

Jefferson Parish Professional Services Questionnaire

Resolution No. 138809
SOQ NO. 22-013

Routine Engineering Services for Water Projects

March 31, 2022



TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:

Routine Engineering Services for Water Projects, Resolution No. 138809

B. Firm Name & Address where Project work will be performed:



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

Manish Mardia, P.E., President
mmardia@msmmeng.com
 (504) 559-1897

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

Manish Mardia, P.E., President
mmardia@msmmeng.com
 (504) 559-1897

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

<u>1</u> Administrative	<u>3</u> Estimators	<u> </u> Specification Writers
<u>1</u> Architects (Licensed)	<u> </u> Geologists	<u>2</u> Structural Engineers
<u> </u> Chemical Engineers	<u> </u> Geotechnical Engineers	<u> </u> Graduate Engineers
<u>5</u> Civil Engineers	<u> </u> Interior Designers	<u>5</u> Project Managers
<u>7</u> Construction Inspectors	<u>1</u> Landscape Architects	<u> </u> Clerical
<u> </u> Ecologists	<u> </u> Land Surveyor	<u> </u> Grant/Funding Specialist
<u>1</u> Electrical Engineers	<u> </u> Mechanical Engineers	<u> </u> Sanitary Engineers
<u>2</u> Engineer Intern	<u>2</u> Environmental Engineers	<u>1</u> Administrative/Accounting
<u> </u> Professional Land Surveyors	<u>3</u> CAD Draftsman	<u>30</u> TOTAL
<u> </u> Environmental Scientist	<u> </u> Transportation Engineer	

F. Is this submittal by a JOINT-VENTURE? Please check:

YES NO

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

TEC Professional Services Questionnaire

G. If submittal is by JOINT-VENTURE, list the firms participating and outline specific area of responsibility (including administrative, technical, and financial) for each firm. Please attach additional pages if necessary.

1. Not Applicable

2.

**H. Has this JOINT-VENTURE previously worked together? Please check:
YES NO**

I. List all subcontractors anticipated for this Project. Please note that all subcontractors must submit a fully completed copy of this questionnaire, applicable licenses, and any other information required by the advertisement. See Jefferson parish Code of Ordinances, Sec. 2-928(a)(3). Please attach additional pages if necessary.

Name & Address:	Specialty	Worked with Firm Before (Yes or No):
1.		
2.		
3.		

J. Please specify the total number of support personnel that may assist in the completion of this Project:

_____15_____

TEC Professional Services Questionnaire

PROFESSIONAL IN CHARGE OF PROJECT:	
Name & Title:	Manish Mardia, P.E. President
Project Assignment:	Quality Control Manager
Name of Firm with which associated:	MSMM ENGINEERING, LLC
Years' experience with this Firm:	11 (2011)
Education: Degree(s)/Year/Specialization:	M.S. in Civil Engineering, 1994, Louisiana State University B.S. in Civil Engineering, 1990, University of Jodhpur
Active registration: Year first registered/discipline:	Year First Registered: 1999 Discipline: <u>Environmental</u> State: <u>Louisiana</u> License No.: <u>28482</u> <i>Also registered in Mississippi (18522)</i>
Other experiences and qualifications relevant to the proposed Project:	<p>Manish Mardia is a registered professional civil and environmental engineer and is the President of MSMM Engineering, LLC; he is an experienced engineering manager and principal with over twenty-five years of experience in managing and designing public works projects. His experience includes environmental assessments, NEPA documentation, planning, design, and construction management for water, wastewater, and solid waste systems for industry and government, design, construction and management of industrial and municipal wastewater treatment facilities, landfill gas collection and control systems, study and management of infiltration and inflow of stormwater into public wastewater collection systems.</p> <p>Mr. Mardia has worked <i>on more than 200 projects for various departments of Jefferson Parish</i>. These projects were successfully completed on time and schedule. Project types include water line replacement design, Environmental Permitting; Hydraulic Modeling; Infiltration and Inflow; Water Treatment and Collection; Wastewater Collection, Distribution, and Treatment; Street and Roadways design; and Landfill Design and Permitting.</p> <p>For a representation of projects completed by Mr. Mardia, please see below:</p> <p><u>Ascension Parish Drinking Water Infrastructure Improvements, Water Meter Replacement</u> Through a federal program to fund Environmental Infrastructure programs within local municipalities, MSMM representing the USACE New Orleans District, is working with the Ascension Parish Government (non-Federal sponsor) to prepare plans and specifications for a water meter replacement program in the Donaldsonville area of Ascension Parish. With many of the water meters in this area being manually read meters and well beyond</p>

PROFESSIONAL IN CHARGE OF PROJECT:

Name & Title:

Manish Mardia, P.E.

President

their design life, it was determined to be a valuable project for the parish to not only reduce labor costs but increase revenues since it was estimated the old water meters were under reporting usage by as much as 30% of water used.

MSMM was responsible for providing 100% bid ready plans and specifications (in USACE format) for removal and replacement of approximately 3,500 water meters of various sizes and installation of four fixed location data collection devices to be mounted on water towers located in the project area. Meter removal and replacement included new meter boxes, meters, encoder registers and antenna; traffic control; and removal and replacement of asphalt/concrete driveways and sidewalks. To have the new water meters and data collection devices work seamlessly with the other areas of the Ascension Parish water system, data collection and billing software, MSMM prepared a J&A document (Justification for other than full and open competition) to allow the use of sole source product. Additional services performed or to be performed by MSMM included field work, obtaining X-Y coordinates for all meter locations, MCACES cost estimate, coordination with Ascension Parish and agencies having jurisdiction, preparation of Letter Report for Project Partnership Agreement between USACE and Ascension Parish, and assistance the USACE with EA, bidding and construction services.

Role: Mr. Mardia provided QA/QC services for the project as well as interfaced with the client.

Ascension Parish Waterline Installation, Donaldsonville, LA

Due to ongoing water quality problems in the Donaldsonville area of Ascension Parish, inclusive of contamination and ongoing pipe bursting, MSMM is designing over 17 miles of new waterline to extend the Parish Utilities of Ascension (PUA) lines to a community in desperate need of new infrastructure. To date, field information has been collected, preliminary design has been initiated and ongoing communication is occurring with Parish officials.

Role: Mr. Mardia is providing QA/QC services for the project and is the liaison between Ascension Parish and the United State Army Corps of Engineers.

Statewide Flood Control Program Grant Drainage Improvements, Kenner, LA

LDOTD's Statewide Flood Control Program grant funding was utilized to undertake stormwater drainage system improvements to two neighborhoods (University City and Audubon Place Subdivisions) in the city. The estimated project cost was \$4.57 million, with a grant amount of \$2.7 million. The project was conducted from beginning to conclusion, which included preparing the grant pre-application package, coordinating with the City and LDOTD staff, conducting hydraulic and hydrologic analyses (HYDRWIN and SWMM), communicating with LDOTD experts on the project's feasibility and technical merit, conducting multiple site visits with LDOTD experts and project staff to clarify project features and existing drainage infrastructure, and facilitating continuous communication with the City's elected representatives about the status of grant process. On course of this project, excellent working relationship was forged with LDOTD's SWFCP staff and experts. Significant coordination was required with LDOTD staff due to the unique drainage conditions in the New Orleans area and due to the SWMM models of the city's previous drainage master plan work required to be re-analyzed with

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President

LDOTD’s HYDRWIN software. The project involved (i) installation of new subsurface drainage pipes and inlets along three city streets, and (ii) upgrading of existing drainage features with larger subsurface pipes, inlets, and outfall pipe along three other city streets. The subsurface pipes ranged in size from small 18-inch diameter circular pipes to large 54”x88” arch pipes. Adjustment of sanitary sewer house connections, and numerous pavement restoration tasks were included in this project as well. This project required continuous coordination with the DPW staff during this project. Most of the drainage improvements under this project were derived from previously completed Master Drainage Plan, while the new improvements were compared with the Master Drainage Plan as well to ensure that no conflicts arise.

Role: Principal; Project Manager

Sludge Line to the River from Carrollton Water Purification Plant, New Orleans, LA

This project involved design and permitting to install one new 36” sludge line from the Sewerage and Water Board of New Orleans Carrollton Water Purification Plant to discharge into the Mississippi River. The 4,300 ft distance of the sludge line travelled along three densely populated neighborhood streets, crossed multiple railroad tracks, crossed an existing flood protection levee on the Mississippi River, and crossed over the existing bike path on the levee crown. Due to site constraints, various alternate installation methods were evaluated, including open cut, horizontal direction drill, jack and bore, micro tunnelling, and above grade. The pipe materials that were considered included fusible PVC and/or restrained PVC for below grade applications, and ductile iron for above grade application (levee crossing). The following tasks were conducted for this project:

- Coordinated with regulatory agencies to obtain input on acceptable design concepts since the sludge line crossed multiple agency jurisdictions. Some of the major agencies included Corps of Engineers (river levee and bike path), and New Orleans Public Belt Railroad.
- Developed the permit applications (environmental permits and railroad permit) and conducted permitting for the entire project. This involved meeting with agencies such as the US Army Corps of Engineers and LA Office of Coastal Management, presenting the project details to the agencies, submitting permit applications, and securing the permits.
- Coordinated with the US Coast Guard regarding discharge of the pipe being in the river and specific requirements of the USCG regarding marine safety lights, warning signs, and marine warning signals.
- Conducted utility research to determine the presence of electrical, gas, telephone, fiber optic, cable, water, sewer, and drainage infrastructure within the project corridor.
- Conducted engineering design for the levee crossing and discharge portion of the sludge line.
- Conducted structural design of the dolphin protection structure in the river for the new sludge line.
- Conducted Preliminary Design (30%), Final Design (60%, 90% and 100%), bidding phase services, and construction management.
- Prepared record drawings.

TEC Professional Services Questionnaire

KEY PERSON:

Name & Title:

Jim Wilson, P.E., LEED® AP
Vice-President

Project Assignment:

Civil Engineer/Engineering Manager

Name of Firm with which associated:

MSMM
ENGINEERING, LLC

Years' experience with this Firm:

8 (2014)

Education: Degree(s)/Year/Specialization:

B.S. in Civil Engineering, 1988, Michigan Technological University

Active registration: Year first registered/discipline:

Year First Registered: 1992
Discipline: Civil State: Louisiana License No.: 35456
Also registered in Michigan (38800)

Other experiences and qualifications relevant to the proposed Project:

Mr. Wilson is a senior civil/drainage engineer with over 26 years of experience in the public sector, successfully designing and managing drainage, sewerage, roadway, waterlines, and site development projects in multiple jurisdictions of Louisiana and Michigan. Mr. Wilson is the civil engineering manager at MSMM where he is responsible for the direct design and design oversight of civil design inclusive of water line design and water meter replacement design across South Louisiana.

Aubry Street CDBG 10-Year Storm Drainage improvement Roadway Construction, New Orleans, LA.

MSMM performed civil design engineering services of the roadway, sidewalks, driveway aprons and sewer for this full reconstruction project. MSMM was also tasked with developing the H&H model (using HYDRWIN) to calculate drainage characteristics within the project area. This information was compared with the capacity of existing drainage infrastructure to develop recommendations for upgrades to the drainage in the neighborhood. MSMM also performed utility research to identify conflicts and found that a 50-inch water line crossed the project area with below average cover (3 ft.). Relocation of the waterline was approved for the project scope and through a mapping and drafting effort, was approved in a new location. MSMM completed the plans and specifications, provided bidding phase services, construction management services and performed the Resident Inspection for the project.

Role: Mr. Wilson was the designer of record for the project.

Ascension Parish - Assumption Water Connection, Ascension Parish, LA

Project consists of placing 10,340 linear feet of 12" water main on LA Highway 70 starting at the existing watermain at the Assumption / Ascension Parish line and extending northerly and then easterly on LA Highway 70 to the existing water tower. The project will include placing steel casing pipe via bore and jack under the

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Jim Wilson, P.E., LEED® AP
Vice-President

intersection of LA Highway 3127; Chef John Folse Boulevard; the railroad; and LA Highway 3089.

Role: Design Engineer

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- Developed the permit applications (environmental permits and railroad permit) and conducted permitting for the entire project. This involved meeting with agencies such as the US Army Corps of Engineers and LA Office of Coastal Management, presenting the project details to the agencies, submitting permit applications, and securing the permits.
- Coordinated with the US Coast Guard regarding discharge of the pipe being in the river and specific requirements of the USCG regarding marine safety lights, warning signs, and marine warning signals.
- Conducted utility research to determine the presence of electrical, gas, telephone, fiber optic, cable, water, sewer, and drainage infrastructure within the project corridor.
- Conducted engineering design for the levee crossing and discharge portion of the sludge line.
- Conducted structural design of the dolphin protection structure in the river for the new sludge line.
- Conducted Preliminary Design (30%), Final Design (60%, 90% and 100%), bidding phase services, and construction management.
- Prepared record drawings.

Role: Design Engineer

Statewide Flood Control Program Grant Drainage Improvements Kenner, LA

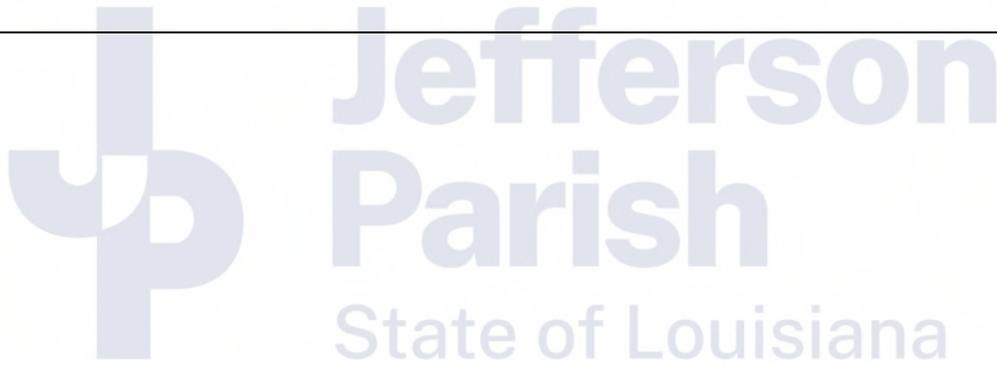
LDOTD’s Statewide Flood Control Program grant funding was utilized to undertake stormwater drainage system improvements to two neighborhoods (University City and Audubon Place Subdivisions) in the city. The estimated project cost was \$4.57 million, with a grant amount of \$2.7 million. The project was conducted from beginning to conclusion, which included preparing the grant pre-application package, coordinating with the City and LDOTD staff, conducting hydraulic and hydrologic analyses (HYDRWIN and SWMM), communicating with LDOTD experts on the project’s feasibility and technical merit, conducting multiple site visits with LDOTD experts and project staff to clarify project features and existing drainage infrastructure, and facilitating continuous communication with the City’s elected representatives about the status of grant process. On course

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Name & Title:

Jim Wilson, P.E., LEED® AP
Vice-President

of this project, excellent working relationship was forged with LDOTD’s SWFCP staff and experts. Significant coordination was required with LDOTD staff due to the unique drainage conditions in the New Orleans area and due to the SWMM models of the city’s previous drainage master plan work required to be re-analyzed with LDOTD’s HYDRWIN software. The project involved (i) installation of new subsurface drainage pipes and inlets along three city streets, and (ii) upgrading of existing drainage features with larger subsurface pipes, inlets, and outfall pipe along three other city streets. The subsurface pipes ranged in size from small 18-inch diameter circular pipes to large 54”x88” arch pipes. Adjustment of sanitary sewer house connections, and numerous pavement restoration tasks were included in this project as well. This project required continuous coordination with the DPW staff during this project. Most of the drainage improvements under this project were derived from previously completed Master Drainage Plan, while the new improvements were compared with the Master Drainage Plan as well to ensure that no conflicts arise.



TEC Professional Services Questionnaire

SPECIALIST:

Name & Title:

Scott Chehardy, P.E.

Project Assignment:

Civil Engineer

Name of Firm with which associated:

MSMM
ENGINEERING, LLC

Years' experience with this Firm:

7 (2015)

Education: Degree(s)/Year/Specialization:

B.S. in Civil Engineering, 1994, University of Southwestern LA

Active registration: Year first registered/discipline:

Year First Registered: 1998
Discipline: Civil State: Louisiana License No.: 28532

Other experiences and qualifications relevant to the proposed Project:

Mr. Chehardy has over two decades of civil design and hydraulic evaluation experience in Louisiana's coastal Parishes. He has successfully designed levees and floodwalls, pump stations and forcemains, and canals and box culverts. His design and assessment experience spans levee and floodwall, roadway, water, sewer and drainage infrastructure elements. He has been an integral part of the study and design of the new 600 cfs drainage pump station in New Orleans International Airport, drainage study of Canal No. 17, Canal No. 7, and Parish Line Pump Station in Jefferson Parish, East Bank Subsurface Drainage Improvement Program in Jefferson Parish, Sewerage & Water Board of New Orleans' SELA Urban Flood Control Projects (Claiborne Avenue Manifold Canal and South Claiborne Avenue Canal II), Hurricane Katrina Related Water Restoration Projects for S&WBNO, etc. Mr. Chehardy's levee design work included West Bank & Vicinity, Lake Cataouatche Pumping Station to Segnette State Park, Phase 2, First Lift. of a 20,250 linear foot segment of the hurricane protection system (\$41.3 M), West Bank & Vicinity, Algiers Canal Levee West, Algiers Lock to Hwy. 23, Orleans & Plaquemines Parish (EAR \$230M to \$425M), and West Bank & Vicinity, Phase 2 Hurricane Protection, Algiers Canal (East), Hero Levee to Highway 23, WBV-49.2, Plaquemines Parish, LA (EAR \$474M to \$558M). Mr. Chehardy's responsibilities have included project management, design, permitting, and quality control.

Ascension Parish Drinking Water Infrastructure Improvements, Water Meter Replacement

Through a federal program to fund Environmental Infrastructure programs within local municipalities, MSMM representing the USACE New Orleans District, is working with the Ascension Parish Government (non-Federal sponsor) to prepare plans and specifications for a water meter replacement program in the Donaldsonville area of Ascension Parish. With many of the water meters in this area being manually read meters and well beyond their design life, it was determined to be a valuable project for the parish to not only reduce labor costs but increase revenues since it was estimated the old water meters were under reporting usage by as much as 30% of

SPECIALIST:

Name & Title:

Scott Chehardy, P.E.

water used.

MSMM was responsible for providing 100% bid ready plans and specifications (in USACE format) for removal and replacement of approximately 3,500 water meters of various sizes and installation of four fixed location data collection devices to be mounted on water towers located in the project area. Meter removal and replacement included new meter boxes, meters, encoder registers and antenna; traffic control; and removal and replacement of asphalt/concrete driveways and sidewalks. To have the new water meters and data collection devices work seamlessly with the other areas of the Ascension Parish water system, data collection and billing software, MSMM prepared a J&A document (Justification for other than full and open competition) to allow the use of sole source product. Additional services performed or to be performed by MSMM included field work, obtaining X-Y coordinates for all meter locations, MCACES cost estimate, coordination with Ascension Parish and agencies having jurisdiction, preparation of Letter Report for Project Partnership Agreement between USACE and Ascension Parish, and assistance the USACE with EA, bidding and construction services.

Role: Mr. Chehardy was the designer of record for the project.

Ascension Parish Waterline Installation, Donaldsonville, LA

Due to ongoing water quality problems in the Donaldsonville area of Ascension Parish, inclusive of contamination and ongoing pipe bursting, MSMM is designing over 17 miles of new waterline to extend the Parish Utilities of Ascension (PUA) lines to a community in desperate need of new infrastructure. To date, field information has been collected, preliminary design has been initiated and ongoing communication is occurring with Parish officials.

Role: Mr. Chehardy serves as the designer of record for the project.

Sludge Line to the River from Carrollton Water Purification Plant, New Orleans, LA

This project involved design and permitting to install one new 36” sludge line from the Sewerage and Water Board of New Orleans Carrollton Water Purification Plant to discharge into the Mississippi River. The roughly 4,300 ft distance of the sludge line travelled along three densely populated neighborhood streets, crossed multiple railroad tracks, crossed an existing flood protection levee on the Mississippi River, and crossed over the existing bike path on the levee crown. Due to site constraints, various alternate installation methods were evaluated, including open cut, horizontal direction drill, jack and bore, microtunnelling, and above grade. The pipe materials that were considered included fusible PVC and/or restrained PVC for below grade applications, and ductile iron for above grade application (levee crossing). The following tasks were conducted for this project:

- Coordinated with regulatory agencies to obtain input on acceptable design concepts since the sludge line crossed multiple agency jurisdictions. Some of the major agencies included Corps of Engineers (river levee and bike path), and New Orleans Public Belt Railroad.
- Developed the permit applications (environmental permits and railroad permit) and conducted permitting for the entire project. This involved meeting with agencies such as the US Army Corps of

SPECIALIST:

Name & Title:

Scott Chehardy, P.E.

Engineers and LA Office of Coastal Management, presenting the project details to the agencies, submitting permit applications, and securing the permits.

- Coordinated with the US Coast Guard regarding discharge of the pipe being in the river and specific requirements of the USCG regarding marine safety lights, warning signs, and marine warning signals.
- Conducted utility research to determine the presence of electrical, gas, telephone, fiber optic, cable, water, sewer, and drainage infrastructure within the project corridor.
- Conducted engineering design for the levee crossing and discharge portion of the sludge line.
- Conducted structural design of the dolphin protection structure in the river for the new sludge line.
- Conducted Preliminary Design (30%), Final Design (60%, 90% and 100%), bidding phase services, and construction management.
- Prepared record drawings.

Role: Engineering Design, Project Coordination

Kennedy Heights Sewer Pumpstation Improvements, Jefferson Parish, LA

MSMM is assisting Jefferson Parish in developing pump station improvements to the Kennedy Heights station on the West Bank. MSMM is evaluating the current state of the station, reviewing the as-built documentation and determining the best/most cost efficient method to rehabilitate the station. Mr. Chehardy is leading the MSMM design efforts and is currently working on finalizing the preliminary design documentation.

Role: Civil Design, Engineer of Record

City of Baton Rouge/Parish of East Baton Rouge System Analysis, Current Condition Evaluation and Rehabilitation Recommendation for Non-SSO Program Sewer Pump Stations, Baton Rouge, LA

The City of Baton Rouge/Parish of East Baton Rouge (C-P) has undertaken a comprehensive rehabilitation program for the portions of its sanitary sewer infrastructure that are plagued with chronic Sewer Sanitary Overflow (SSO) problems. In addition, the C-P is also suffering from severe reduction in functionality and associated increase in Operation & Maintenance costs in several sewer pump stations.

MSMM is performing the evaluation, construction recommendation, design and construction administration on 15 pump stations that fall within the SSO program. MSMM is currently evaluating pump curves, spreadsheets of pump station characteristics, pump station data from survey and GIS. We are comparing this data with previously available data on subject pump stations, identified conflicting data, and working toward a common consensus with the project sponsors about the main issues for each pump station. MSMM has recently submitted 65% design packages for each of the identified pump stations.

Role: Engineer of Record, Engineering Manager

TEC Professional Services Questionnaire

KEY PERSON:
Name & Title:
Thomas M. Willis, P.E., MBA H&H Engineer
Project Assignment:
Hydraulic and Hydrologic Engineer
Name of Firm with which associated:
MSMM ENGINEERING, LLC
Years' experience with this Firm:
10 (2012)
Education: Degree(s)/Year/Specialization:
M.B.A., 1989, Louisiana State University B.S., 1981, Civil Engineering, Louisiana State University
Active registration: Year first registered/discipline:
Year First Registered: 1991 Discipline: <u>Civil and Environmental</u> State: <u>Louisiana</u> License No.: <u>24205</u>
Other experiences and qualifications relevant to the proposed Project:
<p>Mr. Willis has been a Senior Project Manager at MSMM Engineering, LLC since September 2012, where he is conducting civil engineering design and hydrologic and hydraulic analyses of the stormwater drainage systems associated with roadways, bridges, highways, and airports in Kenner, New Orleans, Jefferson Parish and St. Tammany Parish areas. Mr. Willis is a registered civil and environmental engineer with over 31 years of experience in the public works engineering field. Prior to joining MSMM, Mr. Willis conducted numerous design, analysis and inspection activities at airports, conducted master planning, feasibility studies, environmental studies, highway drainage design and permitting.</p> <p>Mr. Willis has successfully completed numerous road, bridge and highway design work around the US, especially related to drainage infrastructure associated with these arteries as presented below:</p> <ul style="list-style-type: none"> ▪ New Orleans Streets Rehabilitation Design and Project Construction Management - Performed street inspection and surveys, value engineering and subsequent rehabilitation design and details for approximately 60 miles of streets and sidewalks in New Orleans. Streets included Royal Street, Marais Street and Robert E. Lee Boulevard. After design was complete, provided engineering management services for construction. ▪ I-49, Shreveport Urban Segment Drainage Master Plan, LA -- Prepared drainage master plan and the preliminary drainage plans. Work consisted of design and detailing of subsurface drainage systems, major culvert crossings, outfall channels, and roadside channels. In addition to design details, he prepared the impact to Floodplain Analysis reports for various sections of the project. ▪ MDOT Statewide Scour Studies, MS – Project manager or engineer with primary responsibility for field review, analysis, report preparation and multidiscipline coordination associated with scour inspection of 50 different structures in Mississippi, including major bridge crossings of the I-10 Biloxi, I-10 Pearl, I-10 Jourdan, I-10 Tchoutacabouffa, I-10 Wolf, Rte 613 Escatawpa, and Rte I 49 Leaf Rivers. Bridge locations extended across the state from the gulf coast area to the northeast Rte. 25 Pickwick Lake on the Tennessee

KEY PERSON:

Name & Title:

Thomas M. Willis, P.E., MBA
H&H Engineer

- River.
- US 61 Widening, St. Francisville, LA -- Performed master plan and preliminary plan analysis for storm sewers and roadside channels and the scour analysis and floodplain analysis report for the proposed Alexander Creek Bridge.
 - Paris Road Design -- Performed surveys, design, and plan preparation for a 1.6 mile section of roadway with two intersections.
 - US Route 7, Norwalk, CT -- Responsible for hydrologic and hydraulic design for a 2 mile, four-lane, divided expressway, serving in a liaison capacity and in preparation of the US Army Corps of Engineers and the Connecticut Department of Environmental Protection permit applications. Structures crossing the Norwalk River and relocation of the Silvermine River were included in the project works.
 - New Jersey Turnpike, NJ -- Directed master plan through final plan drainage design for the six-lane to twelve lane widening of a 2 1/2 mile section of the New Jersey Turnpike. This work involved hydraulic analysis for portions of Meadowlands wetlands and Hackensac River.
 - Great River Bridge, Desha County, Arkansas to Bolivar County, Mississippi -- Project engineer performing engineering and planning for location and hydraulic studies to develop an EIS and a supplemental EIS for a new roadway alignment and crossing of the Mississippi River.
 - US 171 Corridor Study, LA -- Performed master plan hydraulic analysis and field reviews for various sections of the corridor and for several town by-pass alternates.
 - US 165 Widening, I-10 to Fenton -- Performed hydraulic analysis for line and grade adjustments, drainage appurtenance sizing and flood hazard evaluation.
 - I-49 Extension, Lafayette, LA -- Performed hydraulic analysis to determine the feasibility of using a depressed roadway section to extend I-49 through the Lafayette area.
 - West Bank Expressway, LA -- Designed storm sewer and other drainage appurtenances for connecting the structure with at-grade streets.
 - Replacement of I-10 Bridge over St. John River Value Engineering Review, Jacksonville, FL -- Participated as a team member with FDOT representatives and other VE consultants for value engineering study of project design. Performed hydrologic and hydraulic review of proposed structure and approaches including stormwater control and detention basin design.

New Orleans International Airport Drainage Pump Station, Kenner, LA.

Complete design services for a new 600 cfs stormwater drainage pump station and for all landside drainage as part of constructing a new airport terminal in the New Orleans International airport. The pump station will add 600 cfs of capacity to Jefferson Parish east bank's current capacity of 19,935 cfs, and project accomplishments included envisioning, assessing and designing this important addition to the region's flood protection abilities. The \$45 million of drainage mitigation design is a part of the highly anticipated \$826 million of airport improvements to be completed in time for the city's tricentennial anniversary in 2018. The project involved working under extremely compressed schedule, while successfully delivering on a true multi-disciplinary effort spanning civil, structural, electrical, mechanical and environmental engineering, hydraulic modeling (HEC-HMS and HEC-RAS), architectural services, cost estimating, environmental permitting, drafting (CAD, Civil 3D, REVIT, GIS), and agency coordination (COE, CPRA, EJLD, SLFPA-E, LDNR, Entergy, City of New Orleans, City of Kenner, and Jefferson Parish). The station was designed to contain four 150 cfs pumps with 900 HP motors and 60" discharge pipes of more than 4,000 ft combined run.

KEY PERSON:

Name & Title:

Thomas M. Willis, P.E., MBA
H&H Engineer

The structural design involved slab and piles for station, generator, fuel tanks and control building, sheet pile cutoff walls, temporary steel sheet pile TRS system, removal and replacement of floodwall monolith and scour protection, buttress, pipe bents, cofferdam and walers, intake channel and reinforced concrete box culvert, discharge pipe supports, pipe sleeves in floodwall, and discharge basin in West Return Canal.

The landside drainage design effort required continuous close coordination with the roadway drainage designers, the terminal designers, and the apron designers. This required extreme flexibility and adaptability to incorporate numerous changes to other designs into drainage design via multiple hydraulic modeling exercises, and multiple pipe networking and sizing. More than 5 miles of drainage piping (size range of 15” to 72” diameter), open channels and box culverts were designed to route stormwater flow from the terminal to its discharge points.

Role: Hydraulic Modeling

Sludge Line to the River from Carrollton Water Purification Plant, New Orleans, LA

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- Coordinated with regulatory agencies to obtain input on acceptable design concepts since the sluge line crossed multiple agency jurisdictions. Some of the major agencies included Corps of Engineers (river levee and bike path), and New Orleans Public Belt Railroad.
- Developed the permit applications (environmental permits and railroad permit) and conducted permitting for the entire project. This involved meeting with agencies such as the US Army Corps of Engineers and LA Office of Coastal Management, presenting the project details to the agencies, submitting permit applications, and securing the permits.
- Coordinated with the US Coast Guard regarding discharge of the pipe being in the river and specific requirements of the USCG regarding marine safety lights, warning signs, and marine warning signals.
- Conducted utility research to determine the presence of electrical, gas, telephone, fiber optic, cable, water, sewer, and drainage infrastructure within the project corridor.
- Conducted engineering design for the levee crossing and discharge portion of the sludge line.
- Conducted structural design of the dolphin protection structure in the river for the new sludge line.
- Conducted Preliminary Design (30%), Final Design (60%, 90% and 100%), bidding phase services, and construction management.

Role: Hydraulic Modeling

TEC Professional Services Questionnaire

INDIVIDUAL CONSULTANT:	
Name & Title:	Chris Mills, EIT Engineer Intern
Project Assignment:	Engineer Intern
Name of Firm with which associated:	MSMM ENGINEERING, LLC
Years' experience with this Firm:	3 (2019)
Education: Degree(s)/Year/Specialization:	BS in Civil Engineering, 2019, Louisiana State University
Active registration: Year first registered/discipline:	Year First Registered: 2019 Discipline: <u>Civil (EIT)</u> State: <u>Louisiana</u> License No.: 34186
Other experiences and qualifications relevant to the proposed Project:	
<p>Mr. Mills is an EIT with MSMM, responsible for the development of schematic design, survey, roadway pavement condition assessments and the establishment of final grades and utility restoration for City of New Orleans Roadway projects. In his three years at MSMM, Mr. Mills has completed various engineering tasks associated with the six (6) design projects MSMM has been assigned by the City of New Orleans Department of Public Works, over the last three years.</p> <p><u>Little Woods Group A (RR100) Neighborhood Design, New Orleans, LA</u> MSMM was tasked by the CNO DPW to provide roadway design for the neighborhood. Design included patch, mill, overlay, full depth reconstruction, inclusive of new drainage infrastructure, establishment handicap ramps, curbs, and driveway and manhole adjustments. Design services also included the replacement of water and sewer infrastructure below the roadway.</p> <p>Role: Mr. Mills worked with the design engineers to develop the drawings.</p> <p><u>Aubry Street CDBG 10-Year Storm Drainage Improvements and Roadway Construction, New Orleans, LA</u> MSMM completed design of drainage and concrete full depth reconstruction of Aubry St. in the Gentilly neighborhood. The (4) block project included drainage improvements for a 10-year storm, the use of permeable pavement for sidewalks and new utilities for the entire reach. MSMM also performed construction management and resident inspection.</p> <p>Role: Mr. Mills worked in conjunction with the designer of record and was responsible for establishing the layout design for the replacement of the utilities and drainage.</p>	

INDIVIDUAL CONSULTANT:

Name & Title:

Chris Mills, EIT
Engineer Intern

West End Group A (RR193) Neighborhood Roadway Design, New Orleans, LA

MSMM Engineering was tasked by the City of New Orleans Department of Public Works to finalize the design and perform construction management of the West End Group A project. The project includes full depth reconstruction, patch, mill and overlay and incidental pavement repair inclusive of driveways, sidewalks, curbs, and manhole adjustments.

Role: Mr. Mills worked in conjunction with the lead civil engineer to revise the preliminary construction plans, update the project specifications and revise the cost estimate. He was also responsible for providing regular updates to the City concerning the progress of the requested design services.

Lower 9th Ward NW Group D (RR111) Neighborhood Design Project, New Orleans, LA

MSMM has been tasked with providing roadway design for approximately 16 blocks of this Lower 9th ward project. The project included mostly full depth replacement and waterline design. Other services included the development of drainage calculations and drainage features, the re-establishment of base course and new roadway on blocks fully covered with vegetative growth, and curb, gutter, roadway, sidewalk, and street surface improvements on a few blocks not requiring full reconstruction.

Role: Mr. Mills worked in conjunction with the lead engineer to develop line and grade analysis, plan and profile drawings, participation in field reviews and virtual plan-in-hand meetings, and coordination with the CNO DPW Project Manager.

Gentilly Terrace North Group B (RR052) Neighborhood Roadway Design, New Orleans, LA

MSMM has been tasked with providing roadway design for 8 streets of this Gentilly Terrace project as a subconsultant to PEC. The project included mostly full depth replacement and waterline design. Other services included the development of drainage calculations and drainage features, the re-establishment of base course and new roadway, and curb, gutter, roadway, sidewalk, and street surface improvements on a few blocks not requiring full reconstruction.

Role: Mr. Mills worked in conjunction with the lead civil engineer from PEC to help establish an acceptable full depth replacement of the roadway, establishment of utilities appropriate grade adjustments to street intersections, driveways, and sidewalks.

Lower 9th Ward South Group E (RR115) Neighborhood Roadway Design, New Orleans, LA

MSMM has been tasked with providing full depth reconstruction roadway design for 20 blocks of the Lower 9th ward neighborhood. Design services included the development of drainage calculations and drainage features, the widening and addition of curbs on some streets, and full depth reconstruction inclusive of all utilities for most of the area.

Role: Mr. Mills worked in conjunction with the lead civil engineer to provide drainage modifications and improvements, and final grades compatible with adjacent properties to ensure positive flow of water toward newly designed catch basins.

TEC Professional Services Questionnaire

INDIVIDUAL CONSULTANT:	
Name & Title:	Arthur Ian Growden, EIT Engineer Intern
Project Assignment:	Engineer Intern
Name of Firm with which associated:	MSMM ENGINEERING, LLC
Years' experience with this Firm:	3 (2019)
Education: Degree(s)/Year/Specialization:	BS in Civil Engineering, 2020, University of New Orleans
Active registration: Year first registered/discipline:	Year First Registered: 2021 Discipline: <u>Civil</u> State: <u>Louisiana</u> License No.: <u>35468</u>
Other experiences and qualifications relevant to the proposed Project:	<p>Mr. Growden is an EIT with MSMM, responsible for the development of utility design, field survey assessment, establishment of driveway aprons and curb inlets, and the establishment of final grades for City of New Orleans Roadway projects. In his two years at MSMM, Mr. Growden has assisted in several utility designs including the layout of waterline replacement, a large water meter replacement project, and the layout of a sewer treatment plant.</p> <p><u>Ascension Parish Drinking Water Infrastructure Improvements, Water Meter Replacement</u></p> <p>Through a federal program to fund Environmental Infrastructure programs within local municipalities, MSMM representing the USACE New Orleans District, is working with the Ascension Parish Government (non-Federal sponsor) to prepare plans and specifications for a water meter replacement program in the Donaldsonville area of Ascension Parish. With many of the water meters in this area being manually read meters and well beyond their design life, it was determined to be a valuable project for the parish to not only reduce labor costs but increase revenues since it was estimated the old water meters were under reporting usage by as much as 30% of water used.</p> <p>MSMM was responsible for providing 100% bid ready plans and specifications (in USACE format) for removal and replacement of approximately 3,500 water meters of various sizes and installation of four fixed location data collection devices to be mounted on water towers located in the project area. Meter removal and replacement included new meter boxes, meters, encoder registers and antenna; traffic control; and removal and replacement of asphalt/concrete driveways and sidewalks. To have the new water meters and data collection devices work seamlessly with the other areas of the Ascension Parish water system, data collection and billing software, MSMM prepared a J&A document (Justification for other than full and open competition) to allow the</p>

INDIVIDUAL CONSULTANT:

Name & Title:

Arthur Ian Growden, EIT
Engineer Intern

use of sole source product. Additional services performed or to be performed by MSMM included field work, obtaining X-Y coordinates for all meter locations, MCACES cost estimate, coordination with Ascension Parish and agencies having jurisdiction, preparation of Letter Report for Project Partnership Agreement between USACE and Ascension Parish, and assistance the USACE with EA, bidding and construction services.

Role: Mr. Growden assisted in the layout of the project design including the preliminary field work and development of the project specifications.

Ascension Parish Waterline Installation, Donaldsonville, LA

Due to ongoing water quality problems in the Donaldsonville area of Ascension Parish, inclusive of contamination and ongoing pipe bursting, MSMM is designing over 17 miles of new waterline to extend the Parish Utilities of Ascension (PUA) lines to a community in desperate need of new infrastructure. To date, field information has been collected, preliminary design has been initiated and ongoing communication is occurring with Parish officials.

Role: Mr. Growden providing the initial field assessment and is currently working on developing the project specifications.

West End Group A (RR193) Neighborhood Roadway Design, New Orleans, LA

MSMM Engineering was tasked by the City of New Orleans Department of Public Works to finalize the design and perform construction management of the West End Group A project. The project includes full depth reconstruction, patch, mill and overlay and incidental pavement repair inclusive of driveways, sidewalks, curbs, and manhole adjustments.

Role: Mr. Growden, working in unison with the lead project engineer, has been responsible for the review and approval of contractor payment applications, the development of change order packages, review and approval of inspection staff reports, participation in field meetings, and response to contractor and inspection staff regarding questions on the plans and specs.

TEC Professional Services Questionnaire

INDIVIDUAL CONSULTANT:
Name & Title:
Joshua Carson Project Manager
Project Assignment:
Project Manager/Environmental Permitting
Name of Firm with which associated:
MSMM ENGINEERING, LLC
Years' experience with this Firm:
8 (2014)
Education: Degree(s)/Year/Specialization:
B.S. in Biology, 2007, Baldwin-Wallace University M.S. in Environmental Policy, 2011, Johns Hopkins University
Active registration: Year first registered/discipline:
N/A
Other experiences and qualifications relevant to the proposed Project:
<p>Mr. Carson worked as a in-house consultant and Project Manager for the Corps of Engineers on the Mississippi River Gulf-Outlet Feasibility Study project. As Project Manager, he was responsible for the daily operations of the project, including scope, schedule and budget of a project which identified thousands of restoration acres within Orleans and St. Bernard Parishes, including complete restoration of the Bienvenue Triangle, the New Orleans Landbridge, Central Wetlands and Biloxi Marsh. He helped deliver the 3-billion-dollar plan through coordination with numerous jurisdictional agencies and stakeholders as listed below:</p> <ul style="list-style-type: none"> ▪ Local Parish officials from Orleans, St. Bernard and St. Tammany Parishes ▪ State offices of Louisiana (CPRA and Wildlife and Fisheries) and Mississippi (MDMR) ▪ Federal agencies (USF&WS, EPA, NMFS, NRCS) ▪ Local levee districts (SLFPA-E, Lake Borgne Basin Levee District) ▪ Multiple NGO groups (Lake Pontchartrain Basin Foundation, MRGO Must Go Coalition) <p>Mr. Carson's role as an in-house consultant at the the New Orleans District of the Corps of Engineers was to manage projects from project initiation through the planning and construction phases. The technical teams managed by Mr. Carson consisted of both government and consultant personnel with most of the engineering and real estate work performed by government personnel, while environmental and economic work were performed by outside consultants. Mr. Carson's position responsibilities included tasks typical of a government project manager, such as briefing military personnel at both the district and division level, managing project delivery team members to execute project milestones, and relaying critical project information to sponsors, interested parties and the public. He was tasked for meeting legislative and organizational deadlines and to deliver projects on-time and under budget.</p> <p>Mr. Carson also served as a Project Manager for various projects within the Coastal Wetlands Planning and</p>

INDIVIDUAL CONSULTANT:

Name & Title:

Joshua Carson
Project Manager

Protection Act (CWPPRA) program as described below:

- Instrumental in executing a dredging contract for the West Bay Sediment Diversion Project project that dredged the Pilot Town Anchorage Area and used the material beneficially to create islands that serve as sediment speed bumps within the West Bay receiving area.
- Project Manager for the West Belle Pass Headland Restoration, Barataria Bay Waterway Wetland Restoration, and the Clear Marais Bank Protection projects.
- Worked with officials from Orleans, St. Bernard and St. Tammany Parishes to formulate and develop future CWPPRA projects including the Bienvenue Triangle Swamp Restoration, Lake Borgne Shoreline Protection, New Orleans Landbridge Restoration, Wetland Restoration in the Golden Triangle, and various other restoration projects that were included in the 2012 State Master Plan. This formulation has required collaboration with the Coastal Protection and Restoration Authority of Louisiana, local government officials and parish leaders, Federal permitting agencies and non-Government organization representatives to generate projects that can be approved by the CWPPRA Task Force.

Mr. Carson also served as a project manager for the Continuing Authorities Program Section 204 flood risk reduction project in the City of Carencro, LA. Mr. Carson led the planning efforts for the study, working with LADOTD and the City of Carencro to develop an efficient plan to reduce the risk of flooding from localized storm events. He then transitioned to the design and construction phase, working with the regional USACE field office and the construction contractor to deliver a quality project to the City of Carencro. Following completion of the first phase of the project in 2014, Mayor Glen Brasseaux noted that a localized rain event was controlled by the newly installed retention pond, thus preventing flooding to his constituent's houses.

Ascension Parish - Assumption Water Connection, Ascension Parish, LA

Project consists of placing 10,340 linear feet of 12" water main on LA Highway 70 starting at the existing watermain at the Assumption / Ascension Parish line and extending northerly and then easterly on LA Highway 70 to the existing water tower. The project will include placing steel casing pipe via bore and jack under the intersection of LA Highway 3127; Chef John Folse Boulevard; the railroad; and LA Highway 3089.

Role: Environmental Permitting, Facility Infrastructure Identification

Sludge Line to the River from Carrollton Water Purification Plant, New Orleans, LA

This project involved design and permitting to install one new 36" sludge line from the Sewerage and Water Board of New Orleans Carrollton Water Purification Plant to discharge into the Mississippi River. The roughly 4,300 ft distance of the sludge line travelled along three densely populated neighborhood streets, crossed multiple railroad tracks, crossed an existing flood protection levee on the Mississippi River, and crossed over the existing bike path on the levee crown. Due to site constraints, various alternate installation methods were evaluated, including open cut, horizontal direction drill, jack and bore, micro tunnelling, and above grade. The pipe materials that were considered included fusible PVC and/or restrained PVC for below grade applications, and ductile iron for above grade application (levee crossing). The following tasks were conducted for this project:

INDIVIDUAL CONSULTANT:

Name & Title:

Joshua Carson
Project Manager

- Coordinated with regulatory agencies to obtain input on acceptable design concepts since the sluge line crossed multiple agency jurisdictions. Some of the major agencies included Corps of Engineers (river levee and bike path), and New Orleans Public Belt Railroad.
- Developed the permit applications (environmental permits and railroad permit) and conducted permitting for the entire project. This involved meeting with agencies such as the US Army Corps of Engineers and LA Office of Coastal Management, presenting the project details to the agencies, submitting permit applications, and securing the permits.
- Coordinated with the US Coast Guard regarding discharge of the pipe being in the river and specific requirements of the USCG regarding marine safety lights, warning signs, and marine warning signals.
- Conducted utility research to determine the presence of electrical, gas, telephone, fiber optic, cable, water, sewer, and drainage infrastructure within the project corridor.
- Conducted engineering design for the levee crossing and discharge portion of the sludge line.
- Conducted structural design of the dolphin protection structure in the river for the new sludge line.
- Conducted Preliminary Design (30%), Final Design (60%, 90% and 100%), bidding phase services, and construction management.
- Prepared record drawings.

Role: Environmental Permitting

Statewide Flood Control Program Grant Drainage Improvements, Kenner, LA

LDOTD's Statewide Flood Control Program grant funding was utilized to undertake stormwater drainage system improvements to two neighborhoods (University City and Audubon Place Subdivisions) in the city. The estimated project cost was \$4.57 million, with a grant amount of \$2.7 million. The project was conducted from beginning to conclusion, which included preparing the grant pre-application package, coordinating with the City and LDOTD staff, conducting hydraulic and hydrologic analyses (HYDRWIN and SWMM), communicating with LDOTD experts on the project's feasibility and technical merit, conducting multiple site visits with LDOTD experts and project staff to clarify project features and existing drainage infrastructure, and facilitating continuous communication with the City's elected representatives about the status of grant process. On course of this project, excellent working relationship was forged with LDOTD's SWFCP staff and experts. Significant coordination was required with LDOTD staff due to the unique drainage conditions in the New Orleans area and due to the SWMM models of the city's previous drainage master plan work required to be re-analyzed with LDOTD's HYDRWIN software. The project involved (i) installation of new subsurface drainage pipes and inlets along three city streets, and (ii) upgrading of existing drainage features with larger subsurface pipes, inlets, and outfall pipe along three other city streets. The subsurface pipes ranged in size from small 18-inch diameter circular pipes to large 54"x88" arch pipes. Adjustment of sanitary sewer house connections, and numerous pavement restoration tasks were included in this project as well. This project required continuous coordination with the DPW staff during this project. Most of the drainage improvements under this project were derived from previously completed Master Drainage Plan, while the new improvements were compared with the Master Drainage Plan as well to ensure that no conflicts arise.

Role: Environmental Permitting, Program Management

TEC Professional Services Questionnaire

INDIVIDUAL CONSULTANT:	
Name & Title:	Eric M. Curson Design Manager
Project Assignment:	GIS Specialist GIS/CADD
Name of Firm with which associated:	MSMM ENGINEERING, LLC
Years' experience with this Firm:	7 (2015)
Education: Degree(s)/Year/Specialization:	Some classes: Purdue University Southeast College of Technology
Active registration: Year first registered/discipline:	N/A
Other experiences and qualifications relevant to the proposed Project:	<p>Eric Curson is a GIS Specialist and geospatial and CAD manager at MSMM, where his project experience encompasses a variety of geospatial and software initiatives within the Federal and local market in southeast Louisiana. Mr. Curson has worked extensively on projects that require the use of ESRI ArcGIS and Microsoft SQL Server for Federal clients including the USACE New Orleans District. He has been instrumental in leading the GIS database creation and management for several MSMM projects including the Jefferson Parish I&I project, and the Chitimacha and Ascension Parish GIS planning tool initiatives. With a background in both CAD and GIS, Mr. Curson understands the similarities and differences between the two systems and has played an important role in working through any conversion issues that have arisen through the digitization and database creation process. He continues to showcase his skill and talent as the USACE New Orleans District has sent additional requests for database management and specifically requested the services of Mr. Curson.</p> <p><u>Ascension Parish Drinking Water Infrastructure Improvements, Water Meter Replacement</u> Through a federal program to fund Environmental Infrastructure programs within local municipalities, MSMM representing the USACE New Orleans District, is working with the Ascension Parish Government (non-Federal sponsor) to prepare plans and specifications for a water meter replacement program in the Donaldsonville area of Ascension Parish. With many of the water meters in this area being manually read meters and well beyond their design life, it was determined to be a valuable project for the parish to not only reduce labor costs but increase revenues since it was estimated the old water meters were under reporting usage by as much as 30% of water used.</p> <p>MSMM was responsible for providing 100% bid ready plans and specifications (in USACE format) for removal and replacement of approximately 3,500 water meters of various sizes and installation of four fixed location</p>

INDIVIDUAL CONSULTANT:

Name & Title:

Eric M. Curson

Design Manager

data collection devices to be mounted on water towers located in the project area. Meter removal and replacement included new meter boxes, meters, encoder registers and antenna; traffic control; and removal and replacement of asphalt/concrete driveways and sidewalks. To have the new water meters and data collection devices work seamlessly with the other areas of the Ascension Parish water system, data collection and billing software, MSMM prepared a J&A document (Justification for other than full and open competition) to allow the use of sole source product. Additional services performed or to be performed by MSMM included field work, obtaining X-Y coordinates for all meter locations, MCACES cost estimate, coordination with Ascension Parish and agencies having jurisdiction, preparation of Letter Report for Project Partnership Agreement between USACE and Ascension Parish, and assistance the USACE with EA, bidding and construction services.

Role: Mr. Curson provided the CAD drafting for the project.

Ascension Parish Waterline Installation, Donaldsonville, LA

Due to ongoing water quality problems in the Donaldsonville area of Ascension Parish, inclusive of contamination and ongoing pipe bursting, MSMM is designing over 17 miles of new waterline to extend the Parish Utilities of Ascension (PUA) lines to a community in desperate need of new infrastructure. To date, field information has been collected, preliminary design has been initiated and ongoing communication is occurring with Parish officials.

Role: Mr. Curson is providing the GIS support and CAD drafting for the project.

Jefferson Parish Inflow & Infiltration System Modeling, Jefferson, LA

MSMM modeled wastewater collection network piping involving 225 sewer pump stations, more than 8,000 sewer manholes, 200 miles of gravity piping, and 200 miles of forcemains. Field inspection of all modeled stations was performed to conduct pump tests and determine current station capacities. GPS surveys were conducted to determine exact coordinates of manholes and wet wells. Flow monitoring, rainfall measurements and groundwater piezometer data gathering were also performed. Analysis of hydrologic, hydraulic, population and land use data were then performed for modeling purposes. The data was updated in the GIS database, which was then utilized in the InfoWorks modeling software to determine the network's reaction to various design storms, and to quantify inflow and infiltration (I&I) problems. The model results identified SSO areas that matched closely with known customer complaints, sewer overflow records and knowledge of O&M staff. The model was subsequently utilized to test and optimize system improvements, which were utilized by local planning authorities for long term master planning. Mr. Curson has been tasked with running the technical side of the program and routinely meets with GIS and Engineering personnel from Jefferson Parish to provide updates on data gaps/needs, priority projects and the potential for database improvements. He has been involved in the creating of this data set and database since before he was employed by MSMM and continues to refine the data and database for planning use by Jefferson Parish.

TEC Professional Services Questionnaire

INDIVIDUAL CONSULTANT:	
Name & Title:	John M. Domingue Construction Inspector
Project Assignment:	Field Data Collection
Name of Firm with which associated:	MSMM ENGINEERING, LLC
Years' experience with this Firm:	7 (2015)
Education: Degree(s)/Year/Specialization:	N/A
Active registration: Year first registered/discipline:	N/A
Other experiences and qualifications relevant to the proposed Project:	<p>Mr. John Domingue has more than 20 years of experience in construction management, resident inspection, construction administration, resident project representation, site assessment, inspection, and quality control representation for construction projects in the Greater New Orleans area. He has provided inspections for infrastructure projects involving flood control, water resources, roads, bridges, water/wastewater, utility relocations and environmental projects such as marsh restoration. Mr. Domingue has worked closely with local government officials from the City of New Orleans DPW, City of Westwego, City of Gretna, and St. Tammany Parish during construction of these projects. For the past 5 years consecutively, he has provided Resident Inspection Services for CNO DPW projects.</p> <p><u>Reconstruction of Bourbon Street, New Orleans, LA</u> MSMM provided resident inspection services as a subconsultant to Mott MacDonald for this highly visible and important project to fully restore the first 8 blocks of Bourbon Street between Canal and Dumaine. MSMM has continued to provide inspection services with the addition of work on St. Anne Street. Fee: \$615,000. Role: Mr. Domingue was responsible for the daily oversight of the construction work, development of daily reports highlighting completed work, coordination with the City of New Orleans DPW and various other entities inclusive of Entergy and the Sewerage and Water Board, and the daily calculation of reporting of quantities.</p> <p><u>Lower 9th Ward Northeast Group B (RR 104) Roadway Reconstruction, New Orleans, LA</u> MSMM is currently performing Resident Inspection services as a subconsultant to Neel-Schaffer on this full reconstruction project in the Lower 9th ward. MSMM is providing daily observation of the construction of CNO DPW items and providing daily construction quantities to Royal Engineering for input into their construction oversight software. Fee: \$252,000. Role: Mr. Domingue provided the daily construction inspection services for this project. He was responsible for the daily oversight of site progress, daily reporting of site activities and the daily accounting and reporting of</p>

INDIVIDUAL CONSULTANT:

Name & Title:

John M. Domingue
Construction Inspector

site quantities. Mr. Domingue was responsible for inspection of the DPW funded items for the project.

Lake Terrace and Oaks Group A (RR 069) Roadway Reconstruction, New Orleans, LA

As a subconsultant to Mott MacDonald, MSMM provided Resident Inspection and Construction Administration/Project Closeout for this Group A project in the Lake Terrace and Oaks neighborhood. Fee: \$ 249,000.

Role: Mr. Domingue provided the daily inspection and construction oversight for the DPW funded items constructed during the project. This construction project had a duration of 9 months, and Mr. Domingue was on site every day. He was responsible for providing a daily construction log and reporting all contractor questions and field issues to the MSMM engineering staff.

Hurricane Isaac CDBG Disaster Recovery Funding Drainage Construction, Lacombe, LA

MSMM provided Resident Inspection and HUD/Davis Bacon Act labor compliance for St. Tammany Parish on this CDBG project to construct the roadway and all utilities for the academic campus, a stormwater retention pond, and Cultural Arts District. Fee: \$ 435,000.

Role: Mr. Domingue performed the construction management, resident inspection, monitoring of daily construction activities, reviewed project plans and specs, developed daily field reports, coordinated with project manager and project engineer on any problems encountered during construction, and completed HUD labor compliance interviews.

TEC Professional Services Questionnaire

L. Work by Firm or Joint-Venture members which best illustrates current qualifications relevant to this Project. Please include any and all work performed for Jefferson Parish. Please attach additional pages if necessary.

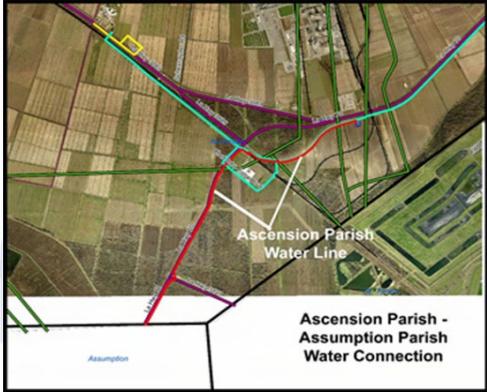
PROJECT NO. 01

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>PUA & ACUD #1 Drinking Water Infrastructure Improvements, Water Meter Replacement</p> <p>Ascension Parish Government and United States Army Corps of Engineers, New Orleans District</p> <p>Durund Elzey, Program Manager 504-862-1674</p>	<p>Through a Federal program to fund Environmental Infrastructure programs within local municipalities, MSMM representing the USACE New Orleans District, is working with the Ascension Parish Government (non-Federal sponsor) to prepare plans and specifications for a water meter replacement program in the Donaldsonville area of Ascension Parish. With many of the water meters in this area being manually read meters and well beyond their design life, it was determined to be a valuable project for the parish to not only reduce labor costs but increase revenues since it was estimated the old water meters were under reporting usage by as much as 30% of water used.</p> <p>MSMM was responsible for providing 100% bid ready plans and specifications (in USACE format) for removal and replacement of approximately 3,500 water meters of various sizes and installation of four fixed location data collection devices to be mounted on water towers located in the project area. Meter removal and replacement included new meter boxes, meters, encoder registers and antenna; traffic control; and removal and replacement of asphalt/concrete driveways and sidewalks. In order to have the new water meters and data collection devices work seamlessly with the other areas of the Ascension Parish water system, data collection and billing software, MSMM prepared a J&A document (Justification for other than full and open competition) to allow the use of sole source product. Additional services performed or to be performed by MSMM included field work, obtaining X-Y coordinates for all meter locations, MCACES cost estimate, coordination with Ascension Parish and agencies having jurisdiction, preparation of Letter Report for Project Partnership Agreement between USACE and Ascension Parish, and assistance the USACE with EA, bidding and construction services.</p>	
<p>Completion Date (actual or estimated):</p>	Estimated Cost (in thousands):	
	Entire Project	Work for which Firm was Responsible:
2022	<i>\$1.3M</i>	\$1.3M

TEC Professional Services Questionnaire

L. Work by Firm or Joint-Venture members which best illustrates current qualifications relevant to this Project. Please include any and all work performed for Jefferson Parish. Please attach additional pages if necessary.

PROJECT NO. 02

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Ascension/Assumption Parish Water Connection</p> <p>US Army Corps of Engineers – New Orleans District, New Orleans LA</p> <p>Mr. Nick Sims Project Manager 504-862-2128</p>	<div style="text-align: center;">  </div> <p>The project includes modelling, permitting, right-of-way, assessment and design of 10,340 linear feet of 12” watermain to extend the existing line in Assumption Parish to an existing water tower in Ascension Parish. The project will include a booster station, flow meter and disinfection by chlorination. The project will also include the use of bore and jacking of steel casing under major road intersections and the Union Pacific Railroad. The design team evaluated the existing in-line system pressures and residual chlorine via hydraulic modeling to determine the required design parameters. Objectives of the project were the following:</p> <ul style="list-style-type: none"> ▪ Modelling Planning, Design, permitting, right-of-way and assessment of 10,340 linear feet of 12” watermain to extend the existing line in Assumption Parish to an existing water tower in Ascension Parish. ▪ Provide no interruptions to vehicular traffic or railway traffic during the course of the project. ▪ Prepare Permit applications and agency coordination. ▪ Determine necessary Right-of-Way ▪ Improve the supply of potable water in Ascension Parish, thereby improving the quality of life of the Parish Residents, and also thereby improving the firefighting capability of the Parish. 	
Completion Date (actual or estimated):	Estimated Cost (in thousands):	
	Entire Project	Work for which Firm was Responsible:
2017	\$2,027	\$200

TEC Professional Services Questionnaire

L. Work by Firm or Joint-Venture members which best illustrates current qualifications relevant to this Project. Please include any and all work performed for Jefferson Parish. Please attach additional pages if necessary.

PROJECT NO. 03

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Sludge Line to the River from Carrollton Water Purification Plant</p> <p>Sewerage and Water Board of New Orleans New Orleans, LA</p> <p>Mr. Cedric S. Grant Executive Director, S&WBNO 504-585-2190</p> <p>Mr. Joseph Baker General Superintendent, S&WBNO 504-585-2365</p>	<div style="display: flex; justify-content: space-around;">   </div> <p>The Sewerage and Water Board of New Orleans intends to install one new 36" sludge line from its Carrollton Water Purification Plant to discharge into the Mississippi River. The roughly 4,300 ft. distance will be along three densely populated neighborhood streets, will cross one set of railroad tracks, will cross an existing flood protection levee on the Mississippi River.</p> <p>MSMM coordinated with regulatory agencies to obtain input on acceptable design concepts since the sludge line route crossed multiple agency jurisdictions. Some of the major agencies included Corps of Engineers (river levee and bike path), and New Orleans Public Belt Railroad. MSMM also developed the permit applications (environmental permits and railroad permit) and conducted permitting for the entire project. This involved meeting with agencies such as the US Army Corps of Engineers and LA Office of Coastal Management, presenting the project details to the agencies, submitting permit applications, and securing the permits. MSMM also coordinated with the US Coast Guard regarding discharge of the pipe being in the river and specific requirements regarding marine safety lights and warning signs/signals. MSMM coordinated with the New Orleans Public Belt Railroad as well, to secure railroad crossing permit. MSMM conducted engineering design for the levee crossing and discharge portion of the sludge line. MSMM conducted Preliminary Design (30%), Final Design, bidding phase services, and construction management. MSMM also conducted hydraulic modeling. The hydraulic modeling evaluated the feasibility of the new 36" pipe in concert with the existing 20" pipe to accommodate the pumped sludge from the plant.</p>	
Completion Date (actual or estimated):	Estimated Cost (in thousands):	
	Entire Project	Work for which Firm was Responsible:
2017	\$467	\$211

TEC Professional Services Questionnaire

L. Work by Firm or Joint-Venture members which best illustrates current qualifications relevant to this Project. Please include any and all work performed for Jefferson Parish. Please attach additional pages if necessary.

PROJECT NO. 04

<p>Project Name, Location and Owner's contact information:</p>	<p align="center">Nature of Firm's Responsibility:</p>	
<p>Aubry Street: CDBG 10-year Storm Drainage Improvement and Roadway Construction New Orleans, LA</p> <p>City of New Orleans Department of Public Works New Orleans, LA</p> <p>Josh Hartley Project Manager 504-658-8042</p>	<p>In 2017, MSMM completed design and construction management of Aubry Street in the Gentilly neighborhood of New Orleans. This critical project to the City of New Orleans required expedited design due to the street being a main thoroughfare for the New Orleans Jazz and Heritage Festival. The project involved the concrete roadway reconstruction of 4 blocks, including all utilities. Project highlights included the following:</p> <ul style="list-style-type: none"> ▪ Concrete Roadway Reconstruction ▪ Development of P&S for the referenced street to improve drainage over the 10 year storm period ▪ Design full set of plans and Bid Specifications package following Standard DPW guidelines ▪ Construction Administration and Inspection services following Standard DPW guidelines ▪ Coordination with all existing utility providers and landowners ▪ Tie in new drainage features with existing drainage infrastructure ▪ Water and Sewer Infrastructure Design inclusive of the relocation of a high pressure water line ▪ Location of Right-of-way (ROW) and trees within ROW ▪ \$2m construction estimate for project completion ▪ Limits of projects are 4 City of New Orleans blocks. <div style="display: flex; justify-content: space-around;">    </div>	
<p>Completion Date (actual or estimated):</p>	<p align="center">Estimated Cost (in thousands):</p>	
<p align="center">2017</p>	<p align="center">Entire Project</p> <p align="center">\$2,000</p>	<p align="center">Work for which Firm was Responsible:</p> <p align="center">\$200</p>

TEC Professional Services Questionnaire

L. Work by Firm or Joint-Venture members which best illustrates current qualifications relevant to this Project. Please include any and all work performed for Jefferson Parish. Please attach additional pages if necessary.

PROJECT NO. 05

<p>Project Name, Location and Owner's contact information:</p>	<p align="center">Nature of Firm's Responsibility:</p>	
<p align="center"> Lincoln Manor Subdivision Drainage Improvements, Kenner LA City of Kenner Tom Schreiner, P.E., Deputy CAO – PW 504-468-7515 </p>	<p>The City of Kenner has recently contracted with MSMM for the necessary drainage improvements for the Lincoln Manor Subdivision in Kenner, LA. Design of new drainage outfalls at Canal No, 13 for Tifton St., Ohio St., and Utah St. are included in the design package, as well as the inclusion of the full restoration of Dawson Street. The improvements for both phases of the project include upsizing the drainage pipes from 15” to 24”, adding new drainage structures, and removing and replacing existing roadways, driveways, and sidewalks as means to upgrade the drainage features. Utility relocations inclusive of water and sewer were also required as part of the new design packages.</p>  <p>MSMM's scope includes geotechnical, engineering design, construction bidding, resident inspection, and construction administration for this project. As the prime, MSMM is providing full engineering design which will include preliminary phase, design phase, bidding phase, and construction phase for specification and drawing productions.</p> <p>During construction, MSMM will be responsible for all resident inspection and construction administration services. This will include reviewing and addressing the project schedule, pay applicants, RFIs, material submittals, and progress meetings. Additionally, we will have an inspector on site at all times for observation of all work by the contractor. MSMM will review, measure, and record all work completed for the production of daily field reports and verification of adequate traffic and site safety procedures.</p>	
<p>Completion Date (actual or estimated):</p>	<p align="center">Estimated Cost (in thousands):</p>	
<p align="center">2021</p>	<p align="center">Entire Project</p> <p align="center">\$900</p>	<p align="center">Work for which Firm was Responsible:</p> <p align="center">\$180</p>

TEC Professional Services Questionnaire

L. Work by Firm or Joint-Venture members which best illustrates current qualifications relevant to this Project. Please include any and all work performed for Jefferson Parish. Please attach additional pages if necessary.

PROJECT NO. 06

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p align="center">West End Group B (RR194) Neighborhood Roadway Design, New Orleans, LA</p> <p align="center">City of New – Department of Public Works</p> <p align="center">Mohanad Abdelfattah, Project Manager 504-250-7608</p>  <p><small>INDEX TO SHEETS</small></p> <p><small>CITY OF NEW ORLEANS STATE OF LOUISIANA DEPARTMENT OF PUBLIC WORKS FEMA RECOVERY ROADS PROGRAM PROJECT NO. 2017-RR194 WEST END GROUP B PAVING PW 21032 (DONOR PW 19901) SWD PW 21031 (DONOR PW 20649) MSMM ENGINEERING, LLC.</small></p> <p><small>NEIGHBORHOOD ROADWAY DESIGN WEST END GROUP B SHEET NO. 01 OF 01 DATE: 08/15/2017</small></p>	<p>The West End Group B project consists of 6 blocks roughly bounded by Bellaire Dr, Pontchartrain Blvd., Veterans Blvd, and 26th Street. MSMM has been tasked with providing full depth roadway construction for all 6 “double blocks”. All blocks are concrete and being replaced as concrete. The fully reconstructed streets include new drainage, new concrete drives and sidewalks and curbs, new ADA Ramps, 6 blocks of new 8” water, and 5 blocks of new 8” sewer.</p> <p>MSMM’s scope for design drawings, included schematic design, preliminary design, and final design, and all plans were prepared and submitted for approval within the City’s CAD system for this project. We were also responsible for providing cost estimates and updates to project schedule reviews. MSMM also completed detailed hydraulic calculations for the new drainage infrastructure that was designed.</p> <p>Construction management services will be performed directly under the supervision of Mr. Jim Wilson, a LA registered civil engineer. Prior to award of construction, Mr. Wilson will be responsible for all design documents. He will also be responsible for updating, reviewing, and documenting all construction plans and specifications, the QA monitoring plan, the project schedule, the coordination of project phasing plan, all RFIs, and any field changes or deficiencies.</p> <p>The project bid cost was identified to be in range of the engineers estimate, but due to the extremely tight construction duration of 200 calendar days, some unit prices were higher than average costs identified by the MSMM team. Overall, this was not an issue and construction will begin on time.</p>	
Completion Date (actual or estimated):	Estimated Cost (in thousands):	
	Entire Project	Work for which Firm was Responsible:
2018	\$225	\$225

TEC Professional Services Questionnaire

L. Work by Firm or Joint-Venture members which best illustrates current qualifications relevant to this Project. Please include any and all work performed for Jefferson Parish. Please attach additional pages if necessary.

PROJECT NO. 07

<p>Project Name, Location and Owner's contact information:</p>	<p align="center">Nature of Firm's Responsibility:</p>	
<p>Jefferson Parish Department of Sewerage (DOS) – Sewer Infiltration and Inflow Management Jefferson Parish, LA</p> <p>Regional Planning Commission</p> <p>Rebecca Otte, Environmental Programs Coordinator 10 Veterans Memorial Blvd., New Orleans, LA 70124 504-483-8513 rotte@norpc.org</p>	<p>MSMM principals conducted field survey of sewer manholes and pump stations utilizing GPS equipment (GPS System 500) and SKI-Pro software (both from Leica Geosystems), data entry into database and management of database (MS Access) to create and maintain Jefferson Parish's intricate wastewater collection system network in ArcGIS software, mapping of the system's features, followed by hydraulic modeling (InfoWorks) to identify problem areas under various storm conditions graphically within a GIS mapping environment, and recommend capacity and rehabilitation improvements to minimize rainfall derived infiltration and inflow (I&I) and related sanitary sewer overflows (SSOs). Detailed field investigation of nearly 6,000 manholes and 250 plus pump stations were conducted. Many rehabilitation projects have been identified costing upwards of \$500 million, along with identifying many areas that will require sewer system evaluation surveys (SSES) to further pin point problem locations and causes. A total of twenty SSO areas were chosen for evaluation as part of this project. The total estimated cost of all recommended improvements as a result of model evaluation of 20 SSO areas located on the East Bank of Jefferson Parish was \$21,858,424. Currently the hydraulic model is being updated to reflect recent construction projects and identify/rank the remaining areas in terms of need for action to resolve current issues.</p>	
<p>Completion Date (actual or estimated):</p>	<p align="center">Estimated Cost (in thousands):</p>	
<p align="center">2017</p>	<p align="center">Entire Project</p> <p align="center">\$21,000</p>	<p align="center">Work for which Firm was Responsible:</p> <p align="center">\$200</p>

TEC Professional Services Questionnaire

L. Work by Firm or Joint-Venture members which best illustrates current qualifications relevant to this Project. Please include any and all work performed for Jefferson Parish. Please attach additional pages if necessary.

PROJECT NO. 08

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Woodlake/Seton Park Drainage Pump Station Analysis Kenner, LA</p> <p>Jefferson Parish Department of Capital Projects</p> <p>Neil Schneider, CCM, P.E., Director 504-736-6833</p>	<p>MSMM Engineering has been tasked by the Jefferson Parish Department of Capital Projects to provide a drainage analysis of the Woodlake Estates, Seton Park and Grand Lake subdivisions in the City of Kenner. This area is located in the Northwest corner of Kenner and has experienced chronic stormwater flooding problems for an extensive time period. Due to the location of these neighborhoods, they are positioned in the downstream end of the complex canal-pump station network of drainage infrastructure that serves the Parish on flood control and stormwater issues. Due to large amounts of canal constrictions (culverts, bridges, cross sectional area, etc) a significant amount of drainage from the target areas are unable to timely reach the two existing drainage pump stations in the area (Parish Line to the south and Duncan Canal to the East). Due to these factors, even extremely large expansions of drainage capacity in Parish Line and Duncan Canal pump stations are not anticipated to provide appreciable drainage relief to the target area. MSMM tasks on this project consist of data review of the area, field reconnaissance and site work, hydraulic modeling, alternatives evaluation and cost estimating. MSMM will provide Jefferson Parish an evaluation report at the end of 2017.</p> 	
Completion Date (actual or estimated):	Estimated Cost (in thousands):	
	Entire Project	Work for which Firm was Responsible:
2017	<i>N/A (Construction)</i>	\$123

TEC Professional Services Questionnaire

L. Work by Firm or Joint-Venture members which best illustrates current qualifications relevant to this Project. Please include any and all work performed for Jefferson Parish. Please attach additional pages if necessary.

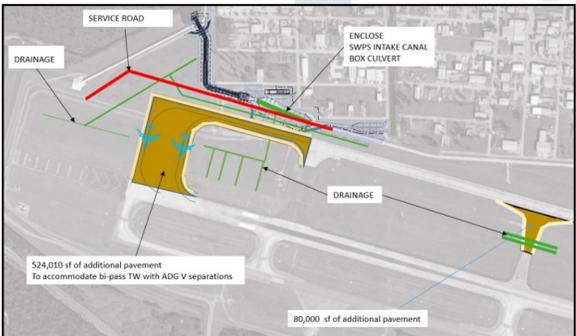
PROJECT NO. 09

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p align="center"> Statewide Flood Control Program Grant Drainage Improvements, Phase 1, 2, & 3 Kenner, LA </p> <p align="center"> City of Kenner – Department of Public Works, Jefferson, LA </p> <p align="center"> Tom Schreiner, Public Works Director 504-468-7515 </p>	<p>MSMM personnel led the design, construction management, and resident inspection of multiple phases of the Statewide Flood Control Program (SWFCP) grant drainage improvements in Kenner. LDOTD's Statewide Flood Control Program grant funding was utilized to undertake stormwater drainage system improvements to two neighborhoods (University City and Audubon Place Subdivisions) in the city. The estimated project cost was \$4.57 million, with a grant amount of \$2.7 million. MSMM personnel conducted the project from beginning to conclusion, which included preparing the grant pre-application package, coordinating with the City and LDOTD staff, conducting hydraulic and hydrologic analyses (HYDRWIN and SWMM), preliminary and final design, construction management and resident inspection. Significant coordination was required with LDOTD staff due to the unique drainage conditions and due to the SWMM models of the city's previous drainage master plan work, which required re-analyzation with LDOTD's HYDRWIN software. The project involved installation of new subsurface drainage pipes and inlets along three city streets, and upgrading existing drainage features with larger subsurface pipes, inlets, and outfall pipe along three other city streets. The subsurface pipes ranged in size from small 18-inch diameter circular pipes to large 54" x 88" arch pipes. Adjustment of sanitary sewer house connections, and concrete pavement restoration of the roadways, sidewalks and driveways was also required.</p> <div style="display: flex; justify-content: space-around;">   </div>	
<p align="center">Completion Date (actual or estimated):</p> <p align="center">2016</p>	Estimated Cost (in thousands):	
	Entire Project	Work for which Firm was Responsible:
	\$500	\$500

TEC Professional Services Questionnaire

L. Work by Firm or Joint-Venture members which best illustrates current qualifications relevant to this Project. Please include any and all work performed for Jefferson Parish. Please attach additional pages if necessary.

PROJECT NO. 10

<p>Project Name, Location and Owner's contact information:</p>	<p align="center">Nature of Firm's Responsibility:</p>			
<p align="center"> New Orleans International Airport Taxiway G, New Orleans, LA New Orleans Aviation Board James McCluskie 504-464-0831 </p> 	<p>MSMM Following the 2019 opening of the new terminal at the New Orleans International Airport, the New Orleans Aviation Board received FAA approval to extend Taxiway Golf (G) and Bravo (B) to accommodate larger International Flights. Given the location of Taxiway G near the perimeter of the Airport grounds, several drainage improvements/changes were also required as part of the design and construction of the Taxiway Extension.</p>	 <p>As a sub to Garver, MSMM was tasked with preparing the taxiway pavement restoration design, designing the utility relocations, developing the transit pavement design, designing the drainage improvements, and applying for the appropriate FAA permit applications. For the taxiway pavement, over 600,000 sf of new pavement was designed. For the drainage infrastructure, our team evaluated the drainage impacts of the Taxiway extensions through hydraulic modeling, and designed drainage mitigation features inclusive of canal enclosures and concrete box culvert enclosures (pictured below). Our utility relocations design consisted of relocation of a main sewer artery, FAA conduit and Parish and Airport water lines. Finally, we were responsible for designing changes to the Airport perimeter fencing due to the taxiway extension. Project design was completed in May of 2020 and the project was bid in June of 2020. Construction began in October of 2020 our team has provided construction administration resident inspection and construction management services during the construction phase.</p>		
<p>Completion Date (actual or estimated):</p>	<p align="center">Estimated Cost (in thousands):</p> <table border="1"> <tr> <td align="center">Entire Project</td> <td align="center">Work for which Firm was Responsible:</td> </tr> </table>		Entire Project	Work for which Firm was Responsible:
Entire Project	Work for which Firm was Responsible:			
<p align="center">2016</p>	<p align="center">\$500</p>	<p align="center">\$500</p>		

TEC Professional Services Questionnaire

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

Parties:		Status/Result of Case:
Plaintiff:	Defendant:	
Not Applicable	Not Applicable	Not Applicable

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

MSMM Engineering, LLC (MSMM) is one of the fastest growing small businesses in the greater New Orleans area. In our short 10- year company history, we have a total portfolio at over \$57M through our experience consisting of public works projects such as water line replacement design, water meter replacement design, retrofitting water distribution facilities and the installation of new water utilities, sewer lift station, design, stormwater drainage design, wastewater system design and assessments, sewer treatment plant, pump station and forcemain design, drainage pump station, and discharge piping design, levee crossing and floodwall crossing of forcemains, discharge basins in rivers and canals, sewer collection system infiltration and inflow assessment via field investigation, pump station capacity verification, manhole GPS surveys, ArcGIS mapping and hydraulic modeling (SewerCAD and InfoWorks), environmental assessments, NEPA documentation, agency coordination, environmental permitting, drainage structures, canals, culverts, bulkheads, levees and floodwalls, resident inspection, and construction management/administration.

Firm Capability: Our proposed team provides coverage for all the project types and supplementary services defined in the RFQ. Our team, led by Mr. Manish, will be comprised of a small but tightly resourced group of firms with a plan for dividing our respective roles and responsibilities. MSMM is proud to add sub-consultant BFM Corporation, LLC to our team for this pursuit. Together, we have an extensive history of providing services to Jefferson Parish.

✓ **MSMM** will serve as the prime firm. MSMM staff make-up consists of civil, environmental, electrical, & structural engineers, architects, CADD drafters, project managers, environmental scientists, cost estimators, construction managers and resident inspectors. We offer a balanced blend of experience performing civil and structural design, environmental design, mechanical and electrical design, feasibility/planning studies and assessments, construction management and resident inspection services. Additionally, we possess the staff and ability to perform any required environmental compliance, permitting, cost estimating, and project and program management oversight.



Company Experience

Specializing in multi-disciplinary design and assessment, MSMM offers experienced personnel with an extremely diverse skill set. MSMM engineers total over 150 years of design experience and combined have designed over 250 projects for Jefferson Parish. The principals of MSMM alone have designed over 200

Jefferson Parish projects. We are extremely proficient in providing feasibility phase, design phase, and construction phase services for all engineering projects.

1. Professional Training and Experience in Relation to the Type of Work Required for the Engineering Services:

Key Personnel: MSMM staff have extensive experience working with municipal, State and Federal clients throughout the Gulf Coast region, particularly in southeast Louisiana. These clients include municipal organizations such as Jefferson Parish (All Departments), the New Orleans Sewerage & Water Board (NOSWB), regional entities like the Southeast Louisiana Flood Protection Authority - East (SLFPA-E), State clients such as the Coastal Protection and Restoration Authority (CPRA) and the Department of Transportation and Development (DOTD), and Federal clients like the U.S. Army Corps of Engineers (USACE) and the Environmental Protection Agency (EPA). MSMM's Principal, Mr. Manish Mardia, P.E., has over twenty-five years of experience in the region with these clients as well as the City of Kenner, the Regional Planning Commission, the Louisiana Department of Environmental Quality (DEQ) and the Louisiana Armstrong International Airport. MSMM staff are also active in a variety of national and local professional organizations, including the American Society of Civil Engineers (ASCE), the Society of American Military Engineers (SAME), and the American Council of Engineering Companies (ACEC).

- **Civil Engineering:** The MSMM civil engineering team led by Mr. Jim Wilson and Mr. Scott Chehardy has an extensive portfolio of waterline and water meter design. In fact, the recent water meter design we just completed for Ascension Parish is going to bid the second week of April, and MSMM will provide the construction administration and engineering during construction services until the completion of this important project. Additionally, we have incorporated utility design inclusive of the relocation of waterlines for all roadway and drainage work we have completed in South Louisiana over the past five years.
- **Cost Estimating:** MSMM personnel are very familiar with the creation of cost estimates for new construction, renovation, and environmental remediation projects. Our estimators are skilled in preparing estimates of contractor performance times and schedules, usually with development of a progress schedule. Our estimators are extremely versed in the development of cost estimates utilizing the Micro-Computer Aided Cost Estimating System (MCACES), Parametric Cost Engineering System Software (PACES) or RSMMeans. Depending on the client preference, we have experience producing estimates in all three systems. MSMM employs multiple cost estimating experts. Our Cost Engineers constantly keep updated with changes in the software versions and associated Cost Libraries. Our team of cost estimators keep a library of cost estimates based on historical cost information from manufacturers, previous project bids and market trends.



- **Construction Management, Testing, and Inspection Services:** MSMM has a deep and talented pool of construction managers and resident inspectors. Currently, in the City of New Orleans, MSMM is providing construction management and resident inspection for the most high-profile construction job - Bourbon Street Reconstruction.
- **CAD Drafting:** MSMM employs multiple personnel with extensive drafting backgrounds. We have the proven ability to provide project plans in A/E/C standard using

AutoCad, Microstation Version V8i, and BIM360. We also have the capability to import and export *.dxf, *.dgn, and *.dwg formatted files and convert from *.dwg to *.dgn and vice versa. MSMM Cad personnel are currently providing drafting for multiple USACE Civil Works projects in the required software and format.

•
2. Capacity for Timely Completion of Newly Assigned Work, considering the Factors of Type of Engineering Task, Current Unfinished Workload, and Person or Firm’s Available Professional and Support Personnel:

MSMM prides itself in completing projects on time and under budget. Since the inception of MSMM, our staff engineers have completed over 100 design projects, including multiple water line replacement, water meter replacement, drainage pump station and sewer lift station projects. Our engineering staff have designed/worked on more than **200 projects for various Jefferson Parish departments**. These projects were successfully completed within the identified schedule and met the quality standard Jefferson Parish expects in design performance. The Jefferson Parish references identified in the response to question #7 can attest to the quality standard and timely completion of Parish projects by MSMM and our personnel. Please reach out to them to gain a better understanding of our firm abilities/accomplishments.

MSMM’s current project load allows ample flexibility in our staffing arrangements to ensure that completion of the field and modeling work associated with this project will be completed on time and within budget. We recently wrapped up four of our largest design jobs, one being the large drainage pump station at the New Orleans International Airport, and the other three were large design task orders for USACE Ft. Worth where we designed an office building, a roadway and bridge project and a large recreational project. These four jobs encompassed most of our engineering resources over the last 2 years. With these jobs now finished, we have started to allocate our engineering resources to smaller jobs, and they have ample availability in their current schedules for a new project. In addition, the other large design jobs we currently have ongoing for USACE (Cow Bayou Drainage Complex, Ascension Parish Wastewater Treatment Plant, and design for a new floodwall in Texas City, TX) have moved past the preliminary design phase and final design will be completed before the end of the year. Additionally, the larger Jefferson Parish Watershed report has been finalized and given to the Parish for feedback, so our modeling staff also has ample availability currently. Given the nature of our current workload, our engineering design and support staff availability is forecast in the following table

Name	Role	Availability
Jim Wilson, P.E., LEED AP	Civil Engineer	40%
Scott Chehardy, PE	Civil Engineer	70%
Manish Mardia, P.E.	Environmental Engineer	65%
Robert Yokum, PE	Structural Engineer	40%
Magan Kansagra, PE	Mechanical Engineer	75%
Harry Hawney, PE	Electrical Engineer	60%
Nestor Houghton, PE	Electrical Engineer	80%
Thomas M. Willis, PE, MBA	Hydraulic Engineer	50%
Eric Curson	CADD Tech	40%
Josh Carson	Project Manager	40%
Don Daigle, CVS, CPE	Cost Estimator	70%
John Domingue	Construction Inspector	40%
Chris Mills, EIT	Engineer Intern	50%
Ian Growden, EIT	Engineer Intern	65%

3. Location of Principal Office Where Work Will be Performed:

All work associated with this project will take place out of the MSMM office located at 4508 Clearview Parkway, Metairie, LA 70006.

4. Adversarial Legal Proceedings between the Parish and the Person or Firm Performing Professional Services, in which the Parish prevailed, or any ongoing Proceedings between Parish and the Person or Firm:

MSMM is proud to state that **neither the firm nor our staff have been involved in any litigation activity with Jefferson Parish** or any other client.

5. Prior Successful Completion of Projects of the Type and Nature of the Engineering Services, as Defined, for which firm has Provided Verifiable References:

Relevant Past Performance: We are a professional engineering consulting firm comprised of highly educated staff experienced in numerous public works projects in south Louisiana. MSMM offers clients an optimum route to sustainable infrastructure planning, construction and management in many disciplines such as environmental regulatory compliance, environmental compliance documentation, environmental permitting, environmental monitoring, and sewer infrastructure projects. As evidenced in the following table, MSMM has completed numerous sewer infrastructure projects over the past five years. We have broken those out by project type in the table.

For recent Water line replacement and water meter replacement projects we have completed across South Louisiana, we offer the following references:

- **Carl Ladmiraault, P.E., Department of Public Works • Ascension Parish • CLadmiraault@apgov.us • 504-450-1200**
- **Durund Elzey • USACE New Orleans District • Durund.elzey@usace.army.mil • 504-862-1674**

6. Size of Firm, considering number of Professional and Support Personnel Required to Perform the type of Engineering Tasks:

MSMM has a total of 28 personnel that will be available to work on this project. Though labeled as a small DBE firm, our engineering qualifications rival those of larger firms in the region. We have been selected by the USACE Ft. Worth and New Orleans Districts for Prime small business contracts to perform A-E Design and Project and Program Management on Federal projects. We have also received a prime engineering design contract by the RTA of New Orleans. Finally, were ranked the top small business firm for roadway design in the region by the City of New Orleans Department of Public Works. Recently in Jefferson Parish, we have primarily provided hydraulic modeling services for various projects. These modeling reports have been widely successful and have been reviewed by top Parish officials. Additionally, we have provided sewer liftstation and drainage design for the Parish.

When beginning any new job, MSMM launches a QA/QC template that assigns personnel based on experience, location, and availability. This plan is developed by the Project Manager and reviewed by the Program Manager before any tasks are executed on the project. MSMM employs a QA/QC manager who not only reviews the quality of the design but participates in forecasting available resources based on the current

workload at the company. The QA/QC manager works in unison with the project manager to guarantee that MSMM is providing quality work products and ample capacity to add resources to the job, should the scope change during design.

For this project, we envision the standard need for the Program Manager, QA/QC manager and Project Manager. We will also assign 1 Hydraulic Engineers, 2 Civil Engineers, a CAD drafters/woman, 1 GIS lead, and two engineers in training who will be responsible for the management, initial design, and construction administration of roadway design projects. The resources available may be too many for the type of work involved, but this is all factored into how MSMM will run the project through our QA/QC plan.

Mr. Scott Chehardy will be the designer of record for MSMM water design tasks associated with this RFP. Mr. Chehardy has over 20 years of history designing water projects across Jefferson Parish and Southeastern Louisiana. He has also been the engineer of record for the two major active water projects MSMM is designing for Ascension Parish. Mr. Chehardy brings an expertise in water design services that will greatly benefit Jefferson Parish.

7. Past Performance by Person of Firm on Parish Contracts:

Since the early 1990s, the President of MSMM Engineering, LLC has worked *on more than 200 projects for various departments of Jefferson Parish*. Project types designed by MSMM engineering staff include drainage evaluation/pump stations, roads and bridges, stormwater and wastewater system assessment, funding and construction administration, environmental site assessments, permitting and NEPA documentation, and hurricane hazard mitigation design for drainage and sewerage facilities. MSMM's Principals have worked on Jefferson Parish contracts for the past 20 years and have a history of successful project execution starting from grant applications, through environmental permitting and design, to construction administration and grant management. At no point during the 20+ year career of producing project plans and specifications has any member of MSMM been involved in projects involving design inadequacies, cost over-runs or assertions of fault. This statement can be verified by checking with the references listed in the response to Question #5.

A listing of other Jefferson Parish projects designed by MSMM engineering staff:

- Utility (Sewer) Relocations – Huey P. Long Bridge Widening
- 31st Street Bridge Replacement
- Hilltop to Quitman Bridge Replacement
- Manhattan Boulevard Rehabilitation from Lapalco to Harvey
- Lapalco Boulevard Widening
- Hickory Avenue (LA-48 to Mounes)
- Harahan Pump to the River, Jefferson Parish, LA
- Soniat Canal Drainage Improvements (USACE/SELA project)
- Drainage Pump Station Design, New Orleans International Airport, Kenner, LA
- Storm Water Demonstration Project, Force Main & East Bank Wastewater Treatment Plant Expansion, Jefferson Parish, LA.
- Sena Drive Drainage Improvements
- Sauve Road Drainage Improvements
- Canal 7 Drainage Improvements at Chateau Boulevard and Joe Yenni Boulevard
- East Bank Subsurface Drainage Improvement Program Phases I and II

- Drainage Evaluation of Canal Nos. 17 and 7, and Parish Line Pump Station
- Environmental Review for Hurricanes Gustav and Ike CDBG Disaster Recovery grant projects
- East Bank Sewerage Plant Disinfection Feasibility Study, Jefferson Parish, LA.
- Expansion, Jefferson Parish, LA.
- Infiltration/Inflow Hydraulic Modeling, Jefferson Parish, LA
- Sewer Lift Station D6-5 Force Main Improvements, Jefferson Parish, LA
- Chetta Drive Gravity Sewer System, Jefferson Parish, LA
- East Bank Water Treatment Plant Expansion, Jefferson Parish, LA
- Wastewater Treatment Plant Modifications, including Sewer Force Main (Tribune to East Bank WWTP), Jefferson Parish, LA
- Sewerage Improvements to the Crown Point Area, Jefferson Parish, LA
- Drainage Design Services for the Long-Term Airport Development, New Orleans International Airport, Kenner, LA
- Bridge City Chlorination/ Dechlorination System, Jefferson Parish, LA

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

Signature: 

Print Name: Manish Mardia, PE

Title: President

Date: March 31, 2022

