.	New Orleans, LA	Sub (15%) – Civil & Mechanical Design
c	Eustis Engineering, LLC	Houston, TX; Metairie, LA	Sub (5%) – Geotechnical Engineering

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT		20. EXAMPLE PROJECT KEY NUMBER 6
(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) Harvey Canal Floodwalls, Frontal Protection, & Earthen Levees Jefferson Parish, LA Contract Numbers W912P806C0173 and W912P809D0029 PPQ Quality Rating: Very Good	22. YEAR COMPLETED PROFESSIONAL SERVICES 2012	CONSTRUCTION (If applicable) 2012
23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER USACE New Orleans District	b. POINT OF CONTACT NAME Craig Waugaman	c. POINT OF CONTACT TELEPHONE NUMBER (504) 862-2673
24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost) Design Fee: \$1.6M, Construction Cost: \$94.3M, % Complete: 100% % of Design Complete: 100%, % of EDC Complete: 100%		
<p>Our team was tasked by the USACE – New Orleans District to provide engineering services for a new design reach of the New Orleans Westbank and Vicinity Project located on in Jefferson Parish, Louisiana. This new reach was designed as part of the USACE New Orleans Districts' Hurricane and Storm Damage Risk Reduction System (HSDRRS) mission.</p> <p>The project was broken into two separate construction phases.</p> <p>The first phase consisted of 2,775 linear feet of floodwall. The floodwall consists of an 18-foot-high T-wall on battered steel H-piles. A portion of the floodwall makes up a new frontal protection floodwall in front of the existing Hero Drainage Pumping Station. Work on this portion of the floodwall included extending the pump station discharge lines through the new floodwall, new pipe support bents, a new stilling basin, and new discharge bells for each of the discharge lines. A total of 10 discharge lines ranging in size from 54-inch to 160-inch had to be addressed. Butterfly valves were placed on each of the discharge lines to prevent backflow when the pumps are not running. The design included air suppression of the horizontal pumps to prevent backflow. Construction documents had to be coordinated with Jefferson Parish (the pump station operator) to minimize impacts to the pumping capacity during construction.</p> <p>The second phase consisted of a 4,230-foot-long earthen levee along the Harvey Canal, T-wall floodwalls in several locations along the levee for both utility and access. A total of three (3) 35-foot roller gates and one (1) 60 roller gate were necessary to provide access to the adjacent industrial facilities. In addition, a T-wall was necessary to facilitate a 30" high pressure gas line that crosses the levee. The gas line was able to pass through the sheet pile cut-off wall under the T-wall and construction was performed without taking the gas line out of service.</p> <p>Design services included surveying, geotechnical investigations, slope stability analysis, pile group analysis, utility line ownership investigations and relocations, civil, structural, mechanical, and electrical engineering.</p> <p>Deliverables included a design documentation report, plans and specifications, right-of-way drawings, quantity takeoffs, and cost estimates.</p>		<p>Areas of Emphasis:</p> <ul style="list-style-type: none"> 1) Navigation Structures (Lock and Dams, Floodgates, etc.) 2) Floodwalls and Closure Structures 4) Dams and Levees 5) Pump Stations <p>Project Relevancies:</p> <ul style="list-style-type: none"> ✓ USACE Civil Works Task Order ✓ Flood Risk Management and Hurricane and Storm Damage Risk Reduction Project ✓ Used USACE CADBIM Policies ✓ Construction Cost Estimating ✓ Utilized Corps Specs ✓ Conducted a Value Engineering Study ✓ Stability Analysis of Flood Walls and Earthen Levees ✓ Seepage and Dewatering Analysis <p>Exemplifies Experiences in:</p> <ul style="list-style-type: none"> ✓ Hydraulics ✓ Geotechnical Design, Investigation and Analysis ✓ Design Documentation Report ✓ Civil Design Plans and Specifications ✓ Structural Engineering ✓ GIS/Survey/Mapping ✓ Construction Cost Estimating ✓ Planning & Project Management ✓ Engineering Support During Construction

All partial milestone deliverables included reviews by the USACE New Orleans District and a final BCOE review was performed prior to the completion of the plans and specifications. All comments during these reviews were addressed in Dr. Checks.

Engineering during advertising and construction services were provided throughout the construction of the project. Those services included review and approval of shop drawings, responses to RFIs, and attending progress meetings.



25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
a	Burk-Kleinpeter, Inc.	New Orleans, LA	Prime (50%) – Civil & Structural Design, DDR, P&S, Cost Estimating, EDC, Project Management
b	Eustis Engineering, LLC	Metairie, LA	Sub (5%) – Geotechnical Engineering
c	MSMM Engineering, LLC	New Orleans, LA	Sub (5%) – Civil Design, QA/QC

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 7
21. TITLE AND LOCATION (City and State)	22. YEAR COMPLETED PROFESSIONAL SERVICES CONSTRUCTION (<i>If applicable</i>)	
WBV-09 Eastern Tie-In Preliminary Design and WBV-09a Hero to Oakville Final Design, First Lift Levee Enlargement <i>Plaquemines Parish, LA</i> Contract Numbers: W912P8-07-D-0045; W912P8-07-D-0062; Task Order Numbers: 0004; 0018 PPQ Quality Rating: Exceptional	2013	2013

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
USACE New Orleans District	Richard Varuso, PhD, PE	(504) 862-2984

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

Design Fee: \$4M; **Construction Cost:** \$33.4M, **% Complete:** 100%
% of Design Complete: 100%; **% of EDC Complete:** 100%

In response to hurricanes Katrina and Rita in 2005, and the need to provide a closed levee system and flood damage risk reduction to New Orleans Westbank infrastructure as part of the West Bank and Vicinity (WBV) project, the USACE New Orleans District contracted HNTB Corporation for engineering services to evaluate the Easter Tie-In of the WBV system, including reach WBV-09 in Plaquemines Parish, Louisiana.

The engineering was completed as part of IDIQ contracts W912P8-06-D-0033; W912P8-07-D-0045; W912P8-07-D-0062 for task orders 0004, 0004, and 0018, respectively. HNTB was the prime contractor, project manager, and design or record (DOR) for the first two contracts and was the subcontractor, overall project manager, and a DOR for the third contract as part of a prime joint venture mentor protégé led the team. Preliminary engineering and design (PED) phases included all the Easter Tie-In, WBV-09 project reaches WBV-09a, 09b, and 09c. Final design phases included only WBV-09a, West Bank and Vicinity, New Orleans, La., Hurricane Protection Project, Hero to Oakville, Phase II, First Lift Levee Enlargement Plaquemines Parish, Louisiana.

Principal design elements of this multi-phased project included evaluating: interior drainage conveyance channels, precast prestressed concrete box culverts, and water control sluice gate; 4,500 linear feet of new levee embankment reinforced with reinforcing geotextile and deep soil mixing, levee stability berms, and Mississippi River Levee tie-in; 1,400 feet of reinforced concrete floodwalls (L- and T-wall), sheet pile (I-wall) tie-ins and scour control revetments; Hero Canal navigation structure (sector gate and bulkhead); LA-23 roadway gate (swing and roller) closure and emergency access road crossing; railroad swing gate closure structure; 70 and 150 cfs pump stations and intake structure, precast prestressed concrete generator building, crane hoist and pipe supports; Supervisory Control and Data Acquisition (SCADA) system designs; and temporary works.

Project roles and tasks included project management, surveying, landowner and utility coordination, geotechnical engineering, geotechnical field investigations and laboratory testing, structural

Areas of Emphasis:

- 1) Navigation Structures (Lock and Dams, Floodgates, etc.)
- 2) Floodwalls and Closure Structures
- 4) Dams and Levees
- 5) Pump Stations

Project Relevancies:

- ✓ Task Order Services Completed for USACE
- ✓ Completed within last 15 years (2013)

Exemplifies Experiences in:

- ✓ Flood Damage Risk Reduction
- ✓ Floodplain Modeling
- ✓ Storm Damage Risk Reduction
- ✓ Technical Analysis
- ✓ Data Collection
- ✓ Geotechnical Investigations
- ✓ Surveying
- ✓ Preliminary Studies Through Feasibility Report Development
- ✓ Engineering Design Through Detailed Plans
- ✓ Design Analysis/Design Documentation Report Preparation
- ✓ Request For Proposal Development
- ✓ Value Engineering
- ✓ Documentation for Right Of Entry and Right Of Way
- ✓ Engineering During Construction

engineering, hydraulics and hydrology engineering, site/civil engineering, highway and traffic engineering, electrical engineering, mechanical engineering, design analysis/Design Documentation Report preparation, value engineering, technical and Biddability Constructability Operability Environmental Sustainability (BCOES) reviews, quantity and cost estimating, documentation for right of entry and right of way, engineering during advertisement (EDA), engineering during construction (EDC) and data collection. HNTB worked in all these design roles during the various phases of the project and was DOR for final features, including the levee, site civil, and all geotechnical levee, pump station and floodwall tasks.

EDA services included preparing amendments to the advertised plans and specifications. EDC responsibilities included attending the preconstruction conference, responding to contractors' RFIs and clarifications, reviewing submittals, and performing monthly or bi-weekly site visits to witness construction practices, observe conditions, and document the implementation of the designer's product. HNTB was responsible for plans and specification revisions required during construction. HNTB was also responsible for coordinating design changes with the government and local sponsors. All information was expeditiously submitted to the government to avoid delays to the construction contractor.

In the first design phase, HNTB performed an accelerated initial Alternative Alignment Report using limited existing survey and geotechnical data to evaluate drainage, access, utility and environmental impacts, and costs for various alternative designs and alignments. Based on this information, the second phase included completing new field surveying and geotechnical investigations to support the development of a detailed Engineering Alternatives Report (EAR). USACE then selected a preferred alignment for the final design and development of construction plans and specifications. These two preliminary phases were performed under HNTB's first two prime contracts.



During this final design phase of engineering design through detailed plans, HNTB's geotechnical team members developed and managed the soil exploration and testing program and performed engineering analyses using the latest Hurricane Storm Damage Risk Reduction System (HSDRRS) design guidelines, USACE national publications, and the preliminary revised guidance for I-wall and deep soil mixing designs. Soil borings and cone penetrometer testing was performed using both truck and marsh buggy rigs in a heavily forested cypress swamp, spillover from adjacent landfill, and railroad, requiring HTRW. Subsurface explorations comprised general-type soil borings, 5-inch undisturbed fixed-piston sampling, and split spoon sampling. Cone penetrometer testing was also used to characterize the soil conditions.

The levee and floodwall design included stability analyses for both unreinforced and high-strength geosynthetic reinforced levees, stability berm design, detailed settlement analyses for staged levee lifts to the year 2057 to account for sea level rise and regional subsidence, I-wall design using gap analyses, and T-wall design including driven pile axial, group, lateral load, downdrag, and settlement analyses. Pile load test results from the adjacent levee contract were used to verify pile capacity curves. The geotechnical team performed a detailed seepage analysis and specified a soil bentonite slurry trench within the levee to cut off potential seepage concerns through the levee sand working platform. Deep soil mixing was specified to improve the soil shear strength for the stability of the pump station fronting protection. A struttled sheet pile earth retention system was designed for the pump station intake suction basin. The above designs for the WBV-09a first levee lift were completed, and construction commenced in 2010. HNTB provided EDC services throughout the construction project in 2011, and notice of completed construction (NCC) to the sponsor was in 2013.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
a HNTB Corporation	Baton Rouge, LA; Kansas City, MO; New Orleans, LA; Milwaukee, WI	Prime (65%) - Geotechnical Engineering, Civil Engineering, Electrical Engineering, Project Management

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) 277K Levee Raise and Delta Pump Station Dallas, TX Contract Number: W9126G16D0017 Task Order Number: W9126G20F0033 PPQ Quality Rating: Satisfactory	22. YEAR COMPLETED 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 Fort Worth District	Donna Jones	(817) 886-1056

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

Design Fee: \$1.3M, **Construction Cost:** \$41M, **% Complete:** 100%,
% of Design Complete: 35%, **% of EDC Complete:** 0%

MSMM was tasked to develop two stand-alone **Design-Build (DB)** RFPs for **USACE Fort Worth District** as part of the Dallas Floodway System. The two DB RFP packages included 35% **Plans, Technical Specs, and a DDR** explaining the requirements of the Design-Build firm, a Summary of Work further explaining the project requirements and a **MII construction cost estimate**. The \$35M **Levee Raise** project was advertised in March 2021, and the \$6M **Pump Station** project was advertised in February 2022. Services provided included **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 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 over 41K feet of levee where the height is less than the required water surface elevation. Our team utilized the Trinity River **HEC-RAS** models to establish the water surface elevations at each **levee station**. The project also includes multiple **bridge** and levee interfaces that include structural bridge sealing plans along the East and West Levees. Additionally, the project included flattening of 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 river side. 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 **Specs Intact** 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 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 storm water pump station replacement of the high flow pumps and pump house, as well as 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

Areas of Emphasis:
2) Floodwalls and Closure Structures
4) Dams and Levees
5) Pump Stations

Project Relevancies:

- ✓ Design-Build RFP Development
- ✓ HTRW Investigations
- ✓ Structural Design of Existing Structures
- ✓ Prestressed and Post Tensioned Concrete Structures
- ✓ Construction Cost Estimating Using MCACES (MII)
- ✓ Utilized Specs Intact
- ✓ Completed Value Engineering Studies (2)

Exemplifies Experiences in:

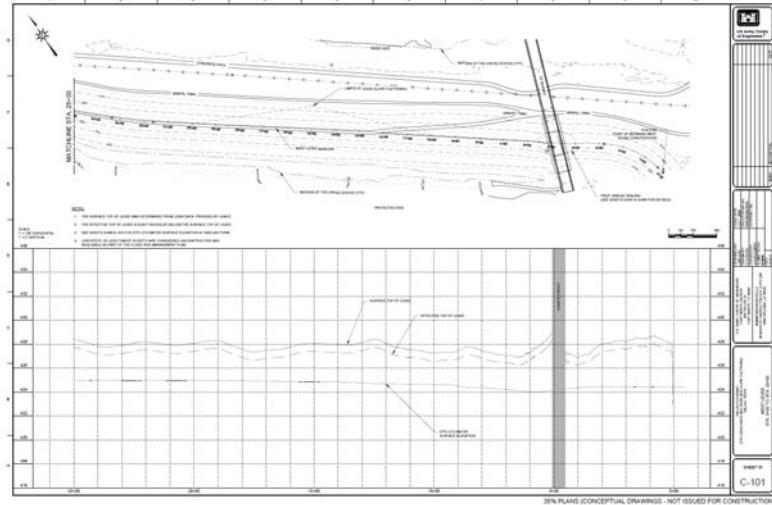
- ✓ Hydrology & Hydraulics
- ✓ Civil Design
- ✓ Structural Design
- ✓ Mechanical Design
- ✓ Electrical Design
- ✓ Architectural Design
- ✓ HTRW Design

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 on the new collection area. The low flow pump stairs will be removed and replaced. Site circulation was designed for 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** have been added at the outfall of the pump station. This is comprised of concrete apron and rock riprap.



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, 3-410-01, and

Our 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; Houston, TX	Prime (60%) – Design-Build Package RFP Development, Program and Project Management
b	(1) FIRM NAME ETTL Engineers & Consultants Inc	(2) FIRM LOCATION (City and State) Tyler, TX	(3) ROLE Sub (5%) – Geotechnical Engineering
c	(1) FIRM NAME Strategic Value Solutions, Inc.	(2) FIRM LOCATION (City and State) Kansas City, MO	(3) ROLE Sub (2%) – Cost Estimating

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	
Bogue Banks Beach Nourishment Master Plan Carteret County, NC Contract Number: 7085-01 PPQ Quality Rating: Exceptional	PROFESSIONAL SERVICES 2021	CONSTRUCTION (if applicable) 2021
23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
Carteret County	Greg "Rudi" Rudolph	(252) 725-4591

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

Design Fee: \$3M, **Construction Cost:** \$79.6M, **% Complete:** 100%
% of Design Complete: 100%; **% of EDC Complete:** 100%

After pronounced hurricane activity in the 1990s, Carteret County began formal steps to address erosion concerns along the 21 miles of managed beach along the ~25-mile-long island of Bogue Banks. To that end, the County contracted Moffatt & Nichol (M&N) to develop a multidecadal programmatic EIS that incorporated all Bogue Banks Beach nourishment and inlet management needs for the next 50 years. M&N was also responsible for the overall project management and completion of the DDR and analyses which included modeling and a detailed sediment budget. In addition to the EIS, the necessary permits were secured to address beach nourishment and inlet management actions and to use specific sand sources for beach nourishment at Bogue Banks for both maintenance and storm response projects as is expected for many of the Coastal Texas CSRM projects. M&N has also completed design, bidding, and EDC for three nourishment projects to date placing approximately 5 MCY of material across all 21 managed beach miles.

M&N considered potential USACE short- and long-term local navigation dredged material management plan strategies, as well as work efforts completed by USACE as part of its long-term project CSRM study. M&N coordinated with FEMA and provided all necessary documentation to qualify the Bogue Banks Beach nourishment master plan as a FEMA-engineered beach for post-storm reimbursement.

M&N developed an engineering report that used a combination of analytical techniques, as well as GENESIS/SBEACH modeling to determine background erosion rates and develop suitable triggers for renourishment maintenance events. M&N used available offshore wave data and shoreline positions and beach profiles taken from survey monitoring data to develop and calibrate the GENESIS and SBEACH models for Bogue Banks, Shackleford Banks, and Bear Island. M&N used available tide, offshore wave data and shoreline positions and beach profiles taken from survey monitoring data, in-situ native beach sediment samples, and USACE RSLR guidance for model inputs to develop and calibrate the GENESIS and SBEACH models for Bogue Banks, Shackleford Banks, and Bear Island. M&N used a combination of long-term annual average and storm conditions for model calibration/verification and sensitivity analysis to confirm the models' applicability for a wide range of conditions for the alternatives assessment. The calibrated models were used to determine background erosion rates and test various alternatives.

Areas of Emphasis:
3) Beaches, Dunes, and Coastal Structures

Project Relevancies:

- ✓ Preliminary studies through feasibility report development
- ✓ Technical Analysis
- ✓ Engineering
- ✓ Design
- ✓ Data collection
- ✓ Geotechnical investigations
- ✓ Surveying
- ✓ Engineering design through detailed plans
- ✓ Specifications
- ✓ Technical & BCOES Review
- ✓ ROW 7 ROE Documentation

Exemplifies Experiences in:

- ✓ Hydrology
- ✓ Hydraulics
- ✓ Civil Engineering
- ✓ Environmental Analyses
- ✓ GIS/Survey/Mapping
- ✓ Technical Reviews
- ✓ Engineering During Construction

In addition to the above shoreline/beachface modeling study, M&N also reviewed the available geologic and inlet studies to qualitatively assess the impacts of the underlying geology and the historical inlet locations and dredging practices on stable inlet locations and adjacent shoreline performance. To verify the historical analysis and GENESIS/SBEACH modeling, M&N used a parallel 2D/3D modeling effort using the DELFT3D or MIKEFM morphological models. The focus of the calibration/verification process was to replicate observed erosional/depositional patterns. This was used to help confirm that the sand placed would provide a long-term benefit and allowed the project team to verify that the current Bogue Inlet location should be maintained for navigational and adjacent beach performance concerns. The modeling also provided potential dredging frequency and verification of “hotspot” areas where additional sand may be required on a more frequent basis, as well as testing the dune/berm size and volume requirements determined from the SBEACH modeling for CSRM performance. M&N completed an evaluation of potential sand sources. Selected sand sources for the project consisted of a combination of offshore, nearshore, upland, and inlet channel sources.



To meet the NEPA/SEPA requirements of an alternatives analysis, M&N developed a matrix of potential alternatives and completed a conceptual screening, which included no action, sand-bypassing, managed retreat, and combinations of beach nourishment and non-structural and structural inlet management interventions. To determine the overall level of protection, M&N used the calibrated GENESIS/SBEACH models to predict the probable annual damages prevented and net benefits consistent with USACE planning regulations for up to three alternatives. The models were run for various storm events (2-, 5-, 10-, 25-, 50-, 100-year) and were compared to the level of protection and CSRM benefits provided for each storm versus costs. Based on the results, M&N noted similar trends and estimates of sediment needs/renourishment triggers/template unit volumes to develop alternative levels of protection and the associated volume needs and cost estimates. M&N estimated the overall project sediment needs and renourishment intervals (3-, 6-, and 9-year) for various return period storms over the project durations (50 years). These estimates were used to determine the proposed level of protection for Bogue Banks and which alternative(s) to pursue. The client ultimately decided to select a “fit for purpose” design for a 25-yr storm event level of protection based on a balancing of financial/risk considerations. The design proved to be accurate based on performance during Hurricane Florence. M&N provided engineering guidance and support during the permitting process, which included documentation and drawings to support the compilation of the required permits. M&N also provided assistance with responses to agency comments and concerns and finalization of permit submissions and attended public workshops. For the Preliminary Draft and Final EIS, M&N provided the engineered template and design alternatives for the preliminary draft and final EIS, as well as data and input for coastal engineering.

M&N provided all final design, bidding, and engineering during construction services for all three projects. Project RFIs were completed, as well as weekly project meetings with the owner and contractor. In addition, daily checks of project progress and volumes were completed so that project goals and linear extent of beach placement were met. Template adjustments were completed, as needed, to stay within these parameters, as well as the overall project budget, which was met.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
^a Moffatt & Nichol	Raleigh, North Carolina	Prime (80%) - Self Performed Coastal engineer

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) Hillaryville Levee Redesign, Pump Station, and Force main Hillaryville, LA Contract Number: W912P815D0022 Task Order Number: TO 0004 PPQ Quality Rating: Exceptional	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 Nick Sims	c. POINT OF CONTACT TELEPHONE NUMBER (504) 862-2128

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

Design Fee: \$339k, **Construction Cost:** \$2.1M, **% Complete:** 100%,
% of Design Complete: 100%, **% of EDC Complete:** 100%

Through the Section 219 Federal program to fund Environmental Infrastructure projects within local municipalities, MSMM Engineering representing the USACE New Orleans District, worked with the Ascension Parish Government, LA (non-Federal sponsor) to design the Hillaryville Pump Station and Force main. The project was constructed as a result of antiquated wastewater infrastructure at the Hillaryville WWTP that would not allow the Parish to support future growth and was contributing to poor local water quality conditions through its effluent discharge into a neighborhood ditch that led to Bayou Conway.

MSMM investigated and identified alternatives that would route the effluent drainage away from the neighborhood ditch and bring the system in compliance with new LADEQ regulations. 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 crosses the Mississippi River Levee before discharging into the Mississippi River. The pipe material is a combination of ductile iron for above grade application (levee crossing) and open cut installation areas, and it is HDPE (high density polyethylene) for the directional drill segments of the project. The pump station wetwell utilized precast concrete pipe for the body with reinforced cast-in-place concrete base and top slabs.

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. On the protected side of the levee, the ductile iron pipe was installed on geotextile fabric and crushed stone to maintain a minimum clearance above the levee theoretical section. The pipe was



then covered with 2-feet of fill material and sloped away on both sides to allow for grass cutting equipment to maintain the levee unimpeded. On the flood side, concrete pipe supports were added within the slope paving until the piping could enter and be buried in the batture out toward the river. At the crown of the levee, a reinforced concrete ramp was designed to allow levee traffic to drive over the pipes where they crossed the

Areas of Emphasis:
4) Dams and Levees

Project Relevancies:

- ✓ USACE Civil Works Task Order
- ✓ 100% performed by MSMM
- ✓ Design Services Sewer Liftstation & Force main
- ✓ 100% Bid Ready Package Through USACE Process
- ✓ Development of DDR Report
- ✓ MCACES Cost Estimate & Permitting

Exemplifies Experiences in:

- ✓ Hydraulics
- ✓ Geotechnical Design, Investigation and Analysis
- ✓ Civil Design Plans and Specifications
- ✓ Structural Engineering
- ✓ Electrical Engineering
- ✓ GIS/Survey/Mapping
- ✓ Construction Cost Estimating
- ✓ Planning & Project Management
- ✓ Engineering Support During Advertisement
- ✓ Engineering Support During Construction

levee crown. Due to the work on and in close proximity to the levee system including spread footings for pipe supports on the flood side slope, the concrete ramp over the pipes at the levee crown, and the options of directional drilling and open cut excavation near the toe of the levee, various cases of global and local stability were evaluated and presented for review.

In addition to the design plans and specifications, our team was also responsible for soil borings and geotechnical analyses, 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.



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 (100%) – Levee Design, Engineering Support During Construction, Sewer Pump Station Evaluation/Design

G. KEY PERSONNEL PARTICIPATION IN EXAMPLE PROJECTS

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
Manish Mardia, PE (MSMM Engineering, LLC) New Orleans, LA	Project Manager	X	X	X		X	X		X		X
Michael Chopin, PE (Burk-Kleinpeter, Inc.) New Orleans, LA	Project Manager					X	X				
Tom Willis, PE, MBA (MSMM Engineering, LLC) New Orleans, LA	Hydraulic Engineer	X				X	X				X
Patti Sexton, PE, CFM (Tetra Tech, Inc.) Irvine, CA	Hydraulic Engineer				X						
Jeff Sheldon, PE (Moffatt & Nichol) Raleigh, NC	Coastal Engineer									X	
Fernando Pagés, PE, D.CE (Tetra Tech, Inc.) San Juan, PR	Coastal Engineer				X						
Jim Wilson, PE, LEED AP (MSMM Engineering, LLC) Houston, TX	Civil Engineer	X					X		X		
Scott Chehardy, PE (MSMM Engineering, LLC) New Orleans, LA	Civil Engineer	X	X	X		X			X		X
Don Daigle, CVS, CPE (Strategic Value Solutions, Inc.) Kansas City, MO	Cost Estimator	X	X						X		
Jack Fink, PE (Moffatt & Nichol) Walnut Creek, CA	Cost Estimator									X	
James J. Hance, PE (Eustis Engineering, LLC) Metairie, LA	Geotechnical Engineer		X	X		X	X				
Therese Koutnik, PhD, PE (HNTB Corporation) Milwaukee, WI	Geotechnical Engineer								X		
Bob Yokum, PE (MSMM Engineering, LLC) New Orleans, LA	Structural Engineer	X	X	X		X	X		X		X
James Costello, PE (Tetra Tech, Inc.) Bellevue, WA	Structural Engineer				X						
Daniel Applebaum, PE (HNTB Corporation) Kansas City, MO	Mechanical Engineer								X		
Eric Flickinger, PE (Tetra Tech, Inc.) Bellevue, WA	Mechanical Engineer				X	X					
Albert Barnes, PE, P.Eng (Tetra Tech, Inc.) Bellevue, WA	Electrical Engineer			X	X						
Alma Reantaso, PE (Tetra Tech, Inc.) Bellevue, WA	Electrical Engineer										
Dani Alexander (MSMM Engineering, LLC) New Orleans, LA	Planner	X					X				
Ridge Robinson (Tetra Tech, Inc.) Seattle, WA	Planner				X						

29. EXAMPLE PROJECTS KEY

NO	TITLE OF EXAMPLE PROJECT (FROM SECTION F)	NO	TITLE OF EXAMPLE PROJECT (FROM SECTION F)
1.	Texas and Vicinity Hurricane Flood Protection Project, I-Wall Repair   	6.	Harvey Canal Floodwalls, Frontal Protection, & Earthen Levees   
2.	Cow Bayou Drainage Pump Station Complex   	7.	WBV-09A, Hero to Oakville, First Lift Levee Enlargement, Plaquemines Parish, LA 
3.	West Return Floodwall   	8.	277K Levee Raise and Delta Pump Station   
4.	Inner Harbor Navigation Canal Lake Borgne Surge Barrier 	9.	Bogue Banks Beach Nourishment Master Plan 
5.	Harahan Pump to the River   	10.	Hillaryville Levee Redesign, Pump Station, and Forcemain 

H. Additional Information

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

INTRODUCTION:

MSMM Engineering, LLC (MSMM) is one of the fastest-growing small businesses that, since inception, was formed to serve the United States Army Corps of Engineers (USACE). We have been identified by USACE as one of the most trusted small business Architect-Engineering (A-E) firms providing Civil Works investigations, analysis, and design. Our recent USACE experience includes planning, hydraulic modeling, design, project management services, EDC, and providing construction oversight of USACE projects. MSMM has maintained multiple civil works design contracts at the USACE New Orleans, Fort Worth, Louisville, and Tulsa Districts, where we average around \$6M in design work annually. Utilizing our Fort Worth small business contract, we performed three value engineering studies for the Galveston District (SWG), which received overwhelmingly positive feedback from the district. As a result, the Galveston District had us provide services on the Texas City I-wall repair projects and Cow Bayou Pump Station: (Full Project Writeups are included in SF330 Section F1 and F2).

Among the advantages we offer the Galveston District in this assignment is the responsiveness of a small business with a proven track record, which is backed by a host of large firms with nationwide resources. Our combined resources offer the Galveston District a full-service design and construction management team that specializes in civil works projects on a national basis with a deep understanding of the overall USACE Mission, as well as a recognized ability to meet USACE standards, processes, and design criteria. MSMM has been involved in over 100 task orders, with a large number of those task orders having been self-performed, allowing us to establish many unique capabilities and design skill sets. Nevertheless, we've brought together an exceptional team of firms for this solicitation who has not only worked extensively with MSMM for many years but also complemented MSMM's proven track record with a deep portfolio in Federal IDIQ Contracts and USACE task orders specializing in multiple technical disciplines.

Accordingly, we believe that MSMM and our skilled team can offer the Galveston District a combination of advantages that no other team can meet. MSMM is currently engaged with multiple USACE districts and has a proven track record of establishing and maintaining exceptional relationships with our USACE connections allowing for a successful partnership built on years of team building, commitment, and effective communication. Furthermore, with such a longstanding relationship with each firm and its principal, we have had the privilege of building a unified team whose success is a direct result of each firm's commitment, established comfortability, and confidence, making each selected mission a success from beginning to end.

To be noted, while MSMM has an existing Joint Venture that is fully qualified for this pursuit, we have chosen to submit this proposal alone to meet the unique skill set of this solicitation, such as wide-ranging oversight and control over negotiation, team assignment, stamping plans, allowing for a seamless, single-focused team with the ideal management controls in place under one roof to excel. We have compiled the best team to meet the flexibility and execution requirements needed for the Galveston District without having the unnecessary coordination that comes with joint ventures.

In short, if we are chosen for this assignment which matches our unique technical expertise, knowledge of the USACE civil design process, knowledge of the geographic footprint, and proven capability to work successfully in collaboration with multiregional USACE districts, you will get a team with a long-term, proven commitment to your mission, an unparalleled track record, and a team led by our most experienced managers and technical staff. Our MSMM team is dedicated to SWG's success.

SELECTION CRITERIA:

Criterion (A) – Specialized Experience and Technical Competence:

In Section F, we have included ten (10) project examples to show our engineers' depth of project experience. The table below shows compliance in the solicitation's areas of emphasis with the ten (10) featured projects in Section F. Additional projects have been added to the table that can be found within Section H. The table also shows the projects regarding the requirements for more significant consideration per the solicitation.

Project		Naviga-tion Struc-tures	Flood-walls and Closure Struc-tures	Beaches, Dunes, and Coastal Structures	Dams and Levees	Pump Sta-tions	EOR is MSMM Per-sonnel	100% EDC
Projects in Section F	Texas City and Vicinity Hurricane Flood Protection Project, I-Wall Repair	✓	✓	✓			✓	
	Cow Bayou Drainage Pump Station Complex	✓	✓	✓	✓	✓	✓	
	Jefferson Lakefront Floodwalls & Structures: West Return Floodwall	✓	✓	✓	✓		✓	✓
	Inner Harbor Navigation Canal Lake Borgne Surge Barrier	✓	✓		✓			✓
	Southeast Louisiana Urban Flood Control – Harahan Pump to the River	✓			✓	✓	✓	✓
	Harvey Canal Floodwalls, Frontal Protection, & Earthen Levees	✓	✓		✓	✓		✓
	WBV-09 Eastern Tie-In and Oakville Design, First Lift Levee Enlargement	✓	✓		✓	✓		✓
	277K Levee Raise and Delta Pump Station Replacement		✓		✓	✓	✓	
	Bogue Banks Beach Nourishment Master Plan			✓				✓
	Hillaryville Levee Redesign, Pump Station, and Forcemain				✓		✓	✓
Projects in Section H	Panama Canal Third Set of Locks	✓						✓
	Grand Isle and Vicinity Hurricane Protection and Coastal Rehabilitation			✓	✓			
	Design Improvements to the Algiers levee system				✓		✓	
	New Orleans International Airport Drainage Pump Station		✓	✓	✓	✓	✓	✓

As SWG can see, we bring a team with significant breadth and depth of experience designing robust civil works projects for USACE. The following bullet points highlight each team member for their specialized expertise. All have a long history of working with MSMM through successful projects.

- **Tetra Tech, Inc.**'s expertise in the coastal environment has been ranked by ENR as #1 in Water in its Top 500 Design Firms issue for 20 consecutive years. With 16 offices and more than 1,600 team members in the Southwest Division's area of responsibility, Tetra Tech delivers innovative, nature-based solutions and structural design for coastal communities seeking climate-resilient flood risk reduction and marine habitat restoration, including storm risk management for USACE Galveston. Tetra Tech provides full-service support in maintaining and improving critical dam, levee, and reservoir infrastructure that protects life, property, and the environment, including the Brazos River floodgate design for USACE Galveston.
- **Moffatt & Nichol (M&N)** has been providing coastal and marine engineering services in Texas since 1999. For more than 75 years, M&N has built a powerful reputation as a premier coastal engineering, numerical modeling, and coastal ecosystem design firm worldwide. As the oldest consulting firm providing coastal engineering services in North America, M&N has successfully completed alternatives analysis and engineering design for a wide range of projects throughout the Gulf Coast region. In addition to over 1,000 professionals, M&N has more than 100 coastal engineers on staff with more than 850 years of experience.
- **HNTB** is a large business, full-service infrastructure solutions firm with more than 77 offices nationwide, including more than 58 years in Texas, including our Houston and Dallas locations. HNTB provides national Corps of Engineers expertise, extensive expert resources, local knowledge, and experienced and trusted staff. HNTB has worked on thousands of federal, state, and local projects within the Texas and USACE Galveston area of responsibility. HNTB will provide the team with depth and breadth of knowledge in the planning and engineering of flood damage risk reduction, coastal, floodplain, navigation, and ecosystem restoration projects.
- **Burk-Kleinپeter, Inc. (BKI)**, a small business A-E firm founded in 1910, is one of the leading engineering and planning firms in the southeast region. BKI has an extensive history of using its breadth of knowledge to provide engineering services and solutions across multiple disciplines on various USACE Civil Works projects.
- **Eustis Engineering**, a small business geotechnical firm, has worked on over 28,000 projects since its inception, including nearly 1,200 projects for the USACE as the prime or as a sub to multiple divisions and districts. Eustis's work history gives their geotechnical engineering staff extensive investigation and analysis experience, a working knowledge of the USACE design standards, and unparalleled familiarity with the foundation conditions on the Gulf Coast.
- **Terracon** is a geotechnical and environmental engineering firm with 500+ registered professional engineers and geologists located within the Southwestern Division. Terracon understands the value of knowing which local agencies maintain the critical records to fully assess a specific property and identify environmental issues essential to SWG investment decisions by All Appropriate Inquiries (AAI) and the (ASTM) standards.
- **ETTL** is a Women Owned Small and HUB Business firm providing geotechnical and environmental drilling, laboratory soil testing, geotechnical engineering, construction materials testing, and environmental consulting services. Since 2006, ETTL has been providing geotechnical engineering, testing, and drilling services to the USACE.
- **SVS, Inc.** is a Women Owned Small Business cost estimating firm providing value engineering, cost estimating, cost management, life cycle cost analysis, scheduling, quality control techniques, and design construction cost reconciliation for USACE Civil Works projects.
- **CMET Engineering, LLC** is a Service-Disabled Veteran Owned Small Business environmental engineering firm specializing in planning, design, and management services for public sector infrastructure projects.

- **ARS Engineers, Inc.** (ARS) is a Small Disadvantaged and HUB Business surveying firm with over 37 years dedicated to successfully working with USACE and understands their unique requirements. ARS field and office personnel have extensive experience in Boundary, Topographic, Planimetric, and Utility Location Surveys.
- **Chustz Surveying, LLC** (CSI) was established in 1995 and primarily focused on supporting the USACE. In the twenty-seven years since its inception, CSI has worked mainly on land, aerial, and hydrographic surveying for USACE projects.

As required by the solicitation, there were five specific questions to be answered; below is our narrative for each question:

(1) MSMM's partnering philosophy to develop and sustain relationships between the A-E, Government, and stakeholders:

At MSMM, we embrace a partnering philosophy dedicated to working hand in hand with USACE to accomplish the district's mission. Our core values of trust, transparency, collaboration, and communication form the foundation of our approach. Our firm was purposefully established to serve the Corps comprehensively.

With a proven track record of successful collaboration with various USACE districts, local sponsors, associated personnel, and external partner groups, we possess a profound understanding of the expectations and challenges that districts encounter while meeting the needs of the communities they serve and support. By proactively engaging with USACE, we strive to identify these challenges in advance, enabling us to align our resources and expertise to achieve your goals seamlessly, as well as the goals of your stakeholders. We wholeheartedly commit to forging a robust partnership with your USACE District team, local sponsors, and other key stakeholders. Our commitment extends beyond mere cooperation; it is a genuine dedication to fostering enduring relationships based on mutual respect and shared objectives. Through our collaborative approach, we aim to create a synergy of resources and expertise that will drive excellence in development and sustainability. In summary, MSMM is firmly committed to partnering with the Army Corps of Engineers and stakeholders to achieve shared success. We recognize the significance of building and maintaining lasting relationships as we work together to achieve the district's mission and serve the communities you support.

(2) MSMM's approach to providing exceptional delivery measured by expedited delivery, lower construction costs, and quality assurance:

Based on our extensive track record of successfully delivering over one hundred task orders across various USACE districts, MSMM stands as a testament to our unwavering commitment to exceptional project execution. With meticulous attention to detail, we have consistently achieved outstanding results. Our success can be attributed to several key factors that we have identified as crucial in expediting project delivery, optimizing construction costs, and ensuring the delivery of a superior-quality product. The ensuing paragraphs delineate our distinguished firm's time-tested approach, which has allowed us to deliver exceptional results in the past consistently and which is poised to continue its persistent success on this project.

Thorough Understanding of Project Requirements: The successful execution of each task hinges upon effective communication, robust partnerships with the Army Corps of Engineers, and close collaboration with all stakeholders. At MSMM, we prioritize these essential elements by striving to gain a comprehensive understanding of the scope of work. Our meticulous approach involves breaking down each task, meticulously analyzing the design criteria, and identifying potential limitations that may necessitate unnecessary changes throughout the process. Timely project delivery is heavily influenced

by a deep comprehension of the challenges, limitations, and permits required, as well as the completeness of data. Once the scope is fully understood, our dedicated project managers employ their expertise to develop a comprehensive schedule. This invaluable tool enables effective monitoring and tracking of project milestones, facilitates seamless coordination among various disciplines, and ensures meticulous documentation of technical reviews.

Effective Communication with Whole Team: From project initiation, a paramount focus is placed on establishing effective communication channels. Clear communication is fostered among all stakeholders, including the articulation of specific design criteria for each submittal, consistent detailing of plans and specifications, rigorous internal Inspection and Test Report (ITR) and Quality Assurance/Quality Control (QA/QC) processes, meticulous coordination of plans across diverse disciplines, and the timely dissemination of pertinent information from the Corps Design Manager to our accomplished Design Team. A comprehensive communication plan is formulated to ensure seamless communication, encompassing both internal collaboration and external stakeholder engagement. This plan serves as a guiding framework for clear and timely information exchange, facilitating effective decision-making throughout the project lifecycle.

Building Experienced and Dedicated Team: Our focus on assembling a team of exceptionally skilled and qualified professionals is integral in ensuring the successful completion of every project. With meticulous discernment, we handpick individuals with a wealth of experience, expertise, long working relationships, and a proven track record in their respective fields. By carefully selecting the most experienced and qualified employees, we foster an environment of competence, innovation, and unwavering dedication, enabling us to deliver exceptional results that exceed client expectations consistently.

Emphasis On Quality: By ensuring that work is executed correctly the first time, the need for rework can be effectively minimized. At MSMM, we prioritize the highest quality standards in all our endeavors. Our robust Quality Assurance/Quality Control (QA/QC) procedures are a cornerstone in upholding excellence in our deliverables.

(3) MSMM's design quality management procedures that optimize quality, limit re-submittals of incomplete work, and increase the efficiency of delivery:

Our firm's commitment to cultivating robust and effective communication channels is a cornerstone of our remarkable success. These channels serve as conduits for the clear and concise articulation of design criteria, meticulous coordination of plans across diverse disciplines, and the timely dissemination of pertinent information from the Corps Design Manager to our accomplished Design Team. A comprehensive communication plan, encompassing internal collaboration and external stakeholder engagement, acts as a guiding framework for seamless information exchange, fostering effective decision-making throughout the project.

Furthermore, our commitment to excellence extends to the composition of our team. We handpick experienced professionals who possess prior expertise in projects of similar nature, enabling us to navigate the intricacies and challenges unique to the undertaking. This wealth of knowledge and proficiency ensures a streamlined execution and successful project outcome.

Thorough quality control (QC) reviews are diligently scheduled before project submittals, ensuring adherence to the highest standards. At the project's commencement, the Project Manager diligently assigns QC and ITR reviewers, with the details meticulously documented in the DQCP. The review team promptly receives all milestone dates, underscoring a comprehensive and methodical approach.

In the event of any schedule updates or alterations to milestone dates, the Project Manager promptly notifies the review team, ensuring their continued alignment and preparedness.

Comprehensive review comments are diligently recorded, carefully reviewed by the design team, and subjected to thorough backchecking before each submittal. We systematically highlight any modifications implemented in response to comments received during the final review or in corrected final submittals. Our ITR reviewers thoroughly compare the comment listing and the document highlights, conducting a last review to verify satisfactory resolution and confirm compliance with requirements. The ITR team comprises seasoned professionals specializing in their respective disciplines, providing valuable perspectives independent of the design process. Rigorous procedures are in place to record comments, subject them to a thorough review by the design team, and diligently backcheck them ahead of subsequent submittals. In strict adherence to USACE requirements, any modifications resulting from comments received during the final review are diligently highlighted in corrected final submittals. Our meticulous ITR reviewers not only diligently cross-reference the comment listing with document highlights but also undertake a comprehensive final review, thoroughly backchecking and affirming the satisfactory resolution of all concerns.

Clarity of Scope and Understanding of Client Goals: The clarity of the project's scope of work and a comprehensive understanding of client goals play a pivotal role in minimizing re-submittals of incomplete work and maximizing delivery efficiency. By establishing a precise scope and fostering a shared understanding among all project stakeholders, conflicts and delays can be effectively minimized, producing a superior product.

Verification of Concepts, Assumptions, and Feasible Alternatives: Checkers meticulously verify the optimal decision-making process.

Additional Plan Review Elements: The plans undergo meticulous scrutiny to ensure consistency of drawing standards across disciplines, completeness of the drawing package, accuracy of the information in the title sheet and drawing index, and uniformity of title block information, including the submission name, among other crucial details.

Adherence to USACE Guidance for Cost Estimates: MSMM strictly adheres to the USACE guidance for the preparation of accurate and appropriate cost estimate deliverables. This commitment ensures uniformity, methodology, and fairness in estimating construction costs, aligning with established standards and procedures.

ITR/Constructability Review: We deploy a team of seasoned senior engineers and/or architects to guarantee optimal design coordination and compliance within construction cost limitations. Leveraging checklists derived from lessons learned on previous projects and construction experience, this team meticulously reviews each project, ensuring interdisciplinary coordination and alignment with the DD 1391's construction cost guidelines.

By diligently fulfilling these roles and responsibilities, MSMM's design quality management procedures ensure the highest level of quality and efficiency, minimize time wasted due to re-submittals, and enhance the overall efficiency of project delivery through careful adherence to project requirements.

(4) MSMM's previous experience with team members:

For this solicitation, MSMM carefully hand-selected firms with excellent flood risk management and hurricane and storm damage risk reduction project qualifications, and each of these firms has provided services for USACE in the past. The biggest asset this team offers is the knowledge of the Civil Works

design process, the technology required to provide said design, and the knowledge of the locality to implement these design processes to help reduce the risk of flood damages for communities in the USACE Galveston District. This team was carefully created to encompass the breadth and depth of expertise requested by the solicitation. This is evident from the vast array of USACE projects completed by team members located within the Galveston District footprint.

Our collaborative team has a history that stretches back two decades, making us intimately familiar with each organization's overall mission to serve the USACE Districts. Furthermore, with such a longstanding relationship with each firm and its principal, we have had the privilege of building a unified team whose success is a direct result of each firm's commitment, established comfortability, and confidence, making each selected mission a success from beginning to end. Below is a table that demonstrates the history of our team member's working relationships:

Subconsultant/Firm	Years worked with MSMM (or Principals)
Tetra Tech, Inc.	15
Moffatt & Nichol	6
HNTB Corporation	14
Burk-Kleinپeter, Inc.	27
Eustis Engineering, LLC	19
Terracon Consultants, Inc.	4
ETTL Engineers & Consultants, Inc.	4
Strategic Value Solutions, Inc.	9
CMET Engineering, LLC	28
ARS Engineers, Inc.	7
Chutz Surveying, LLC	22

In addition to the committed and successful historical relationship mentioned above, our firms also met our strict partnering criteria with their unique and specialized expertise that was required in this solicitation to meet the overall needs of SWG.

(5) MSMM's procedures for financial management and task order management:

Alongside MSMM's expert engineering/project management staff, we also have a dedicated in-house team of seasoned task order and financial specialists present in the process from the initial request of services. Our team works cohesively to monitor progress and performance, maintain budgetary goals, track payables/receivables to ensure proper matching to deliverables and job progress, and maintain a thorough level of communication with the district using our single point of contact for each task order to effectively support the highest level of efficiency and problem resolution throughout the project.

One of the primary challenges with executing multiple task orders through an IDIQ contract is scheduling the appropriate production resources to complete the work accurately, on time, and on budget. MSMM mitigates this risk by 1) managing our deep bench of experienced professionals who can support multiple task orders and 2) our differentiated task order execution process that inherently reduces risks associated with resource commitments.

For each task order, our assigned task order Project Manager develops a project work plan. This plan is a living document that defines the hours needed for each task, including critical-path coordination

items for each sub-task. Our work plans are reviewed, along with the project's progress, at weekly project-specific team meetings and adjusted accordingly if there are any indications that internal resource commitments could pose a risk to the project.

Mitigation Processes and Procedures. Our weekly reviews of project-specific work plans illuminate if any disciplines are at risk of falling behind schedule. We proactively adjust resources to ensure the project is staffed with qualified personnel who can complete the work on time.

Additionally, our team prides itself on compliance, consistency, and oversight. Our financial management procedures will include, but are not limited to:

- ✓ A cost accounting system with internal policies and procedures that allow for accurate allocation and segregation of direct, indirect, and unallowable costs for contract reporting/billings.
- ✓ A timekeeping system structured to comply with all DCAA regulations.
- ✓ Monthly senior management reviews for financial capability/analysis, compliance accuracy (i.e., FAR, DCAA, GAAP), and internal control adherence for quick problem identification and remediation.
- ✓ Annual audits from a third-party commercially recognized auditing firm as defined in FAR/DFARS requirements to ensure an acceptable accounting system.

One of the primary challenges with executing and managing multiple task orders through an IDIQ contract is scheduling the appropriate production resources to complete the work accurately, on time, and on budget. MSMM mitigates this risk by 1) managing our deep bench of experienced professionals who can support multiple task orders and 2) our differentiated task order execution process that inherently reduces risks associated with resource commitments. For each task order, our assigned task order Project Manager develops a project work plan. This plan is a living document that defines the hours needed for each task, including critical-path coordination items for each sub-task. Our work plans are reviewed, along with the project's progress, at weekly project-specific team meetings and adjusted accordingly if there are any indications that internal resource commitments could pose a risk to the project. These weekly reviews of project-specific work plans illuminate if any disciplines are at risk of falling behind schedule. We proactively adjust resources to ensure the project is staffed with qualified personnel who can complete the work on time.

Area of Emphasis (1) Navigation Structures (Lock and Dams, Floodgates, etc.):

Our design team offers an in-depth understanding of all the multidisciplinary requirements needed for the planning and design of navigation projects to support USACE's mission to plan, design, evaluate, construct, operate, maintain, and control navigation, including rehabilitation of existing facilities as well as the design of new facilities.

This team comprises trusted firms that have provided the design and inspection of locks for federal clients for decades. Moreover, our team has designed billions of dollars of infrastructure associated with locks, dams, and floodgates. Our design experience consists of the design for gatebay monoliths, chamber monoliths, tainter gate monoliths, tie-in floodwalls, pile foundation, lock culvert operating roller gates, dewatering bulkheads, and culvert intake screens.

In addition to the navigation projects we have highlighted in Section F (projects 1 through 7 have a Navigation Structure component), one of our team members, Tetra Tech, has worked on the World's largest navigation project, the Panama Canal. The project included the design and construction of two lock complexes, one each on the Canal's Atlantic and Pacific Ocean sides. The project doubled the

capacity of the Canal when construction was completed in 2018. Furthermore, our team's engineers have experience ranging from filling and routing of flows in locks, floodgates, and sector gates to determine the geometry of the structures, as well as routing of storms through and around canals to determine invert and slope materials and still water and wave impacts, as well as converting wave loads to structural forces and setting the geometry for bulkheads, guide walls and to determine the loadings on and to berth at marine structures.



Area of Emphasis (2) Floodwalls and Closure Structures:

As described in Section F as the 1st project, MSMM recently finished the design of an I-Wall to T-wall conversion for the USACE Galveston District in Texas City, TX. We were identified by USACE SWG to perform this work based on the post-Katrina floodwall design we performed in Jefferson Parish, on the west return floodwall project described under project #3 in Section F. Our engineering team understands and helped develop the HSDRRS design guidelines that are now being applied USACE-wide for floodwalls and levees. Our civil and structural personnel have finalized the design, which consists of design plans in Microstation, a marked-up version of the Specifications in SpecsIntact, a DDR containing design calculations, a MCACES cost estimate, Phase 1 HTRW evaluation, and a Geotechnical Report.

Our team's Floodwall design experience includes both I-wall, T-wall, and brace wall types and pedestrian and vehicular closure structures. We have designed over 60 miles of floodwalls for the USACE in accordance with the HSDRRS Design Guidelines and the regionally specific design practices and analyses it prescribes. Our design team has also worked with USACE Districts across the United States for common T- and I-wall cantilever floodwalls in accordance EM 1110-2-2502 and EC 1110-2-6066, respectively, to prevent flooding (inundation) of land. Cantilever T-type floodwalls are pile supported in the MVN district, but other regions may include a vertical base key depending on the foundation and resistance to horizontal movement. The I-type floodwalls consist of driven sheet piles capped by a concrete wall and are commonly used for short sections of tie-in with earthen levee and T-type floodwall junctions. Other types of floodwall experience include braced sheet piles, cellular sheet piles, gravity, and buttress. As with any water-retaining structure, seepage analysis is a critical design component that can affect the stability from uplift or support loss due to erosion.

Area of Emphasis (3) Beaches, Dunes, and Coastal Structures:

Our team's Beaches, Dunes, and Coastal Structures experience spans across the continental United States coastline. Our team includes many firms such as Moffatt and Nichol and HNTB, who have extensive coastal project experience. In addition to the Beaches, Dunes, and Coastal Structures project, we have highlighted in Section F (project 9 Bogue Banks Beach Nourishment Master Plan by Moffatt & Nichol), another one of our team members, HNTB completed the following project.

In response to damage incurred during hurricanes Katrina and Rita in 2005, the USACE New Orleans District contracted HNTB Corporation for engineering services to rehabilitate coastal protection works to the authorized project for the Grand Isle and Vicinity Hurricane Protection project in Jefferson Parish, Louisiana. The storm risk reduction measures included rehabilitation to the authorized condition, breakwaters and jetties, pedestrian crosswalks, emergency vehicle crossovers, and other more minor features. USACE requested that the plans and



specifications be sufficient to advertise for construction lump sum/unit price bids. The project included 7.5 miles of Grand Isle beach between Caminada and Barataria Passes. Prime engineer and overall project manager, HNTB, was the designer of record (DOR) for the project features for civil, environmental, coastal, hydraulic, structural, and geotechnical engineering.

Area of Emphasis (4) Dams and Levees:

The MSMM engineering team is intimately knowledgeable in the levee design process at USACE and has designed over 200 miles of levees for various USACE districts. We have been involved cradle-to-grave in developing design plans for earthen levees. Our team comprises experts that have identified, permitted, and tested borrow pits for levees, developed HTRW testing plans and survey for earthen levees, and provided complete engineering design services for developing plans and specifications for earthen levees.

Following Hurricane Katrina, MSMM staff prepared engineering design for improvements to the Algiers levee system on the West bank of the City of New Orleans. Following Hurricane Katrina, these improvements were mandated as part of the USACE MVN Phase 2 hurricane protection enhancements program. MSMM staff were tasked with taking three alignment alternatives identified by USACE and

providing further investigation, fieldwork and engineering design to choose the preferred alternative that would provide the mandated 100-year level of protection. MSMM staff provided this, and the project was successfully bid and constructed in 2012. Alternatives considered were; all earthen levee enlargement, un-reinforced, with a landside shift, all earthen levee enlargement, reinforced with geotextile, with a landside change, and reinforced T-Wall along landside levee toe with existing levee as barge barrier. Based on preliminary field conditions identified by the survey and geotechnical investigations, the identification of conflicts with utilities and relocations, and following the production of preliminary cost estimates. Some of the scope items completed consisted of structural Analysis for the T-wall option: inclusive of pile capacity curves, settlement of piles, bearing capacity, seepage analysis per alternative considered, review, sort, log, evaluate and analyze geotechnical data, assign permeability values, draw finite element mesh, assign phreatic, summarize results (seepage flux, exit gradient, FS, station, etc.), development of EAR, development of ROW drawings, detailed design in MicroStation, and participation in ITR reviews. The project was successfully bid and constructed within budget.

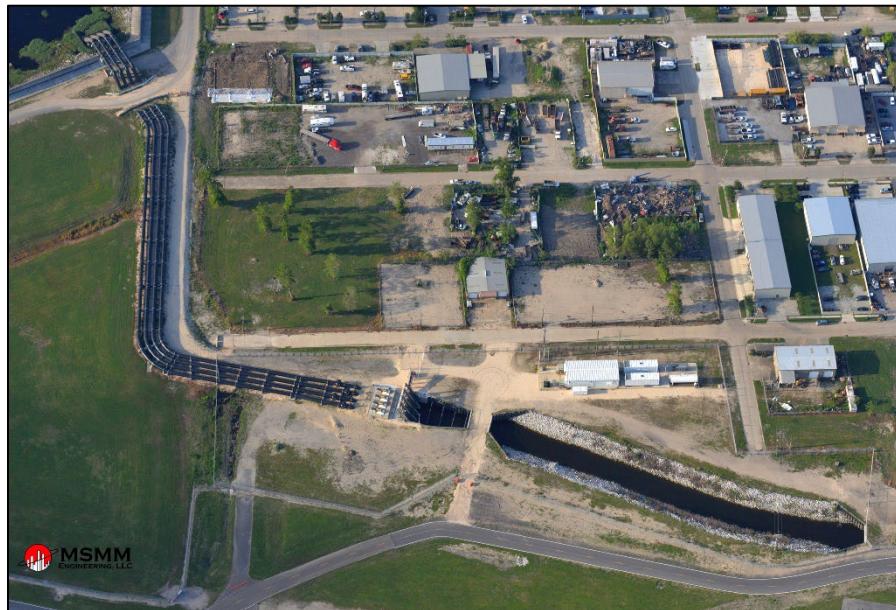


Area of Emphasis (5) Pump Stations:

MSMM is one of the leading designers of pumping stations in the greater New Orleans area. Our team has designed 37 of the largest and most complex pump stations throughout the SWD and MVD. In Section F, we have described our team's design experience for multiple pump station projects, including project #2, the Cow Bayou Drainage Pump Station, and project #5 the Harahan Pump to the River. In addition, we have included pumping station experience from several teaming partners in Section F, highlighted by Project #6 Harvey Canal Floodwalls, Frontal Protection, & Earthen Levees and Project #7 WBV-09A, Hero to Oakville, First Lift Levee Enlargement, Plaquemines Parish, LA.



MSMM recently completed 100% design and EDCs and design for a new 600 cfs stormwater drainage pump station (pictured below, 600 cfs consisted of four 150 cfs pumps, each 44" w/ 800 HP Driver) and for all landside drainage as part of constructing a new airport terminal. The \$45 million drainage mitigation designed by MSMM included civil, structural, electrical, mechanical, and environmental design, hydraulic modeling (HEC-HMS and HEC-RAS), architectural design, cost estimating, and permitting. The project involved discharging stormwater over a hurricane protection floodwall through the construction of 4,000 ft. of 60" steel discharge pipes, requiring detailed structural design of sheet pile cutoff walls, steel sheet pile temporary retaining structure (TRS), buttress, pipe bents, cofferdam and walers, intake channel and reinforced concrete box culvert, pipe supports, pipe sleeves in floodwall, and a discharge basin.



Criterion (B) – Professional Qualifications:

As seen in our SF330 response requirements in the preceding materials, project experience is one of the strengths of our team. However, just as crucial to the program's success is the quality of our people, and we believe that we offer the advantage of the consistent quality of proposed personnel across the board.

Our Team includes registered/licensed engineers, geologists, planners, architects, and surveyors with the professional qualifications and specialized experience to perform and oversee our work – confirming it is accomplished as required by law and professional engineering, architectural, and surveying practices. Each proposed Team member was selected because of proven technical competence on projects of similar size and scope and relevant experience working MSMM and on previous contracts for the USACE and other Federal agencies.

Between all team members, we have a combined staff of over 40,000 employees.

As highlighted in Section D and the following table exhibit, we have an extensive team of qualified technical staff supported by subcontractors and personnel throughout the footprint of the SWD, SWG, and nationwide.

Personnel/Role	Education	Registration	Total Experience			Experience Related to Scope of Work		
			Employed by Prime	Yrs. With Firm	Total Yrs.	DoD Exp.	Sec. F. Exp.	Exp. In Proposed Role
Manish Mardia / Project Manager	MS, BS	PE	✓	12	29	✓	✓	✓
Mike Chopin / Project Manager	BS	PE		31	31	✓	✓	✓
Tom Willis / Hydraulic Engineer	MBA, BS	PE	✓	12	42	✓	✓	✓
Patti Sexton / Hydraulic Engineer	MS, BS	PE, CFM		25	32	✓	✓	✓
Jeff Shelden / Coastal Engineer	BS	PE		37	39	✓	✓	✓
Fernando Pagés / Coastal Engineer	ME, BS	PE, D.CE		33	35	✓	✓	✓
Jim Wilson / Civil Engineer	BS	PE, LEED AP	✓	10	35	✓	✓	✓
Scott Chehardy / Civil Engineer	BS	PE	✓	11	28	✓	✓	✓
Don Daigle / Cost Estimator	AAS AAS	CVS, CPE		5	44	✓	✓	✓
Jack Fink / Cost Estimator	BS	PE		22	36	✓	✓	✓
James Hance / Geotechnical Engineer	MBA, MS, BS	PE		19	23	✓	✓	✓
Therese Koutnik / Geotechnical Engineer	PhD, MS	PhD, PE		23	23	✓	✓	✓
Bob Yokum / Structural Engineer	MS, BS	PE	✓	11	42	✓	✓	✓
James Costello / Structural Engineer	MS, BS	PE		31	36	✓	✓	✓
Daniel Appelbaum / Mechanical Engineer	MS	PE		15	16	✓	✓	✓
Eric Flickinger / Mechanical Engineer	BS	PE		14	14	✓	✓	✓
Albert Barnes / Electrical Engineer	BASc	PE, P.Eng		14	30	✓	✓	✓
Alma Reantaso / Electrical Engineer	BS	PE		3	24	✓	✓	✓
Dani Alexander / Planner	AS		✓	5	26	✓	✓	✓
Ridge Robinson / Planner	BB, BS			25	31	✓	✓	✓

Criterion (C) – Past Performance:

The MSMM team is committed to delivering cost-efficient, on-schedule, high-quality work for this IDIQ. Our team has thousands of “Exceptional” and “Very Good” CPARS and ACASS performance ratings on Federal IDIQ contracts. This proven history will assure USACE SWG of high-quality and low-risk performance on all anticipated types of work for this contract. MSMM believes in providing quality professional services with utmost responsiveness. This has garnered many accolades and repeat calls for service from clients. We have an enviable performance history, especially USACE Districts across

the SWD. Our outstanding record is a result of our demonstrated ability to control project costs, provide high-quality technical products, and meet project schedules for many concurrent government contracts. To the right is a table summarizing the CPARS or PPQ rating received on the projects identified in Section F.

Projects Highlighted in Section F	CPARS / PPQ Quality Rating	POC / Contact Number
1) Texas City and Vicinity Hurricane Flood Protection Project, I-Wall Repair (MSMM Engineering, LLC)	Exceptional	Ryan Schwartzengraber (409) 502-7884
2) Cow Bayou Drainage Pump Station Complex (MSMM Engineering, LLC)	Exceptional	Charlie Brandstetter (504) 862-2501
3) Jefferson Lakefront Floodwalls & Structures: West Return Floodwall (MSMM Engineering, LLC)	Exceptional	Durund Elzey (504) 862-1674
4) Inner Harbor Navigation Canal Lake Borgne Surge Barrier (Tetra Tech, Inc.)	Exceptional	Craig Waugaman (504) 862-2673
5) Southeast Louisiana Urban Flood Control – Harahan Pump to the River (MSMM Engineering, LLC)	Exceptional	Durund Elzey (504) 862-1674
6) Harvey Canal Floodwalls, Frontal Protection, & Earthen Levees (Burk-Kleinpeter, Inc.)	Very Good	Craig Waugaman (504) 862-2673
7) WBV-09 Eastern Tie-In Preliminary Design and WBV-09a Hero to Oakville Final Design, First Lift Levee Enlargement (HNTB Corporation)	Exceptional	Richard Varuso, PhD, PE (409) 502-7884
8) 277K Levee Raise and Delta Pump Station (MSMM Engineering, LLC)	Satisfactory	Donna Jones (817) 886-1056
9) Bogue Banks Beach Nourishment Master Plan (Moffatt & Nichol)	Exceptional	Greg "Rudi" Rudolph (252) 725-4591
10) Hillaryville Levee Redesign, Pump Station, and Force main (MSMM Engineering, LLC)	Exceptional	Nick Sims (504) 862-2128

Criterion (D) – Capacity to Accomplish the Work:

Our Team has proven efficient and comfortable handling concurrent task orders over the geographic area covered by this solicitation. We have office coverage and are highly experienced in delivering projects anywhere within the Southwestern Division, as we have executed thousands of projects throughout your AOR. Before completing a couple of task orders last year, MSMM was executing four concurrent task orders for SWF and MVN on the current Civil Works and Project Management Task IDIQ, exceeding \$1M in fee. The following task order occurred concurrently during the fiscal year 2020. Cow Bayou Pump Station (35%), Design Build for 277k levee and delta pump station, project and planning for BBA-18 projects, and Texas City flood wall.

In developing our team, we considered our current working relationships as we have worked with all of these subs on previous task orders, providing the same services. Duplicating team members in these areas allows team leadership to respond to requests, rapidly saving USACE time and money. For example, field services such as surveys and geotechnical exploration require the use of equipment that relies on favorable field conditions and a quick response time to maintain project schedules.

MSMM alone currently executes approximately \$5M per year in task orders for USACE, and over 80% of those task orders are completed with in-house personnel. MSMM does not perform any fieldwork outside of site visits, so that fieldwork will be subbed to the many specialty firms on the team. For this solicitation design services, MSMM plans to handle most of the design in-house and rely on our two large subs in Tetra Tech and HNTB, where design support is needed.

The below table demonstrates the capacity to accomplish at least three (3) \$500,000 task orders simultaneously:

Prime	Project	Services Performed	Contract & TO No.	Client	Total Fee	Fiscal Year
Y	Mississippi River And Tributaries (MR&T – C/I), Floodplain Management Services (FPMS), & EPA Investigations	Project Management and Planning	W912P819D0011 W912P820F0182	USACE MVN	\$1.5M	2021
Y	Texas City and Vicinity Hurricane Flood Protection Project, I-Wall Repair	Design	W9126G16D0017 W912HY19F0031	USACE SWG	\$1.9M	2021
Y	Cow Bayou Drainage Pump Station Complex Orange, TX	Design	W9126G16D0017 W912P819F0215	USACE MVN	\$1.3M	2021
Y	277K Levee Raise and Delta Pump Station Dallas, TX	Design Build Package	W9126G16D0017 W9126G20F0033	USACE SWF	\$1.3M	2021

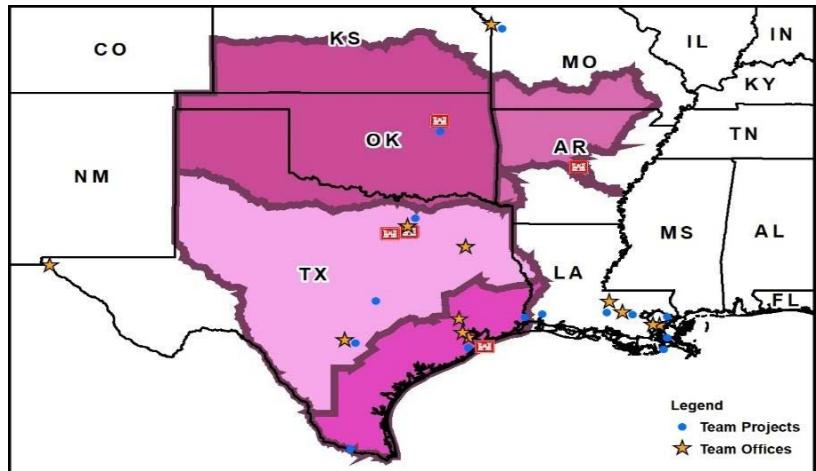
For the past five years, we have been able to execute this model to the satisfaction of multiple USACE districts, and we don't see a need to change for this pursuit. Performing at least 50% of the work will not be an issue with this contract.

Criterion (E) – Knowledge of the Locality:

As shown throughout SF330, the MSMM team has provided specific examples proving our knowledge of local requirements, local environmental regulations, and soil conditions, with its district and stakeholders. All MSMM team members have had long-standing business operations in southeast Texas and surrounding states. 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. Therefore, we have an intimate knowledge of the above-ground terrain, subsurface conditions, coastal and water resource characteristics, and disaster mitigation and recovery of this region. Also, many of the staff of MSMM's team have a personal stake in the region's wellbeing.

We are well versed in providing quality design given the unique geographical nature of the local areas and given the high groundwater table and poor soil quality; we know that geotechnical engineering and materials testing is of the utmost importance when designing projects that involve life safety. As a result, we have added two of the best geotechnical firms in Texas – ETTL and Eustis - to ensure our geotechnical design exceeds USACE standards.

This team was carefully created to encompass the breadth and depth of expertise requested by the solicitation. This is evident from the vast array of USACE projects completed by team members located within the Southwestern division footprint. The capacity to accomplish the requested work in this solicitation is further enhanced when considering the number of offices our team offers within the project footprint. The landscapes covered by the boundaries of the Galveston District offer a unique set of physical and environmental conditions that must be considered when undertaking project planning and design. This team has over 400 professionals that have lived and worked in this geographic setting for many years and are comfortable and confident designing projects in this area. The MSMM team proposed for this contract has demonstrated design experience working on an extensive list of hurricane and storm damage risk reduction projects as presented in the project descriptions and the Section H write-up. Please reference the adjacent map showing our team members' office locations within the AOR.



The MSMM Houston office is located approximately 40 minutes from the Galveston District. In addition, MSMM has added team members with nine office locations in the City of Houston area.

Criterion (F) – Extent of Participation of Small Businesses:

As a Small-Business Prime, of the work generated on this contract.

For this solicitation, we will adhere to the following Small Business Participation Plan table, and please see the Small Business Participation Plan Form attached at the end of our response:

Small Business Participation Plan		
Firm Name:	Business Type:	Work Percentage Estimate:
MSMM Engineering, LLC (Prime)	Small Business (SB)	51%
Burk-Kleinپeter Inc.	Small Business (SB)	10%
Eustis Engineering, LLC	Small Business (SB)	5%
ETTL Engineers & Consultants	Woman-Owned Small Business, HUB	2%
Strategic Value Solutions, Inc.	Woman-Owned Small Business	3%
CMET Engineering, LLC	Service-Disabled Veteran Owned Small Business (SDVOSB) (VOSB)	3%
ARS Engineers, Inc.	Small Disadvantaged Business (SDB), HUB	2%
Total Small Business Participation Percentage		76%

Criterion (G) – Volume of DoD Contract Awards in Previous 12 Months:

Prime/ Sub	Project	Contract No.	Delivery No.	Client	Total Fee
Sub	AE Design Pump Station and Piping for East Baton Rouge, LA	W9126P820D0007	W912P822F0166	USACE MVN	\$1,539,889.37
Prime	Mississippi River and Tributaries, BBA-18, IHNC, Sediment Diversion, LA	W912P823D0002	W912P823F0048	USACE MVN	\$1,895,810.80
Sub	AE design of Westside Creeks Restoration in San Antonio, TX	W912BV19D0020	W9126G23F0082	USACE SWF	\$1,338,472.35

I. AUTHORIZED REPRESENTATIVE

The preceding is a statement of facts.

31. SIGNATURE

32. DATE

July 12, 2023

33. NAME AND TITLE

Manish Mardia, P.E., President



SF330, PART II

ARCHITECT-ENGINEER QUALIFICATIONS				1. SOLICITATION NUMBER (If any) W912HY-23-R-3601		
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 SB		
6b. TELEPHONE NUMBER 504-559-1897		6c. EMAIL ADDRESS mmardia@msmmeng.com		7. NAME OF FIRM (If block 2a is a branch office)		
8. FORMER NAME(S) (If any)				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	5	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	5	5	D02	Dams; Dikes; Levees	5
18	Cost Engineer /Estimator	2	1	E03	Electrical Studies and Design	1
21	Electrical Engineer	1	1	L06	Lighting (Exteriors; Streets; Memorials Athletic Fields)	1
23	Environmental Engineer	2	1	P06	Planning (Site, Installation, and Project)	6
32	Hydraulic Engineer	3	2	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
61	Value Engineer	1	1	W03	Water Supply; Treatment and Distribution	3
Total		40	29			
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	6	1. Less than \$100,000 6. \$2 million to less than \$5 million				
b. Non-Federal Work	6	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	June 30, 2023
c. NAME AND TITLE Manish Mardia, P.E., President/Owner						

ARCHITECT-ENGINEER QUALIFICATIONS				1. SOLICITATION NUMBER (If any) W912HY-23-R-3601		
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 JVL4KTEBNRX9	
2b. STREET 13850 Gulf Freeway, Suite 202A				5. OWNERSHIP		
2c. CITY Houston		2d. STATE TX	2e. ZIP CODE 77034	a. TYPE Limited Liability Corporation		
6a. POINT OF CONTACT NAME AND TITLE Manish Mardia, P.E., President/Owner				b. SMALL BUSINESS STATUS SB		
6b. TELEPHONE NUMBER 504-559-1897		6c. EMAIL ADDRESS mmardia@msmmeng.com		7. NAME OF FIRM (If block 2a is a branch office)		
8. FORMER NAME(S) (If any)				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	5	1	C07	Coastal Engineering	2
05	Architect	1		C13	Computer Facilities; Computer Service	2
08	CADD Technician	5	1	C15	Construction Management	4
12	Civil Engineer	5	1	D01	Dams (Concrete; Arch)	1
15	Inspector	5		D02	Dams; Dikes; Levees	5
18	Cost Engineer /Estimator	2	1	E03	Electrical Studies and Design	1
21	Electrical Engineer	1		L06	Lighting (Exteriors; Streets; Memorials Athletic Fields)	1
23	Environmental Engineer	2	1	P06	Planning (Site, Installation, and Project)	6
32	Hydraulic Engineer	3		R11	Rivers; Canals; Waterways; Flood Control	5
39	Landscape Architect	1		S09	Structural Design; Special Structures	5
48	Project Manager	7	1	S13	Storm Water Handling & Facilities	5
57	Structural Engineer	2		W02	Water Resources; Hydrology Ground Water	3
61	Value Engineer	1		W03	Water Supply; Treatment and Distribution	3
Total		40	6			
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	6	1. Less than \$100,000 6. \$2 million to less than \$5 million				
b. Non-Federal Work	6	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 June 30, 2023	
c. NAME AND TITLE Manish Mardia, P.E., President/Owner						

ARCHITECT – ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (*If any*)

W912HY-23-R-3601

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 GMW1WKSRWQW3
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 Kathy Cox-Czosnyka, PE – Northwest Regional Manager			b. SMALL BUSINESS STATUS N/A	
6b. TELEPHONE NUMBER (425) 635-1000		6c. E-MAIL ADDRESS kathy.cox-czosnyka@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 (see below)
		(1) FIRM	(2) BRANCH			
02	Administrative	1,802	7	B02	Bridges	2
08	CADD Technician	522	4	C07	Coastal Engineering	2
12	Civil Engineer	2,399	5	D01	Dams (Concrete; Arch)	3
21	Electrical Engineer	706	3	D02	Dams (Earth; Rock; Dikes; Levees)	4
42	Mechanical Engineer	788	3	D04	Design-Build - Preparation of RFPs	3
48	Project Manager	3,193	6	E03	Electrical Studies & Design	1
57	Structural Engineer	240	9	E11	Environmental Planning	4
	Graphic Artist/Designer	84	1	F03	Fire Protection	2
				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	18,228	0	T03	Traffic & Transportation Engineering	1
	Total	27,962	38	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

- | | |
|--|--|
| <p>a. Federal Work 6</p> <p>b. Non-Federal Work 6</p> <p>c. Total Work 7</p> | <ol style="list-style-type: none"> 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 |
|--|--|

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE 	b. DATE 4/26/2023
---	-----------------------------

c. NAME AND TITLE

Kristi Clemens, Marketing Manager

ARCHITECT – ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (*If any*)

W912HY-23-R-3601

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 2004	4. UNIQUE ENTITY IDENTIFIER JBJTPCXMTYH5
2b. STREET 17885 Von Karman Avenue, Suite 500			5. OWNERSHIP	
2c. CITY Irvine		2d. STATE CA	2e. ZIP CODE 92614	a. TYPE Corporation
6a. POINT OF CONTACT NAME AND TITLE Ike Pace, PE, SE, CCP – Regional Manager			b. SMALL BUSINESS STATUS N/A	
6b. TELEPHONE NUMBER (949) 809-5000		6c. E-MAIL ADDRESS ike.pace@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>) N/A			8b. YEAR 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 (<i>see below</i>)
		(1) FIRM	(2) BRANCH			
02	Administrative	1,802	2	B02	Bridges	1
12	Civil Engineer	2,399	5	C16	Construction Surveying	1
18	Cost Engineer/Estimator	240	1	D01	Dams (Concrete; Arch)	1
20	Economist	30	1	D02	Dams (Earth; Rock; Dikes; Levees)	4
24	Environmental Scientist	1,100	1	E02	Educational Facilities; Classrooms	1
27	Foundation/Geotech Engineer	488	1	E08	Engineering Economics	1
29	GIS Specialist	83	1	E09	Env. Impact Studies, Assess. or Statements	2
32	Hydraulic Engineer	348	1	E11	Environmental Planning	3
34	Hydrologist	227	1	F04	Fisheries; Fish Ladders	1
47	Planner: Urban/Regional	648	1	H13	Hydrographic Surveying	2
48	Project Manager	3,193	4	N01	Naval Architecture; Off-Shore Platforms	1
56	Specifications Writer	61	1	P06	Planning (Site, Installation & Project)	2
62	Water Resources Engineer	472	2	R10	Risk Analysis	2
				R11	Rivers; Canals; Waterways; Flood Control	7
				S04	Sewage Collection, Treatment and Disposal	1
				S07	Solid Wastes; Incineration; Landfill	1
				S13	Storm Water Handling & Facilities	1
				U02	Urban Renewals	1
	Other Employees	16,871	0	W02	Water Resources; Hydrology; Ground Water	3
	Total	27,962	22	W03	Water Supply; Treatment & Distribution	2

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

(*Insert revenue index number shown at right*)

a. Federal Work	6
b. Non-Federal Work	6
c. Total Work	7

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

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE


c. NAME AND TITLE

Kristi Clemens, Marketing Manager

b. DATE
6/1/2023

ARCHITECT – ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (*If any*)

W912HY-23-R-3601

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 1998	4. UNIQUE ENTITY IDENTIFIER DNA3V45LNKN5
2b. STREET 251 Recinto Sur, Suite 200			5. OWNERSHIP	
2c. CITY San Juan		2d. STATE PR	2e. ZIP CODE 00901	a. TYPE Corporation
6a. POINT OF CONTACT NAME AND TITLE Fernando L. Pagés, PE, D.CE – Managing Director			b. SMALL BUSINESS STATUS N/A	
6b. TELEPHONE NUMBER (787) 721-7929	6c. E-MAIL ADDRESS fernando.pages@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>) N/A			8b. YEAR 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	1,802	1	B02	Bridges	1
06	Architect	679	1	C07	Coastal Engineering	2
12	Civil Engineer	2,399	2	C15	Construction Management	1
21	Electrical Engineer	706	1	E07	Energy Conservation; New Energy Sources	1
23	Environmental Engineer	843	2	E09	Env. Impact Studies, Assess. or Stmt	1
24	Environmental Scientist	1,100	3	E10	Environmental & Natural Resource Mapping	1
42	Mechanical Engineer	788	1	E11	Environmental Planning	3
47	Planner: Urban/Regional	648	1	E12	Environmental Remediation	1
48	Project Manager	3,193	3	E13	Environmental Testing & Analysis	3
58	Technician/Analyst	2,767	2	F04	Fisheries; Fish Ladders	1
	Financial Analyst	751	1	G04	GIS Services: Dev., Analysis, & Data Coll.	1
				H01	Harbors; Jetties; Piers, Ship Terminal Facilities	1
				I01	Industrial Buildings; Manufacturing Plants	1
				J01	Judicial & Courtroom Facilities	1
				O02	Oceanographic Engineering	2
				P05	Planning (Community, Region, Area, & State)	5
				P06	Planning (Site, Installation, & Project)	1
				R11	Rivers; Canals; Waterways; Flood Control	1
	Other Employees	12,286	0	S07	Solid Wastes; Incineration; Landfill	1
	Total	27,962	18	S13	Storm Water Handling & Facilities	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	
a. Federal Work	2	1. Less than \$100,000	6. \$2 million to less than \$5 million
b. Non-Federal Work	6	2. \$100,000 to less than \$250,000	7. \$5 million to less than \$10 million
c. Total Work	6	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 5/9/2023
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c. NAME AND TITLE

Kristi Clemens, Marketing Manager

ARCHITECT – ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (*If any*)

W912HY-23-R-3601

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 2004	4. UNIQUE ENTITY IDENTIFIER FN3KJ67ZG226
2b. STREET 2003 Western Avenue, Suite 700			5. OWNERSHIP	
2c. CITY Seattle		2d. STATE WA	2e. ZIP CODE 98121	a. TYPE Corporation
6a. POINT OF CONTACT NAME AND TITLE Kathy Cox-Czosnyka – Regional Manager			b. SMALL BUSINESS STATUS N/A	c. Revenue Index Number <i>(see below)</i>
6b. TELEPHONE NUMBER (206) 728-9655		6c. E-MAIL ADDRESS kathy.coxczosnyka@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>) N/A			8b. YEAR 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 (<i>see below</i>)
		(1) FIRM	(2) BRANCH			
02	Administrative	1,802	5	B02	Bridges	1
08	CADD Technician	522	1	D02	Dams (Earth; Rock; Dikes; Levees)	4
12	Civil Engineer	2,399	8	D04	Design-Build - Preparation of RFPs	1
20	Economist	30	1	E08	Engineering Economics	2
23	Environmental Engineer	843	1	E09	Env. Impact Studies, Assess. or Stmt	3
24	Environmental Scientist	1,100	2	E11	Environmental Planning	3
32	Hydraulic Engineer	348	1	E12	Environmental Remediation	1
36	Industrial Hygienist	75	1	F04	Fisheries; Fish Ladders	1
48	Project Manager	3,193	4	G03	Geodetic Surveying: Ground & Airborne	1
57	Structural Engineer	240	1	H01	Harbors; Jetties; Piers, Ship Term. Fac.	1
	Financial Analyst	751	2	H07	Highways; Streets; Paving; Parking Lots	3
				M06	Mining & Mineralogy	1
				R10	Risk Analysis	1
				R11	Rivers; Canals; Waterways; Flood Control	5
				S10	Survey; Plot; Map; Flood Plain Studies	2
				S11	Sustainable Design	1
				S13	Storm Water Handling & Facilities	4
				T03	Traffic & Transportation Engineering	3
	Other Employees	16,659	0	T04	Topographic Surveying & Mapping	1
	Total	27,962	27	W02	Water Resources; Hydrology; Ground Water	4

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

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	5	1. Less than \$100,000	6. \$2 million to less than \$5 million
b. Non-Federal Work	6	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

The foregoing is a statement of facts.

a. SIGNATURE 	b. DATE 5/22/2023
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c. NAME AND TITLE

Kristi Clemens, Marketing Manager

ARCHITECT-ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (If any)

W912HY23R3601

PART II – GENERAL QUALIFICATIONS

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

2a. FIRM (OR BRANCH OFFICE) NAME Moffatt & Nichol			3. YEAR ESTABLISHED 1999	4. UNIQUE ENTITY IDENTIFIER CTTMKG7EFDK1
2b. STREET 1780 Hughes Landing Boulevard, Suite 575			5. OWNERSHIP	
2c. CITY The Woodlands		2d. STATE TX	2e. ZIP CODE 77380-4011	a. TYPE Corporation
6a. POINT OF CONTACT NAME AND TITLE Jonathan E. Thomas, PE, Vice President			b. SMALL BUSINESS STATUS	
6b. TELEPHONE NUMBER (713) 977-7372	6c. EMAIL ADDRESS jthomas@moffattnichol.com	7. NAME OF FIRM (If block 2a is a branch office) Moffatt & Nichol		
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

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	Administration	144	2	C07	Coastal Engineering	2
08	CADD Technician	93	5	C15	Construction Management	3
12	Civil Engineer	103		D04	Design Build – Preparation of RFP	4
15/16	Construction Inspector/Manager	13		D08	Dredging Studies & Design	3
18	Cost Engineer/Estimator	7		H01	Harbors; Jetties; Piers; Ship Terminals	5
21	Electrical Engineer	24		R11	Rivers; Canals; Waterways; Flood Cntl	3
23/24	Environmental Engineer/Scientist	17		S13	Storm Water Handling & Facilities	3
27	Foundation/Geotechnical Engineer	8		T02	Testing & Inspection Services	3
29	GIS Specialist	7				
42	Mechanical Engineer	11				
48	Project Manager	36	3			
57	Structural Engineer	211	4			
60	Transportation Engineer	36				
62	Water Resources Engineer	20				
	Coastal/Hydraulic Engineer/Scientist	93	2			
	Dredging Specialist/Engineer	5				
	NEPA Planners	5				
	Port Planner/Engineer	15				
	Rail Engineer/Specialist	16				
	Transportation Economist	15				
	Waterfront Planner	4				
	Other Employees	103				
Total		986	16			

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

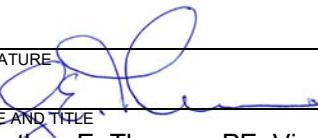
(Insert revenue index number shown at right)

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

a. Federal Work	8	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

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE 	b. DATE 02/09/2023
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c. NAME AND TITLE Jonathan E. Thomas, PE, Vice President

ARCHITECT-ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (If any)

W912HY23R3601

PART II – GENERAL QUALIFICATIONS

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

2a. FIRM (OR BRANCH OFFICE) NAME Moffatt & Nichol			3. YEAR ESTABLISHED 1981	4. UNIQUE ENTITY IDENTIFIER CTTMKG7EFDK1
2b. STREET 4700 Falls of Neuse Road, Suite 300			5. OWNERSHIP	
2c. CITY Raleigh		2d. STATE NC	2e. ZIP CODE 27609- 6275	a. TYPE Corporation
6a. POINT OF CONTACT NAME AND TITLE Patrick R. Graney, PE, Vice President			b. SMALL BUSINESS STATUS	
6b. TELEPHONE NUMBER (919) 781-4626	6c. EMAIL ADDRESS pgraney@moffattnichol.com			7. NAME OF FIRM (If block 2a is a branch office) Moffatt & Nichol
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

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	Administration	144	6	B02	Bridges	3
08	CADD Technician	93	4	C07	Coastal Engineering	3
12	Civil Engineer	103	7	C15	Construction Management	1
15/16	Construction Inspector/Manager	13		D08	Dredging Studies & Design	2
18	Cost Engineer/Estimator	7	2	E09	Environ. Impact Studies, EAs & EIIs	3
21	Electrical Engineer	24		E10	Environ. & Nat'l Resource Mapping	1
23/24	Environmental Engineer/Scientist	17	2	E11	Environmental Planning	1
27	Foundation/Geotechnical Engineer	8		G04	GIS Services; Development, Analysis	1
29	GIS Specialist	7	4	H01	Harbors; Jetties; Piers; Ship Terminals	5
42	Mechanical Engineer	11		H07	Highways; Streets; Parking Lots	4
48	Project Manager	36	3	L06	Lighting (Exteriors; Streets; Memorials)	1
57	Structural Engineer	211	14	P05	Planning (Community, Regional, State)	1
60	Transportation Engineer	36	2	R03	Railroad; Rapid Transit	4
62	Water Resources Engineer	20	7	R04	Recreation Facilities (Parks, Marinas)	1
	Coastal/Hydraulic Engineer/Scientist	93	9	R11	Rivers; Canals; Waterways; Flood Cntrl	4
	Dredging Specialist/Engineer	5	1	S03	Seismic Designs & Studies	1
	Field Inspector/Equipment Manager	12	1	S09	Structural Design; Special Structures	2
	NEPA Planners	5	2	S13	Storm Water Handling & Facilities	2
	Port Planner/Engineer	15		T03	Traffic & Transportation Engineering	1
	Rail Engineer/Specialist	16	3	W02	Water Resources; Hydrology	4
	Transportation Economist	15		W03	Water Supply; Treatment & Distribution	1
	Other Employees	95	10		Civil Site Work	1
	Total	986	77		Economic Impact & Feasibility Studies	1

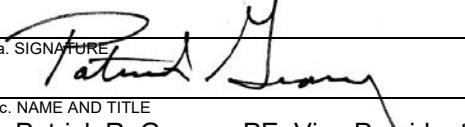
11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS (Insert revenue index number shown at right)

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

a. Federal Work	8	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

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE 	b. DATE 02/09/2023
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c. NAME AND TITLE Patrick R. Graney, PE 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 Moffatt & Nichol			3. YEAR ESTABLISHED 1985	4. UNIQUE ENTITY IDENTIFIER LZDBJT88LJM3
2b. STREET 2185 N. California Boulevard, Suite 500			5. OWNERSHIP	
2c. CITY Walnut Creek		2d. STATE CA	2e. ZIP CODE 94596-3543	a. TYPE Corporation
6a. POINT OF CONTACT NAME AND TITLE Scott C. Butler, PE, Vice President			b. SMALL BUSINESS STATUS	
6b. TELEPHONE NUMBER (925) 944-5411	6c. EMAIL ADDRESS sbutler@moffattnichol.com	7. NAME OF FIRM (If block 2a is a branch office) Moffatt & Nichol		
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

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	Administration	144	4	A05	Airports; NavAids; Airport Lighting	3
08	CADD Technician	93	3	B02	Bridges	2
12	Civil Engineer	103	10	C07	Coastal Engineering	4
15/16	Construction Inspector/Manager	13		C15	Construction Management	1
18	Cost Engineer/Estimator	7	2	D02	Dams (Earth; Rock); Dikes; Levees	1
21	Electrical Engineer	24		D08	Dredging Studies & Design	3
23/24	Environmental Engineer/Scientist	17		E09	Environmental Impact Studies	1
27	Foundation/Geotechnical Engineer	8		H01	Harbors; Jetties; Piers; Ship Terminals	4
29	GIS Specialist	7		H07	Highways; Streets; Parking Lots	1
42	Mechanical Engineer	11		P06	Planning (Site, Installation, & Project)	1
48	Project Manager	36		P12	Power Transmission & Distribution	2
57	Structural Engineer	211	12	R03	Railroad; Rapid Transit	1
60	Transportation Engineer	36	1	R04	Recreation Facilities (Parks, Marinas)	3
62	Water Resources Engineer	20	1	R11	Rivers; Canals; Waterways; Flood Cntrl	3
	Coastal/Hydraulic Engineer/Scientist	93	5	S03	Seismic Designs & Studies	1
	Dredging Specialist/Engineer	5	1	S04	Sewage Collect'n, Treatm't & Disposal	1
	Port Planner/Engineer	15		S09	Structural Design; Special Structures	3
	Project Control Specialist	8	1	W02	Water Resources; Hydrology	1
	Rail Engineer/Specialist	16			Ferry Terminals & Transfer Bridges	1
	Transportation Economist	15			Mathematical Modeling	2
	Waterfront Planner	4			Wetlands	2
	Other Employees	100			Civil Site Work	3
Total		986	40			

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	8	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

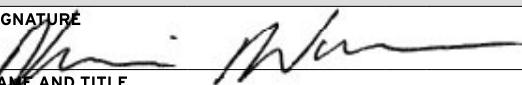
The foregoing is a statement of facts.

a. SIGNATURE 	b. DATE 02/09/2023
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c. NAME AND TITLE Scott C. Butler, PE, Vice President
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ARCHITECT - ENGINEER QUALIFICATIONS				1. SOLICITATION NUMBER (if any) W912HY23R3601		
PART II - GENERAL QUALIFICATIONS (If a firm has branch offices, complete for each specific branch office seeking work.)						
2a. FIRM (OR BRANCH OFFICE) NAME HNTB Corporation				3. YEAR ESTABLISHED 1992		
2b. STREET 10000 Perkins Rowe, Suite 640				4. UNIQUE ENTITY IDENTIFIER RHXDZZEKQ3X7		
2c. CITY Baton Rouge	2d. STATE Louisiana	2e. ZIP CODE 70810	5. OWNERSHIP a. TYPE S-Corporation			
6a. POINT OF CONTACT NAME AND TITLE Gen. John Basilica, Jr. - Vice President				b. SMALL BUSINESS STATUS Not Applicable		
6b. TELEPHONE NUMBER (225) 368-2881	6c. E-MAIL ADDRESS jbasilica@HNTB.com	7. NAME OF FIRM (If block 2a is a branch office) HNTB Holdings, Ltd.				
8a. FORMER FIRM NAME(S) (If any)				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			
2	Administrative	872	5	A01	Acoustics, Noise Abatement	8
5	Archeologist	15	0	A05	Airports; Navaids; Airport Lighting; Aircraft Fueling	6
6	Architect	94	0	A06	Airports; Terminals & Hangars	10
8	CADD Technician	160	3	B02	Bridges	10
12	Civil Engineer	208	5	C15	Construction Management	10
13	Communications Engineer	6	0	E09	Environmental Impact Studies	7
14	Computer Programmer	120	1	E11	Environmental Planning	8
15	Construction Inspector	369	3	F02	Field Houses; Gyms, Stadiums	8
16	Construction Manager	118	0	H07	Highways, Streets, Airfield Paving	10
18	Cost Engineer/Estimator	20	0	H12	Hydraulics & Pneumatics	6
21	Electrical Engineer	25	0	I04	Intelligent Transportation Systems	7
23	Environmental Engineer	8	0	P05	Planning (Community, Regional, State)	9
24	Environmental Scientist	43	0	P06	Planning (Site, Installation & Project)	7
27	Foundation/Geotechnical Eng.	51	2	R03	Railroad	10
29	GIS Specialist	39	0	R11	Rivers; Canals; Waterways; Flood Control	6
37	Interior Designer	6	0	T02	Testing & Inspection Services	7
38	Land Surveyor	12	0	T03	Traffic & Transportation Engineering	10
42	Mechanical Engineer	24	0	T06	Tunnels & Subways	8
47	Planner: Urban/Regional	222	2	W02	Water Resources; Hydrology, Groundwater	7
48	Project Manager	973	8			
50	Risk Assessor	4	0			
51	Safety/Occupational Health Engineer	6	0			
53	Scheduler	32	0			
54	Security Specialist	1	0			
57	Structural Engineer	348	6			
58	Technician/Analyst	598	9			
60	Transportation Engineer	983	2			
62	Water Resources Engineer	82	0			
	Total	5,439	46			
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		
12. AUTHORIZED REPRESENTATIVE The foregoing is a statement of facts.						
a. SIGNATURE 				b. DATE January 10, 2023		
c. NAME AND TITLE Gen. John Basilica, Jr. - Vice President						

ARCHITECT - ENGINEER QUALIFICATIONS				1. SOLICITATION NUMBER (<i>if any</i>) W912HY23R3601		
PART II - GENERAL QUALIFICATIONS (If a firm has branch offices, complete for each specific branch office seeking work.)						
2a. FIRM (OR BRANCH OFFICE) NAME HNTB Corporation				3. YEAR ESTABLISHED 1992	4. UNIQUE ENTITY IDENTIFIER RHXDZZEKQ3X7	
2b. STREET 1301 Fannin Street, Suite 1800				5. OWNERSHIP		
2c. CITY Houston		2d. STATE Texas	2e. ZIP CODE 77002	a. TYPE S-Corporation		
6a. POINT OF CONTACT NAME AND TITLE Michael G. Voinis, PE - Vice President				b. SMALL BUSINESS STATUS Not Applicable		
6b. TELEPHONE NUMBER (346) 352-5620		6c. E-MAIL ADDRESS mvoinis@hntb.com		7. NAME OF FIRM (<i>If block 2a is a branch office</i>) HNTB Holdings, Ltd. (established in 1914)		
8a. FORMER FIRM 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			
2	Administrative	872	11	A01	Acoustics, Noise Abatement	8
5	Archeologist	15	0	A05	Airports; Navaids; Airport Lighting; Aircraft Fueling	6
6	Architect	94	1	A06	Airports; Terminals & Hangars	10
8	CADD Technician	160	2	B02	Bridges	10
12	Civil Engineer	208	8	C15	Construction Management	10
13	Communications Engineer	6	0	E09	Environmental Impact Studies	7
14	Computer Programmer	120	0	E11	Environmental Planning	8
15	Construction Inspector	369	13	F02	Field Houses; Gyms, Stadiums	8
16	Construction Manager	118	5	H07	Highways, Streets, Airfield Paving	10
18	Cost Engineer/Estimator	20	0	H12	Hydraulics & Pneumatics	6
21	Electrical Engineer	25	0	I04	Intelligent Transportation Systems	7
23	Environmental Engineer	8	0	P05	Planning (Community, Regional, State)	9
24	Environmental Scientist	43	0	P06	Planning (Site, Installation & Project)	7
27	Foundation/Geotechnical Eng.	51	0	R03	Railroad	10
29	GIS Specialist	39	1	R11	Rivers; Canals; Waterways; Flood Control	6
37	Interior Designer	6	0	T02	Testing & Inspection Services	7
38	Land Surveyor	12	0	T03	Traffic & Transportation Engineering	10
42	Mechanical Engineer	24	0	T06	Tunnels & Subways	8
47	Planner: Urban/Regional	222	7	W02	Water Resources; Hydrology, Groundwater	7
48	Project Manager	973	20			
50	Risk Assessor	4	0			
51	Safety/Occupational Health Engineer	6	0			
53	Scheduler	32	0			
54	Security Specialist	1	0			
57	Structural Engineer	348	6			
58	Technician/Analyst	598	16			
60	Transportation Engineer	983	22			
62	Water Resources Engineer	82	0			
	Total	5,439	112			
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 January 10, 2023		
c. NAME AND TITLE Michael G. Voinis, PE - Vice President						

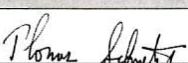
ARCHITECT - ENGINEER QUALIFICATIONS		1. SOLICITATION NUMBER (<i>if any</i>) W912HY23R3601						
PART II - GENERAL QUALIFICATIONS (If a firm has branch offices, complete for each specific branch office seeking work.)								
2a. FIRM (OR BRANCH OFFICE) NAME HNTB Corporation		3. YEAR ESTABLISHED 1992	4. UNIQUE ENTITY IDENTIFIER RHXDZZEKQ3X7					
2b. STREET 715 Kirk Drive		5. OWNERSHIP						
2c. CITY Kansas City		2d. STATE Missouri	2e. ZIP CODE 64105					
6a. POINT OF CONTACT NAME AND TITLE Gretchen Ivy, PE - Vice President, Office Leader		b. TYPE S-Corporation						
6b. TELEPHONE NUMBER (816) 472-1201		b. SMALL BUSINESS STATUS Not Applicable						
6c. E-MAIL ADDRESS Glvy@HNTB.com		7. NAME OF FIRM (<i>If block 2a is a branch office</i>) HNTB Holdings, Ltd. (established in 1914)						
8a. FORMER FIRM 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					
2	Administrative	872	131	A01	Acoustics, Noise Abatement	8		
5	Archeologist	15	0	A05	Airports; Navaids; Airport Lighting; Aircraft Fueling	6		
6	Architect	94	34	A06	Airports; Terminals & Hangars	10		
8	CADD Technician	160	22	B02	Bridges	10		
12	Civil Engineer	208	2	C15	Construction Management	10		
13	Communications Engineer	6	0	E09	Environmental Impact Studies	7		
14	Computer Programmer	120	36	E11	Environmental Planning	8		
15	Construction Inspector	369	2	F02	Field Houses; Gyms, Stadiums	8		
16	Construction Manager	118	1	H07	Highways, Streets, Airfield Paving	10		
18	Cost Engineer/Estimator	20	0	H12	Hydraulics & Pneumatics	6		
21	Electrical Engineer	25	2	I04	Intelligent Transportation Systems	7		
23	Environmental Engineer	8	0	P05	Planning (Community, Regional, State)	9		
24	Environmental Scientist	43	1	P06	Planning (Site, Installation & Project)	7		
27	Foundation/Geotechnical Eng.	51	8	R03	Railroad	10		
29	GIS Specialist	39	3	R11	Rivers; Canals; Waterways; Flood Control	6		
37	Interior Designer	6	6	T02	Testing & Inspection Services	7		
38	Land Surveyor	12	0	T03	Traffic & Transportation Engineering	10		
42	Mechanical Engineer	24	3	T06	Tunnels & Subways	8		
47	Planner: Urban/Regional	222	7	W02	Water Resources; Hydrology, Groundwater	7		
48	Project Manager	973	45					
50	Risk Assessor	4	4					
51	Safety/Occupational Health Engineer	6	0					
53	Scheduler	32	1					
54	Security Specialist	1	0					
57	Structural Engineer	348	26					
58	Technician/Analyst	598	64					
60	Transportation Engineer	983	28					
62	Water Resources Engineer	82	9					
	Total	5,439	435					
11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS								
(Insert revenue index number shown at right)								
PROFESSIONAL SERVICES REVENUE INDEX NUMBER								
<table border="0"> <tr> <td style="vertical-align: top;"> 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 </td> <td style="vertical-align: top;"> 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 </td> </tr> </table>							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
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							
12. AUTHORIZED REPRESENTATIVE								
The foregoing is a statement of facts.								
a. SIGNATURE 					b. DATE January 10, 2023			
c. NAME AND TITLE Kevin L. Wallace, PE - Vice President								

ARCHITECT - ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (If any)
W912HY23R3601

PART II - GENERAL QUALIFICATIONS

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

2a. FIRM (or Branch Office) NAME HNTB Corporation				3. YEAR ESTABLISHED 1992	4. UNIQUE ENTITY IDENTIFIER 076650464	
2b. STREET 777 108th Ave. NE, Ste. 1000				5. OWNERSHIP		
2c. CITY Bellevue		2d. STATE Washington	2e. ZIP CODE 98004	a. TYPE S-Corporation	b. SMALL BUSINESS STATUS Not Applicable	
6a. POINT OF CONTACT NAME AND TITLE Thomas V. Schnetzer, Northwest Division Operations & Delivery Officer				7. NAME OF FIRM (If Block 2a is a Branch Office) HNTB Holdings, Ltd. (established in 1914)		
6b. TELEPHONE NUMBER (425) 455-3555		6c. E-MAIL ADDRESS tschnetzer@HNTB.com		8a. FORMER FIRM NAME(S) (If any)	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			
2	Administrative	872	26	A01	Acoustics, Noise Abatement	8
5	Archeologist	15	0	A05	Airports; Navaids; Airport Lighting; Aircraft Fueling	6
6	Architect	194	2	A06	Airports; Terminals & Hangars; Freight Handling	10
8	CADD Technician	160	14	B02	Bridges	10
12	Civil Engineer	208	21	C15	Construction Management	10
13	Communications Engineer	6	0	E09	Environmental Impact Studies, Assessments or Statements	7
14	Computer Programmer	120	1	E011	Environmental Planning	8
15	Construction Inspector	369	21	F02	Field Houses; Gyms, Stadiums	8
16	Construction Manager	118	13	H07	Highways; Streets; Airfield Paving; Parking Lots	10
18	Cost Engineer/Estimator	20	0	H12	Hydraulics & Pneumatics	6
21	Electrical Engineer	25	8	I04	Intelligent Transportation Systems	7
23	Environmental Engineer	8	0	P05	Planning (Community, Regional, Areawide and State)	9
24	Environmental Scientist	43	13	P06	Planning (Site, Installation & Project)	7
27	Foundation/Geotechnical Eng.	51	0	R03	Railroad; Rapid Transit	10
29	GIS Specialist	39	3	R11	Rivers; Canals; Waterways; Flood Control	6
37	Interior Designer	6	0	T02	Testing & Inspection Services	7
38	Land Surveyor	12	0	T03	Traffic & Transportation Engineering	10
42	Mechanical Engineer	24	13	T06	Tunnels & Subways	8
47	Planner: Urban/Regional	222	25	W02	Water Resources; Hydrology; Ground Water	7
48	Project Manager	973	60			
50	Risk Assessor	4	0			
51	Safety/Occupational Health Engineer	6	0			
53	Scheduler	32	4			
54	Security Specialist	1	0			
57	Structural Engineer	348	10			
58	Technician/Analyst	598	34			
60	Transportation Engineer	983	53			
62	Water Resources Engineer	82	17			
	Total	5,439	338		Total	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				
		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
a. Federal Work	8				7. \$5 million to less than \$10 million	
b. Non-Federal Work	10				8. \$10 million to less than \$25 million	
c. Total Work	10				9. \$25 million to less than \$50 million	
					10. \$50 million or greater	
12. AUTHORIZED REPRESENTATIVE The foregoing is a statement of facts.						
a. SIGNATURE				b. DATE	February 8, 2023	
c. NAME AND TITLE Thomas V. Schnetzer, Northwest Division Operations & Delivery Officer						

ARCHITECT - ENGINEER QUALIFICATIONS				1. SOLICITATION NUMBER (if any) W912HY23R3601		
PART II - GENERAL QUALIFICATIONS (If a firm has branch offices, complete for each specific branch office seeking work.)						
2a. FIRM (OR BRANCH OFFICE) NAME HNTB Corporation				3. YEAR ESTABLISHED 1992		
2b. STREET 250 E. Wisconsin Avenue, Suite 2000				4. UNIQUE ENTITY IDENTIFIER RHXDZZEKQ3X7		
2c. CITY Milwaukee		2d. STATE WI	2e. ZIP CODE 53202	5. OWNERSHIP		
				a. TYPE S-Corporation		
				b. SMALL BUSINESS STATUS Not Applicable		
6a. POINT OF CONTACT NAME AND TITLE Ashley Booth - Vice President				7. NAME OF FIRM (If block 2a is a branch office) HNTB Holdings, Ltd.		
6b. TELEPHONE NUMBER (414) 359-2300		6c. E-MAIL ADDRESS abooth@HNTB.com		8b. YEAR ESTABLISHED		
8a. FORMER FIRM NAME(S) (If any)				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			
2	Administrative	872	31	A01	Acoustics, Noise Abatement	8
5	Archeologist	15	0	A05	Airports; Navaids; Airport Lighting; Aircraft Fueling	6
6	Architect	94	0	A06	Airports; Terminals & Hangars	10
8	CADD Technician	160	0	B02	Bridges	10
12	Civil Engineer	208	0	C15	Construction Management	10
13	Communications Engineer	6	0	E09	Environmental Impact Studies	7
14	Computer Programmer	120	1	E11	Environmental Planning	8
15	Construction Inspector	369	1	F02	Field Houses; Gyms, Stadiums	8
16	Construction Manager	118	2	H07	Highways, Streets, Airfield Paving	10
18	Cost Engineer/Estimator	20	0	H12	Hydraulics & Pneumatics	6
21	Electrical Engineer	25	0	I04	Intelligent Transportation Systems	7
23	Environmental Engineer	8	0	P05	Planning (Community, Regional, State)	9
24	Environmental Scientist	43	0	P06	Planning (Site, Installation & Project)	7
27	Foundation/Geotechnical Eng.	51	3	R03	Railroad	10
29	GIS Specialist	39	1	R11	Rivers; Canals; Waterways; Flood Control	6
37	Interior Designer	6	0	T02	Testing & Inspection Services	7
38	Land Surveyor	12	0	T03	Traffic & Transportation Engineering	10
42	Mechanical Engineer	24	0	T06	Tunnels & Subways	8
47	Planner: Urban/Regional	222	5	W02	Water Resources; Hydrology, Groundwater	7
48	Project Manager	973	22			
50	Risk Assessor	4	0			
51	Safety/Occupational Health Engineer	6	0			
53	Scheduler	32	0			
54	Security Specialist	1	0			
57	Structural Engineer	348	6			
58	Technician/Analyst	598	14			
60	Transportation Engineer	983	36			
62	Water Resources Engineer	82	3			
	Total	5,439	125			
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	
12. AUTHORIZED REPRESENTATIVE The foregoing is a statement of facts.						
a. SIGNATURE 				b. DATE January 10, 2023		
c. NAME AND TITLE Ashley Booth - Vice President						

ARCHITECT - ENGINEER QUALIFICATIONS

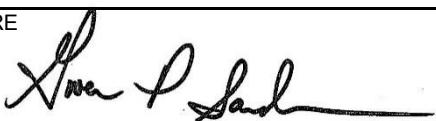
1. SOLICITATION NUMBER (if any):
W912HY23R3601

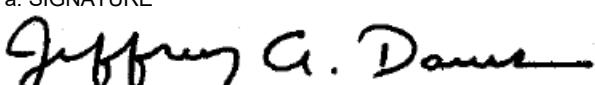
PART II - CONTRACT SPECIFIC QUALIFICATIONS

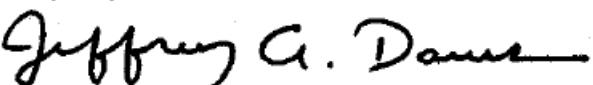
(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (or branch office) NAME: BKI BURK-KLEINPETER, INC.				3. YEAR ESTABLISHED 1910	4. UNIQUE ENTITY IDENTIFIER TT9AGM31ZHM5	
2b. STREET: 4176 Canal St.				5. OWNERSHIP		
2c. CITY: New Orleans		2d. STATE: LA	2e. ZIP CODE: 70119	a. TYPE: Corporation	b. SMALL BUSINESS STATUS: YES	
6a. POINT OF CONTACT NAME AND TITLE: Henry M. Picard, III, PE, PLS				7. NAME OF FIRM (If block 2a is a branch office): N/A		
6b. TELEPHONE NUMBER: (504) 486-5901		6c. EMAIL ADDRESS: hpicard@bkiusa.com		8a. FORMER FIRM NAME(s) (if any)		
				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	10	10	B02	Bridges	5
06	Architect	0	0	C15	Construction Management	5
08	CADD Technician	5	5	D02	Dams Earth Levee	1
12	Civil Engineering	10	10	E09	EIS	1
14	Computer Programmer	0	0	H01	Harbors, Piers	3
15	Construction Inspection	2	2	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			R03	Railroad	1
23	Environmental Engineering	0	0	R06	Rehab Building	1
29	GIS Specialist	1	1	R11	Rivers, Canals	1
32	Hydraulic Engineer	0	0	S04	Sewage Collection & Treatment	3
42	Mechanical Engineer	0	0	S09	Structural Design	5
47	Planner	1	1	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	4	4	D04	Design Build	1
60	Transportation Engineer	0	0	E03	Electrical Design	3
				E12	Environmental Remediation	1
				I01	Industrial Buildings	1
	Other Employees	0	0	G04	GIS Services	1
	Total	33	33	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 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				
b. Non-Federal Work	8	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				
c. Total Work	8					
12. AUTHORIZED REPRESENTATIVE The foregoing is a statement of facts.						
a. SIGNATURE 				b. DATE 06/21/2023		
c. NAME & TITLE		Henry M. Picard, III, PE, PLS Senior Vice President				

ARCHITECT-ENGINEER QUALIFICATIONS				1. SOLICITATION NUMBER (<i>If any</i>) W912HY23R3601		
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 Eustis Engineering L.L.C.				3. YEAR ESTABLISHED 2006	4. UNIQUE ENTITY IDENTIFIER R83MG9NLTMS4	
2b. STREET 4116 Rose Way				5. OWNERSHIP		
2c. CITY Houston		2d. STATE TX	2e. ZIP CODE 77025	a. TYPE Corporation		
6a. POINT OF CONTACT NAME AND TITLE Chad L. Held, P.E. / Regional Manager and Executive Vice President				b. SMALL BUSINESS STATUS Small Business		
6b. TELEPHONE NUMBER 713-909-2906		6c. EMAIL ADDRESS cheld@eustiseng.com		7. NAME OF FIRM (<i>If block 2a is a branch office</i>) Eustis Engineering L.L.C.		
8a. FORMER NAME(S) (<i>If any</i>) Eustis Engineering Company, Inc. Eustis Engineering Services, L.L.C.				8b. YEAR ESTABLISHED 1946 2006	8c. UNIQUE ENTITY IDENTIFIER 03-439-1870 78-481-0959	
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			
27	Geotechnical Engineer (P.E.)	15	1	S05	Soils & Geologic Studies: Foundations	7
	Assistant Engineer (E.I.)	2		T02	Testing & Inspection Services	7
	Engineering Graduate	1				
	Engineering Technician	1				
	Engineering Intern	0				
30	Geologist (P.G.)	1				
30	Geoscientist-in-Training (G.I.T.)	1				
30	Field Geologist	1				
	AutoCAD Technician	1				
02	Administrative	14				
	Drilling Personnel	14	1			
	Laboratory Personnel	8				
	CMT Personnel	13	1			
	Safety Manager	1				
	Quality Control Manager	1				
	Operations Manager	1				
Total		75	3			
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	7	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 <i>The foregoing is a statement of facts.</i>						
a. SIGNATURE 					b. DATE 06/16/2023	
c. NAME AND TITLE Chad L. Held, P.E. / Regional Manager and Executive Vice President						

ARCHITECT-ENGINEER QUALIFICATIONS				1. SOLICITATION NUMBER (<i>If any</i>) W912HY23R3601		
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 Eustis Engineering L.L.C.				3. YEAR ESTABLISHED 2006	4. UNIQUE ENTITY IDENTIFIER R83MG9NLTMS4	
2b. STREET 3011 28 th Street				5. OWNERSHIP		
2c. CITY Metairie		2d. STATE LA	2e. ZIP CODE 70002	a. TYPE Corporation		
6a. POINT OF CONTACT NAME AND TITLE Gwendolyn P. Sanders, P.E. / President				b. SMALL BUSINESS STATUS Small Business		
6b. TELEPHONE NUMBER 504-834-1057		6c. EMAIL ADDRESS ganders@eustiseng.com		7. NAME OF FIRM (<i>If block 2a is a branch office</i>)		
8a. FORMER NAME(S) (<i>If any</i>) Eustis Engineering Company, Inc. Eustis Engineering Services, L.L.C.				8b. YEAR ESTABLISHED 1946 2006	8c. UNIQUE ENTITY IDENTIFIER 03-439-1870 78-481-0959	
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			
27	Geotechnical Engineer (P.E.)	15	11	S05	Soils & Geologic Studies: Foundations	7
	Assistant Engineer (E.I.)	2	2	T02	Testing & Inspection Services	7
	Engineering Graduate	1	1			
	Engineering Technician	1				
	Engineering Intern	0				
30	Geologist (P.G.)	1				
30	Geoscientist-in-Training (G.I.T.)	1	1			
30	Field Geologist	1	1			
	AutoCAD Technician	1	1			
02	Administrative	14	12			
	Drilling Personnel	14	13			
	Laboratory Personnel	8	7			
	CMT Personnel	13	11			
	Safety Manager	1	1			
	Quality Control Manager	1	1			
	Operations Manager	1	1			
	Total	75	63			
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	7	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 <i>The foregoing is a statement of facts.</i>						
a. SIGNATURE 						b. DATE 06/16/2023
c. NAME AND TITLE Gwendolyn P. Sanders, P.E. / President						

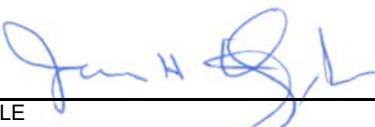
ARCHITECT-ENGINEER QUALIFICATIONS				1. SOLICITATION NUMBER (If any) W912HY23R3601		
PART II – GENERAL QUALIFICATIONS <i>(If a firm has branch offices, complete for each specific branch office seeking work)</i>						
2a. FIRM (Or Branch Office) NAME Terracon Consultants, Inc.				3. YEAR ESTABLISHED 1979	4. UNIQUE ENTITY IDENTIFIER MG15GZJ9BES5	
2b. STREET 6460 Hiller Street, Suite A				5. OWNERSHIP		
2c. CITY El Paso		2d. STATE TX	2e. ZIP CODE 79925	a. TYPE Corporation		
6a. POINT OF CONTACT NAME AND TITLE Rubin Solis, PE, Office Manager				b. SMALL BUSINESS STATUS Large Business		
6b. TELEPHONE NUMBER 915-778-5233		6c. EMAIL ADDRESS Ruben.SolisHernandez@terracon.com		7. NAME OF FIRM (If block 2a is a branch office) Terracon Consultants, Inc. (Est. 1965, DUNS No. 613569961)		
8a. FORMER NAME(S) (If any)				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			
05	Archaeologist	42		A06	Airports	9
06	Architect	31		A10	Asbestos Abatement	9
07	Biologist	91		B02	Bridges	9
08	CADD Technician	29		D01/D02	Dams/Dikes/Levees	9
12/27	Civil/Geotechnical	596	3	D04	Design Build RFPs	9
15	Construction Inspector	165		E07	Renewable Energy/ Conservation Energy	10
23	Environmental Engineer	240		E09/E13	EIS/NEPA/Env Testing & Analysis	10
24	Environmental Scientist/NEPA	461		E12/H03	Environmental Remediation/HTRW	9
29	GIS Specialist	44		H07	Highways/Streets/Parking	9
30	Geologist	283		H09	Medical Facilities	9
36	Industrial Hygienist	31		H10	Hospitality	9
39	Landscape Architect	7		H11	Multi-Family Housing	9
40	Construction Materials/Pavement Engineer	472	3	I01/W01	Industrial Manufacturing/ Warehouse	8
51	Occupational Health Eng	11		P12	Power Generation	9
58	Technician Analyst (Lab)	1952	11	S05	Soils/Foundations	10
	Other	1500	8	R13	Stormwater	8
Total		5955	25	S11	Sustainable Design	7
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	9	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 <i>The foregoing is a statement of facts.</i>						
a. SIGNATURE 					b. DATE 6/20/2023	
c. NAME AND TITLE Jeff Davis, F SAME, Vice President Federal Services						

ARCHITECT-ENGINEER QUALIFICATIONS				1. SOLICITATION NUMBER (If any) W912HY23R3601		
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 Terracon Consultants, Inc.				3. YEAR ESTABLISHED 2004	4. UNIQUE ENTITY IDENTIFIER VT1LSL4EWND3	
2b. STREET 6911 Blanco Road				5. OWNERSHIP		
2c. CITY San Antonio		2d. STATE TX	2e. ZIP CODE 78216	a. TYPE Corporation		
6a. POINT OF CONTACT NAME AND TITLE Chuck Gregory, PE, Office Manager				b. SMALL BUSINESS STATUS Large Business		
6b. TELEPHONE NUMBER 210-641-2112		6c. EMAIL ADDRESS Chuck.Gregory@terracon.com		7. NAME OF FIRM (If block 2a is a branch office) Terracon Consultants, Inc. (Est. 1965, DUNS No. 613569961)		
8a. FORMER NAME(S) (If any)				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			
05	Archaeologist	42	2	A06	Airports	9
06	Architect	31		A10	Asbestos Abatement	9
07	Biologist	91	2	B02	Bridges	9
08	CADD Technician	29		D01/D02	Dams/Dikes/Levees	9
12/27	Civil/Geotechnical	596	8	D04	Design Build RFPs	9
15	Construction Inspector	165	10	E07	Renewable Energy/ Conservation Energy	10
23	Environmental Engineer	240	4	E09/E13	EIS/NEPA/Env Testing & Analysis	10
24	Environmental Scientist/NEPA	461	11	E12/H03	Environmental Remediation/HTRW	9
29	GIS Specialist	44		H07	Highways/Streets/Parking	9
30	Geologist	283	5	H09	Medical Facilities	9
36	Industrial Hygienist	31		H10	Hospitality	9
39	Landscape Architect	7		H11	Multi-Family Housing	9
40	Construction Materials/Pavement Engineer	472	10	I01/W01	Industrial Manufacturing/ Warehouse	8
51	Occupational Health Eng	11		P12	Power Generation	9
58	Technician Analyst (Lab)	1952	45	S05	Soils/Foundations	10
	Other	1500	22	R13	Stormwater	8
Total		5955	119	S11	Sustainable Design	7
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	9	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 <i>The foregoing is a statement of facts.</i>						
a. SIGNATURE 					b. DATE 6/20/2023	
c. NAME AND TITLE Jeff Davis, F SAME, Vice President Federal Services						

ARCHITECT-ENGINEER QUALIFICATIONS				1. SOLICITATION NUMBER (<i>If any</i>) W912HY23R3601		
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 Strategic Value Solutions, Inc.				3. YEAR ESTABLISHED 2000	4. UNIQUE ENTITY IDENTIFIER FAS6ELEG65M5	
2b. STREET 1650 NE Grand Avenue, Suite 100				5. OWNERSHIP		
2c. CITY Kansas City		2d. STATE MO	2e. ZIP CODE 64086	a. TYPE Corporation		
6a. POINT OF CONTACT NAME AND TITLE Korene V. Robinson, PE, VMA, LEED AP/President				b. SMALL BUSINESS STATUS Yes 541690	WOSB	
6b. TELEPHONE NUMBER 816-795-0700		6c. EMAIL ADDRESS Korene.Robinson@SVS-inc.com		7. NAME OF FIRM (<i>If block 2a is a branch office</i>)		
8a. 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 (1) FIRM (2) BRANCH		a. Profile Code	b. Experience	c. Revenue Index Number (see below)
02	Administrative	10	10	V01	Value Analysis, LCC	6
18	Cost Estimator	6	6	C18	Cost Estimating	1
48	Project Manager	2	2	R10	Risk Analysis	3
61	Value Engineer	8	8			
Total		26	26			7
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	4	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	June 7, 2023
c. NAME AND TITLE Korene V. Robinson, President/Principal						

ARCHITECT-ENGINEER QUALIFICATIONS				1. SOLICITATION NUMBER (If any) W912HY23R3601		
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 CMET Engineering, LLC				3. YEAR ESTABLISHED 2013	4. UNIQUE ENTITY IDENTIFIER 079459747	
2b. STREET 16018 LA Highway 73, Suite A				5. OWNERSHIP		
2c. CITY Prairieville		2d. STATE LA	2e. ZIP CODE 70769	a. TYPE Limited Liability Corporation		
6a. POINT OF CONTACT NAME AND TITLE Dr. Marty Tittlebaum, President/Owner				b. SMALL BUSINESS STATUS Service Disabled Veteran Owned Small Business		
6b. TELEPHONE NUMBER 502-492-0767		6c. EMAIL ADDRESS mtittleb@cmetengineering.com		7. NAME OF FIRM (If block 2a is a branch office) SAME		
8. FORMER NAME(S) (If any)				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	1	1	C15	Construction Management	1
08	CADD Technician	1	1	E03	Electrical Studies and Design	2
12	Civil Engineer	1	1	F03	Fire Protection	1
23	Environmental Engineer	2	2	H04	Heating, Ventilating, AC	2
48	Project Manager	1	1	H09	Hospitals & Medical Facilities	4
				P12	Power Generation, Transmission	1
				S04	Sewage Collection, Treatment and Disposal	2
				S09	Structural Design; Special Structures	1
				W03	Water Supply; Treatment and Distribution	4
TOTAL		6	6			
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		
a. Federal Work	3	3. \$250,000 to less than \$500,000		8. \$10 million to less than \$25 million		
b. Non-Federal Work	2	4. \$500,000 to less than \$1 million		9. \$25 million to less than \$50 million		
c. Total Work	4	5. \$1 million to less than \$2 million		10. \$50 million or greater		
12. AUTHORIZED REPRESENTATIVE The foregoing is a statement of facts.						
31. SIGNATURE 						32. DATE 07/07/2023
33. NAME AND TITLE		Marty Tittlebaum, Owner				

ARCHITECT-ENGINEER QUALIFICATIONS				1. SOLICITATION NUMBER (<i>If any</i>) W912HY23R3601		
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 ARS Engineers, Inc.				3. YEAR ESTABLISHED 1984	4. UNIQUE ENTITY IDENTIFIER 151196813	
2b. STREET 3440 Sojourn Dr., Suite 230				5. OWNERSHIP		
2c. CITY Carrollton		2d. STATE TX	2e. ZIP CODE 75006	a. TYPE Corporation		
6a. POINT OF CONTACT NAME AND TITLE Dustin D. Davison, RPLS				b. SMALL BUSINESS STATUS SBE, DBE, MBE, HUB		
6b. TELEPHONE NUMBER 214-739-3152		6c. EMAIL ADDRESS ddavison@arsengineers.com		7. NAME OF FIRM (<i>If block 2a is a branch office</i>)		
8a. FORMER NAME(S) (<i>If any</i>) N/A				8b. YEAR 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 (<i>see below</i>)
		(1) FIRM	(2) BRANCH			
38	Land Surveyor	2		A06	Airports; Terminals and Hangers; Freight Handling	1
12	Civil Engineer	3		B02	Bridges	1
08	CADD Technicians	10		E02	Educational Facilities, Classrooms	1
02	Administrative	3		H07	Highways, Streets, Airfield Paving, Parking Lots	2
58	Technical / Analyst	24		I06	Irrigation; Drainage	3
				L02	Land Surveying	4
				R03	Railroad; Rapid Transit	4
				S10	Surveying; Platting; Mapping; Flood Plan Studies	4
				T03	Traffic & Transportation Engineering	2
				T04	Topographic Surveying and Mapping	4
				W02	Water Resources; Hydrology; Ground Water	1
Total		42				
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	1	1. Less than \$100,000 6. \$2 million to less than \$5 million				
b. Non-Federal Work	7	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 06/22/2023	
c. NAME AND TITLE Aneil Marc Sandhu, PE / President						

ARCHITECT-ENGINEER QUALIFICATIONS				1. SOLICITATION NUMBER (<i>If any</i>) W912HY23R3601		
PART II – GENERAL QUALIFICATIONS <i>(If a firm has branch offices, complete for each specific branch office seeking work)</i>						
2a. FIRM (<i>Or Branch Office</i>) NAME Chustz Surveying, LLC, a Division of GIS Engineering				3. YEAR ESTABLISHED 1995	4. UNIQUE ENTITY IDENTIFIER QWXJLZNY6F21	
2b. STREET 211 Richy St				5. OWNERSHIP		
2c. CITY New Roads		2d. STATE LA	2e. ZIP CODE 70749	a. TYPE Corporation		
6a. POINT OF CONTACT NAME AND TITLE James H. Chustz, Jr. PLS, Manager				b. SMALL BUSINESS STATUS N/A		
6b. TELEPHONE NUMBER 225-638-5949	6c. EMAIL ADDRESS jchustz@chust.com			7. NAME OF FIRM (<i>If block 2a is a branch office</i>)		
8a. 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 (<i>see below</i>)
		(1) FIRM	(2) BRANCH			
02	Administrative	3		G03	Geodetic Surveying	2
03	Ariel Photographer	2		H13	Hydrographic Surveying	4
08	Cadd Technician	5		L02	Land Surveying	1
28	Geodetic Surveyor	1		S10	Surveying, Platting, Mapping, Flood Plain Studies	2
29	G.I.S.S.	1		T04	Topographic Surveying and Mapping	4
33	Hydrographic Surveyor	1				
38	Land Surveyor	4				
48	Project Manager	3				
	Survey Party Chief	7				
	Survey Technicians	14				
	Total					
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 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				
b. Non-Federal Work	2					
c. Total Work	7					
12. AUTHORIZED REPRESENTATIVE <i>The foregoing is a statement of facts.</i>						
a. SIGNATURE 				b. DATE 6/20/23		
c. NAME AND TITLE James H. Chustz, Jr., PLS, Manager						



CPARS, PPQ, and ACASS Project Assessments

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CONTRACTOR PERFORMANCE ASSESSMENT REPORT (CPAR)

INCOMPLETE-RATED

Architect-Engineer**Name/Address of Contractor:**

Vendor Name: MSMM ENGINEERING, LLC

Division Name:

Street: 4640 S CARROLLTON AVE SUITE 210-12

City: NEW ORLEANS

State: LA Zip: 701196051

Country: USA

CAGE Code:

Unique Entity ID (DUNS): 969989370 Unique Entity ID (SAM): NYLUL4Q5GYF6

Product/Service Code: C219 Principal NAICS Code: 541330

Evaluation Type: Interim**Contract Percent Complete:** 95%**Period of Performance Being Assessed:** 06/27/2020 - 06/26/2021**Contract Number:** W9126G16D0017 **Business Sector & Sub-Sector:** Architect-Engineer**Contracting Office:** US ARMY ENGINEER DISTRICT GALVESTON **Contracting Officer:** MARIA RODRIGUEZ **Phone Number:** 409 766 6331**Location of Work:**

Texas City and Vicinity

Date Signed: 07/15/2019 **Period of Performance Start Date:** 06/28/2019**Est. Ultimate Completion Date/Last Date to Order:** 12/30/2022 **Estimated/Actual Completion Date:****Funding Office ID:** 966501**Base and All Options Value :** \$1,931,597 **Action Obligation:** \$1,881,103**Complexity:** Medium **Termination Type:** None**Extent Competed:** Full and Open Competition after Exclusion of Sources **Type of Contract:** Firm Fixed Price**Key Subcontractors and Effort Performed:****Unique Entity ID (DUNS): Unique Entity ID (SAM):****Effort:****Unique Entity ID (DUNS): Unique Entity ID (SAM):****Effort:****Unique Entity ID (DUNS): Unique Entity ID (SAM):****Effort:****Project Number:****Project Title:**PREPARATION OF DESIGN DOCUMENTATION REPORT (DDR) and PLANS AND SPECIFICATIONS
(P&S) for the Texas City and Vicinity Hurricane Flood Protection Project I-Wall
Repair**Contract Effort Description:**The design and preparation of a design documentation report (DDR) and plans and specifications(P&S)for the Texas City and Vicinity Hurricane Flood Protection
Project I-Wall Repair.

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Small Business Subcontracting:

Does this contract include a subcontracting plan? No

Date of last Individual Subcontracting Report (ISR) / Summary Subcontracting Report (SSR): N/A

Evaluation Areas	Past Rating	Rating
Quality:	Very Good	Exceptional
Schedule:	Exceptional	Very Good
Cost Control:	N/A	Satisfactory
Management:	Exceptional	Very Good
Small Business Subcontracting:	N/A	N/A
Regulatory Compliance:	N/A	N/A
Other Areas:		
(1) :		N/A
(2) :		N/A
(3) :		N/A

Variance (Contract to Date):

Current Cost Variance (%): Variance at Completion (%):

Current Schedule Variance (%):

Assessing Official Comments:

QUALITY: Quality of submittals was very good and included significant coordination with USACE and Eastman Chemical Company. Submittal included alternative courses of action to get to construction sooner, and the contractor was extremely proactive to provide the Government all potential solutions with supporting rationale to make quick decisions and inform leadership of major constraints.

SCHEDULE: The A-E proactively managed their design, submittals, comment responses, and review meetings to avoid schedule slippages despite a challenging project. The project is currently on hold pending the completion of an adjacent construction project, and the A-E proactively reaches out to the Government to ensure that design completion starts up in time to maximize the solicitation period to get to construction as soon as possible.

COST CONTROL: Performance meetings contractual requirements.

MANAGEMENT: The A-E Project Manager has done a very good job to anticipate Government needs and proactively work them in advance of an issue. When logistical challenges presented themselves due to construction of a project on an adjacent site, the A-E proactively worked options for the Government to make key decisions related to completion of this design.

ADDITIONAL/OTHER: This interim rating includes the period from conceptual design through 95% design. Comments on individual rating elements indicate that the A-E has provided services to date that meet and exceed contractual requirements.

RECOMMENDATION:

Given what I know today about the contractor's ability to perform in accordance with this contract or order's most significant requirements, I would recommend them for similar requirements in the future.

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Name and Title of Assessing Official:

Name: KALLI CLARK-EGAN

Title: Civil Engineer

Organization: CESWD-EC

Phone Number: 4693676036 Email Address: kalli.clark-egan2@usace.army.mil

Date: 06/29/2021

Contractor Comments:**Name and Title of Contractor Representative:**

Name:

Title:

Phone Number: Email Address:

Date:

Review by Reviewing Official:**Name and Title of Reviewing Official:**

Name:

Title:

Organization:

Phone Number: Email Address:

Date:

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CONTRACTOR PERFORMANCE ASSESSMENT REPORT (CPAR)

INCOMPLETE-RATED

Architect-Engineer

Name/Address of Contractor:

Vendor Name: MSMM ENGINEERING, LLC

Division Name:

Street: 4640 S CARROLLTON AVE SUITE 210-12

City: NEW ORLEANS

State: LA Zip: 701196051

Country: USA

CAGE Code: 6SKR5

Unique Entity ID (DUNS): 969989370 Unique Entity ID (SAM): NYLUL4Q5GYF6

Product/Service Code: C212 Principal NAICS Code: 541330

Evaluation Type: Final**Contract Percent Complete:** 100**Period of Performance Being Assessed:** 08/12/2019 - 09/30/2020**Contract Number:** W9126G16D0017 W912P819F0215 **Business Sector & Sub-Sector:** Architect-Engineer**Contracting Office:** W07V ENDIST N ORLEANS **Contracting Officer:** VERONICA GARNER-FLINT **Phone Number:** 5048621515**Location of Work:**

Orange County, Texas

Date Signed: 08/14/2019 **Period of Performance Start Date:** 08/12/2019**Est. Ultimate Completion Date/Last Date to Order:** 09/30/2020 **Estimated/Actual Completion Date:** 09/30/2020**Funding Office ID:** W912P8**Base and All Options Value :** \$1,326,143 **Action Obligation:** \$1,326,143**Complexity:** High **Termination Type:** None**Extent Competed:** Full and Open Competition after Exclusion of Sources **Type of Contract:** Firm Fixed Price**Key Subcontractors and Effort Performed:****Unique Entity ID (DUNS): Unique Entity ID (SAM):****Effort:****Unique Entity ID (DUNS): Unique Entity ID (SAM):****Effort:****Unique Entity ID (DUNS): Unique Entity ID (SAM):****Effort:****Project Number:** OC - 01**Project Title:**

Sabine to Galveston

Orange County

Cow Bayou Complex

Contract Effort Description:

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The AE's effort for the complex was to do a 35% design for all features of the Cow Bayou pump station except for the mechanical and electrical disciplines. These disciplines include Civil, Structural and Architectural. The AE was also responsible for developing a cost estimate for the Pump Station, including the Mechanical and Electrical features that were provided by the government.

Small Business Subcontracting:

Does this contract include a subcontracting plan? No

Date of last Individual Subcontracting Report (ISR) / Summary Subcontracting Report (SSR): N/A

Evaluation Areas	Past Rating	Rating
Quality:	N/A	Exceptional
Schedule:	N/A	Very Good
Cost Control:	N/A	Very Good
Management:	N/A	Exceptional
Small Business Subcontracting:	N/A	N/A
Regulatory Compliance:	N/A	N/A
Other Areas:		
(1) :		N/A
(2) :		N/A
(3) :		N/A

Variance (Contract to Date):

Current Cost Variance (%): 0 Variance at Completion (%): 0

Current Schedule Variance (%):

Assessing Official Comments:

QUALITY: The AE consistently met all contract requirements and went above and beyond to ensure the success of the PDT.

On multiple occasions, the AE pointed out items required for the project before any other team member brought it up.

Also, in order to help the team visualize the project as a hole, the AE created multiple project renderings which was not part of his responsibility but did it to further the teams understanding of the project. The quality of these renders was exceptional and have been used in multiple project presentations.

The quality of the renderings allowed the government team to focus on the details on the project and saved the government time by not needing to create these renderings ourselves.

It was obvious that the AE performed their required QC but the quality of the product that was submitted.

SCHEDULE: The Contractor was able to work thru many slips in the schedule that were caused by the federal government. There were many items the AE could not work on without the input from the government. The Mechanical and Electrical team from USACE were responsible for developing the layout of the pump station and provide this information to the contractor, on multiple occasions, the government was late

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getting the information to the AE. On multiple occasions, the information provided to the AE had changed resulting in re-work on the part of the AE but the contractor's management team was able to bring the project back onto the aggressive schedule.

The AE's work products had to be taken and incorporated into an overall submission package, the AE was able to provide their work in time for the government to take their work and incorporated into the overall submission 35%

COST CONTROL: When this project first started the scope of work was not all that defined because the parameters of the work was evolving. Despite the vague status of the scope, the AE was able to stay within the budget with the exception of work that was required to be added as the scope became more defined, there were no price overruns on the project. The AE's proposals were very well thought out and their pricing came in fair and reasonable.

The funding for design of this project was very limited, the capacity needed to be borrowed from another district in order to get this team together. The amount of money that was available had a not to exceed number, the AE's team and experience was able to perform the necessary work on a limited budget and provide a quality product.

MANAGEMENT: 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.

RECOMMENDATION:

Given what I know today about the contractor's ability to perform in accordance with this contract or order's most significant requirements, I would recommend them for similar requirements in the future.

Name and Title of Assessing Official:

Name: VERONICA GARNER-FLINT

Title: Contracting Officer

Organization: HQ USACE

Phone Number: (504) 862-1515 Email Address: veronica.garner-flint@usace.army.mil

Date: 01/19/2022

Contractor Comments:

Name and Title of Contractor Representative:

Name:

Title:

FOR OFFICIAL USE ONLY / SOURCE SELECTION INFORMATION - SEE FAR 2.101, 3.104, AND 42.1503

Phone Number: Email Address:

Date:

Review by Reviewing Official:

Name and Title of Reviewing Official:

Name:

Title:

Organization:

Phone Number: Email Address:

Date:

FOR OFFICIAL USE ONLY

NAVFAC / USACE Past Performance Questionnaire (PPQ)

Form PPQ-0 (9/30/11)

NAVFAC/USACE PAST PERFORMANCE QUESTIONNAIRE (Form PPQ-0)**CONTRACT INFORMATION (Contractor to complete Blocks 1-4)****1. Contractor Information**

Firm Name: MSMM Engineering, LLC
 Address: 4640 S Carrollton Avenue, Suite 220, New Orleans, LA 70119
 Phone Number: 504-570-6098
 Email Address: mmardia@mssmeng.com
 Point of Contact: Manish Mardia
 Contact Phone Number: 504-559-1897

CAGE Code: 6SKR5

UEI Number: NYLUL4Q5GYF6

2. Work Performed as: Prime Contractor Sub Contractor Joint Venture Other (Explain)

Percent of project work performed: 75%

If subcontractor, who was the prime (Name/Phone #):

3. Contract Information

Contract Number: W912P808D0002

Delivery/Task Order Number (if applicable): TO 0014

Contract Type: Firm Fixed Price Cost Reimbursement Other (Please specify):

Contract Title: Jefferson Lakefront Floodwalls & Structures: West Return Floodwall

Contract Location: Jefferson Parish and St. Charles Parish, LA

Award Date (mm/dd/yy): 11/17/09

Contract Completion Date (mm/dd/yy): 07/30/12

Actual Completion Date (mm/dd/yy): 07/31/12

Explain Differences:

Original Contract Price (Award Amount): \$3,040,000

Final Contract Price (to include all modifications, if applicable): \$3,040,000

Explain Differences:

4. Project Description:Complexity of Work High Med Routine

How is this project relevant to project of submission? (Please provide details such as similar equipment, requirements, conditions, etc.) Navigation structures, floodwalls, and closure structures

CLIENT INFORMATION (Client to complete Blocks 5-8)**5. Client Information**

Name: DURUND EIZZY

Title: Deputy Chief PRMD

Phone Number: 504 802 2204

Email Address: durund.eizzy@usace.army.mil

6. Describe the client's role in the project: MSNAA served as the designer of record for the subject project

7. Date Questionnaire was completed (mm/dd/yy): 10/28/12

8. Client's Signature: 

NOTE: NAVFAC/USACE requests that the client completes this questionnaire and submits directly back to the offeror. The offeror will submit the completed questionnaire to USACE with their proposal, and may duplicate this questionnaire for future submission on USACE solicitations. Clients are highly encouraged to submit questionnaires directly to the offeror. However, questionnaires may be submitted directly to USACE. Please contact the offeror for USACE POC information. The Government reserves the right to verify any and all information on this form.

NAVFAC / USACE Past Performance Questionnaire (PPQ)

Form PPQ -0 (9/30/11)

**ADJECTIVE RATINGS AND DEFINITIONS TO BE USED TO BEST REFLECT
YOUR EVALUATION OF THE CONTRACTOR'S PERFORMANCE**

RATING	DEFINITION	NOTE
(E) Exceptional	Performance meets contractual requirements and exceeds many to the Government/Owner's benefit. The contractual performance of the element or sub-element being assessed was accomplished with few minor problems for which corrective actions taken by the contractor was highly effective.	An Exceptional rating is appropriate when the Contractor successfully performed multiple significant events that were of benefit to the Government/Owner. A singular benefit, however, could be of such magnitude that it alone constitutes an Exceptional rating. Also, there should have been NO significant weaknesses identified.
(VG) Very Good	Performance meets contractual requirements and exceeds some to the Government's/Owner's benefit. The contractual performance of the element or sub-element being assessed was accomplished with some minor problems for which corrective actions taken by the contractor were effective.	A Very Good rating is appropriate when the Contractor successfully performed a significant event that was a benefit to the Government/Owner. There should have been no significant weaknesses identified.
(S) Satisfactory	Performance meets minimum contractual requirements. The contractual performance of the element or sub-element contains some minor problems for which corrective actions taken by the contractor appear or were satisfactory.	A Satisfactory rating is appropriate when there were only minor problems, or major problems that the contractor recovered from without impact to the contract. There should have been NO significant weaknesses identified. Per DOD policy, a fundamental principle of assigning ratings is that contractors will not be assessed a rating lower than Satisfactory solely for not performing beyond the requirements of the contract.
(M) Marginal	Performance does not meet some contractual requirements. The contractual performance of the element or sub-element being assessed reflects a serious problem for which the contractor has not yet identified corrective actions. The contractor's proposed actions appear only marginally effective or were not fully implemented.	A Marginal is appropriate when a significant event occurred that the contractor had trouble overcoming which impacted the Government/Owner.
(U) Unsatisfactory	Performance does not meet most contractual requirements and recovery is not likely in a timely manner. The contractual performance of the element or sub-element contains serious problem(s) for which the contractor's corrective actions appear or were ineffective.	An Unsatisfactory rating is appropriate when multiple significant events occurred that the contractor had trouble overcoming and which impacted the Government/Owner. A singular problem, however, could be of such serious magnitude that it alone constitutes an unsatisfactory rating.
(N) Not Applicable	No information or did not apply to your contract	Rating will be neither positive nor negative.

NAVFAC / USACE Past Performance Questionnaire (PPQ)

Form PPQ -0 (9/30/11)

TO BE COMPLETED BY CLIENT

PLEASE SELECT THE ADJECTIVE RATING WHICH BEST REFLECTS YOUR EVALUATION OF THE CONTRACTOR'S PERFORMANCE.	
1. QUALITY	
a) Quality of technical data/report preparation efforts	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
b) Ability to meet quality standards specified for technical performance	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
c) Timeliness/effectiveness of contract problem resolution without extensive customer guidance	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
d) Adequacy/effectiveness of quality control program and adherence to contract quality assurance requirements (without adverse effect on performance)	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
2. SCHEDULE/TIMELINESS OF PERFORMANCE	
a) Compliance with contract delivery/completion schedules including any significant intermediate milestones. (<i>If liquidated damages were assessed or the schedule was not met, please address below</i>)	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
b) Rate the contractor's use of available resources to accomplish tasks identified in the contract	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
3. CUSTOMER SATISFACTION	
a) To what extent were the end users satisfied with the project?	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
b) Contractor was reasonable and cooperative in dealing with your staff (including the ability to successfully resolve disagreements/disputes; responsiveness to administrative reports, businesslike and communication)	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
c) To what extent was the contractor cooperative, businesslike, and concerned with the interests of the customer?	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
d) Overall customer satisfaction	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
4. MANAGEMENT/ PERSONNEL/LABOR	
a) Effectiveness of on-site management, including management of subcontractors, suppliers, materials, and/or labor force?	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
b) Ability to hire, apply, and retain a qualified workforce to this effort	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
c) Government Property Control	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
d) Knowledge/expertise demonstrated by contractor personnel	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
e) Utilization of Small Business concerns	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
f) Ability to simultaneously manage multiple projects with multiple disciplines	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
g) Ability to assimilate and incorporate changes in requirements and/or priority, including planning, execution and response to Government changes	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
h) Effectiveness of overall management (including ability to effectively lead, manage and control the program)	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
5. COST/FINANCIAL MANAGEMENT	
a) Ability to meet the terms and conditions within the contractually agreed price(s)?	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N

NAVFAC / USACE Past Performance Questionnaire (PPQ)

Form PPQ -0 (9/30/11)

b) Contractor proposed innovative alternative methods/processes that reduced cost, improved maintainability or other factors that benefited the client	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
c) If this is/was a Government cost type contract, please rate the Contractor's timeliness and accuracy in submitting monthly invoices with appropriate back-up documentation, monthly status reports/budget variance reports, compliance with established budgets and avoidance of significant and/or unexplained variances (under runs or overruns)	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
d) Is the Contractor's accounting system adequate for management and tracking of costs? <i>If no, please explain in Remarks section.</i>	<input checked="" type="radio"/> Yes <input type="checkbox"/> No
e) If this is/was a Government contract, has/was this contract been partially or completely terminated for default or convenience or are there any pending terminations? <i>Indicate if show cause or cure notices were issued, or any default action in comment section below.</i>	<input type="checkbox"/> Yes <input checked="" type="radio"/> No
f) Have there been any indications that the contractor has had any financial problems? <i>If yes, please explain below.</i>	<input type="checkbox"/> Yes <input checked="" type="radio"/> No
6. SAFETY/SECURITY	
a) To what extent was the contractor able to maintain an environment of safety, adhere to its approved safety plan, and respond to safety issues? (Includes: following the users rules, regulations, and requirements regarding housekeeping, safety, correction of noted deficiencies, etc.)	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
b) Contractor complied with all security requirements for the project and personnel security requirements.	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
7. GENERAL	
a) Ability to successfully respond to emergency and/or surge situations (including notifying COR, PM or Contracting Officer in a timely manner regarding urgent contractual issues).	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
b) Compliance with contractual terms/provisions (<i>explain if specific issues</i>)	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
c) Would you hire or work with this firm again? <i>(If no, please explain below)</i>	<input checked="" type="radio"/> Yes <input type="checkbox"/> No
d) In summary, provide an overall rating for the work performed by this contractor.	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N

Please provide responses to the questions above (*if applicable*) and/or additional remarks. Furthermore, please provide a brief narrative addressing specific strengths, weaknesses, deficiencies, or other comments which may assist our office in evaluating performance risk (*please attach additional pages if necessary*):

After Hurricane Katrina, the west return wall project was an important project to the Hurricane protection plan. During the Design, working with MSMM personnel was excellent. With clear communication and understanding of standards and practices. All submittals were of great quality and on time. During Construction, the team was quick to respond to any issues and construction was able to meet the schedule plan.

NAVFAC/USACE PAST PERFORMANCE QUESTIONNAIRE (Form PPQ-0)**CONTRACT INFORMATION (Contractor to complete Blocks 1-4)****1. Contractor Information**

Firm Name: Tetra Tech

CAGE Code: 0YEM5

Address: 2969 Prospect Park Drive, Suite 100

Rancho Cordova, CA 95670

DUNs Number: 36-126-7339

Phone Number: 916-853-4506

Email Address: steve.krueger@tetrtech.com

Point of Contact: Steve Krueger

Contact Phone Number: 916-853-4506

2. Work Performed as: Prime Contractor Sub Contractor Joint Venture Other (Explain)

Percent of project work performed: Approx. 50% Tetra Tech

3. Contract Information

Contract Number: b) W912P8-08-C-0038

Delivery/Task Order Number (if applicable):

Contract Type: Firm Fixed Price Cost Reimbursement Other (Please specify): Time & Materials

Contract Location: USACE New Orleans

Award Date (mm/dd/yy): 04/03/08 (Prime)

Contract Completion Date (mm/dd/yy): 06/01/11 for 100-year risk reduction

Actual Completion Date (mm/dd/yy): 04/30/14

Explain Differences: Achieved 06/01/11 100-year risk reduction; actual includes additional design/construction activities

Original Contract Price (Award Amount): \$21,358,817 (estimate, Joint Venture)

Final Contract Price (*to include all modifications, if applicable*): \$58,754,975 (Joint Venture)

Explain Differences: Changes in criteria; additional non-scope design tasks

4. Project Description:Complexity of Work High Med RoutineHow is this project relevant to project of submission? (*Please provide details such as similar equipment, requirements, conditions, etc.*)

As part of a joint venture, INCA Engineers, Inc. (acquired by Tetra Tech in 2008), led the design of the \$1.1 billion Lake Borgne surge barrier project at the Inner Harbor Navigation Canal (IHNC) - the largest civil works design-build project in USACE's history. As a subconsultant to the prime (Shaw E&I), the Tetra Tech/Gerwick JV developed the detailed design and prepared the construction plans and specifications of the surge barrier, gates, structural monoliths, and foundations. The IHNC project benefited from a capable and creative program and construction management team to successfully adhere to congressionally mandated timelines while using novel and ambitious methods under extremely close scrutiny from an array of critics. This project has been recognized by numerous prestigious awards, including the 2012 ACEC Grand Conceptor Award, and is viewed as a global model for flood infrastructure solutions that are resilient and adaptable in the face of climate change. Another important feature to the residents of New Orleans was the aggressive 4-year schedule to provide 100-year risk reduction for the 2011 hurricane season, June 1, 2011. Actual risk reduction was achieved in May, 2011.

CLIENT INFORMATION (Client to complete Blocks 5-8)**5. Client Information**

Name: Timothy Black

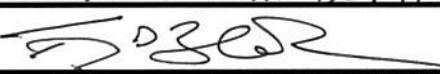
Title: Contracting Officer

Phone Number: 504-862-2918

Email Address: timothy.black@usace.army.mil

6. Describe the client's role in the project: Contracting Officer

7. Date Questionnaire was completed (mm/dd/yy): 24 JUNE 2015

8. Client's Signature: 

NOTE: NAVFAC/USACE REQUESTS THAT THE CLIENT COMPLETES THIS QUESTIONNAIRE AND SUBMITS DIRECTLY BACK TO THE OFFEROR. THE OFFEROR WILL SUBMIT THE COMPLETED QUESTIONNAIRE TO USACE WITH THEIR PROPOSAL, AND MAY DUPLICATE THIS QUESTIONNAIRE FOR FUTURE SUBMISSION ON USACE SOLICITATIONS. CLIENTS ARE HIGHLY ENCOURAGED TO SUBMIT QUESTIONNAIRES DIRECTLY TO THE OFFEROR. HOWEVER, QUESTIONNAIRES MAY BE SUBMITTED DIRECTLY TO USACE. PLEASE CONTACT THE OFFEROR FOR USACE POC INFORMATION. THE GOVERNMENT RESERVES THE RIGHT TO VERIFY ANY AND ALL INFORMATION ON THIS FORM.

***ADJECTIVE RATINGS AND DEFINITIONS TO BE USED TO BEST REFLECT
YOUR EVALUATION OF THE CONTRACTOR'S PERFORMANCE***

RATING	DEFINITION	NOTE
(E) Exceptional	Performance meets contractual requirements and exceeds many to the Government/Owner's benefit. The contractual performance of the element or sub-element being assessed was accomplished with few minor problems for which corrective actions taken by the contractor was highly effective.	An Exceptional rating is appropriate when the Contractor successfully performed multiple significant events that were of benefit to the Government/Owner. A singular benefit, however, could be of such magnitude that it alone constitutes an Exceptional rating. Also, there should have been NO significant weaknesses identified.
(VG) Very Good	Performance meets contractual requirements and exceeds some to the Government's/Owner's benefit. The contractual performance of the element or sub-element being assessed was accomplished with some minor problems for which corrective actions taken by the contractor were effective.	A Very Good rating is appropriate when the Contractor successfully performed a significant event that was a benefit to the Government/Owner. There should have been no significant weaknesses identified.
(S) Satisfactory	Performance meets minimum contractual requirements. The contractual performance of the element or sub-element contains some minor problems for which corrective actions taken by the contractor appear or were satisfactory.	A Satisfactory rating is appropriate when there were only minor problems, or major problems that the contractor recovered from without impact to the contract. There should have been NO significant weaknesses identified. Per DOD policy, a fundamental principle of assigning ratings is that contractors will not be assessed a rating lower than Satisfactory solely for not performing beyond the requirements of the contract.
(M) Marginal	Performance does not meet some contractual requirements. The contractual performance of the element or sub-element being assessed reflects a serious problem for which the contractor has not yet identified corrective actions. The contractor's proposed actions appear only marginally effective or were not fully implemented.	A Marginal is appropriate when a significant event occurred that the contractor had trouble overcoming which impacted the Government/Owner.
(U) Unsatisfactory	Performance does not meet most contractual requirements and recovery is not likely in a timely manner. The contractual performance of the element or sub-element contains serious problem(s) for which the contractor's corrective actions appear or were ineffective.	An Unsatisfactory rating is appropriate when multiple significant events occurred that the contractor had trouble overcoming and which impacted the Government/Owner. A singular problem, however, could be of such serious magnitude that it alone constitutes an unsatisfactory rating.
(N) Not Applicable	No information or did not apply to your contract	Rating will be neither positive nor negative.

TO BE COMPLETED BY CLIENT

PLEASE CIRCLE THE ADJECTIVE RATING WHICH BEST REFLECTS YOUR EVALUATION OF THE CONTRACTOR'S PERFORMANCE.						
1. QUALITY:						
a) Quality of technical data/report preparation efforts	<input type="radio"/> E	VG	S	M	U	N
b) Ability to meet quality standards specified for technical performance	<input checked="" type="radio"/> E	VG	S	M	U	N
c) Timeliness/effectiveness of contract problem resolution without extensive customer guidance	<input checked="" type="radio"/> E	VG	S	M	U	N
d) Adequacy/effectiveness of quality control program and adherence to contract quality assurance requirements (without adverse effect on performance)	<input type="radio"/> E	VG	S	M	U	N
2. SCHEDULE/TIMELINESS OF PERFORMANCE:						
a) Compliance with contract delivery/completion schedules including any significant intermediate milestones. (<i>If liquidated damages were assessed or the schedule was not met, please address below</i>)	E	<input checked="" type="radio"/> VG	S	M	U	N
b) Rate the contractor's use of available resources to accomplish tasks identified in the contract	<input checked="" type="radio"/> E	VG	S	M	U	N
3. CUSTOMER SATISFACTION:						
a) To what extent were the end users satisfied with the project?	<input checked="" type="radio"/> E	VG	S	M	U	N
b) Contractor was reasonable and cooperative in dealing with your staff (including the ability to successfully resolve disagreements/disputes; responsiveness to administrative reports, businesslike and communication)	<input checked="" type="radio"/> E	VG	S	M	U	N
c) To what extent was the contractor cooperative, businesslike, and concerned with the interests of the customer?	<input checked="" type="radio"/> E	VG	S	M	U	N
d) Overall customer satisfaction	<input checked="" type="radio"/> E	VG	S	M	U	N
4. MANAGEMENT/ PERSONNEL/LABOR						
a) Effectiveness of on-site management, including management of subcontractors, suppliers, materials, and/or labor force?	<input checked="" type="radio"/> E	VG	S	M	U	N
b) Ability to hire, apply, and retain a qualified workforce to this effort	<input checked="" type="radio"/> E	VG	S	M	U	N
c) Government Property Control	E	VG	S	M	U	<input checked="" type="radio"/> N
d) Knowledge/expertise demonstrated by contractor personnel	<input checked="" type="radio"/> E	VG	S	M	U	N
e) Utilization of Small Business concerns	E	VG	S	M	U	<input checked="" type="radio"/> N
f) Ability to simultaneously manage multiple projects with multiple disciplines	E	<input checked="" type="radio"/> VG	S	M	U	N
g) Ability to assimilate and incorporate changes in requirements and/or priority, including planning, execution and response to Government changes	E	<input checked="" type="radio"/> VG	S	M	U	N
h) Effectiveness of overall management (including ability to effectively lead, manage and control the program)	<input checked="" type="radio"/> E	VG	S	M	U	N
5. COST/FINANCIAL MANAGEMENT						
a) Ability to meet the terms and conditions within the contractually agreed price(s)?	E	<input checked="" type="radio"/> VG	S	M	U	N
b) Contractor proposed innovative alternative methods/processes that reduced cost, improved maintainability or other factors that benefited the client	E	VG	S	M	U	<input checked="" type="radio"/> N



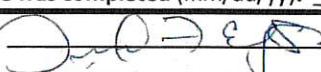
c) If this is/was a Government cost type contract, please rate the Contractor's timeliness and accuracy in submitting monthly invoices with appropriate back-up documentation, monthly status reports/budget variance reports, compliance with established budgets and avoidance of significant and/or unexplained variances (under runs or overruns)	E VG S M U N
d) Is the Contractor's accounting system adequate for management and tracking of costs? <i>If no, please explain in Remarks section.</i>	Yes No
e) If this is/was a Government contract, has/was this contract been partially or completely terminated for default or convenience or are there any pending terminations? <i>Indicate if show cause or cure notices were issued, or any default action in comment section below.</i>	Yes No
f) Have there been any indications that the contractor has had any financial problems? <i>If yes, please explain below.</i>	Yes No
6. SAFETY/SECURITY	
a) To what extent was the contractor able to maintain an environment of safety, adhere to its approved safety plan, and respond to safety issues? (Includes: following the users rules, regulations, and requirements regarding housekeeping, safety, correction of noted deficiencies, etc.)	E VG S M U N
b) Contractor complied with all security requirements for the project and personnel security requirements.	E VG S M U N
7. GENERAL	
a) Ability to successfully respond to emergency and/or surge situations (including notifying COR, PM or Contracting Officer in a timely manner regarding urgent contractual issues).	E VG S M U N
b) Compliance with contractual terms/provisions (<i>explain if specific issues</i>)	E VG S M U N
c) Would you hire or work with this firm again? <i>(If no, please explain below)</i>	Yes No
d) In summary, provide an overall rating for the work performed by this contractor.	E VG S M U N

Please provide responses to the questions above (*if applicable*) and/or additional remarks. Furthermore, please provide a brief narrative addressing specific strengths, weaknesses, deficiencies, or other comments which may assist our office in evaluating performance risk (*please attach additional pages if necessary*):

This project was our flagship for the program. The complexity and design effort required to successfully execute the project was not matched by any other in our program. Outstanding effort on this contract with excellent results. The project received the 2014 Outstanding Civil Engineering Achievement (OCEA) award for the American Society of Civil Engineers. 104

NAVFAC / USACE Past Performance Questionnaire (PPQ)

Form PPQ-0 (9/30/11)

NAVFAC/USACE PAST PERFORMANCE QUESTIONNAIRE (Form PPQ-0)	
CONTRACT INFORMATION (Contractor to complete Blocks 1-4)	
1. Contractor Information Firm Name: <u>MSMM Engineering, LLC</u> Address: <u>4640 S Carrollton Avenue, Suite 220, New Orleans, LA 70119</u> Phone Number: <u>504-570-6098</u> Email Address: <u>mmardia@mssmmeng.com</u> Point of Contact: <u>Manish Mardia</u> Contact Phone Number: <u>504-559-1897</u>	
2. Work Performed as: <input checked="" type="checkbox"/> Prime Contractor <input type="checkbox"/> Sub Contractor <input type="checkbox"/> Joint Venture <input type="checkbox"/> Other (Explain) Percent of project work performed: <u>55%</u> If subcontractor, who was the prime (Name/Phone #): _____	
3. Contract Information Contract Number: <u>W912P808D0002</u> Delivery/Task Order Number (if applicable): <u>W912P813C0015</u> Contract Type: <input checked="" type="checkbox"/> Firm Fixed Price <input type="checkbox"/> Cost Reimbursement <input type="checkbox"/> Other (Please specify): _____ Contract Title: <u>Southeast Louisiana Urban Flood Control – Harahan Pump to the River</u> Contract Location: <u>Jefferson Parish, LA</u> Award Date (mm/dd/yy): <u>06/15/12</u> Contract Completion Date (mm/dd/yy): <u>04/16/18</u> Actual Completion Date (mm/dd/yy): <u>04/16/18</u> Explain Differences: _____	
Original Contract Price (Award Amount): <u>\$1,800,000</u> Final Contract Price (to include all modifications, if applicable): <u>\$1,800,000</u> Explain Differences: _____	
4. Project Description: Complexity of Work <input checked="" type="checkbox"/> High <input type="checkbox"/> Med <input type="checkbox"/> Routine How is this project relevant to project of submission? (Please provide details such as similar equipment, requirements, conditions, etc.) <u>Navigation structures, levees, pump stations</u>	
CLIENT INFORMATION (Client to complete Blocks 5-8)	
5. Client Information Name: <u>DURWARD E. LEE</u> Title: <u>Deputy Chief PPMO</u> Phone Number: <u>504 862 7204</u> Email Address: <u>durward.lee@usace.army.mil</u>	
6. Describe the client's role in the project: <u>MSMM served as the designer of record for the SUBJECT PROJECT</u>	
7. Date Questionnaire was completed (mm/dd/yy): <u>6/28/13</u>	
8. Client's Signature: <u></u>	

NOTE: NAVFAC/USACE requests that the client completes this questionnaire and submits directly back to the offeror. The offeror will submit the completed questionnaire to USACE with their proposal, and may duplicate this questionnaire for future submission on USACE solicitations. Clients are highly encouraged to submit questionnaires directly to the offeror. However, questionnaires may be submitted directly to USACE. Please contact the offeror for USACE POC information. The Government reserves the right to verify any and all information on this form.

NAVFAC / USACE Past Performance Questionnaire (PPQ)

Form PPQ -0 (9/30/11)

**ADJECTIVE RATINGS AND DEFINITIONS TO BE USED TO BEST REFLECT
YOUR EVALUATION OF THE CONTRACTOR'S PERFORMANCE**

RATING	DEFINITION	NOTE
(E) Exceptional	Performance meets contractual requirements and exceeds many to the Government/Owner's benefit. The contractual performance of the element or sub-element being assessed was accomplished with few minor problems for which corrective actions taken by the contractor was highly effective.	An Exceptional rating is appropriate when the Contractor successfully performed multiple significant events that were of benefit to the Government/Owner. A singular benefit, however, could be of such magnitude that it alone constitutes an Exceptional rating. Also, there should have been NO significant weaknesses identified.
(VG) Very Good	Performance meets contractual requirements and exceeds some to the Government's/Owner's benefit. The contractual performance of the element or sub-element being assessed was accomplished with some minor problems for which corrective actions taken by the contractor were effective.	A Very Good rating is appropriate when the Contractor successfully performed a significant event that was a benefit to the Government/Owner. There should have been no significant weaknesses identified.
(S) Satisfactory	Performance meets minimum contractual requirements. The contractual performance of the element or sub-element contains some minor problems for which corrective actions taken by the contractor appear or were satisfactory.	A Satisfactory rating is appropriate when there were only minor problems, or major problems that the contractor recovered from without impact to the contract. There should have been NO significant weaknesses identified. Per DOD policy, a fundamental principle of assigning ratings is that contractors will not be assessed a rating lower than Satisfactory solely for not performing beyond the requirements of the contract.
(M) Marginal	Performance does not meet some contractual requirements. The contractual performance of the element or sub-element being assessed reflects a serious problem for which the contractor has not yet identified corrective actions. The contractor's proposed actions appear only marginally effective or were not fully implemented.	A Marginal is appropriate when a significant event occurred that the contractor had trouble overcoming which impacted the Government/Owner.
(U) Unsatisfactory	Performance does not meet most contractual requirements and recovery is not likely in a timely manner. The contractual performance of the element or sub-element contains serious problem(s) for which the contractor's corrective actions appear or were ineffective.	An Unsatisfactory rating is appropriate when multiple significant events occurred that the contractor had trouble overcoming and which impacted the Government/Owner. A singular problem, however, could be of such serious magnitude that it alone constitutes an unsatisfactory rating.
(N) Not Applicable	No information or did not apply to your contract	Rating will be neither positive nor negative.

NAVFAC / USACE Past Performance Questionnaire (PPQ)

Form PPQ -0 (9/30/11)

TO BE COMPLETED BY CLIENT

PLEASE SELECT THE ADJECTIVE RATING WHICH BEST REFLECTS YOUR EVALUATION OF THE CONTRACTOR'S PERFORMANCE.	
1. QUALITY	
a) Quality of technical data/report preparation efforts	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
b) Ability to meet quality standards specified for technical performance	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
c) Timeliness/effectiveness of contract problem resolution without extensive customer guidance	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
d) Adequacy/effectiveness of quality control program and adherence to contract quality assurance requirements (without adverse effect on performance)	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
2. SCHEDULE/TIMELINESS OF PERFORMANCE	
a) Compliance with contract delivery/completion schedules including any significant intermediate milestones. (<i>If liquidated damages were assessed or the schedule was not met, please address below</i>)	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
b) Rate the contractor's use of available resources to accomplish tasks identified in the contract	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
3. CUSTOMER SATISFACTION	
a) To what extent were the end users satisfied with the project?	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
b) Contractor was reasonable and cooperative in dealing with your staff (including the ability to successfully resolve disagreements/disputes; responsiveness to administrative reports, businesslike and communication)	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
c) To what extent was the contractor cooperative, businesslike, and concerned with the interests of the customer?	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
d) Overall customer satisfaction	<input checked="" type="radio"/> E <input type="radio"/> VG <input checked="" type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
4. MANAGEMENT/ PERSONNEL/LABOR	
a) Effectiveness of on-site management, including management of subcontractors, suppliers, materials, and/or labor force?	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
b) Ability to hire, apply, and retain a qualified workforce to this effort	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
c) Government Property Control	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
d) Knowledge/expertise demonstrated by contractor personnel	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
e) Utilization of Small Business concerns	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
f) Ability to simultaneously manage multiple projects with multiple disciplines	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
g) Ability to assimilate and incorporate changes in requirements and/or priority, including planning, execution and response to Government changes	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
h) Effectiveness of overall management (including ability to effectively lead, manage and control the program)	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
5. COST/FINANCIAL MANAGEMENT	
a) Ability to meet the terms and conditions within the contractually agreed price(s)?	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N

NAVFAC / USACE Past Performance Questionnaire (PPQ)

Form PPQ -0 (9/30/11)

b) Contractor proposed innovative alternative methods/processes that reduced cost, improved maintainability or other factors that benefited the client	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
c) If this is/was a Government cost type contract, please rate the Contractor's timeliness and accuracy in submitting monthly invoices with appropriate back-up documentation, monthly status reports/budget variance reports, compliance with established budgets and avoidance of significant and/or unexplained variances (under runs or overruns)	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
d) Is the Contractor's accounting system adequate for management and tracking of costs? <i>If no, please explain in Remarks section.</i>	<input checked="" type="radio"/> Yes <input type="checkbox"/> No
e) If this is/was a Government contract, has/was this contract been partially or completely terminated for default or convenience or are there any pending terminations? <i>Indicate if show cause or cure notices were issued, or any default action in comment section below.</i>	<input type="checkbox"/> Yes <input checked="" type="radio"/> No
f) Have there been any indications that the contractor has had any financial problems? <i>If yes, please explain below.</i>	<input type="checkbox"/> Yes <input checked="" type="radio"/> No
6. SAFETY/SECURITY	
a) To what extent was the contractor able to maintain an environment of safety, adhere to its approved safety plan, and respond to safety issues? (Includes: following the users rules, regulations, and requirements regarding housekeeping, safety, correction of noted deficiencies, etc.)	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
b) Contractor complied with all security requirements for the project and personnel security requirements.	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
7. GENERAL	
a) Ability to successfully respond to emergency and/or surge situations (including notifying COR, PM or Contracting Officer in a timely manner regarding urgent contractual issues).	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
b) Compliance with contractual terms/provisions (<i>explain if specific issues</i>)	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
c) Would you hire or work with this firm again? (<i>If no, please explain below</i>)	<input checked="" type="radio"/> Yes <input type="checkbox"/> No
d) In summary, provide an overall rating for the work performed by this contractor.	<input checked="" type="radio"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N

Please provide responses to the questions above (*if applicable*) and/or additional remarks. Furthermore, please provide a brief narrative addressing specific strengths, weaknesses, deficiencies, or other comments which may assist our office in evaluating performance risk (*please attach additional pages if necessary*):

The Harahan Pump to the river was a complex project with local sponsors and various stakeholders.

MSMM brought in team which provided excellent services and problem resolutions. During the construction they identified quick solutions to any issues. MSMM worked well with their team and USACE, and we met the schedule on time. Overall quality and communication was excellent and would recommend working with them.

NAVFAC / USACE Past Performance Questionnaire (PPQ)

Form PPQ -0 (9/30/11)

NAVFAC/USACE PAST PERFORMANCE QUESTIONNAIRE (Form PPQ-0)**CONTRACT INFORMATION (Contractor to complete Blocks 1-4)****1. Contractor Information**

Firm Name: Burk-Kleinpetter, Inc.

Address: 4176 Canal Street

Phone Number: (504) 489-5901

Email Address: mchopin@bkiusa.com

Point of Contact: Michael D Chopin

CAGE Code: 0GL22

UEI Number: TT9AGM31ZHM5

Contact Phone Number: (504) 485-5901

2. Work Performed as: Prime Contractor Sub Contractor Joint Venture Other (Explain)

Percent of project work performed: 50% Design - Joint Venture EDC - Prime

If subcontractor, who was the prime (Name/Phone #):

3. Contract Information

Contract Number: W912P806C0173 & W912P809D0029

Delivery/Task Order Number (if applicable):

Contract Type: Firm Fixed Price Cost Reimbursement Other (Please specify):

Contract Title: IDIQ USACE New Orleans District

Contract Location: New Orleans, Louisiana

Award Date (mm/dd/yy): 07/17/2006

Contract Completion Date (mm/dd/yy): 03/01/2012

Actual Completion Date (mm/dd/yy): 03/01/2012

Explain Differences: _____

Original Contract Price (Award Amount): \$929,070

Final Contract Price (to include all modifications, if applicable): \$1,558,930

Explain Differences: Multiple Government-initiated redesigns due to changes in structural elevation

4. Project Description:Complexity of Work High Med Routine

How is this project relevant to project of submission? (Please provide details such as similar equipment, requirements, conditions, etc.) This project consists of floodwalls, floodgates, earthen levees, pump stations, utility relocations, right-of-way drawings, engineering design, plans and specifications, and engineering during advertising and construction

CLIENT INFORMATION (Client to complete Blocks 5-8)**5. Client Information**

Name: Rob Dauenhauer, PE - CEMVN

Title: Supervisory Structural Engineer

Phone Number: 504-862-1840

Email Address: Rob.M.Dauenhauer@usace.army.mil

6. Describe the client's role in the project: I was the COR for the EDC Contract and was supervisor of the engineers managing the design contract.**7. Date Questionnaire was completed (mm/dd/yy):** 06/29/2023**8. Client's Signature:** DAUENHAUER.ROB.MICHAEL.1230860811

Digitally signed by DAUENHAUER.ROB.MICHAEL.1230860811

Date: 2023.06.29 12:02:50 -05'00'

NOTE: NAVFAC/USACE requests that the client completes this questionnaire and submits directly back to the offeror. The offeror will submit the completed questionnaire to USACE with their proposal, and may duplicate this questionnaire for future submission on USACE solicitations. Clients are highly encouraged to submit questionnaires directly to the offeror. However, questionnaires may be submitted directly to USACE. Please contact the offeror for USACE POC information. The Government reserves the right to verify any and all information on this form.

NAVFAC / USACE Past Performance Questionnaire (PPQ)

Form PPQ -0 (9/30/11)

**ADJECTIVE RATINGS AND DEFINITIONS TO BE USED TO BEST REFLECT
YOUR EVALUATION OF THE CONTRACTOR'S PERFORMANCE**

RATING	DEFINITION	NOTE
(E) Exceptional	Performance meets contractual requirements and exceeds many to the Government/Owner's benefit. The contractual performance of the element or sub-element being assessed was accomplished with few minor problems for which corrective actions taken by the contractor was highly effective.	An Exceptional rating is appropriate when the Contractor successfully performed multiple significant events that were of benefit to the Government/Owner. A singular benefit, however, could be of such magnitude that it alone constitutes an Exceptional rating. Also, there should have been NO significant weaknesses identified.
(VG) Very Good	Performance meets contractual requirements and exceeds some to the Government's/Owner's benefit. The contractual performance of the element or sub-element being assessed was accomplished with some minor problems for which corrective actions taken by the contractor were effective.	A Very Good rating is appropriate when the Contractor successfully performed a significant event that was a benefit to the Government/Owner. There should have been no significant weaknesses identified.
(S) Satisfactory	Performance meets minimum contractual requirements. The contractual performance of the element or sub-element contains some minor problems for which corrective actions taken by the contractor appear or were satisfactory.	A Satisfactory rating is appropriate when there were only minor problems, or major problems that the contractor recovered from without impact to the contract. There should have been NO significant weaknesses identified. Per DOD policy, a fundamental principle of assigning ratings is that contractors will not be assessed a rating lower than Satisfactory solely for not performing beyond the requirements of the contract.
(M) Marginal	Performance does not meet some contractual requirements. The contractual performance of the element or sub-element being assessed reflects a serious problem for which the contractor has not yet identified corrective actions. The contractor's proposed actions appear only marginally effective or were not fully implemented.	A Marginal is appropriate when a significant event occurred that the contractor had trouble overcoming which impacted the Government/Owner.
(U) Unsatisfactory	Performance does not meet most contractual requirements and recovery is not likely in a timely manner. The contractual performance of the element or sub-element contains serious problem(s) for which the contractor's corrective actions appear or were ineffective.	An Unsatisfactory rating is appropriate when multiple significant events occurred that the contractor had trouble overcoming and which impacted the Government/Owner. A singular problem, however, could be of such serious magnitude that it alone constitutes an unsatisfactory rating.
(N) Not Applicable	No information or did not apply to your contract	Rating will be neither positive nor negative.

NAVFAC / USACE Past Performance Questionnaire (PPQ)

Form PPQ -0 (9/30/11)

TO BE COMPLETED BY CLIENT

**PLEASE SELECT THE ADJECTIVE RATING WHICH BEST REFLECTS
YOUR EVALUATION OF THE CONTRACTOR'S PERFORMANCE.**

1. QUALITY	
a) Quality of technical data/report preparation efforts	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
b) Ability to meet quality standards specified for technical performance	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
c) Timeliness/effectiveness of contract problem resolution without extensive customer guidance	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
d) Adequacy/effectiveness of quality control program and adherence to contract quality assurance requirements (without adverse effect on performance)	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
2. SCHEDULE/TIMELINESS OF PERFORMANCE	
a) Compliance with contract delivery/completion schedules including any significant intermediate milestones. (<i>If liquidated damages were assessed or the schedule was not met, please address below</i>)	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
b) Rate the contractor's use of available resources to accomplish tasks identified in the contract	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
3. CUSTOMER SATISFACTION	
a) To what extent were the end users satisfied with the project?	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
b) Contractor was reasonable and cooperative in dealing with your staff (including the ability to successfully resolve disagreements/disputes; responsiveness to administrative reports, businesslike and communication)	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
c) To what extent was the contractor cooperative, businesslike, and concerned with the interests of the customer?	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
d) Overall customer satisfaction	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
4. MANAGEMENT/ PERSONNEL/LABOR	
a) Effectiveness of on-site management, including management of subcontractors, suppliers, materials, and/or labor force?	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
b) Ability to hire, apply, and retain a qualified workforce to this effort	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
c) Government Property Control	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
d) Knowledge/expertise demonstrated by contractor personnel	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
e) Utilization of Small Business concerns	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
f) Ability to simultaneously manage multiple projects with multiple disciplines	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
g) Ability to assimilate and incorporate changes in requirements and/or priority, including planning, execution and response to Government changes	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
h) Effectiveness of overall management (including ability to effectively lead, manage and control the program)	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
5. COST/FINANCIAL MANAGEMENT	
a) Ability to meet the terms and conditions within the contractually agreed price(s)?	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N

NAVFAC / USACE Past Performance Questionnaire (PPQ)

Form PPQ -0 (9/30/11)

b) Contractor proposed innovative alternative methods/processes that reduced cost, improved maintainability or other factors that benefited the client	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
c) If this is/was a Government cost type contract, please rate the Contractor's timeliness and accuracy in submitting monthly invoices with appropriate back-up documentation, monthly status reports/budget variance reports, compliance with established budgets and avoidance of significant and/or unexplained variances (under runs or overruns)	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
d) Is the Contractor's accounting system adequate for management and tracking of costs? <i>If no, please explain in Remarks section.</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
e) If this is/was a Government contract, has/was this contract been partially or completely terminated for default or convenience or are there any pending terminations? <i>Indicate if show cause or cure notices were issued, or any default action in comment section below.</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
f) Have there been any indications that the contractor has had any financial problems? <i>If yes, please explain below.</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
6. SAFETY/SECURITY	
a) To what extent was the contractor able to maintain an environment of safety, adhere to its approved safety plan, and respond to safety issues? (Includes: following the users rules, regulations, and requirements regarding housekeeping, safety, correction of noted deficiencies, etc.)	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
b) Contractor complied with all security requirements for the project and personnel security requirements.	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
7. GENERAL	
a) Ability to successfully respond to emergency and/or surge situations (including notifying COR, PM or Contracting Officer in a timely manner regarding urgent contractual issues).	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
b) Compliance with contractual terms/provisions (<i>explain if specific issues</i>)	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
c) Would you hire or work with this firm again? (<i>If no, please explain below</i>)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
d) In summary, provide an overall rating for the work performed by this contractor.	<input type="radio"/> E <input checked="" type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N

Please provide responses to the questions above (*if applicable*) and/or additional remarks. Furthermore, please provide a brief narrative addressing specific strengths, weaknesses, deficiencies, or other comments which may assist our office in evaluating performance risk (*please attach additional pages if necessary*):

During the Design Phase, BKI were responsive and provided timely feedback. All submittals were timely and good quality. They were easy to work with and adaptive to changes in the design. The Mechanical Engineering team was excellent, especially when providing input and design for the expansion couplings. Structural Designs were very good and timely when developing and providing design revisions. Civil and Geotechnical Engineering was of high quality for these designs. The Team did a very good job executing the requirements of the contract and I would recommend for future work based on this performance. During the EDC Phase, the overall quality was very good. The Team was excellent in management and adhering to schedules and very timely on all responses. They performed site visits and were timely on all trip reports. Submittal reviews and RFI were often returned prior to deadlines with quality responses.

FOR OFFICIAL USE ONLY / SOURCE SELECTION INFORMATION - SEE FAR 2.101 and 3.104

PERFORMANCE EVALUATION (ARCHITECT-ENGINEER)						A-E CONTRACTOR I.D. NUMBER (For ACASS use only) 002895576	
						1. A-E CONTRACT NUMBER W912P806C0173	
						2. CONSTRUCTION CONTRACT NUMBER	
IMPORTANT: Be sure to complete back of form. If additional space is necessary for any item, use Remarks section on back.							
3. TYPE OF EVALUATION: a. PHASE OF COMPLETION b. COMPLETION (X one) c. X IF APPLICABLE <input type="checkbox"/> INTERIM (100%) <input checked="" type="checkbox"/> FINAL <input type="checkbox"/> DESIGN <input type="checkbox"/> ENGINEERING SERVICES <input type="checkbox"/> CONSTRUCTION <input type="checkbox"/> TERMINATION <i>(Explain in Remarks)</i>						4. PROJECT NUMBER WBV-3a, 3b	5. DELIVERY ORDER NO.(S) (If applicable)
6. NAME AND ADDRESS OF A-E CONTRACTOR B K I / DEI 4176 CANAL ST NEW ORLEANS LA 70119 USA				7a. PROJECT TITLE AND LOCATION WBV-3a and 3b: Harvey Canal Floodwalls, Hero Pump Sta. to Algiers Canal			
				7b. DESCRIPTION OF PROJECT IF NOT EXPLAINED BY TITLE This project consisted of design of pump station fronting protection, steel roller gates, floodwall through an industrial corridor, and levee.			
8. NAME, ADDRESS AND PHONE NUMBER OF OFFICE RESPONSIBLE FOR:							
a. SELECTION OF A-E CONTRACTOR CEMVN-ED (504) 862-2240				b. NEGOTIATION/AWARD OF A-E CONTRACT XU W07V ENDIST N ORLEANS			
c. ADMINISTRATION OF A-E CONTRACT CEMVN-CT				d. ADMINISTRATOR OF CONSTRUCTION CONTRACT			
9. A-E CONTRACT DATA (Items 9d thru 9g are not applicable during construction unless there are modifications to the A-E contract.)							
a. TYPE OF WORK (Design, study, etc.) Design, P&S, and Engineering During Construction				b. TYPE OF CONTRACT <input checked="" type="checkbox"/> FIRM FIXED-PRICE <input type="checkbox"/> COST-REIMBURSEMENT	INDEFINITE DELIVERY/INDEFINITE QUANTITY (IDIQ) <input type="checkbox"/> TASK ORDER UNDER ID/IQ <input type="checkbox"/> OTHER (Specify)		
c. PROJECT COMPLEXITY <input checked="" type="checkbox"/> DIFFICULT <input type="checkbox"/> ROUTINE		d. CONTRACT OR TASK ORDER AMOUNT (1) INITIAL FEE \$755,000 (2) CONTRACT OR TASK ORDER MODIFICATIONS NO. 6 AMOUNT \$629,860 (3) TOTAL FEE \$1,384,860					
e. CONTRACT OR TASK ORDER AWARD DATE 07/17/2006			f. NEGOTIATED CONTRACT OR TASK ORDER COMPLETION DATE (or number of days) (including extensions) 08/30/2008			g. ACTUAL CONTRACT OR TASK ORDER COMPLETION DATE (or number of days) 08/30/2008	
10. CONSTRUCTION CONTRACT DATA (Not applicable at completion of design or engineering services not involving construction.)							
a. CONSTRUCTION COSTS		(1) AUTHORIZED CONSTRUCTION COST		(2) A-E ESTIMATE FOR BID ITEMS AWARDED		(3) AWARD AMOUNT	
b. DATA AT TIME OF CONSTRUCTION COMPLETION (Completion date _____)				NUMBER		TOTAL COST	
(1) CONSTRUCTION MODIFICATIONS							
(2) CONSTRUCTION MODIFICATIONS ARISING FROM DESIGN DEFICIENCIES							
11. A-E LIABILITY		NONE <input checked="" type="checkbox"/>	UNDETERMINED <input type="checkbox"/>	PENDING		SETTLEMENT	
12. OVERALL RATING				13. RECOMMENDED FOR FUTURE CONTRACTS?			
<input type="checkbox"/> EXCEPTIONAL <input type="checkbox"/> SATISFACTORY <input type="checkbox"/> UNSATISFACTORY <input checked="" type="checkbox"/> VERY GOOD <input type="checkbox"/> MARGINAL				<input checked="" type="checkbox"/> YES <input type="checkbox"/> CONDITIONALLY NO (Explain "No" or "Conditionally" in Remarks.)			
14a. NAME, TITLE AND OFFICE OF RATING OFFICIAL CHRISTOPHER L. DUNN SUPERVISORY STRUCTURAL ENGINEER CEMVN-ED-T TELEPHONE NUMBER: (504) 862-1799				15a. NAME, TITLE AND OFFICE OF REVIEWING OFFICIAL JOHN BAILEN ASSISTANT TO CHIEF ED-E USACE, NEW ORLEANS DISTRICT TELEPHONE NUMBER: 504-862-2612			
b. SIGNATURE: //Electronically Signed// AGENCY USE: (Distribution, etc.)		c. DATE: 09/21/2010		b. SIGNATURE: //Electronically Signed// c. DATE: (Official Report date) 10/12/2010			

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16. QUALITY OF A-E SERVICES BY DISCIPLINE (Completion mandatory for both DESIGN and CONSTRUCTION phases and Engineering Service)										
a. DISCIPLINES (If applicable)	DESIGN/SERVICES					CONSTRUCTION				
	EXCEP-TIONAL	VERY GOOD	SATIS-FAC-TORY	MARGINAL	UNSATIS-FAC-TORY	EXCEP-TIONAL	VERY GOOD	SATIS-FAC-TORY	MARGINAL	UNSATIS-FAC-TORY
Architectural										
Structural		X								
Civil		X								
Mechanical	X									
Electrical		X								
Fire Protection										
Surveying, Mapping, & Geospatial Information Svcs.		X								
Cost Estimating										
Value Engineering										
Environmental Engineering										
Geotechnical Engineering		X								
Master Planning										
Hydrology										
Chemical Engineering										
Geology										
Chemistry										
Risk Assessment										
Safety/Occupational Health										
Hydrographic Surveying										
17. DESIGN PHASE OR ENGINEERING SERVICES (Quality of A-E Services Evaluation)						16b. DISCIPLINE, NAME AND ADDRESS OF KEY CONSULTANT(S) (If applicable) NAME: Eustis Engineering ADDRESS: 3011 28th Street, Metairie, LA 70002 DISCIPLINE: Geotechnical				
ATTRIBUTES (If applicable)	EXCEP-TIONAL	VERY GOOD	SATIS-FAC-TORY	MARGINAL	UNSATIS-FAC-TORY					
Thoroughness of Site Investigation/Field Analysis		X								
Quality Control Procedures and Execution		X								
Plans/Specs Accurate and Coordinated		X								
Plans Clear and Detailed Sufficiently		X								
Management and Adherence to Schedules		X								
Meeting Cost Limitations		X								
Suitability of Design or Study Results		X								
Solution Environmentally Suitable		X								
Cooperativeness and Responsiveness		X								
Quality of Briefing and Presentations										
Innovative Approaches/Technologies										
Implementation of Sm. Business Subcontracting Plan										
18. HOW MANY 100% FINAL RESUBMITTALS WERE REQUIRED BECAUSE OF POOR A-E PERFORMANCE?	0									
19. CONSTRUCTION PHASE (Quality of A-E Services Evaluation)										
ATTRIBUTES (If applicable)	EXCEP-TIONAL	VERY GOOD	SATIS-FAC-TORY	MARGINAL	UNSATIS-FAC-TORY					
Plans Clear and Detailed Sufficiently										
Drawings Reflect True Conditions										
Plans/Specs Accurate and Coordinated										
Design Constructability										
Cooperativeness and Responsiveness										
Timeliness and Quality of Processing Submittals										
Product & Equipment Selections Readily Available										
Timeliness of Answers to Design Questions										
Field Consultation and Investigations										
Quality of Construction Support Services										
20. REMARKS (Attach additional sheet(s) or documentation if necessary)										
PLEASE SEE CONTINUATION SHEET .										

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Does this contract include a subcontracting plan? No

Is small business subcontracting under this contract included in a comprehensive small business subcontracting plan? N/A

Is small business subcontracting under this contract included in a commercial small business subcontracting plan? N/A

Date of last Individual Subcontracting Report (ISR) / Summary Subcontracting Report (SSR): N/A

RATING OFFICIAL REMARKS: *Ratings are based primarily on design phase, with some Engineering During Construction.

*BKI/DEI were responsive in all aspects when executing this contract. The team provided feedback in a timely manner when requested by the Technical Manager and COR.

*BKI/DEI were punctual with submittals and prepared quality designs.

*BKI/DEI proved to be very adaptable to changes, especially on this contract due to multiple Government-initiated redesigns due to changes in structure elevation.

*The BKI/DEI mechanical engineering team was excellent and provided timely and thorough feedback upon request, especially when addressing a change in expansion coupling, shifting from Dressler to Teeekay.

*Structural designs were largely high-quality. An issue with uplift on roller gates was discovered during construction and when brought to the A-Es attention, they responded immediately with corrective actions.

*Civil and Geotechnical designs were high quality.

*Overall the BKI/DEI team did a very good job in executing the requirements of this contract and based upon this performance I would recommend them for future contracts.

CONTRACTOR REMARKS: Enjoyed working with the staff of the New Orleans District on this project. Working together as a team with the District made this project a success. Look forward to working with the COE on future tasks / contracts.

CONCURRENCE: I concur with this evaluation.

CONTRACTOR NAME: MICHAEL CHOPIN

TITLE: REGIONAL VICE PRESIDENT

PHONE: 504-485-5901

DATE: 10/07/2010

REVIEWING OFFICIAL REMARKS: Concur

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PERFORMANCE EVALUATION (ARCHITECT-ENGINEER)		A-E CONTRACTOR I.D. NUMBER <small>(For ACASS use only)</small> <u>556225910</u> 1. A-E CONTRACT NUMBER <u>W912P809D0029</u> 2. CONSTRUCTION CONTRACT NUMBER																					
INCOMPLETE-REVIEWED																							
IMPORTANT: Be sure to complete back of form. If additional space is necessary for any item, use Remarks section on back.																							
3. TYPE OF EVALUATION: <table border="1" style="width: 100%;"> <tr> <td>a. PHASE OF COMPLETION</td> <td>b. COMPLETION (X one)</td> <td>c. X IF APPLICABLE</td> </tr> <tr> <td><input type="checkbox"/> INTERIM (<u>100 %</u>)</td> <td><input checked="" type="checkbox"/> FINAL</td> <td><input type="checkbox"/> DESIGN <input checked="" type="checkbox"/> ENGINEERING SERVICES</td> </tr> <tr> <td colspan="2"></td> <td><input type="checkbox"/> CONSTRUCTION</td> </tr> <tr> <td colspan="2"></td> <td><input type="checkbox"/> TERMINATION <small>(Explain in Remarks)</small></td> </tr> </table>		a. PHASE OF COMPLETION	b. COMPLETION (X one)	c. X IF APPLICABLE	<input type="checkbox"/> INTERIM (<u>100 %</u>)	<input checked="" type="checkbox"/> FINAL	<input type="checkbox"/> DESIGN <input checked="" type="checkbox"/> ENGINEERING SERVICES			<input type="checkbox"/> CONSTRUCTION			<input type="checkbox"/> TERMINATION <small>(Explain in Remarks)</small>	4. PROJECT NUMBER	5. DELIVERY ORDER NO.(S) (If applicable)								
a. PHASE OF COMPLETION	b. COMPLETION (X one)	c. X IF APPLICABLE																					
<input type="checkbox"/> INTERIM (<u>100 %</u>)	<input checked="" type="checkbox"/> FINAL	<input type="checkbox"/> DESIGN <input checked="" type="checkbox"/> ENGINEERING SERVICES																					
		<input type="checkbox"/> CONSTRUCTION																					
		<input type="checkbox"/> TERMINATION <small>(Explain in Remarks)</small>																					
			<u>0002</u>																				
6. NAME AND ADDRESS OF A-E CONTRACTOR BURK-KLEINPETER, INC. 4176 CANAL ST NEW ORLEANS LA 70119 US		7a. PROJECT TITLE AND LOCATION Hurricane Protection Project, Hero Pump Station Fronting Protection																					
		7b. DESCRIPTION OF PROJECT IF NOT EXPLAINED BY TITLE EDC services for the duration of construction of work of Hero Pump Station Fronting Protection																					
8. NAME, ADDRESS AND PHONE NUMBER OF OFFICE RESPONSIBLE FOR: <table border="1" style="width: 100%;"> <tr> <td>a. SELECTION OF A-E CONTRACTOR Walter O. Baumy, Jr., PE 504-862-2240</td> <td>b. NEGOTIATION/AWARD OF A-E CONTRACT Ione Cataldo 504-862-2882</td> </tr> <tr> <td>c. ADMINISTRATION OF A-E CONTRACT Rob M. Dauenhauer 504-862-1840</td> <td>d. ADMINISTRATON OF CONSTRUCTION CONTRACT</td> </tr> </table>				a. SELECTION OF A-E CONTRACTOR Walter O. Baumy, Jr., PE 504-862-2240	b. NEGOTIATION/AWARD OF A-E CONTRACT Ione Cataldo 504-862-2882	c. ADMINISTRATION OF A-E CONTRACT Rob M. Dauenhauer 504-862-1840	d. ADMINISTRATON OF CONSTRUCTION CONTRACT																
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9. A-E CONTRACT DATA <small>(Items 9d thru 9g are not applicable during construction unless there are modifications to the A-E contract.)</small> <table border="1" style="width: 100%;"> <tr> <td>a. TYPE OF WORK <small>(Design, study, etc.)</small> EDC</td> <td>b. TYPE OF CONTRACT</td> <td>INDEFINITE DELIVERY/INDEFINITE QUANTITY (IDIQ)</td> </tr> <tr> <td></td> <td><input type="checkbox"/> FIRM FIXED-PRICE</td> <td><input checked="" type="checkbox"/> TASK ORDER UNDER IDIQ</td> </tr> <tr> <td></td> <td><input type="checkbox"/> COST-REIMBURSEMENT</td> <td><input type="checkbox"/> OTHER <small>(Specify)</small></td> </tr> <tr> <td>c. PROJECT COMPLEXITY</td> <td colspan="2">d. CONTRACT OR TASK ORDER AMOUNT</td> </tr> <tr> <td><input type="checkbox"/> DIFFICULT <input checked="" type="checkbox"/> ROUTINE</td> <td>(1) INITIAL FEE <u>\$174,070</u></td> <td>(2) CONTRACT OR TASK ORDER MODIFICATIONS NO. _____ AMOUNT _____</td> <td>(3) TOTAL FEE <u>\$174,070</u></td> </tr> <tr> <td>e. CONTRACT OR TASK ORDER AWARD DATE <u>12/10/2009</u></td> <td>f. NEGOTIATED CONTRACT OR TASK ORDER COMPLETION DATE <small>(or number of days)</small> <small>(including extensions)</small> <u>03/01/2012</u></td> <td colspan="2">g. ACTUAL CONTRACT OR TASK ORDER COMPLETION DATE <small>(or number of days)</small> <u>03/01/2012</u></td> </tr> </table>				a. TYPE OF WORK <small>(Design, study, etc.)</small> EDC	b. TYPE OF CONTRACT	INDEFINITE DELIVERY/INDEFINITE QUANTITY (IDIQ)		<input type="checkbox"/> FIRM FIXED-PRICE	<input checked="" type="checkbox"/> TASK ORDER UNDER IDIQ		<input type="checkbox"/> COST-REIMBURSEMENT	<input type="checkbox"/> OTHER <small>(Specify)</small>	c. PROJECT COMPLEXITY	d. CONTRACT OR TASK ORDER AMOUNT		<input type="checkbox"/> DIFFICULT <input checked="" type="checkbox"/> ROUTINE	(1) INITIAL FEE <u>\$174,070</u>	(2) CONTRACT OR TASK ORDER MODIFICATIONS NO. _____ AMOUNT _____	(3) TOTAL FEE <u>\$174,070</u>	e. CONTRACT OR TASK ORDER AWARD DATE <u>12/10/2009</u>	f. NEGOTIATED CONTRACT OR TASK ORDER COMPLETION DATE <small>(or number of days)</small> <small>(including extensions)</small> <u>03/01/2012</u>	g. ACTUAL CONTRACT OR TASK ORDER COMPLETION DATE <small>(or number of days)</small> <u>03/01/2012</u>	
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(1) CONSTRUCTION MODIFICATIONS																							
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11. A-E LIABILITY		<input checked="" type="checkbox"/> NONE <input type="checkbox"/> UNDETERMINED <input type="checkbox"/> PENDING <input type="checkbox"/> SETTLEMENT																					
12. OVERALL RATING		13. RECOMMENDED FOR FUTURE CONTRACTS? <input type="checkbox"/> YES <input type="checkbox"/> CONDITIONALLY <input checked="" type="checkbox"/> VERY GOOD <input type="checkbox"/> MARGINAL <small>NO (Explain "No" or "Conditionally" in Remarks.)</small>																					
14a. NAME, TITLE AND OFFICE OF RATING OFFICIAL ROB M. DAUENHAUER SUPERVISORY STRUCTURAL ENGINEER USACE		15a. NAME, TITLE AND OFFICE OF REVIEWING OFFICIAL <small>TELEPHONE NUMBER:</small> <u>504-862-1840</u>																					
b. SIGNATURE: <small>//Electronically Signed//</small>		c. DATE: <u>05/09/2012</u>	b. SIGNATURE: <small>TELEPHONE NUMBER:</small> <small>c. DATE: (Official Report date)</small>																				
AGENCY USE: <small>(Distribution, etc.)</small>																							

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16. QUALITY OF A-E SERVICES BY DISCIPLINE <small>(Completion mandatory for both DESIGN and CONSTRUCTION phases and Engineering Service)</small>									
a. DISCIPLINES (If applicable)	DESIGN/SERVICES					CONSTRUCTION			
	EXCEP-TIONAL	VERY GOOD	SATIS-FACTORY	MARGINAL	UNSATIS-FACTORY	EXCEP-TIONAL	VERY GOOD	SATIS-FACTORY	MARGINAL
Architectural									
Structural		X							
Civil		X							
Mechanical		X							
Electrical		X							
Fire Protection									
Surveying, Mapping, & Geospatial Information Svcs.									
Cost Estimating									
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Hydrology									
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Risk Assessment									
Safety/Occupational Health									
Hydrographic Surveying									
17. DESIGN PHASE OR ENGINEERING SERVICES (Quality of A-E Services Evaluation)									
ATTRIBUTES (If applicable)	EXCEP-TIONAL	VERY GOOD	SATIS-FACTORY	MARGINAL	UNSATIS-FACTORY	16b. DISCIPLINE, NAME AND ADDRESS OF KEY CONSULTANT(S) (If applicable)			
Thoroughness of Site Investigation/Field Analysis		X							
Quality Control Procedures and Execution									
Plans/Specs Accurate and Coordinated									
Plans Clear and Detailed Sufficiently									
Management and Adherence to Schedules	X								
Meeting Cost Limitations									
Suitability of Design or Study Results									
Solution Environmentally Suitable									
Cooperativeness and Responsiveness	X								
Quality of Briefing and Presentations									
Innovative Approaches/Technologies									
Implementation of Sm. Business Subcontracting Plan									
18. HOW MANY 100% FINAL RESUBMITTALS WERE REQUIRED BECAUSE OF POOR A-E PERFORMANCE?									
19. CONSTRUCTION PHASE (Quality of A-E Services Evaluation)									
ATTRIBUTES (If applicable)	EXCEP-TIONAL	VERY GOOD	SATIS-FACTORY	MARGINAL	UNSATIS-FACTORY				
Plans Clear and Detailed Sufficiently									
Drawings Reflect True Conditions									
Plans/Specs Accurate and Coordinated									
Design Constructability									
Cooperativeness and Responsiveness									
Timeliness and Quality of Processing Submittals									
Product & Equipment Selections Readily Available									
Timeliness of Answers to Design Questions									
Field Consultation and Investigations									
Quality of Construction Support Services									
20. REMARKS (Attach additional sheet(s) or documentation if necessary)									
PLEASE SEE CONTINUATION SHEET.									

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Does this contract include a subcontracting plan? No

Date of last Individual Subcontracting Report (ISR) / Summary Subcontracting Report (SSR): N/A

20. REMARKS

RATING OFFICIAL REMARKS: A-E performed site visits as required and provided prompt and concise trip reports. Submittals and RFI reviews were prompt and often were returned prior to the required due date.

CONTRACTOR REMARKS: Enjoyed working with the Corps of Engineers on this important project and look forward to future assignments.

CONCURRENCE: I concur with this evaluation.

CONTRACTOR NAME: MICHAEL D CHOPIN

TITLE: REGIONAL VICE PRESIDENT

PHONE: (504) 486-5901

DATE: 05/10/2012

NAVFAC / USACE Past Performance Questionnaire (PPQ)

Form PPQ -0 (9/30/11)

NAVFAC/USACE PAST PERFORMANCE QUESTIONNAIRE (Form PPQ-0)**CONTRACT INFORMATION (Contractor to complete Blocks 1-4)****1. Contractor Information**Firm Name: HNTB CorporationCAGE Code: 1EQW7Address: 2021 Lakeshore Dr. Suite 300, New Orleans, LA 70122DUNS Number: (UEI) RHXDZZEKQ3X7Phone Number: 504-872-3000Email Address: bpowell@hntb.com

Point of Contact: Brian Powell

Contact Phone Number: 504-872-3022**2. Work Performed as:** Prime Contractor Sub Contractor Joint Venture Other (Explain)Percent of project work performed: 34%If subcontractor, who was the prime (Name/Phone #): Arcadis-Bioengineering JV/David Escude PE, Senior Vice President, 225-205-8250**3. Contract Information**Contract Number: W912P8-07-D-0062Delivery/Task Order Number (if applicable): 0018Contract Type: Firm Fixed Price Cost Reimbursement Other (Please specify): _____Contract Title: GEOTECHNICAL REPORT, PLANS AND SPECIFICATIONS (P&S), ENGINEERING DURING ADVERTISEMENT (EDA), ENGINEERING DURING CONSTRUCTION (EDC), WBV -9a EASTERN TIE-IN, HERO TO OAKVILLE, PHASE II FIRST LIFT LEVEE ENLARGEMENT PLAQUEMINES PARISH, LOUISIANA.Contract Location: USACE New Orleans DistrictAward Date (mm/dd/yy): 04/17/2009Contract Completion Date (mm/dd/yy): 02/19/2011Actual Completion Date (mm/dd/yy): ~10/01/2011Explain Differences: Additional work scoped and construction delays.Original Contract Price (Award Amount): \$ 2,809,403Final Contract Price (to include all modifications, if applicable): \$ 3,168,888Explain Differences: There were six mods for additional tasks.**4. Project Description:**Complexity of Work High Med RoutineHow is this project relevant to project of submission? (Please provide details such as similar equipment, requirements, conditions, etc.) Storm damage risk reduction project with levee, floodwall, pump station, drainage structure and other features**CLIENT INFORMATION (Client to complete Blocks 5-8)****5. Client Information**Name: Mr. Richard Varuso, PhD, PETitle: Geotechnical Branch ChiefPhone Number: (504) 862-2984Email Address: richard.j.varuso@usace.army.mil**6. Describe the client's role in the project:** Geotechnical Deputy Branch Chief and overall geotechnical technical manager**7. Date Questionnaire was completed (mm/dd/yy):** 06/29/23**8. Client's Signature:** 

NOTE: NAVFAC/USACE requests that the client completes this questionnaire and submits directly back to the offeror. The offeror will submit the completed questionnaire to USACE with their proposal, and may duplicate this questionnaire for future submission on USACE solicitations. Clients are highly encouraged to submit questionnaires directly to the offeror. However, questionnaires may be submitted directly to USACE. Please contact the offeror for USACE POC information. The Government reserves the right to verify any and all information on this form.

NAVFAC / USACE Past Performance Questionnaire (PPQ)

Form PPQ -0 (9/30/11)

**ADJECTIVE RATINGS AND DEFINITIONS TO BE USED TO BEST REFLECT
YOUR EVALUATION OF THE CONTRACTOR'S PERFORMANCE**

RATING	DEFINITION	NOTE
(E) Exceptional	Performance meets contractual requirements and exceeds many to the Government/Owner's benefit. The contractual performance of the element or sub-element being assessed was accomplished with few minor problems for which corrective actions taken by the contractor was highly effective.	An Exceptional rating is appropriate when the Contractor successfully performed multiple significant events that were of benefit to the Government/Owner. A singular benefit, however, could be of such magnitude that it alone constitutes an Exceptional rating. Also, there should have been NO significant weaknesses identified.
(VG) Very Good	Performance meets contractual requirements and exceeds some to the Government's/Owner's benefit. The contractual performance of the element or sub-element being assessed was accomplished with some minor problems for which corrective actions taken by the contractor were effective.	A Very Good rating is appropriate when the Contractor successfully performed a significant event that was a benefit to the Government/Owner. There should have been no significant weaknesses identified.
(S) Satisfactory	Performance meets minimum contractual requirements. The contractual performance of the element or sub-element contains some minor problems for which corrective actions taken by the contractor appear or were satisfactory.	A Satisfactory rating is appropriate when there were only minor problems, or major problems that the contractor recovered from without impact to the contract. There should have been NO significant weaknesses identified. Per DOD policy, a fundamental principle of assigning ratings is that contractors will not be assessed a rating lower than Satisfactory solely for not performing beyond the requirements of the contract.
(M) Marginal	Performance does not meet some contractual requirements. The contractual performance of the element or sub-element being assessed reflects a serious problem for which the contractor has not yet identified corrective actions. The contractor's proposed actions appear only marginally effective or were not fully implemented.	A Marginal is appropriate when a significant event occurred that the contractor had trouble overcoming which impacted the Government/Owner.
(U) Unsatisfactory	Performance does not meet most contractual requirements and recovery is not likely in a timely manner. The contractual performance of the element or sub-element contains serious problem(s) for which the contractor's corrective actions appear or were ineffective.	An Unsatisfactory rating is appropriate when multiple significant events occurred that the contractor had trouble overcoming and which impacted the Government/Owner. A singular problem, however, could be of such serious magnitude that it alone constitutes an unsatisfactory rating.
(N) Not Applicable	No information or did not apply to your contract	Rating will be neither positive nor negative.

NAVFAC / USACE Past Performance Questionnaire (PPQ)

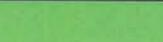
Form PPQ -0 (9/30/11)

TO BE COMPLETED BY CLIENT

PLEASE SELECT THE ADJECTIVE RATING WHICH BEST REFLECTS YOUR EVALUATION OF THE CONTRACTOR'S PERFORMANCE.	
1. QUALITY	
a) Quality of technical data/report preparation efforts	<input checked="" type="checkbox"/> E <input type="checkbox"/> VG <input type="checkbox"/> S <input type="checkbox"/> M <input type="checkbox"/> U <input type="checkbox"/> N
b) Ability to meet quality standards specified for technical performance	<input checked="" type="checkbox"/> E <input type="checkbox"/> VG <input type="checkbox"/> S <input type="checkbox"/> M <input type="checkbox"/> U <input type="checkbox"/> N
c) Timeliness/effectiveness of contract problem resolution without extensive customer guidance	<input checked="" type="checkbox"/> E <input type="checkbox"/> VG <input type="checkbox"/> S <input type="checkbox"/> M <input type="checkbox"/> U <input type="checkbox"/> N
d) Adequacy/effectiveness of quality control program and adherence to contract quality assurance requirements (without adverse effect on performance)	<input checked="" type="checkbox"/> E <input type="checkbox"/> VG <input type="checkbox"/> S <input type="checkbox"/> M <input type="checkbox"/> U <input type="checkbox"/> N
2. SCHEDULE/TIMELINESS OF PERFORMANCE	
a) Compliance with contract delivery/completion schedules including any significant intermediate milestones. (<i>If liquidated damages were assessed or the schedule was not met, please address below</i>)	<input checked="" type="checkbox"/> E <input type="checkbox"/> VG <input type="checkbox"/> S <input type="checkbox"/> M <input type="checkbox"/> U <input type="checkbox"/> N
b) Rate the contractor's use of available resources to accomplish tasks identified in the contract	<input checked="" type="checkbox"/> E <input type="checkbox"/> VG <input type="checkbox"/> S <input type="checkbox"/> M <input type="checkbox"/> U <input type="checkbox"/> N
3. CUSTOMER SATISFACTION	
a) To what extent were the end users satisfied with the project?	<input checked="" type="checkbox"/> E <input type="checkbox"/> VG <input type="checkbox"/> S <input type="checkbox"/> M <input type="checkbox"/> U <input type="checkbox"/> N
b) Contractor was reasonable and cooperative in dealing with your staff (including the ability to successfully resolve disagreements/disputes; responsiveness to administrative reports, businesslike and communication)	<input checked="" type="checkbox"/> E <input type="checkbox"/> VG <input type="checkbox"/> S <input type="checkbox"/> M <input type="checkbox"/> U <input type="checkbox"/> N
c) To what extent was the contractor cooperative, businesslike, and concerned with the interests of the customer?	<input checked="" type="checkbox"/> E <input type="checkbox"/> VG <input type="checkbox"/> S <input type="checkbox"/> M <input type="checkbox"/> U <input type="checkbox"/> N
d) Overall customer satisfaction	<input checked="" type="checkbox"/> E <input type="checkbox"/> VG <input type="checkbox"/> S <input type="checkbox"/> M <input type="checkbox"/> U <input type="checkbox"/> N
4. MANAGEMENT/ PERSONNEL/LABOR	
a) Effectiveness of on-site management, including management of subcontractors, suppliers, materials, and/or labor force?	<input checked="" type="checkbox"/> E <input type="checkbox"/> VG <input type="checkbox"/> S <input type="checkbox"/> M <input type="checkbox"/> U <input type="checkbox"/> N
b) Ability to hire, apply, and retain a qualified workforce to this effort	<input checked="" type="checkbox"/> E <input type="checkbox"/> VG <input type="checkbox"/> S <input type="checkbox"/> M <input type="checkbox"/> U <input type="checkbox"/> N
c) Government Property Control	<input type="checkbox"/> E <input checked="" type="checkbox"/> VG <input type="checkbox"/> S <input type="checkbox"/> M <input type="checkbox"/> U <input type="checkbox"/> N
d) Knowledge/expertise demonstrated by contractor personnel	<input checked="" type="checkbox"/> E <input type="checkbox"/> VG <input type="checkbox"/> S <input type="checkbox"/> M <input type="checkbox"/> U <input type="checkbox"/> N
e) Utilization of Small Business concerns	<input type="checkbox"/> E <input checked="" type="checkbox"/> VG <input type="checkbox"/> S <input type="checkbox"/> M <input type="checkbox"/> U <input type="checkbox"/> N
f) Ability to simultaneously manage multiple projects with multiple disciplines	<input checked="" type="checkbox"/> E <input type="checkbox"/> VG <input type="checkbox"/> S <input type="checkbox"/> M <input type="checkbox"/> U <input type="checkbox"/> N
g) Ability to assimilate and incorporate changes in requirements and/or priority, including planning, execution and response to Government changes	<input checked="" type="checkbox"/> E <input type="checkbox"/> VG <input type="checkbox"/> S <input type="checkbox"/> M <input type="checkbox"/> U <input type="checkbox"/> N
h) Effectiveness of overall management (including ability to effectively lead, manage and control the program)	<input checked="" type="checkbox"/> E <input type="checkbox"/> VG <input type="checkbox"/> S <input type="checkbox"/> M <input type="checkbox"/> U <input type="checkbox"/> N
5. COST/FINANCIAL MANAGEMENT	
a) Ability to meet the terms and conditions within the contractually agreed price(s)?	<input type="checkbox"/> E <input checked="" type="checkbox"/> VG <input type="checkbox"/> S <input type="checkbox"/> M <input type="checkbox"/> U <input type="checkbox"/> N

NAVFAC / USACE Past Performance Questionnaire (PPQ)

Form PPQ-0 (9/30/11)

b) Contractor proposed innovative alternative methods/processes that reduced cost, improved maintainability or other factors that benefited the client	<input checked="" type="checkbox"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
c) If this is/was a Government cost type contract, please rate the Contractor's timeliness and accuracy in submitting monthly invoices with appropriate back-up documentation, monthly status reports/budget variance reports, compliance with established budgets and avoidance of significant and/or unexplained variances (under runs or overruns)	<input type="radio"/> E <input checked="" type="checkbox"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
d) Is the Contractor's accounting system adequate for management and tracking of costs? If no, please explain in Remarks section.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
e) If this is/was a Government contract, has/was this contract been partially or completely terminated for default or convenience or are there any pending terminations? Indicate if show cause or cure notices were issued, or any default action in comment section below.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
f) Have there been any indications that the contractor has had any financial problems? If yes, please explain below.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
6. SAFETY/SECURITY	
a) To what extent was the contractor able to maintain an environment of safety, adhere to its approved safety plan, and respond to safety issues? (Includes: following the users rules, regulations, and requirements regarding housekeeping, safety, correction of noted deficiencies, etc.)	<input type="radio"/> E <input checked="" type="checkbox"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
b) Contractor complied with all security requirements for the project and personnel security requirements.	<input type="radio"/> E <input checked="" type="checkbox"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
7. GENERAL	
a) Ability to successfully respond to emergency and/or surge situations (including notifying COR, PM or Contracting Officer in a timely manner regarding urgent contractual issues).	<input checked="" type="checkbox"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
b) Compliance with contractual terms/provisions (explain if specific issues)	<input type="radio"/> E <input checked="" type="checkbox"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N
c) Would you hire or work with this firm again? (If no, please explain below)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
d) In summary, provide an overall rating for the work performed by this contractor.	<input checked="" type="checkbox"/> E <input type="radio"/> VG <input type="radio"/> S <input type="radio"/> M <input type="radio"/> U <input type="radio"/> N

Please provide responses to the questions above (if applicable) and/or additional remarks. Furthermore, please provide a brief narrative addressing specific strengths, weaknesses, deficiencies, or other comments which may assist our office in evaluating performance risk (please attach additional pages if necessary):

The WBV-09a levee project was a complex levee design given the virgin marsh environment and the required height of the levee to reduce flood risk to less than the 1% AEP. The site was complicated by a former landfill along the alignment and tie-in to a new floodgate. The HNTB staff were exceptional at developing innovative solutions to the design of this project. They worked extremely well with USACE, the levee sponsor, and land owners. The end result was an effective levee segment design that had minimal settlement and performed well during the recent Hurricane Ida in 2021. HNTB is one of the most competent and professional firms CENVN has ever worked with.

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CONTRACTOR PERFORMANCE ASSESSMENT REPORT (CPAR)**Architect-Engineer****Name/Address of Contractor:**

Vendor Name: MSMM ENGINEERING, LLC

Division Name:

Street: 4640 S CARROLLTON AVE SUITE 210-12

City: NEW ORLEANS

State: LA Zip: 701196051

Country: USA

CAGE Code:

Unique Entity ID (DUNS): 969989370 Unique Entity ID (SAM): NYLUL4Q5GYF6

Product/Service Code: C219 Principal NAICS Code: 541330

Evaluation Type: Interim**Contract Percent Complete:** 83**Period of Performance Being Assessed:** 11/19/2020 - 11/18/2021**Contract Number:** W9126G16D0017 W9126G20F0033 **Business Sector & Sub-Sector:** Architect-Engineer**Contracting Office:** US ARMY ENGINEER DISTRICT FT WORTH **Contracting Officer:** CARL S. OELSCHIG **Phone Number:** 817-886-1060**Location of Work:**

Architect and Engineer Services for Design Build (DB) Requests for Proposal (RFPs) Development for Dallas Floodway 277K Levee Raise and Delta Pump Station Renovation

Date Signed: 11/22/2019 **Period of Performance Start Date:** 11/20/2019**Est. Ultimate Completion Date/Last Date to Order:** 07/08/2022 **Estimated/Actual Completion Date:** 07/08/2022**Funding Office ID:** 966501**Base and All Options Value :** \$1,282,703 **Action Obligation:** \$1,282,703**Complexity:** Medium **Termination Type:** None**Extent Competed:** Full and Open Competition after Exclusion of Sources **Type of Contract:** Firm Fixed Price**Key Subcontractors and Effort Performed:****Unique Entity ID (DUNS): Unique Entity ID (SAM):****Effort:****Unique Entity ID (DUNS): Unique Entity ID (SAM):****Effort:****Unique Entity ID (DUNS): Unique Entity ID (SAM):****Effort:****Project Number:****Project Title:**

Architect and Engineer Services for Design Build (DB) Requests for Proposal (RFPs) Development for Dallas Floodway 277K Levee Raise and Delta Pump Station Renovation

Contract Effort Description:

Architect and Engineer Services for Design Build (DB) Requests for Proposal (RFPs) Development for Dallas Floodway 277K Levee Raise and Delta Pump Station Renovation

Small Business Subcontracting:

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123

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Does this contract include a subcontracting plan? No

Date of last Individual Subcontracting Report (ISR) / Summary Subcontracting Report (SSR): N/A

Evaluation Areas	Past Rating	Rating
Quality:	Satisfactory	Satisfactory
Schedule:	Satisfactory	Satisfactory
Cost Control:	Satisfactory	Satisfactory
Management:	Satisfactory	Satisfactory
Small Business Subcontracting:	N/A	N/A
Regulatory Compliance:	N/A	N/A
Other Areas:		
(1) :		N/A
(2) :		N/A
(3) :		N/A

Variance (Contract to Date):

Current Cost Variance (%): Variance at Completion (%):

Current Schedule Variance (%):

Assessing Official Comments:

QUALITY: The contractor is meeting task order requirements.

SCHEDULE: The contractor is meeting task order requirements.

COST CONTROL: The contractor is meeting task order requirements.

MANAGEMENT: The contractor is meeting task order requirements.

RECOMMENDATION:

Given what I know today about the contractor's ability to perform in accordance with this contract or order's most significant requirements, I would recommend them for similar requirements in the future.

Name and Title of Assessing Official:

Name: JAMES WRIGHT

Title: Professional Engineer

Organization: CESWF-EC-AM

Phone Number: 817-886-1305 Email Address: james.wright@usace.army.mil

Date: 11/29/2021

Contractor Comments:

QUALITY: General comment here, but Design-Build RFP's are a new thing in Civil Works. The development of the 277K levee raise and side slope flattening Design-Build package was an efficient and seamless process that should deserve recognition given the uncertainty of the process from all parties. The package was put together quickly and out to the winning bidder with high quality and exceeding expectations.

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SCHEDULE: As this project has been ongoing there have been several similar design-build projects proceeding (outside of our scope) that have impacted our submittal dates and review times. This has not had an impact on the overall submittals as our management team has worked directly with the PM and DM to accommodate the ongoing changes, and the ever changing review resources. Our team has stayed flexible to these changes and continued to work toward the common goal of submitting a design-build product that meets the USACE requirements.

COST CONTROL: Request the COR reach out to the Project Management and Design Management team to inquire about the money saved to the project. The Value Engineering study (conducted by our team) identified a large cost savings measure that has been implemented by the team. This suggestion was implemented, and resulted in the subsequent modification of rehabilitation of the Delta Pump Station scope to Delta Pump Station replacement. This is a large-scale action that resulted in USCE and the City of Dallas in wanting to move forward with modifying the task order to realize the cost saving identified.

MANAGEMENT: As this is a Design-Build RFP project, extensive management oversight has been required by our team to combine the specifications (some prepared by us and some by USACE), but to also organize the comment responses. Our PM has created a system to provide the USACE spec section with highlighted documents that show front-end comments that require a USACE response. Additionally, we have taken overarching comments that impact both A-E driven specs and USACE driven specs and show the USACE spec section how we have handled the responses, and areas in the specs where similar changes are needed in the front-end. This management approach helps ensure the overall project moves more efficiently and project documents are receiving the updates they require. Assisting and organizing the USACE spec developers, is above and beyond the scope of our task order.

ADDITIONAL/OTHER: The comments included in this rating are very General and do not seem to reflect that the COR coordinated this rating with the Project Management or Design Management team for this task order. The A-E team has remained extremely flexible in providing Design-Build deliverables to the District and for it being a new process, the 277K levee raise design-build RFP was put together efficiently in a very timely manner. Other actions documented in the comments here have occurred, and they exceed the base evaluation provided here within.

CONCURRENCE: I do not concur with this evaluation and request that it be reevaluated.

Name and Title of Contractor Representative:

Name: Joshua Carson

Title: Project Manager

Phone Number: 9375095974 Email Address: joshcarson@msmmeng.com

Date: 11/24/2021

Review by Reviewing Official:

The ratings provided accurately reflect the performance of the Contractor on this task order. Although the Contractor does not concur with the Satisfactory ratings on this RFP development, they did not provide justification as to how they exceeded the requirements of the contract.

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Name and Title of Reviewing Official:

Name: STEPHEN ATKINSON

Title: Chief, Professional Services Branch

Organization: USACE

Phone Number: 817-886-1645 Email Address: stephen.atkinson@usace.army.mil

Date: 12/29/2021

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NAVFAC/USACE PAST PERFORMANCE QUESTIONNAIRE (Form PPQ-0)	
CONTRACT INFORMATION (Contractor to complete Blocks 1-4)	
1. Contractor Information Firm Name: Moffatt & Nichol Address: 4700 Falls of Neuse Road, Suite 300 Raleigh, NC 27609 Phone Number: (919) 781-4626 Email Address: jmartin@moffattnichol.com Point of Contact: Johnny Martin, PE	
CAGE Code: 1NW66 DUNs Number: 033996026 Contact Phone Number: (919) 781-4626	
2. Work Performed as: <input checked="" type="checkbox"/> Prime Contractor <input type="checkbox"/> Sub Contractor <input type="checkbox"/> Joint Venture <input type="checkbox"/> Other (Explain) Percent of project work performed: 80% If subcontractor, who was the prime (Name/Phone #):	
3. Contract Information Contract Number: N/A Delivery/Task Order Number (if applicable): Contract Type: <input checked="" type="checkbox"/> Firm Fixed Price <input type="checkbox"/> Cost Reimbursement <input type="checkbox"/> Other (Please specify): Contract Title: Bogue Banks Beach Nourishment Master Plan Contract Location: Carteret County, NC Award Date (mm/dd/yy): 01/11/10 Contract Completion Date (mm/dd/yy): 12/31/18 Actual Completion Date (mm/dd/yy): 05/31/21 Explain Differences: Due to Hurricane Florence, contract was amended to construct three (3) beach renourishment projects for storm response.	
Original Contract Price (Award Amount): \$1,386,000 Final Contract Price (<i>to include all modifications, if applicable</i>): \$6,941,838 Explain Differences: Execution of additional field investigations to locate beach compatible sand and also provide final design, bidding and construction observation services for three (3) beach renourishment projects totaling over \$79.6M.	
4. Project Description: Complexity of Work <input checked="" type="checkbox"/> High <input type="checkbox"/> Med <input type="checkbox"/> Routine How is this project relevant to project of submission? (<i>Please provide details such as similar equipment, requirements, conditions, etc.</i>)	
After pronounced hurricane activity in the 1990s, Carteret County began formal steps to address erosion concerns along 21 miles of managed beach along the ~25-mile-long island of Bogue Banks. The County contracted with Moffatt & Nichol (M&N) to develop a multidecadal programmatic EIS that incorporated all Bogue Banks Beach nourishment and inlet management needs for the next 50 years. M&N was also responsible for the overall project management and completion of the engineering report and analyses. In addition to the EIS, the necessary permits were secured to address needs and to use specific sand sources for beach nourishment at Bogue Banks. M&N also completed an engineering report to outline the historical regional sediment budget, including the response of shorelines and inlets to natural long-term erosion, storm-induced erosion, and man-made dredging and beach nourishment. The report also determined the desired overall level of storm protection (25-year return period storm event selected by the owner based on financial constraints) to be provided and maintained across the island and the appropriate nourishment volumes, benchmarks, and reach-based triggers/template unit volumes that should be used for the various regions of Bogue Banks to achieve that outcome. The project also included three (3) back to back to back beach renourishment projects in response to Hurricane Florence.	
CLIENT INFORMATION (Client to complete Blocks 5-8)	
5. Client Information Name: Greg "Rudi" Rudolph Title: Former Carteret County Shore Protection Manager Phone Number: (252) 725-4591 Email Address: rudi@geodynamicsgroup.com	
6. Describe the client's role in the project: Mr. Rudolph was the client's project manager serving as Moffatt & Nichol's liaison with the County and overseeing Moffatt & Nichol's efforts under this contract.	
7. Date Questionnaire was completed (mm/dd/yy): 12/8/22	

8. Client's Signature:

A handwritten signature in black ink, appearing to read "John Doe".

**ADJECTIVE RATINGS AND DEFINITIONS TO BE USED TO BEST REFLECT
YOUR EVALUATION OF THE CONTRACTOR'S PERFORMANCE**

RATING	DEFINITION	NOTE
(E) Exceptional	Performance meets contractual requirements and exceeds many to the Government/Owner's benefit. The contractual performance of the element or sub-element being assessed was accomplished with few minor problems for which corrective actions taken by the contractor was highly effective.	An Exceptional rating is appropriate when the Contractor successfully performed multiple significant events that were of benefit to the Government/Owner. A singular benefit, however, could be of such magnitude that it alone constitutes an Exceptional rating. Also, there should have been NO significant weaknesses identified.
(VG) Very Good	Performance meets contractual requirements and exceeds some to the Government's/Owner's benefit. The contractual performance of the element or sub-element being assessed was accomplished with some minor problems for which corrective actions taken by the contractor were effective.	A Very Good rating is appropriate when the Contractor successfully performed a significant event that was a benefit to the Government/Owner. There should have been no significant weaknesses identified.
(S) Satisfactory	Performance meets minimum contractual requirements. The contractual performance of the element or sub-element contains some minor problems for which corrective actions taken by the contractor appear or were satisfactory.	A Satisfactory rating is appropriate when there were only minor problems, or major problems that the contractor recovered from without impact to the contract. There should have been NO significant weaknesses identified. Per DOD policy, a fundamental principle of assigning ratings is that contractors will not be assessed a rating lower than Satisfactory solely for not performing beyond the requirements of the contract.
(M) Marginal	Performance does not meet some contractual requirements. The contractual performance of the element or sub-element being assessed reflects a serious problem for which the contractor has not yet identified corrective actions. The contractor's proposed actions appear only marginally effective or were not fully implemented.	A Marginal is appropriate when a significant event occurred that the contractor had trouble overcoming which impacted the Government/Owner.
(U) Unsatisfactory	Performance does not meet most contractual requirements and recovery is not likely in a timely manner. The contractual performance of the element or sub-element contains serious problem(s) for which the contractor's corrective actions appear or were ineffective.	An Unsatisfactory rating is appropriate when multiple significant events occurred that the contractor had trouble overcoming and which impacted the Government/Owner. A singular problem, however, could be of such serious magnitude that it alone constitutes an unsatisfactory rating.
(N) Not Applicable	No information or did not apply to your contract	Rating will be neither positive nor negative.

Contractor Information (Firm Name): Moffatt & NicholClient Information (Name): Carteret County (Greg "Rudi" Rudolph, Former Shore Protection Manager)**TO BE COMPLETED BY CLIENT**

PLEASE CIRCLE THE ADJECTIVE RATING WHICH BEST REFLECTS YOUR EVALUATION OF THE CONTRACTOR'S PERFORMANCE.						
1. QUALITY:						
a) Quality of technical data/report preparation efforts	<input type="checkbox"/> E	VG	S	M	U	N
b) Ability to meet quality standards specified for technical performance	<input type="checkbox"/> E	VG	S	M	U	N
c) Timeliness/effectiveness of contract problem resolution without extensive customer guidance	<input type="checkbox"/> E	VG	S	M	U	N
d) Adequacy/effectiveness of quality control program and adherence to contract quality assurance requirements (without adverse effect on performance)	<input type="checkbox"/> E	VG	S	M	U	N
2. SCHEDULE/TIMELINESS OF PERFORMANCE:						
a) Compliance with contract delivery/completion schedules including any significant intermediate milestones. (<i>If liquidated damages were assessed or the schedule was not met, please address below</i>)	<input type="checkbox"/> E	VG	S	M	U	N
b) Rate the contractor's use of available resources to accomplish tasks identified in the contract	<input type="checkbox"/> E	VG	S	M	U	N
3. CUSTOMER SATISFACTION:						
a) To what extent were the end users satisfied with the project?	<input type="checkbox"/> E	VG	S	M	U	N
b) Contractor was reasonable and cooperative in dealing with your staff (including the ability to successfully resolve disagreements/disputes; responsiveness to administrative reports, businesslike and communication)	<input type="checkbox"/> E	VG	S	M	U	N
c) To what extent was the contractor cooperative, businesslike, and concerned with the interests of the customer?	<input type="checkbox"/> E	VG	S	M	U	N
d) Overall customer satisfaction	<input type="checkbox"/> E	VG	S	M	U	N
4. MANAGEMENT/ PERSONNEL/LABOR						
a) Effectiveness of on-site management, including management of subcontractors, suppliers, materials, and/or labor force?	<input type="checkbox"/> E	VG	S	M	U	N
b) Ability to hire, apply, and retain a qualified workforce to this effort	<input type="checkbox"/> E	VG	S	M	U	N
c) Government Property Control	<input type="checkbox"/> E	VG	S	M	U	N
d) Knowledge/expertise demonstrated by contractor personnel	<input type="checkbox"/> E	VG	S	M	U	N
e) Utilization of Small Business concerns	<input type="checkbox"/> E	VG	S	M	U	N
f) Ability to simultaneously manage multiple projects with multiple disciplines	<input type="checkbox"/> E	VG	S	M	U	N
g) Ability to assimilate and incorporate changes in requirements and/or priority, including planning, execution and response to Government changes	<input type="checkbox"/> E	VG	S	M	U	N
h) Effectiveness of overall management (including ability to effectively lead, manage and control the program)	<input type="checkbox"/> E	VG	S	M	U	N
5. COST/FINANCIAL MANAGEMENT						
a) Ability to meet the terms and conditions within the contractually agreed price(s)?	<input type="checkbox"/> E	VG	S	M	U	N

Contractor Information (Firm Name): Moffatt & Nichol

Client Information (Name): Carteret County (Greg "Rudi" Rudolph, Former Shore Protection Officer)

b) Contractor proposed innovative alternative methods/processes that reduced cost, improved maintainability or other factors that benefited the client	<input type="checkbox"/> E	VG	S	M	U	N
c) If this is/was a Government cost type contract, please rate the Contractor's timeliness and accuracy in submitting monthly invoices with appropriate back-up documentation, monthly status reports/budget variance reports, compliance with established budgets and avoidance of significant and/or unexplained variances (under runs or overruns)	<input type="checkbox"/> E	VG	S	M	U	N
d) Is the Contractor's accounting system adequate for management and tracking of costs? <i>If no, please explain in Remarks section.</i>	<input type="checkbox"/> Yes No					
e) If this is/was a Government contract, has/was this contract been partially or completely terminated for default or convenience or are there any pending terminations? <i>Indicate if show cause or cure notices were issued, or any default action in comment section below.</i>	Yes			<input type="checkbox"/> No		
f) Have there been any indications that the contractor has had any financial problems? <i>If yes, please explain below.</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No					
6. SAFETY/SECURITY						
a) To what extent was the contractor able to maintain an environment of safety, adhere to its approved safety plan, and respond to safety issues? (Includes: following the users rules, regulations, and requirements regarding housekeeping, safety, correction of noted deficiencies, etc.)	<input type="checkbox"/> E	VG	S	M	U	<input type="checkbox"/> N
b) Contractor complied with all security requirements for the project and personnel security requirements.	<input type="checkbox"/> E	VG	S	M	U	N
7. GENERAL						
a) Ability to successfully respond to emergency and/or surge situations (including notifying COR, PM or Contracting Officer in a timely manner regarding urgent contractual issues).	<input type="checkbox"/> E	VG	S	M	U	N
b) Compliance with contractual terms/provisions (<i>explain if specific issues</i>)	<input type="checkbox"/> E	VG	S	M	U	N
c) Would you hire or work with this firm again? (<i>If no, please explain below</i>)	<input type="checkbox"/> Yes No					
d) In summary, provide an overall rating for the work performed by this contractor.	<input type="checkbox"/> E	VG	S	M	U	N

Please provide responses to the questions above (if applicable) and/or additional remarks. Furthermore, please provide a brief narrative addressing specific strengths, weaknesses, deficiencies, or other comments which may assist our office in evaluating performance risk (please attach additional pages if necessary):

We (Carteret County) have enjoyed a relationship with Moffatt & Nichol (M&N) for well over a decade, and have retained M&N for a series of different work scopes as well. They always proactively assigned different project managers with appropriate experiences germane to each project, and continued to provide excellent services with consistent invoicing, problem resolution, and QA/QC approaches. Even though they serve many clients in the private and public sector, we always felt we were their top priority, and again believe that is the result of their institutional approach and business model.

NAVFAC / USACE Past Performance Questionnaire (PPQ)

Form PPQ -0 (9/30/11)

NAVFAC/USACE PAST PERFORMANCE QUESTIONNAIRE (Form PPQ-0)**CONTRACT INFORMATION (Contractor to complete Blocks 1-4)****1. Contractor Information**

Firm Name: MSMM Engineering, LLC CAGE Code: 6SKR5
 Address: 4640 South Carrollton Avenue, Suite 220, New Orleans, LA 70119 DUNs Number: 969989370
 Phone Number: 504-570-6098
 Email Address: mmardia@msmmeng.com
 Point of Contact: Manish Mardia Contact Phone Number: 504-559-1897

2. Work Performed as: Prime Contractor Sub Contractor Joint Venture Other (Explain)

Percent of project work performed: 100%

If subcontractor, who was the prime (Name/Phone #): Jesco Environmental & Geotechnical Services, Inc.

3. Contract Information

Contract Number: W912P8-15-D-0022

Delivery/Task Order Number (if applicable):

Contract Type: Firm Fixed Price Cost Reimbursement Other (Please specify):

Contract Title: Section 219 Environmental Infrastructure Planning, Evaluation, Mapping and Design

Contract Location: Ascension Parish, Louisiana

Award Date (mm/dd/yy): 09/10/15

Contract Completion Date (mm/dd/yy): 09/30/16

Actual Completion Date (mm/dd/yy): 08/24/16

Explain Differences: The schedule was shortened by a month once design started, to allow the contracting branch extra time to award a construction contract before the end of the Federal fiscal year.

Original Contract Price (Award Amount): \$339,284

Final Contract Price (to include all modifications, if applicable): \$339,284

Explain Differences: N/A

4. Project Description:

Complexity of Work High Med Routine

How is this project relevant to project of submission? (Please provide details such as similar equipment, requirements, conditions, etc.) These projects were completed within the Section 219 Environmental Infrastructure program and show relevance to the Border Infrastructure program due to the nature of construction. For this project, MSMM designed sewer pump station and forcemain. The 4,068 feet of discharge pipe travels beneath two state highways and over the Mississippi River Levee before discharging into the Mississippi River. MSMM had to redesign the river levee and levee access road to account for this new utility crossing.

CLIENT INFORMATION (Client to complete Blocks 5-8)**5. Client Information**

Name: Nick Sims - USACE New Orleans District (MVN)

Title: Project Manager

Phone Number: 504-862-2128

Email Address: christopher.n.sims@usace.army.mil

6. Describe the client's role in the project:

As the project manager for the project, I worked with the Non-Federal sponsor (NFS) and A-E design firm to ensure the project met the requirements of the 219 program. I ran PDT meetings and design reviews and executed a project PPA.

7. Date Questionnaire was completed (mm/dd/yy): 05/03/2019**8. Client's Signature:**


NOTE: NAVFAC/USACE requests that the client completes this questionnaire and submits directly back to the offeror.

The offeror will submit the completed questionnaire to USACE with their proposal, and may duplicate this questionnaire for future submission on USACE solicitations. Clients are highly encouraged to submit questionnaires directly to the offeror. However, questionnaires may be submitted directly to USACE. Please contact the offeror for USACE POC information. The Government reserves the right to verify any and all information on this form.

NAVFAC / USACE Past Performance Questionnaire (PPQ)

Form PPQ -0 (9/30/11)

**ADJECTIVE RATINGS AND DEFINITIONS TO BE USED TO BEST REFLECT
YOUR EVALUATION OF THE CONTRACTOR'S PERFORMANCE**

RATING	DEFINITION	NOTE
(E) Exceptional	Performance meets contractual requirements and exceeds many to the Government/Owner's benefit. The contractual performance of the element or sub-element being assessed was accomplished with few minor problems for which corrective actions taken by the contractor was highly effective.	An Exceptional rating is appropriate when the Contractor successfully performed multiple significant events that were of benefit to the Government/Owner. A singular benefit, however, could be of such magnitude that it alone constitutes an Exceptional rating. Also, there should have been NO significant weaknesses identified.
(VG) Very Good	Performance meets contractual requirements and exceeds some to the Government's/Owner's benefit. The contractual performance of the element or sub-element being assessed was accomplished with some minor problems for which corrective actions taken by the contractor were effective.	A Very Good rating is appropriate when the Contractor successfully performed a significant event that was a benefit to the Government/Owner. There should have been no significant weaknesses identified.
(S) Satisfactory	Performance meets minimum contractual requirements. The contractual performance of the element or sub-element contains some minor problems for which corrective actions taken by the contractor appear or were satisfactory.	A Satisfactory rating is appropriate when there were only minor problems, or major problems that the contractor recovered from without impact to the contract. There should have been NO significant weaknesses identified. Per DOD policy, a fundamental principle of assigning ratings is that contractors will not be assessed a rating lower than Satisfactory solely for not performing beyond the requirements of the contract.
(M) Marginal	Performance does not meet some contractual requirements. The contractual performance of the element or sub-element being assessed reflects a serious problem for which the contractor has not yet identified corrective actions. The contractor's proposed actions appear only marginally effective or were not fully implemented.	A Marginal is appropriate when a significant event occurred that the contractor had trouble overcoming which impacted the Government/Owner.
(U) Unsatisfactory	Performance does not meet most contractual requirements and recovery is not likely in a timely manner. The contractual performance of the element or sub-element contains serious problem(s) for which the contractor's corrective actions appear or were ineffective.	An Unsatisfactory rating is appropriate when multiple significant events occurred that the contractor had trouble overcoming and which impacted the Government/Owner. A singular problem, however, could be of such serious magnitude that it alone constitutes an unsatisfactory rating.
(N) Not Applicable	No information or did not apply to your contract	Ra Rating will be neither positive nor negative.

NAVFAC / USACE Past Performance Questionnaire (PPQ)

Form PPQ -0 (9/30/11)

TO BE COMPLETED BY CLIENT

PLEASE CIRCLE THE ADJECTIVE RATING WHICH BEST REFLECTS YOUR EVALUATION OF THE CONTRACTOR'S PERFORMANCE.						
1. QUALITY:						
a) Quality of technical data/report preparation efforts	E	VG	S	M	U	N
b) Ability to meet quality standards specified for technical performance	E	VG	S	M	U	N
c) Timeliness/effectiveness of contract problem resolution without extensive customer guidance	E	VG	S	M	U	N
d) Adequacy/effectiveness of quality control program and adherence to contract quality assurance requirements (without adverse effect on performance)	E	VG	S	M	U	N
2. SCHEDULE/TIMELINESS OF PERFORMANCE:						
a) Compliance with contract delivery/completion schedules including any significant intermediate milestones. (<i>If liquidated damages were assessed or the schedule was not met, please address below</i>)	E	VG	S	M	U	N
b) Rate the contractor's use of available resources to accomplish tasks identified in the contract	E	VG	S	M	U	N
3. CUSTOMER SATISFACTION:						
a) To what extent were the end users satisfied with the project?	E	VG	S	M	U	N
b) Contractor was reasonable and cooperative in dealing with your staff (including the ability to successfully resolve disagreements/disputes; responsiveness to administrative reports, businesslike and communication)	E	VG	S	M	U	N
c) To what extent was the contractor cooperative, businesslike, and concerned with the interests of the customer?	E	VG	S	M	U	N
d) Overall customer satisfaction	E	VG	S	M	U	N
4. MANAGEMENT/ PERSONNEL/LABOR						
a) Effectiveness of on-site management, including management of subcontractors, suppliers, materials, and/or labor force?	E	VG	S	M	U	N
b) Ability to hire, apply, and retain a qualified workforce to this effort	E	VG	S	M	U	N
c) Government Property Control	E	VG	S	M	U	N
d) Knowledge/expertise demonstrated by contractor personnel	E	VG	S	M	U	N
e) Utilization of Small Business concerns	E	VG	S	M	U	N
f) Ability to simultaneously manage multiple projects with multiple disciplines	E	VG	S	M	U	N
g) Ability to assimilate and incorporate changes in requirements and/or priority, including planning, execution and response to Government changes	E	VG	S	M	U	N
h) Effectiveness of overall management (including ability to effectively lead, manage and control the program)	E	VG	S	M	U	N
5. COST/FINANCIAL MANAGEMENT						
a) Ability to meet the terms and conditions within the contractually agreed price(s)?	E	VG	S	M	U	N

NAVFAC / USACE Past Performance Questionnaire (PPQ)

Form PPQ -0 (9/30/11)

b) Contractor proposed innovative alternative methods/processes that reduced cost, improved maintainability or other factors that benefited the client	E VG S M U N
c) If this is/was a Government cost type contract, please rate the Contractor's timeliness and accuracy in submitting monthly invoices with appropriate back-up documentation, monthly status reports/budget variance reports, compliance with established budgets and avoidance of significant and/or unexplained variances (under runs or overruns)	E VG S M U N
d) Is the Contractor's accounting system adequate for management and tracking of costs? <i>If no, please explain in Remarks section.</i>	Yes No
e) If this is/was a Government contract, has/was this contract been partially or completely terminated for default or convenience or are there any pending terminations? <i>Indicate if show cause or cure notices were issued, or any default action in comment section below.</i>	Yes No
f) Have there been any indications that the contractor has had any financial problems? <i>If yes, please explain below.</i>	Yes No
6. SAFETY/SECURITY	
a) To what extent was the contractor able to maintain an environment of safety, adhere to its approved safety plan, and respond to safety issues? (Includes: following the users rules, regulations, and requirements regarding housekeeping, safety, correction of noted deficiencies, etc.)	E VG S M U N
b) Contractor complied with all security requirements for the project and personnel security requirements.	E VG S M U N
7. GENERAL	
a) Ability to successfully respond to emergency and/or surge situations (including notifying COR, PM or Contracting Officer in a timely manner regarding urgent contractual issues).	E VG S M U N
b) Compliance with contractual terms/provisions (<i>explain if specific issues</i>)	E VG S M U N
c) Would you hire or work with this firm again? (<i>If no, please explain below</i>)	Yes No
d) In summary, provide an overall rating for the work performed by this contractor.	E VG S M U N

Please provide responses to the questions above (*if applicable*) and/or additional remarks. Furthermore, please provide a brief narrative addressing specific strengths, weaknesses, deficiencies, or other comments which may assist our office in evaluating performance risk (*please attach additional pages if necessary*):

Firm is very professional and exhibited excellent technical capabilities. All communication was clear and concise, which lead to any issue being addressed before they evolved into a bigger problem. Very pleased with every aspect of the services provided. Would recommend working with firm in the future.



SMALL BUSINESS PARTICIPATION PLAN FORM

(ATTACHMENT 1)
SMALL BUSINESS PARTICIPATION PLAN FORM

(a) Check the applicable size and categories for the PRIME offeror only -- Check all applicable boxes:

- { } Large Prime
{ } Historically Black Colleges or Universities and Minority Institutions (HBCU/MI)
or
{X} Small Business Prime; also categorized as a
{ } Small Disadvantaged Business (SDB)
{ } Woman-Owned Small Business (WOSB)
{ } Historically Underutilized Zone (HUB Zone) Small Business
{ } Veteran Owned Small Business (VOSB)
{ } Service-Disabled Veteran Owned Small Business (SDVOSB)

(b) Submit the total combined percentage of work to be performed by both large and small businesses (include the percentage of work to be performed both by Prime and Subcontractors):

Example: If Prime proposes a price of \$1,000,000 (including all options), and small business(es) will provide \$250,000 in services/supplies as a prime or subcontractor, the % planned for small businesses is 25%; and 75% for large business equaling 100%.

Total Percentage planned for Large Business(es) 24 % or \$ _____
Total Percentage planned for Small Business(es) 76 % or \$ _____
 100 % Total \$ _____
 Must =100% Must = Total Value of the Contract

(c) Please indicate the total percentage and/or total dollars of participation to be performed by each type of subcategory small business. The percentage of work performed by Small Businesses that qualify in multiple small business categories may be counted in each category:

Example: Victory Prop Mgt (WOSB and SDVOSB) performing 2%; and Williams Group (SDB, HubZone Small Business and WOSB) performing 3%. Results equate to: SDB 3%; HubZone 3%; WOSB 5%; SDVOSB 2%; VOSB 2%;). SDVOSBs are also VOSBs automatically; however, VOSBs are not automatically SDVOSBs.

Small Disadvantaged Business 2 % or \$ _____
HUB Zone Small Business 4 % or \$ _____
Woman Owned Small Business 5 % or \$ _____
Service-Disabled Veteran Owned SB 3 % or \$ _____
Veteran Owned Small Business 3 % or \$ _____
HBCU /MI _____ % or \$ _____

(d) List principle supplies/services to be performed by Small Businesses:

Example: If a Small Business qualifies also as a WOSB and a SDVOSB, and you can add them to each category below in which they qualify.

Name of Company Type of Service/Supply

Small Business (SB):

MSMM Engineering, LLC

Full Service Engineering

Burk-KleinPeter Inc.

Civil & Structural Engineering

Eustis Engineering, LLC

Geotechnical Engineering

Small Disadvantaged Business (SDB):

ARS Engineers, Inc. Surveying

Women-Owned Small Business (WOSB):

ETTL Engineers & Consultants Geotechnical Engineering
Strategic Value Solutions, Inc. Cost Estimating

Historically Underutilized Business Zone (HUB Zone):

ETTL Engineers & Consultants Geotechnical Engineering
ARS Engineers, Inc. Surverying

Veteran Owned Small Business (VOSB):

CMET Engineering, LLC Environmental Engineering

Service-Disabled Veteran Owned Small Business (SDVO):

CMET Engineering, LLC Environmental Engineering

(e) Describe the extent of commitment to use small businesses (small business prime, written contract, verbal, enforceable, non-enforceable, joint venturing, mentor-protégé, etc.)

Small Business prime with multiple small business subcontractors.

Additional Important Note for Other than U.S. Small Businesses ONLY.

Other-than-U.S. SB offerors must also submit a Small Business Subcontracting Plan meeting the requirements of FAR 52.219-9, DFARS 252.219-7003, DFARS 252.219-7004 (if the offeror has a comprehensive subcontracting plan), and DFARS PGI 219.705-4, using the DOD Checklist for Reviewing Small Business Subcontracting Plans. The socio-economic dollars must be equal to or greater than the commitments proposed in the Small Business Participation Plan. It is the Government's expectation that the percentages will be met. Failure to meet or exceed the percentages without sufficient justification in terms of the good faith efforts applied may result in the offeror paying liquidated damages to the Government IAW FAR 52.219-16 "Liquidated Damages – Subcontracting Plan" and a CPARS rating less than satisfactory. Small Business specifically identified in the Small Business Participation Plan must be listed in any Small Business Subcontracting Plan submitted pursuant to DFARS 215.304(c)(i)(C). ***It is important to note that Small Business Subcontracting Plans are not evaluated as part of the selection process. Rather, they are reviewed only if the offeror is selected for an award.*** Failure to submit an acceptable Small Business Subcontracting Plans may result in the offeror's ineligibility for award.

The firms will be required to notify the Contracting Officer of any substitutions of firms that are not SB firms, for the SB firms specifically identified in the Small Business participation Plan and Small Business Subcontracting Plan. Notifications shall be in writing and shall occur within a reasonable period of time after award of the subcontract to facilitate compliance with DFARS 252.219-7003(e).



AUDIT LETTER

LeGlue & Company, CPAs, L.L.C.

Energy Centre
1100 Poydras Street, Suite 2850
New Orleans, LA 70163-2850
Telephone (504) 586-0581
Fax (504) 561-5040
www.leglue.com

May 10, 2022

To the Member
MSMM Engineering, LLC
4640 South Carrollton Avenue, Suite 220
New Orleans, Louisiana 70119

Gentleman:

We have audited the Statement of Direct Labor, Fringe Benefits and General Overhead (the "Statement") of MSMM Engineering, LLC as of and for the year ended December 31, 2021, and have issued our report thereon dated May 10, 2022. Professional standards require that we advise you of the following matters relating to our audit.

Our Responsibility in Relation to the Statement Audit

As communicated in our engagement letter dated March 13, 2022, our responsibility, as described by professional standards, is to form and express an opinion about whether the Statement that has been prepared by management with your oversight is presented fairly, in all material respects, in accordance with accounting principles generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States of America. Our audit of the Statement does not relieve you or management of your respective responsibilities.

Our responsibility, as prescribed by professional standards, is to plan and perform our audit to obtain reasonable, rather than absolute, assurance about whether the Statement is free of material misstatement. An audit of the Statement includes consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control over financial reporting. Accordingly, as part of our audit, we considered the internal control of MSMM Engineering, LLC solely for the purpose of determining our audit procedures and not to provide any assurance concerning such internal control.

We are also responsible for communicating significant matters related to the audit that are, in our professional judgment, relevant to your responsibilities in overseeing the financial reporting process. However, we are not required to design procedures for the purpose of identifying other matters to communicate to you.

We did not identify any deficiencies in internal control over financial reporting and we communicated this to you in a separate letter dated May 10, 2022.

Other Information in Documents Containing Audited Schedule of Indirect Costs

Pursuant to professional standards, our responsibility as auditors for other information in documents containing MSMM Engineering, LLC's audited Statement does not extend beyond the financial information identified in the audit report, and we are not required to perform any procedures to corroborate such other information. We are not aware of any additional information included with the audited Statement.

Planned Scope and Timing of the Audit

We conducted our audit consistent with the planned scope and timing we previously communicated to you.

Compliance with All Ethics Requirements Regarding Independence

The engagement team and our firm have complied with all relevant ethical requirements regarding independence.

Qualitative Aspects of the Entity's Significant Accounting Practices

Significant Accounting Policies

Management has the responsibility to select and use appropriate accounting policies. A summary of the significant accounting policies adopted by MSMM Engineering, LLC is included in the notes to the Statement. There have been no initial selection of accounting policies and no changes in significant accounting policies or their application during 2021. No matters have come to our attention that would require us, under professional standards, to inform you about (1) the methods used to account for significant unusual transactions and (2) the effect of significant accounting policies in controversial or emerging areas for which there is a lack of authoritative guidance or consensus.

Significant Accounting Estimates

Accounting estimates are an integral part of the Statement prepared by management and are based on management's current judgments. Those judgments are normally based on knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the Statement and because of the possibility that future events affecting them may differ markedly from management's current judgments.

The most sensitive accounting estimates affecting the Statement are:

- Management's estimate of the useful lives of depreciable capital assets is based on the length of time it is believed that those assets will provide some economic benefit in the future.

- Management's estimate of the accrued compensation absences is based on current hourly rates and policies regarding payment of sick and vacation time.
- Management's estimating system is based on a job cost system, including direct labor, fringe benefits and general overhead, sub-consultants, other direct cost and profit. The Company's estimating system is consistent with the accumulation and reporting of cost under its job cost accounting system.

We evaluated the key factors and assumptions used to develop these estimates and determined that they are reasonable in relation to the Statement taken as a whole.

Statement of Direct Labor, Fringe Benefits and General Overhead Disclosures

The disclosures in the Statement are neutral, consistent, and clear. Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. There are no significant sensitive disclosures in the Statement for the year ended December 31, 2021.

Significant Unusual Transactions

For purposes of this communication, professional standards require us to communicate to you significant unusual transactions identified during our audit. There were no significant unusual transactions.

Identified or Suspected Fraud

We identified no information that indicates fraud may have occurred.

Significant Difficulties Encountered during the Audit

We encountered no significant difficulties in dealing with management relating to the performance of the audit.

Uncorrected and Corrected Misstatements

For purposes of this communication, professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that we believe are trivial, and communicate them to the appropriate level of management. We detected no material misstatements and did not propose any audit adjustments that, in our judgement, could have a significant effect, either individually or in the aggregate, on the entity's financial reporting process.

There were no uncorrected financial statement misstatements.