

# STATEMENT<sup>OF</sup> QUALIFICATIONS



DRAINAGE MASTER PLAN FOR THE  
EAST BANK OF JEFFERSON PARISH

SOQ NO. 22-014  
RESOLUTION NUMBER: 138896

MARCH 24, 2022

LINFIELD, HUNTER & JUNIUS, INC.

IN ASSOCIATION WITH:

**CDM Smith** CDM Smith, INC.

**Fenstermaker** C. H. Fenstermaker & Associates, LLC

**pivotal** Pivotal Engineering, LLC  
engineering

22M-034



**LINFIELD, HUNTER & JUNIUS, INC.**

PROFESSIONAL ENGINEERS,  
ARCHITECTS AND SURVEYORS

3608 18<sup>th</sup> Street / Suite 200  
Metairie, Louisiana 70002  
(504) 833-5300 / (504) 833-5350 fax  
LHJ@LHJunius.com

Ralph W. Junius, Jr., P.E.  
Nathan J. Junius, P.E., P.L.S.  
Anthony F. Goodgion, P.E.  
Benjamin N. Chadwick, AIA  
Charles T. Knight, P.E.  
Robert E. Nockton, P.E.  
Mark K. Annino, E.I.

Casey M. Genovese, P.E.  
Daniel A. Flores, P.E.  
John M. Jackson, P.E.  
Timothy J. Roth, P.E.  
Luis F. Sosa, P.E.  
Richard A. Van Wootten, P.E.

March 24, 2022

Ms. Eula A. Lopez, Parish Clerk  
Jefferson Parish Council  
200 Derbigny Street, Suite 6700  
Gretna, LA 70053

**RE: Statement of Qualifications  
Professional Services Engineering and Supplemental Services  
For a Drainage Master Plan for the East Bank of Jefferson Parish  
Resolution No. 138896 – SOQ No. 22-014  
Our File #: 22M-034**

Dear Ms. Lopez:

Linfield, Hunter & Junius, Inc. (LH&J) is pleased to submit its Statement of Qualifications for the Drainage Master Plan for the East Bank of Jefferson Parish.

LH&J is well qualified to provide the services required for this project. Our team is made up of LH&J, CDM Smith, C.H. Fenstermaker & Associates, and Pivotal Engineering. Our team includes over 50 professionals who are available to meet all project requirements. Our Team meets or exceeds the qualifications and experience required for this project.

Contact Information:

Nathan J. Junius, P.E., P.L.S., President  
Linfield, Hunter & Junius, Inc., 3608 18<sup>th</sup> Street, Suite 200, Metairie, LA 70002  
[njunius@LHJunius.com](mailto:njunius@LHJunius.com) - 504-833-5300 - 504-833-5350 fax

We appreciate your business and look forward to continuing our relationship with Jefferson Parish.

Very truly yours,

LINFIELD, HUNTER & JUNIUS, INC.

Nathan J. Junius, P.E., P.L.S.  
President

NJJ/ckc

Enclosures

## TEC Professional Services Questionnaire

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

Professional Engineering and Supplemental Services for a  
Drainage Master Plan for the East Bank of Jefferson Parish  
Resolution No. 138896  
SOQ 22-014

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

LINFIELD, HUNTER & JUNIUS, INC.  
3608 18<sup>th</sup> Street, Suite 200  
Metairie, LA 70002



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

Nathan J. Junius, P.E., P.L.S., President  
Linfield, Hunter & Junius, Inc.  
3608 18<sup>th</sup> Street, Suite 200  
Metairie, LA 70002  
504-833-5300 504-833-5350 fax  
njunius@LHJunius.com

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

Nathan J. Junius, P.E., P.L.S., President  
Linfield, Hunter & Junius, Inc.  
3608 18<sup>th</sup> Street, Suite 200  
Metairie, LA 70002  
504-833-5300 504-833-5350 fax  
njunius@LHJunius.com

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

<u>5</u> Administrative	— Estimators	— Specification Writers
<u>1</u> Architects (Licensed)	— Geologists	<u>4</u> Structural Engineers
— Chemical Engineers	— Geotechnical Engineers	— Graduate Engineers
<u>6</u> Civil Engineers (Licensed)	— Interior Designers	— Project Managers
<u>5</u> Construction Inspectors	— Landscape Architects	<u>1</u> Clerical
— Ecologists	<u>5</u> Land Surveyor	— Grant/Funding Specialist
— Electrical Engineers	— Mechanical Engineers	— Sanitary Engineers
<u>4</u> Engineer Intern	— Environmental Engineers	<u>3</u> CADD Drafters
<u>2</u> Professional Land Surveyors	<u>1</u> Architect Intern	<u>37</u> TOTAL

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

If marked "No" skip to Section I. If marked "yes" complete Sections G-H.



**LINFIELD, HUNTER & JUNIUS, INC.**  
PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS

## TEC Professional Services Questionnaire

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

1. N/A

2.

**H. Has this JOINT-VENTURE previously worked together? Please check:**

YES ☐ NO ☐ N/A

**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. CDM Smith 1515 Poydras Street, Suite 1130 New Orleans, LA 70112	Hydraulic & Hydrologic Modeling	Yes
2. C.H. Fenstermaker & Associates, L.L.C. 1100 Poydras Street, Suite 1550 New Orleans, LA 70163	Hydraulic & Hydrologic Modeling	Yes
3. Pivotal Engineering, LLC 3925 N. I-10 Service Road W., Suite 109R Metairie, LA 70002	Hydraulic & Hydrologic Modeling	Yes

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

23



**LINFIELD, HUNTER & JUNIUS, INC.**

PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS



Staffing Plan – A Diagram showing all key personnel that would be available for assignment. The Staffing Plan should also include the same information for sub-consultants (if applicable).

**LINFIELD, HUNTER & JUNIUS, INC.**  
**STAFFING PLAN**



**Professional Engineering and  
Supplemental Services for a  
Drainage Master Plan for the  
East Bank of Jefferson Parish**

**SOQ No. 22-014  
Resolution No. 138896**

**Prime Consultant**



**LINFIELD, HUNTER & JUNIUS, INC.**  
PROFESSIONAL ENGINEERS, ARCHITECTS AND SURVEYORS

**Management Team**

**Nathan J. Junius, P.E., P.L.S. \***  
*Principal in Charge*

**Robert E. Nockton, P.E. \***  
*Project Manager*

**Drainage Master Plan Team**

**Hydraulic Modeling &  
Engineering**

**Luis F. Sosa, P.E. \***  
Lead Hydraulic Modeler

**John M. Jackson, P.E. \***  
Jessica Watts, P.E.  
CFM, DWRE, ENVSP<sup>1</sup>

Michael Schmidt, P.E., BCEE, DWRE<sup>1</sup>  
Rich Wagner, P.E., DWRE<sup>1</sup>  
Thomas Nye, PhD, P.E.<sup>1</sup>  
Rania Bekheet, PhD, P.E.<sup>1</sup>  
Jeanne Arceneaux Hornsby, P.E., CFM<sup>2</sup>  
Stefan Bourgeois, P.E.<sup>2</sup>  
William Katzenmeyer, P.E., CFM<sup>2</sup>  
Mark Dubroc, P.E.<sup>2</sup>  
Ian Trahan, P.E.<sup>2</sup>  
Kazunga Maitaria, Ph.D.<sup>2</sup>  
Mallory Rodrigue, P.E.<sup>2</sup>  
Murtada Mousa, E.I.<sup>2</sup>  
Coy LeBlanc, M.S.<sup>2</sup>  
Avinash Mehta, P.E.<sup>3</sup>  
Yoseph Shifare, P.E., PTOE<sup>3</sup>  
Elena LeBlanc<sup>3</sup>  
Michael Malley<sup>3</sup>

**Land Surveying**

**Nathan J. Junius, P.E., P.L.S. \***  
Team Leader

**William J. Muller, P.L.S. \***  
Senior Land Surveyor

Paul H. Morales, IV \*  
Survey Party Chief

Daniel D. Bindewald \*  
Survey Party Chief

Vincent J. Leco, E.I. \*  
Survey Party Chief

Cooper G. Ashworth, E.I. \*  
Survey Party Chief

**Engineering and Estimating of  
Recommended Improvements**

Luis F. Sosa, P.E. \*  
Robert E. Nockton, P.E. \*  
Mark K. Annino, E.I. \*  
William M. Katzenmeyer, P.E.<sup>2</sup>  
Avinash Mehta, P.E.<sup>3</sup>

\* Linfield Hunter & Junius, Inc.  
Employee

<sup>1</sup> CDM Smith, Inc. Employee

<sup>2</sup> C.H. Fenstermaker & Associates,  
L.L.C. Employee

<sup>3</sup> Pivotal Engineering, L.L.C.  
Employee

## TEC Professional Services Questionnaire

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

### **PROFESSIONAL IN CHARGE OF PROJECT:**

#### **Name & Title:**

Nathan J. Junius, P.E., P.L.S., PTOE, President

#### **Project Assignment:**

Principal In Charge / Land Surveying Team Leader

#### **Name of Firm with which associated:**



**LINFIELD, HUNTER & JUNIUS, INC.**

#### **Years' experience with this Firm:**

20 Years

#### **Education: Degree(s)/Year Specialization:**

Tulane University / 2001 / B.S. / Civil Engineering  
University of Texas / 2002 / M.S. / Civil Engineering

#### **Active registration: Year first registered/discipline:**

2002 / Civil / LA License No. PE.0031843 - 2005 / Land Surveying / LA License No. PLS.0004958

#### **Other experience and qualifications relevant to the proposed Project:**

Junius has over 20 years of project management, engineering design, surveying and construction management experience, with specialized expertise in the planning, permitting, design and construction management for a diverse range of public and private sector projects. Civil projects include major drainage canals, drainage pump stations, site developments, miles of streets, wastewater treatment plants, sewage collections systems, sewer force mains and waterline distribution projects. He has also served as an expert in disputes involving drainage and land surveying.

Junius has conducted numerous boundary, topographic, resubdivision surveys, route surveys, ALTA surveys, hydrographic surveys, utility surveys throughout Louisiana, Mississippi and Texas.

### **ENGINEERING PROJECTS**

**Hoey's Canal Bypass – , Jefferson Parish, LA.** Junius is the Principal in Charge for this project. The Hoey's Canal Bypass is divided into three phases. Phase 1 entailed the construction of approximately 800 feet of new pile-supported **concrete-lined canal with concrete side slopes** from the Monticello Canal to Cold Storage Road. Phase 2 entailed the construction of approximately 450 feet of pile-supported **concrete-lined canal** including a 200-foot long 31-foot wide by 10-foot high pile-supported **covered concrete box culvert**. Phase 3 will consist of the construction of pile-supported concrete-lined canal that connects Phases 1 and 2.

## TEC Professional Services Questionnaire

Nathan J. Junius, P.E., P.L.S., PTOE, President  
Principal in Charge – Land Surveying Team Leader

Resume

### HOEY'S CANAL IMPROVEMENTS (PHASE II AND III), JEFFERSON PARISH, LA

Junius is **Principal in Charge** for this project. This project is divided into three phases. Phase 1 entailed the construction of approximately 800 feet of sheet pile lined **concrete flume with concrete side slopes** from Betz Avenue to Deckbar Avenue. Phase 2 entailed the construction of approximately 1,800 feet of sheet pile lined pile-supported **concrete flume with concrete side slopes** from Deckbar Avenue to Labarre Road. Phase 2 also included an in-line pile-supported culvert beneath a railroad spur. Phase 3 will consist of the construction of approximately 1,500 feet of sheet pile lined **concrete flume with concrete side slopes** from Labarre Road to Causeway Boulevard.

### 17<sup>TH</sup> STREET CANAL WIDENING BETWEEN HOEY'S CANAL AND AIRLINE DRIVE, JEFFERSON PARISH / NEW ORLEANS, LA

Junius was **Principal in Charge** for this project. This project entails the widening and concrete lining of approximately 700 feet of the 17<sup>th</sup> Street Canal between the Hoey's Canal and Airline Drive, including the construction of new pile-supported concrete canal bottom and pile-supported concrete retaining side walls.

### GEISENHEIMER COVERED CANAL RECONSTRUCTION, METAIRIE, LA

The Geisenheimer Covered Canal is the primary drainage canal for the portion of Jefferson Parish located between Metairie Road to the north, Airline Drive to the south, the Orleans/Jefferson Parish boundary to the east and Causeway Boulevard to the west. This area includes the Metairie Country Club and Metairie Club Gardens subdivision. The project entailed the construction of 3,800 feet of **covered concrete box culvert**. Junius was an **engineer** on this project.

### LAND SURVEYING

Junius currently provides surveying in many areas including hydrographic surveying, GPS surveying, single beam technology, multibeam technology and scanning including numerous topographic and boundary surveys. Survey data that LH&J provides has been imported into ArcGis in the following survey data converter formats: ASCII, TDS Coordinate and TDS Raw. The survey work has been in the State Plane Coordinate System based on NAD27. Junius is proficient with Leica Dual Frequency RTK Rovers, Leica DNA03 Digital Auto Level, Leica GPS Base Station, G-882 Magnetometer Leica Total Robotic Total Station, Leica Geo Office, Carlson Survey/Civil Software, Autocad 2016 and Civil 3D.

Junius has conducted numerous boundary, topographic, resubdivision surveys, route surveys, ALTA surveys, hydrographic surveys, utility surveys throughout Louisiana, Mississippi and Texas. One of Junius' largest surveying projects included the hydrographic and topographic surveying for the **Inner Harbor Navigation Canal (IHNC) Lake Borgne Surge Barrier** which included over a mile and half of hydrographic surveying through the marsh including topographic surveying for two gates.

### **RELEVANT EXPERIENCE:**

#### CANAL STREET IMPROVEMENTS, JEFFERSON PARISH, LA

**Land Surveying Team Leader** for this Jefferson Parish road and drainage project. Topographic surveying for the reconstruction of a divided roadway, culverting an **open channel drainage canal**, and building a Linear Park from Lake Avenue to the I-10 Frontage Road including a bike trailhead.

#### HOEY'S CANAL BYPASS, JEFFERSON PARISH, LA

**Land Surveying Team Leader** for this drainage project. Topographic and boundary surveying for the construction of a new concrete-lined open canal including a 200-foot long 31-foot wide by 10-foot high pile-supported **covered concrete box culvert**.

## TEC Professional Services Questionnaire

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

#### Name & Title:

Robert E. Nockton, P.E., Civil Engineer

#### Project Assignment:

Project Manager

#### Name of Firm with which associated:



**LINFIELD, HUNTER & JUNIUS, INC.**

#### Years' experience with this Firm:

27 Years

#### Education: Degree(s)/Year Specialization:

Rice University / B.S. / 1995 / Civil Engineering

#### Active registration: Year first registered/discipline:

2000 / Civil / LA License No. PE.0028802

#### Other experience and qualifications relevant to the proposed Project:

Nockton has been involved in the engineering of a wide variety of projects including **storm water modeling, improvements to major drainage structures, storm water management systems with green infrastructure, drainage pump stations, drainage studies**, urban streets projects, water and sewerage studies, new waterlines and sewer lines, waterline and sewer line replacement and upgrades, wastewater pump station design and rehabilitation, utility relocations, surveying and site design. Nockton has been Project Manager and/or Lead Civil Engineer on many successful projects in the past twenty years.

#### **17<sup>TH</sup> STREET CANAL WIDENING BETWEEN HOEY'S CANAL AND AIRLINE DRIVE, JEFFERSON PARISH / NEW ORLEANS, LA**

Nockton is the **Project Manager** for this project. This project entails the widening and concrete lining of approximately 700 feet of the 17<sup>th</sup> Street Canal between the Hoey's Canal and Airline Drive, including the construction of new pile-supported concrete canal bottom and pile-supported concrete retaining side walls.

#### **GEISENHEIMER COVERED CANAL RECONSTRUCTION, METAIRIE, LA**

Nockton was Lead Civil Engineer for this project. The Geisenheimer Covered Canal is the primary drainage canal for the portion of Jefferson Parish located between Metairie Road to the north, Airline Drive to the south, the Orleans/Jefferson Parish boundary to the east and Causeway Boulevard to the west. This area includes the Metairie Country Club and Metairie Club Gardens subdivision. The project entailed the construction of 3,800 feet of **covered concrete box culvert**.



## TEC Professional Services Questionnaire

Robert E. Nockton, P.E., Civil Engineer  
Project Assignment – Project Manager

Resume

### **ADDITIONAL EXPERIENCE AND QUALIFICATIONS**

#### **HOEY'S CANAL IMPROVEMENTS (PHASE II AND III), JEFFERSON PARISH, LA**

Nockton was **Project Manager** and Lead Civil Engineer for this project. This project is divided into three phases. Phase 1 entailed the construction of approximately 800 feet of sheet pile lined **concrete flume with concrete side slopes** from Betz Avenue to Deckbar Avenue. Phase 2 entailed the construction of approximately 1,800 feet of sheet pile lined pile-supported **concrete flume with concrete side slopes** from Deckbar Avenue to Labarre Road. Phase 2 also included an in-line pile-supported culvert beneath a railroad spur. Phase 3 will consist of the construction of approximately 1,500 feet of sheet pile lined **concrete flume with concrete side slopes** from Labarre Road to Causeway Boulevard.

#### **HOEY'S CANAL BYPASS, JEFFERSON PARISH, LA**

Nockton was **Project Manager** and Lead Civil Engineer for this project. The Hoey's Canal Bypass is divided into three phases. Phase 1 entailed the construction of approximately 800 feet of new pile-supported **concrete-lined canal with concrete side slopes** from the Monticello Canal to Cold Storage Road. Phase 2 entailed the construction of approximately 450 feet of pile-supported **concrete-lined canal** including a 200-foot long 31-foot wide by 10-foot high pile-supported **covered concrete box culvert**. Phase 3 will consist of the construction of pile-supported concrete-lined canal that connects Phases 1 and 2.

#### **AUDUBON PARK DRAINAGE SYSTEM STUDY, NEW ORLEANS, LA**

Nockton was the **Project Manager** for this project. Exposition Boulevard, a concrete-paved pedestrian walkway along the eastern edge of Audubon Park, regularly floods during heavy rainfall events, rendering it unusable and generating ongoing complaints from adjacent residents. This study identified and prioritized numerous alternative improvements to alleviate this flooding.

#### **DILLARD UNIVERSITY IMPROVEMENTS, NEW ORLEANS, LA**

Nockton was Lead Civil Engineer for this project. LH&J was engaged by Dillard University to design multiple infrastructure projects including improvement of the campus-wide **drainage facilities**, roadways, parks, pervious pavements, bioswales, parking lots, tennis courts, etc.

#### **DRAINAGE IMPROVEMENTS TO CUDDIHY DRIVE AND WOODVINE AVENUE, METAIRIE, LA**

Nockton performed as Lead Civil Engineer for this project. This project consisted of the upgrading of the **subsurface drainage** and roadway reconstruction along Cuddihy Drive and Woodvine Avenue to alleviate persistent street flooding.

#### **REPLACE SIX CANAL CROSSINGS OVER GENERAL DEGAULLE BOULEVARD CANAL, NEW ORLEANS, LA**

Nockton was Lead Civil Engineer for this project. This project required the removal of 6 existing canal crossings and replacement them with double 20 wide concrete box culverts and replacement of roadway crossing.

#### **WIDENING OF CLUB DELUXE ROAD, TANGIPAHOA PARISH, LA**

Nockton is **Project Manager** and Lead Civil Engineer for this project. This project entails the widening of approximately 7,600 feet of roadway and the installation of **new subsurface drainage** along both sides of the roadway.

#### **CANAL STREET IMPROVEMENTS, METAIRIE, LA**

Nockton was **Project Manager** for the first phase of this project. This project includes the installation of a **new double barrel box culvert** in an open canal and enclosure of the canal, along with **new subsurface drainage** to tie the existing drainage into the new box culvert.

## TEC Professional Services Questionnaire

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

#### Name & Title:

Luis F. Sosa, P.E., Civil Engineer

#### Project Assignment:

Lead Hydraulic Modeler

#### Name of Firm with which associated:



**LINFIELD, HUNTER & JUNIUS, INC.**

#### Years' experience with this Firm:

43 Years

#### Education: Degree(s)/Year Specialization:

Louisiana State University New Orleans / B.A. / 1973 / Biological Sciences

University of New Orleans / B.S. / 1978 / Civil Engineering

Tulane University / M.S. / 1982 / Civil Engineering

#### Active registration: Year first registered/discipline:

1984 / Civil / LA License No. PE.0020850

1993 / Environmental / LA License No. PE.0020850

#### Other experience and qualifications relevant to the proposed Project:

Sosa is a seasoned engineer with experience primarily in the areas of **major drainage studies, planning and improvements**, water treatment and distribution, wastewater collection system evaluation, repair, and upgrades, wastewater treatment, and land development.

Sosa has considerable experience performing hydraulic analysis of open channels including culverts and of pressure pipe, including waterlines and sewage force mains.

#### **SEVENTEENTH STREET CANAL DRAINAGE BASIN STUDY, NEW ORLEANS, LA**

Sosa was the Lead Civil Engineer for this project that included computer modeling of a 10,400 acre drainage basin, **two major drainage pumping stations** and **outfall canals**. The study formed the basis of the design of improvements to the 17<sup>th</sup> Street Canal from Pumping Station No. 6 to the Hoey's Canal. This study was performed as a joint effort between the Sewerage and Water Board of New Orleans and Jefferson Parish.

#### **17<sup>TH</sup> STREET CANAL WIDENING BETWEEN HOEY'S CANAL AND AIRLINE DRIVE, JEFFERSON PARISH / NEW ORLEANS, LA**

Sosa was the Senior Civil Engineer for this project. This project entails the widening and concrete lining of approximately 700 feet of the 17<sup>th</sup> Street Canal between the Hoey's Canal and Airline Drive, including the construction of new pile-supported concrete canal bottom and pile-supported concrete retaining side walls.

## TEC Professional Services Questionnaire

Luis F. Sosa P.E., Civil Engineer  
Project Assignment – Lead Hydraulic Modeler

Resume

### **ADDITIONAL EXPERIENCE AND QUALIFICATIONS**

#### **GEISENHEIMER COVERED CANAL RECONSTRUCTION, METAIRIE, LA**

Sosa performed as Senior Civil Engineer for this project. The Geisenheimer Covered Canal is the primary drainage canal for the portion of Jefferson Parish located between Metairie Road to the north, Airline Drive to the south, the Orleans/Jefferson Parish boundary to the east and Causeway Blvd. to the west. This area includes the Metairie Country Club and Metairie Club Gardens subdivision. The project entailed the construction of 3,800 feet of **covered concrete box culvert**.

#### **IMPROVEMENTS TO THE 17<sup>TH</sup> STREET CANAL, JEFFERSON PARISH / NEW ORLEANS, LA**

Sosa was the **Lead Civil Engineer** for the design of improvements to the 17<sup>th</sup> Street Canal from Pumping Station No. 6 to the Hoey's Canal. The project consisted of the widening and concrete lining of 3,700 feet of **drainage canal**, including pile-supported retaining wall, pile-supported concrete slab, utility and roadway relocation and four bridge approaches.

#### **REPLACE SIX CANAL CROSSINGS OVER GENERAL DEGAULLE BOULEVARD CANAL, NEW ORLEANS, LA**

Sosa performed as Senior Civil Engineer for this project. This project required the removal of 6 existing canal crossings and replacement them with double 20 wide concrete box culverts and replacement of roadway crossing.

#### **CLAIBORNE AVENUE BOX CANAL I - MONTICELLO CANAL TO LEONIDAS STREET, NEW ORLEANS, LA**

Sosa performed as Senior Civil Engineer for this project. This project entailed the construction of a 20 foot wide by 10 foot deep **Drainage Culvert** and reconstruction of the Claiborne Ave damaged roadway under the SELA program for the Corps of Engineers (COE).

#### **DAVIS PLANTATION PARK SUBDIVISION PHASE III, ST. CHARLES PARISH, LA**

Sosa was the **Lead Civil Engineer** for this 53 acre subdivision with 113 residential lots, including **roadway drainage design** and the design of a **drainage pump station**.

#### **CANAL STREET IMPROVEMENTS, METAIRIE, LA**

Sosa was the Senior Civil Engineer for the first phase of this project. This project includes the installation of a **new double barrel box culvert** in an open canal and enclosure of the canal, along with **new subsurface drainage** to tie the existing drainage into the new box culvert.

#### **HOLLYGROVE DRAINAGE IMPROVEMENTS, NEW ORLEANS, LA**

Sosa performed as **Senior Civil Engineer** for this project. LH&J designed all drainage improvements including the Forshey Street-Railroad Embankment **Drainage Culvert** Improvements, the Dublin Street and Eagle Street **Drainage Culvert** Improvements, the Oleander Street **Culvert** modifications, and the Pritchard Street Pumping Station.

## TEC Professional Services Questionnaire

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

#### Name & Title:

John M. Jackson, P.E.

#### Project Assignment:

Hydraulic Modeler

#### Name of Firm with which associated:



**LINFIELD, HUNTER & JUNIUS, INC.**

#### Years' experience with this Firm:

7 Years

#### Education: Degree(s)/Year Specialization:

University of New Orleans / 2018 / BS / Civil Engineering

Bob Jones University / 2011 / B.S. / Biology

#### Active registration: Year first registered/discipline:

2021 / Civil / LA License No. PE.0045804

#### Other experience and qualifications relevant to the proposed Project:

Jackson specializes in the design of civil projects such as **storm water management systems, improvements to major drainage structures, drainage studies, green infrastructure**, surveying, urban streets, highways, site developments, and utility expansions and relocations.

Jackson has varied experience in design for public clients including parish and local governments; and private clients, including commercial, institutional and industrial. His design experience includes a range of civil engineering and surveying disciplines for site investigation, feasibility study, conceptual layouts, value engineering, detailed designs, preparation of plans and specifications, and cost estimates. Jackson has successfully designed projects for **Jefferson Parish**, Plaquemines Parish, and City of New Orleans Department of Public Works.

Jackson is a licensed Remote Pilot to fly drones for aerial surveys.

#### **GEISENHEIMER COVERED CANAL RECONSTRUCTION, METAIRIE, LA**

Jackson was Civil Engineer for this project. The Geisenheimer Covered Canal is the primary drainage canal for the portion of Jefferson Parish located between Metairie Road to the north, Airline Drive to the south, the Orleans/Jefferson Parish boundary to the east and Causeway Boulevard to the west. This area includes the Metairie Country Club and Metairie Club Gardens subdivision. The project entailed the construction of 3,800 feet of **covered concrete box culvert**.



**HOEY'S CANAL IMPROVEMENTS (PHASE III), JEFFERSON PARISH, LA**

Jackson was Civil Engineer for this project. This project is divided into three phases. Phase 1 entailed the construction of approximately 800 feet of sheet pile lined **concrete flume with concrete side slopes** from Betz Avenue to Deckbar Avenue. Phase 2 entailed the construction of approximately 1,800 feet of sheet pile lined pile-supported **concrete flume with concrete side slopes** from Deckbar Avenue to Labarre Road. Phase 2 also included an in-line pile-supported culvert beneath a railroad spur. Phase 3 will consist of the construction of approximately 1,500 feet of sheet pile lined **concrete flume with concrete side slopes** from Labarre Road to Causeway Boulevard.

**RIVERTOWN/SOUTH KENNER DRAINAGE IMPROVEMENT KENNER, LA**

Jackson was Civil Engineer for this project. This project included upgrading of catch basins and drain pipes along Williams Blvd, installation of approximately 2,600 linear feet of a 36-inch diameter trunk line to carry water from Williams Blvd. beneath the railroad embankment and directly to the Duncan Canal. To accommodate the increased flows and to enhance the performance of the new trunk line and work along Williams Blvd, the project included approximately 1,100 feet of widening of the Duncan Canal.

**ZATARAIN'S BRANDS SHIPPING FACILITY, GRETN, LA**

Jackson was lead Civil Engineer for this project. This 12-acre facility would hold rain water for days after a storm event, causing damage to the truck loading area and inhibiting truck movement. The project included an investigation of the site and the surrounding areas, a stormwater management plan for the City of Gretna and the Zatarain's facility, and the design of a new drainage system, improved stormwater storage measures, and new paving.

**DISTRICT 4 COVERED CANAL FEASIBILITY STUDY, JEFFERSON PARISH, LA**

Jackson was Civil Engineer for this project. The purpose of this project was to study the impact of replacing existing open canals in District 4 of Jefferson Parish with **covered concrete box culverts**, allowing for land development on top of the existing canals. The project included the modeling of 79,400 feet of canals and the impact of replacing them with box culverts.

**KENNER DISCOVERY MODULAR CAMPUS, KENNER, LA**

Jackson was Stormwater Management Engineer for this project. This project was a flood mitigation study including hydraulic modeling, **drainage design**, ecological considerations, **storm water detention** and **green infrastructure**

## TEC Professional Services Questionnaire

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

#### Name & Title:

Mark K. Annino, E.I.

#### Project Assignment:

Civil Engineering

#### Name of Firm with which associated:



**LINFIELD, HUNTER & JUNIUS, INC.**

#### Years' experience with this Firm:

27 Years

#### Education: Degree(s)/Year Specialization:

University of New Orleans / B.S. / 1995 / Civil Engineering

#### Active registration: Year first registered/discipline:

1995 / Civil / LA License No. EI.0016308

#### Other experience and qualifications relevant to the proposed Project:

Annino has vast experience preparing plans and specifications for numerous municipal and private projects. The scopes of these projects include **subsurface and major drainage structures**, roadways, bridges, water distribution systems, utility system replacement / relocation (sewer, water, drain, etc.), hydraulic structures and horizontal / vertical geometric layouts. Annino has also been involved in the permit application process and construction administration of most projects for which he has designed.

#### **CANAL STREET IMPROVEMENTS, METAIRIE, LA**

Annino is the Civil Engineering Design Team Leader for this project. This project includes the installation of a **new double barrel box culvert** in an open canal and enclosure of the canal, along with **new subsurface drainage** to tie the existing drainage into the new box culvert.

#### **17<sup>TH</sup> STREET CANAL WIDENING BETWEEN HOEY'S CANAL AND AIRLINE DRIVE, JEFFERSON PARISH / NEW ORLEANS, LA**

Annino was the Civil Engineering Design Team Leader for this project. This project entails the widening and concrete lining of approximately 700 feet of the 17<sup>th</sup> Street Canal between the Hoey's Canal and Airline Drive, including the construction of new pile-supported concrete canal bottom and pile-supported concrete retaining side walls.

## TEC Professional Services Questionnaire

Mark K. Annino, BSCE  
Project Assignment – Civil Engineering

Resume

### **ADDITIONAL EXPERIENCE AND QUALIFICATIONS**

#### **EAST AND WEST LIVINGSTON PLACE DRAINAGE IMPROVEMENTS, METAIRIE, LA**

Annino was the Civil Engineering Design Team Leader for this project. This project consisted of the reconstruction of East and West Livingston Place including installation of **new subsurface drainage** and utility relocation.

#### **CUDDIHY DRIVE AND WOODVINE AVENUE DRAINAGE IMPROVEMENTS, METAIRIE, LA**

Annino was the Civil Engineering Design Team Leader for this project. This project consisted of the upgrading of the **subsurface drainage system** along Cuddihy Drive and a part of Woodvine Avenue and the reconstruction of the affected roadways.

#### **MAGAZINE STREET / PRYTANIA STREET RECONSTRUCTION, NEW ORLEANS, LA**

Annino was the Civil Engineering Design Team Leader for this project. This project entailed the reconstruction of 26,500 feet of roadway including replacement of **subsurface drainage** and utility relocation.

#### **REPLACE SIX CANAL CROSSINGS OVER GENERAL DEGAULLE BOULEVARD CANAL, NEW ORLEANS, LA**

Annino was the Civil Engineering Design Team Leader for this project. This project required the removal of 6 existing canal crossings and replacement them with double 20 wide concrete box culverts and replacement of roadway crossing.

#### **LOUISVILLE STREET / CATINA STREET RECONSTRUCTION, NEW ORLEANS, LA**

Annino was the Lead Civil Engineering Designer for this project. This project entailed the reconstruction of 3,950 feet of roadway including replacement of **subsurface drainage** and utility relocation.

#### **CLAIBORNE AVENUE BOX CANAL I-MONTICELLO CANAL TO LEONIDAS STREET, NEW ORLEANS, LA**

Annino performed as Lead Civil Engineering Designer on this project. This project entailed the construction of a 20 foot wide by 10 foot deep **Drainage Culvert** and reconstruction of the Claiborne Ave damaged roadway under the SELA program for the Corps of Engineers (COE). Also included replacement of local street **subsurface drainage**.

#### **HOLLYGROVE DRAINAGE IMPROVEMENTS, NEW ORLEANS, LA**

Annino performed Civil Engineering on this project. LH&J designed all drainage improvements including the Forshey Street-Railroad Embankment **Drainage Culvert** Improvements, the Dublin Street and Eagle Street **Drainage Culvert** Improvements, the Oleander Street **Culvert** modifications, and the Pritchard Street Pumping Station.

#### **DAKIN ST. IMPROVEMENTS, METAIRIE, LA**

Annino performed Civil Engineering on this project. The Dakin Street Corridor project is divided into three Phases. Phase 1 entailed the construction of an underpass, railroad bridge and pump station at Dakin Street and Airline Drive. Phase 2 includes a 3,200 feet overpass and 1,250 feet of 4-lane roadway from the underpass to Jefferson Highway. Phase 3 will extend L&A Road from Dakin Street to the Earhart Expressway and includes installation of **new subsurface drainage**.

**TEC Professional Services Questionnaire**

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

**Name & Title:**

William J. Muller, P.L.S., Registered Land Surveyor

**Project Assignment:**

Senior Land Surveyor

**Name of Firm with which associated:**



**LINFIELD, HUNTER & JUNIUS, INC.**

**Years' experience with this Firm:**

16 Years

**Education: Degree(s)/Year Specialization:**

Southeastern Louisiana University / 1954

**Active registration: Year first registered/discipline:**

1995 / Land Surveying / LA License No. PLS. 0004756

**Other experience and qualifications relevant to the proposed Project:**

Muller has extensive experience in all aspects of land surveying throughout Louisiana. He was technical manager for the largest land survey firm in Southeast Louisiana for many years. Prior to that he worked in the offshore industry spotting well locations, run field crews for numerous Louisiana Power and Light topographic and boundary surveys, analyzed thousands of boundary surveys, and supervised multiple field crews, draftsmen and land surveys. He has been providing land surveying for the firm the past 11 years.

Following is a small sampling of Muller's experience:

**WOODLAND DRIVE – GENERAL DEGAULLE DRIVE TO TULLIS DRIVE**

**Lead Land Surveyor.** Topographic and boundary survey for City of New Orleans roadway project.

**MAGAZINE STREET - ROADWAY IMPROVEMENTS**

**Lead Land Surveyor.** Topographic and boundary survey for City of New Orleans roadway project.

**GENERAL DEGAULLE CANAL CROSSINGS**

**Lead Land Surveyor.** Topographic and boundary survey for State Highway 428.

**SOUTH CLAIBORNE AVENUE CANAL I**

**Lead Land Surveyor.** Topographic and boundary survey for State Highway 90.

**ST. CHARLES AVENUE NAPOLEON AVENUE TO CALLIOPE STREET**

**Lead Land Surveyor.** Topographic and boundary survey for City of New Orleans roadway.



**ADDITIONAL EXPERIENCE AND QUALIFICATIONS**

**I-10 METAIRIE – CAUSEWAY TO ORLEANS PARISH LINE**

**Lead Land Surveyor.** Topographic and boundary survey for Interstate 10.

**I-10 METAIRIE – CLEARVIEW TO CAUSEWAY**

**Lead Land Surveyor.** Topographic and boundary survey for Interstate 10.

**I-10 METAIRIE – VETERANS MEMORIAL BLVD. TO CLEARVIEW**

**Lead Land Surveyor.** Topographic and boundary survey for Interstate 10.

**I-10 KENNER – WILLIAMS BLVD. INTERCHANGE**

**Lead Land Surveyor.** Topographic and boundary survey for Interstate 10.

**US 190 - MANDEVILLE – CAUSEWAY TO STATE PARK**

**Lead Land Surveyor.** Topographic and boundary survey for U.S. Highway 190.

**US 190 - SLIDELL – FREMAUX INTERCHANGE**

**Lead Land Surveyor.** Topographic and boundary survey for U.S. Highway 190.

**US 190 - SLIDELL - FREMAUX- 9th TO I-10**

**Lead Land Surveyor.** Topographic and boundary survey for U.S. Highway 190.

**I-10 SLIDELL - LA 433 TO US 190**

**Lead Land Surveyor.** Topographic and boundary survey for Interstate 10.

**US 190 SLIDELL - US 11 TO THOMPSON RD.**

**Lead Land Surveyor.** Topographic and boundary survey for U.S. Highway 190.

**ST. TAMMANY PARISH EAST OF ABITA SPRINGS – NEW HIGHWAY FROM LA 36 TO LA 435**

**Lead Land Surveyor.** Topographic and boundary survey for new Louisiana state highway.

**LA 611 – METAIRIE ROAD**

**Lead Land Surveyor.** Topographic and boundary survey for State Highway LA 611.

**I-10 NEW ORLEANS - S. BROAD TO ST. CHARLES**

**Lead Land Surveyor.** Topographic and boundary survey for Interstate 10.

**LA 3139 EARHART BLVD. – JEFFERSON/ORLEANS PARISH LINE TO CLARA ST.**

**Lead Land Surveyor.** Topographic and boundary survey State Highway 3139.

**LAKE CHARLES - McNEESE/AIRPORT**

**Lead Land Surveyor.** Topographic and boundary survey for Lake Charles, Louisiana airport.

**TEC Professional Services Questionnaire**

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

**Name & Title:**

Daniel D. Bindewald, Survey Party Chief

**Project Assignment:**

Survey Party Chief

**Name of Firm with which associated:**



**LINFIELD, HUNTER & JUNIUS, INC.**

**Years' experience with this Firm:**

13 Years

**Education: Degree(s)/Year Specialization:**

Southeastern Louisiana University / B.A. / Criminal Justice

**Active registration: Year first registered/discipline:**

N/A

**Other experience and qualifications relevant to the proposed Project:**

Bindewald has served as a survey crew member and more recently as a survey party chief on numerous projects.

Bindewald initially joined LH&J as a survey party crew member and began performing as the **crew chief** of LH&J's Survey Party in 2009. Bindewald is proficient in the use of modern GPS/RTK survey instruments, as well as conventional total stations and levels. He is experienced in performing land surveys in all types of environments, including urban, forests and marshes. Bindewald has led survey crews conducting boundary, topographic and hydrographic surveys in Louisiana, Texas and Mississippi. He is knowledgeable of the USACE New Orleans District Minimum Survey Standards Edition 4.1, February 2015, (as well as prior editions) and has a high level of experience and expertise ensuring that all survey work performed by LH&J for the USACE New Orleans district is performed in strict compliance with these standards.

**INNER HARBOR NAVIGATION CANAL SURGE PROTECTION BARRIER, ORLEANS PARISH, LOUISIANA**

Provided surveying services including locating borings in the field and providing elevations with latitude and longitude coordinates. Located the USACE baselines and tied into the project control to provide station and offset data. Benchmarks were occupied and set for project control. Existing and final cross sections were taken providing cut/fill quantities, station and offset data for 36" diameter

Daniel D. Bindewald, Survey Party Chief  
Project Assignment – Survey Party Chief

Resume

**ADDITIONAL EXPERIENCE AND QUALIFICATIONS**

pipe piles were provided for QA/QC measures. Bindewald was the GPS survey party crew chief responsible for the accurate collection of all field survey data and reviewed the developed survey files and drawings for consistency with USACE New Orleans District Minimum Survey Standards. Construction cost was in excess of \$1.5 billion.

**STORM PROOFING ORLEANS PARISH DRAINAGE PUMP STATIONS, NEW ORLEANS, LA**

Provided topographic surveys of 18 existing pump station sites for the project. Baselines and benchmarks were established to obtain elevations and latitude/longitude data. Utilities were located and related to the baselines using station/offset data, right-of-way maps were provided to the USACE for project design. Bindewald was the GPS Survey party crew chief responsible for the accurate collection of all field survey data and reviewed the developed survey files and drawings for consistency with USACE New Orleans District Minimum Survey Standards. Program Cost was approximately \$200 million.

**PREPARATION OF PLANS AND SPECIFICATIONS FOR THE HURRICANE PROTECTION SYSTEM AT WEST BANK NON-FEDERAL LEVEE NOV-NF-W-04 OAKVILLE TO LAREUSSITE IN PLAQUEMINES PARISH, LA**

During the design of this 8.3 mile levee and fronting protection project, Bindewald was the GPS survey party crew chief responsible for performing the supplemental surveys that were needed to complement the Government furnished survey information. Detailed topographic surveys were performed using GPS/RTK equipment at the Ollie Pump Station and at the interface with the adjacent WBV-09a floodwall. Hydrographic surveys were performed to collect bathymetric data for a number of canals and bodies of water that are immediately adjacent to the levee alignment. All elevation data was collected using the North American Vertical Datum (N.A.V.D. 88) (2004.65) and all X-Y coordinates were based upon the Louisiana State Plane Coordinate System, South Zone NAD 83, in U.S. survey feet. During the construction of the project, Bindewald was the GPS survey party chief responsible for field locating the locations for installing 30 temporary bench marks (TBMs) that were supported by 60-foot deep concrete filled boreholes. After construction of the TBMs he performed high precision  $\pm 1.5$  mm leveling surveys to tie the TBMs into the required vertical and horizontal datums. He also filed located the installation locations for 34 geotechnical instrumentation clusters and monitoring panels that are used to measure settlement during the first stage of the levee construction and then surveyed the precise elevation and location for each instrument after they were installed. As part of the settlement monitoring program, every two weeks Bindewald leads a survey crew that performs high precision elevation surveys of each of the 34 settlement plates and monitoring panels so that surveyed data can be correlated to the remotely monitored settlement gauges. Construction cost of the project is approximately \$45 million.

## TEC Professional Services Questionnaire

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

#### Name & Title:

Paul H. Morales, IV, Survey Party Chief

#### Project Assignment:

Survey Party Chief

#### Name of Firm with which associated:



**LINFIELD, HUNTER & JUNIUS, INC.**

#### Years' experience with this Firm:

9 Years

#### Education: Degree(s)/Year Specialization:

University of New Orleans / B.S. / 2013 / Civil Engineering

#### Active registration: Year first registered/discipline:

N/A

#### Other experience and qualifications relevant to the proposed Project:

Morales has surveying, civil engineering design and resident inspection experience. During two summers while still in college, he often served as an LH&J survey crew member. He was a design engineer for civil site work on numerous CVS/Pharmacy and Dollar General store sites. Large Scale Topographical and ALTA Surveys for U.S. Army Corps of Engineers, Plaquemines Parish Government and a major pharmacy chain. Elevation, Construction Layout and Pile Layout, GPS, Robotics, Total Station experience including data transfer, plotting and printing. Manual and Mechanical Traffic Counts. TWIC

#### RELEVANT EXPERIENCE:

##### **DESIRE NEIGHBORHOOD TOPOGRAPHIC AND SUBSURFACE SURVEY, NEW ORLEANS, LA**

LH&J provided topographic surveying services for the project that consisted of the patching and reconstruction of 20,285 linear feet of roadway across 39 blocks, construction of new concrete roadway, replacement of the storm drainage system, sewer lines and water mains. Role: Survey Party

##### **INNER HARBOR NAVIGATION CANAL SURGE PROTECTION BARRIER, ORLEANS PARISH, LA**

Provided surveying services including locating borings in the field and providing elevations with latitude and longitude coordinates. The USACE baselines were located and tied into the project control to provide station and offset data. Benchmarks were occupied and set for project control. Existing and final cross sections were taken providing cut/fill quantities, station and offset data for 36-inch diameter pipe piles were provided for QA/QC measures. Morales performed as a survey party technician for the accurate collection of all field survey data and reviewed the developed survey files and drawings for consistency with New Orleans District Minimum Survey Standards. Construction cost >\$1.5B



## TEC Professional Services Questionnaire

**Paul H. Morales, IV**  
**Project Assignment – Survey Party Chief**

### **HSDRRS LEVEE PROFILES FOR SOUTHEAST LOUISIANA FLOOD PROTECTION AUTHORITY – EAST – LAKE PONTCHARTRAIN LEVEE SYSTEM**

Approximately 63 miles of earthen levee centerline profile surveys in Jefferson, Orleans and St. Bernard Parish using tilt rover and base stations. Project compared the existing profile elevations to the design profile elevations.

### **SOUTHSHORE HARBOR, NEW ORLEANS, LA**

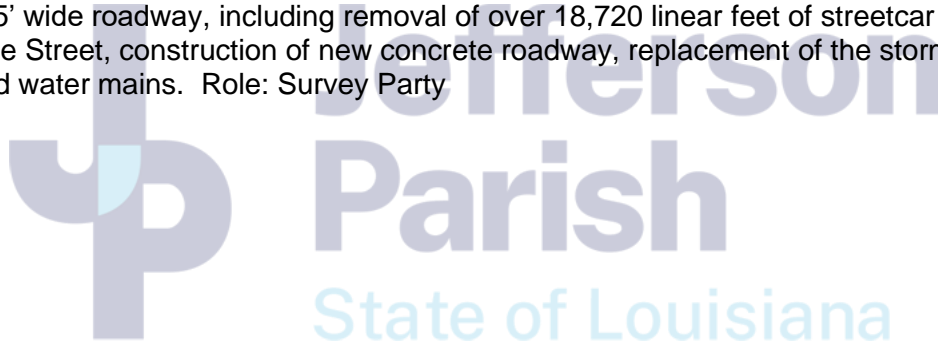
Hydrographic survey of approximately 150 acres in Southshore Harbor including portions of the navigation channel and Lake Pontchartrain. Included cross sections and profiles of approximately 10 acres of the north peninsula floodwall for a potential dredge spoil area.

### **AVONDALE SHIPYARD REDEVELOPMENT, AVONDALE, LA**

Hydrographic surveys for 2 miles of the Mississippi River in front of the existing docks. USACE Baseline profile surveys and cross sections. Included batture surveys and topographic surveys of existing lay down areas.

### **MAGAZINE STREET TOPOGRAPHIC SURVEY, NEW ORLEANS, LA**

LH&J provided topographic surveying services for the project that consisted of the reconstruction of 12,500 linear feet of 35' wide roadway, including removal of over 18,720 linear feet of streetcar tracks that are buried under Magazine Street, construction of new concrete roadway, replacement of the storm drainage system, sewer lines and water mains. Role: Survey Party



## TEC Professional Services Questionnaire

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

#### Name & Title:

Vincent J. Leco, III, E.I., Survey Party Chief

#### Project Assignment:

Survey Party Chief

#### Name of Firm with which associated:



**LINFIELD, HUNTER & JUNIUS, INC.**

#### Years' experience with this Firm:

2 Year

#### Education: Degree(s)/Year Specialization:

University of New Orleans - B.S. / 2018 / Civil Engineering

#### Active registration: Year first registered/discipline:

Civil / LA License / EI. 0034160

#### Other experience and qualifications relevant to the proposed Project:

##### RELEVANT EXPERIENCE:

##### **DESIRE STREET NEIGHBORHOOD SURVEY, NEW ORLEANS, LA**

Assisted in drafting the approximately 21,000 LF Desire Neighborhood Survey. This survey included identifying topographic and underground utility features. This survey was assigned for future street, subsurface drainage and underground utility improvements for the Desire Neighborhood in New Orleans, LA.

##### **SELA 72.2 SURVEY, NEW ORLEANS, LA**

Assisted in constructing the Limits of Construction and Utility Disposition Plans along General De Gaulle Dr. for the Southeast Louisiana Urban Flood Damage Reduction Project (SELA 72.2) in New Orleans, LA.

##### **HAYNE BOULEVARD RELIEF WELL DRAINAGE, NEW ORLEANS, LA**

Assisted in drafting the survey for the Hayne Boulevard relief well system. This survey was assigned to locate relief well structures and to identify the current drainage system for future drainage improvements along Hayne Blvd. in New Orleans, LA.

##### **GEISENHEIMER CANAL IMPROVEMENTS, METAIRIE, LA**

Assisted project engineer in design of a 8'X12' box culvert paralleling existing Geisenheimer drainage canal over a distance of approximately 2,800 linear feet. Box culvert is structurally integrated with existing drain lines at three junction box tie-in locations.

## TEC Professional Services Questionnaire

Vincent J. Leco, E.I.  
Project Assignment – Survey Party Chief

### **LOUMOR OUTFALL DITCH IMPROVEMENTS, METAIRIE, LA**

Assisted project engineer in design of two (2) new underground drainage lines. One drainage line consist of 78" X 122" Reinforced Concrete Pipe Arch (RCPA) segments along the existing drain line identified as Loumor Ditch combining to approximately 1,300 linear feet. The second line consists of a 9'X6' box culvert spanning approximately 320 linear feet. These new segments will tie-into the existing below-grade Geisenheimer Canal box culvert that extends along Airline Drive.

### **MAGAZINE STREET RECONSTRUCTION (LEAKE AVENUE TO EAST DRIVE), NEW ORLEANS, LA**

Assisted project engineer in reconstruction of Magazine Street from Leake Avenue to East Drive. The reconstruction includes regrading, new striping, adjustment of utility manholes where applicable, removal & replacement of roadways and sidewalks, and installation of ADA ramps.

### **MAF BUILDING 103 DRAINAGE STUDY, NEW ORLEANS, LA**

Assisted project engineer in analyzing hydraulics of the roof drainage system for Building 103 Michoud Assembly Facility including the subsurface drainage under the building and extending to the pumped outfall canal and to recommend improvements to reduce ponding on the approximate 38 acre building roof.

### **PEPSI BUIDING CONCRETE REPAIRS, RESERVE, LA**

Resident Inspector for various concrete repairs to the 150,000 SF warehouse building for the Port of South Louisiana.



## TEC Professional Services Questionnaire

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

**Name & Title:**

Cooper G. Ashworth, E.I., Survey Party Chief

**Project Assignment:**

Survey Party Chief

**Name of Firm with which associated:**

**LINFIELD, HUNTER & JUNIUS, INC.**

**Years' experience with this Firm:**

1 Year

**Education: Degree(s)/Year Specialization:**

Louisiana State University/B.S./2021/Civil Engineering  
FAA Certified Remote Pilot License/2021

**Active registration: Year first registered/discipline:**

2021 / Civil / LA License / EI.0034948

**Other experience and qualifications relevant to the proposed Project:****RELEVANT EXPERIENCE:****ST. JAMES SOLAR, VACHERIE LA, ST. JACQUES SOLAR, VACHERIE LA, AND SUNLIGHT ROAD SOLAR, FRANKLINTON, LA**

LH&J was responsible for conducting topographic and boundary surveys for 4,500 acre solar farm facility in Vacherie and Franklinton, LA. The projects consisted of surveying both through traditional surveying and by utilizing Lidar scanning technology. The project fee was over \$250,000.00.

Determined site boundaries, provided contours and, collected georeferenced aerial imagery to provide a construction progress exhibit to the client, collected georeferenced aerial imagery to assist in the development of servitudes and parcels of land.

**RENE INDUSTRIES SAND PIT, DARROW, LA**

LH&J provided land surveying in conjunction with the permitting of levee crossings and a sand pit on the batture. The project was permitted through CPRA, PLD and LADNR through the use of a Joint Permit Application.

**FRANCE ROAD YARD SURVEY, NEW ORLEANS, LA**

Approximately 20 acre survey for the NOPBRR for the expansion of a railyard. Included topographic survey, hydrographic surveying of the industrial canal, aerial imagery and survey baseline control.

**ORPHEUM AVENUE, NEW ORLEANS, LA**

Topographic Survey Drafting, Drone Surveying, Photogrammetry

**XPLORE CREDIT UNION, METAIRIE, LA**

Boundary Survey Drafting

## 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. 1

**Project Name, Location and Owner's contact information:**

**17<sup>th</sup> Street Canal Drainage Master Plan & Hydraulic Modeling**  
**Jefferson and Orleans Parishes, LA**

**Jefferson Parish Government**  
**Department of Drainage**  
**1221 Elmwood Park Blvd., Suite 907**  
**Jefferson, LA 70123**  
**Mr. Mitch Theriot, P.E.**  
**(504) 736-6751**

**Sewerage and Water Board of New Orleans**  
**8800 S. Claiborne Ave.**  
**New Orleans, LA 70118**  
**Mr. Ron Spooner, P.E.**  
**(504) 865-0410**



**Nature of Firm's Responsibility:**

The 17th Street Canal Drainage Basin is a 10,000 acre drainage basin consisting of 7,500 acres in uptown New Orleans and the 2,500 acre Hoey's Basin on the east bank of Jefferson Parish. Linfield, Hunter & Junius, Inc. has been actively involved in hydrologic and hydraulic modeling of drainage in the basin since 1982. Listed below are highlights of the work accomplished by the firm since 1982. Each project listed below is a separate engagement, all interrelated and building upon the previous engagement. Each project identified system improvements, many of which were subsequently designed by the firm.

- 1) **The 17th Street Canal Drainage Basin Study** for the Sewerage and Water Board of New Orleans was a \$290,000 effort which modeled a 10,400 acre urban drainage district in Orleans and Jefferson Parishes. To perform the study, the existing urban drainage system was inventoried in detail. These systems included subsurface drains and culverts, open canals, pump stations and a large open earthen outfall canal extending to Lake Pontchartrain. Storm surges in the lake affecting the operation of the system were studied. Contour maps were obtained from the Corps of Engineers and spot checked in the field by survey. A design rain storm was agreed to by all parties based upon the records of the Sewerage and Water Board. Using this design storm a design Hyetograph was formulated. In developing the model for the system analysis, several methods Urban were investigated and computer programs evaluated. These Illinois Storm Runoff Method, HEC-1, HEC-2, STORM, ILLUDAS, and SWMM. The pros and cons of each approach were evaluated and it included the National Method, the SCS Method, the Inlet Method, the was decided that SWMM and HEC-2 would be used.

The existing system was then modeled and records of rainfall and pumping hydrologic station activity utilized to calibrate the model by tweaking SWMM coefficients. The calibration storm hydrograph matched the water pumped within one percent. Based on the calibrated model, the entire system was analyzed producing hydrographs at open canals and pump stations. The storm flow was then routed through canals using the HEC-2 model. SWMM and HEC-2 were then utilized to size needed improvements for the design storm. A 150 page report was prepared to summarize the assumptions, findings, and recommended schedule of improvements. This report has been the basis of over \$80,000,000 in drainage improvements in the Basin to date including completed and proposed improvements to the 17<sup>th</sup> Street Canal, Monticello Canal and Hoey's Canal.

- 2) **Lower Hoey's Basin Canal System Improvements** Work included the hydraulic design of canal cross sections and junctions to meet criteria developed in the 17th St. Canal Drainage Basin Study of 1982. The canals in the Lower Hoey's Basin are critical to efficient drainage in Jefferson Parish. HEC-2 modeling of canal sections and junctions was performed to provide preliminary hydraulic designs. These designs were verified by physical hydraulic modeling by Alden Research Labs under contract to Linfield, Hunter, and Junius, Inc. to verify efficient functioning of the canals and junctions.



	<p>3) <b>Hoey's Basin Hydrologic Modeling</b> for Post Authorization Change, SELA Project -The firm developed HEC-UNET computer models of the entire Hoey's Basin in accordance with USCOE requirements and up-to-date GIS land elevations to document cost to benefit ratios of alternative improvements to ascertain which improvements USCOE funding may be obtained. HEC-UNET is a non-steady state hydraulic and hydrologic computer program which, at the time the modeling was conducted, represented the state of the art in computer modeling. Models justifying \$40,000,000 in projects have been approved by the USCOE hydraulics section.</p> <p>4) <b>Geisenheimer Basin Master Drainage Plan</b> – The area south of Metairie Road and North of Airline Drive is an important residential area of Jefferson Parish. The firm was retained to assess the existing drainage system and identify improvements to provide adequate drainage to meet modern drainage standards adopted by the Parish. This work was completed in 2006. This study is currently being updated to identify viable alternatives to several improvements recommended in the original 2006 report.</p> <p><b><u>Key Features Related to this Solicitation:</u></b>  Drainage Master Plan; SWMM, UNET and HEC-2 Hydraulic Modeling; Physical Hydraulic Modeling for verification of Computer Models.</p> <p><b><u>Key Personnel Participation:</u></b>  Robert E. Nockton, P.E.; Nathan J. Junius, P.E., P.L.S., Luis F. Sosa, P.E.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
Ongoing	Over \$120 Million in Recommended Improvements Were Identified	Over \$120 Million in Recommended Improvements Were Identified

## TEC Professional Services Questionnaire

PROJECT NO. 2	
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:
<p><b>Geisenheimer Basin Drainage Studies</b>  <b>Jefferson Parish, LA</b></p> <p><b>Jefferson Parish Government</b>  <b>Department of Capital Projects</b>  <b>1221 Elmwood Park Blvd., Suite 906</b>  <b>Jefferson, LA 70123</b>  <b>Mr. Neil Schneider, CCM, P.E.</b>  <b>(504) 736-6833</b></p> 	<p>The Geisenheimer Basin is an 1,100 acre drainage sub-basin bordered on the north and west by Metairie Road, on the east by the 17<sup>th</sup> St. Canal, and on the south by Airline Highway. The basin encompasses Old Metairie and forms a part of the 2,500 acre Hoey's Drainage Basin. Linfield, Hunter &amp; Junius, Inc. was retained by Jefferson Parish to analyze drainage in the basin and prioritize needed improvements.</p> <p>The original study included hydrologic modeling of the drainage system and basin. Major tasks completed included collation of existing Flood Insurance Claims in the Basin to identify areas of repeated flooding; extension of levels throughout the basin to tie in finished floors of flooded structures, high water marks from the May 8, 1995 storm, and datum conversions between GIS datum and previous construction datums in the basin; development of stage storage relationships from the latest Jefferson Parish GIS elevations in the basin; development of stage-discharge relationships in the basin utilizing HEC-2 computer modeling; and calibration of a TR-20 hydrologic model to reflect actual flood levels experienced during the May 8, 1995 storm.</p> <p>The major findings of this study were that capital funds could be saved by utilizing overland flow to transport water during extreme rain events with major conveyance structures strategically located at important topographic locations to improve drainage. Another major finding was that the Southern Railroad Embankment formed an important hydrologic feature in the basin which had not been accounted for in previous FEMA studies in the basin. <b>This study has served as the master plan for drainage in the basin since its publication in 1996.</b> Identified projects were subsequently included in HEC-UNET modeling of the Hoey's Basin. The HEC-UNET model confirmed the results of the 1996 TR-20 models. It is expected that funding for identified projects will be obtained through the SELA program with \$8,000,000 of recommended construction projected.</p> <p>A follow-up study was performed in the mid-2000's to update and expand upon the findings and recommendations of the original study. Extensive additional hydraulic and hydrologic computer modeling was conducted using the most current versions of the HEC-RAS and HEC-HMS packages. One key feature of this new study was the detailed modeling of natural overland flow mechanisms within the basin in conjunction with collection system components. This was based upon the observation that during larger rainfall events, the capacities of subsurface drainage conduits are exceeded and overland flow is the primary transport mechanism for excess stormwater runoff. Recommendations included improvements to the collection system to increase the capacity of primary subsurface conduits in the basin and enhancing natural features of the Pontiff Playground and Metairie Country Club Golf Course to better utilize the natural overland flow mechanisms in the basin so that excess stormwater flows in the basin are better managed.</p> <p>The 2006 study report included an overall master plan showing necessary improvements throughout the basin to accommodate a 10-year design storm.</p> <p>The mid-2000's study is currently being updated to evaluate possible alternative improvements to those recommended in the 2006 report that crossed through the Pontiff Playground and Metairie Country Club Golf Course.</p>



**Key Features Related to this Solicitation:**

Jefferson Parish Project; Drainage Studies; Hydraulic Hydrologic Computer Modeling; Covered Drainage Canals (Box Culverts); Subsurface Drainage; Stormwater Management

**Key Personnel Participation:**

Robert E. Nockton, P.E.; Nathan J. Junius, P.E., P.L.S., Luis F. Sosa, P.E.



Jefferson  
Parish  
State of Louisiana

Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
Ongoing	\$480,000 (Fee)	\$480,000 (Fee)

## TEC Professional Services Questionnaire

### PROJECT NO. 3

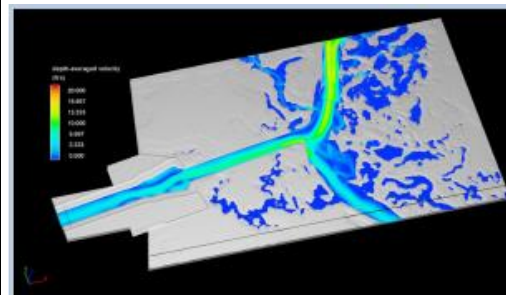
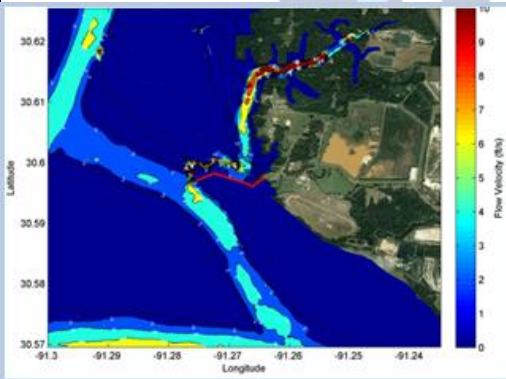
#### Project Name, Location and Owner's contact information:

**Hydraulic Modeling And Analysis For Design Of The Comite River Diversion Project, East Baton Rouge Parish, LA**

**U.S. Army Corps of Engineers  
7400 Leake Ave.  
New Orleans, LA 70118  
Ms. Danielle Washington, P.E.  
(504) 862-2974**



**US Army Corps  
of Engineers®**



#### Nature of Firm's Responsibility:

The Comite River is a right bank tributary of the Amite River with a confluence near Denham Springs, Louisiana. The Comite River Basin comprises approximately 348 square miles. Lower frequency rain events in the watersheds of the Amite and Comite Rivers are the major causes of catastrophic flooding in the Baton Rouge Metropolitan Area. The flood of record occurred in August of 2016, which caused widespread flooding and devastation. In order to help alleviate flooding, the Comite River Diversion Project was authorized for construction by the Water Resources Development Act (WRDA) of 1992 (PL 102-580, Section 101-11), dated October 31, 1992. The purpose of the diversion project is to reduce stages on the Comite River from the diversion point to the confluence with the Amite River, on the Amite River from the confluence with the Comite River (near Denham Springs) to Port Vincent, White Bayou, Cypress Bayou, Bayou Baton Rouge, and other minor Comite and Amite River tributaries.

The authorized project provides for design and construction of a 12 mile long diversion channel from the Comite River to a bluff on the Mississippi River; highway and railroad bridges across the channel; the Lilly Bayou control structure to convey water down the bluff towards the Mississippi River; a diversion structure at the Comite River; four drop structures at the intersections of the diversion channel with the McHugh Sump Area, Bayou Baton Rouge, Cypress Bayou, and White Bayou; clearing and snagging of Bayou Baton Rouge, White Bayou, and Cypress Bayou (north of the diversion channel); low-flow augmentation pumps at the streams intercepted by the channel; and an earthen closure at Brooks Lake.

There are several grade changes along the diversion channel. The upstream end of the diversion channel, as currently designed, has an invert approximately 10-ft lower than the Comite River at the diversion point, according to the surveys last taken in 2009. Therefore, an inline drop structure is required at the Comite River and Comite Diversion Channel confluence. The intercepting bayous are also at a higher grade than the channel, so a lateral drop structure will be required at the channel intercept point with each of the three bayous. There is a final drop at the Mississippi River Bluff, which is conveyed by the Lilly Bayou Structure. Due to geomorphologic changes on the Comite River and along the intercepting bayous, the designs of the diversion structure, the diversion channel, and the drop structures, as provided in the DM, would no longer be effective in diverting the authorized diversion flows.

The initial tasks of the Task Order was for the purpose of establishing the amount of flows that would be diverted for the existing channel design, and also for determining the amount of inundation occurring due to flow in the channel exceeding the top elevations of the channel (which are concurrent with the bottom elevations of the spoil banks).

The remaining tasks for this Task Order are to redesign the project as needed to divert the intended Comite River and the intercepting bayou flows, taking into account that the Lilly Bayou structure will not be modified, and should still be a functioning element of the project. Design processes needed for this task order are for the purposes of completing the diversion channel (channel geometry and scour protection design); the highway and railroad bridges (bottom chord heights and scour depth determinations), the diversion structure at the Comite River, the drop structures, the earthen closure at Brooks Lake, and scour analyses.



Jefferson  
Parish  
State of Louisiana

The features that are were designed and evaluated as part of this task order are as follows:

1. Optimization of the Comite Diversion Channel Geometry
2. Design of the Comite Diversion Channel Scour Protection
3. Design of the Comite River Diversion Structure
4. Design of the White Bayou Drop Structure
5. Design of the Cypress Bayou Drop Structure
6. Check the Existing Design of the Bayou Baton Rouge Drop Structure
7. Determine the Scour Depths at the Brooks Lake Outfall Channel
8. Design of the Earthen Brooks Lake Cutoff Structure
9. Design of the McHugh Control Structure
10. Determine the Lower Chord Height for 5 Highway Bridges and One Railroad Bridge

This \$1.16 million Hydraulic and Hydrologic Study, Analysis and Design effort was performed under LH&J Contract No. W912P8-16-D-0004, Task Order No. W912P818F0127.

**Key Features Related to this Solicitation:**

Hydraulic Engineering; Hydrologic Engineering; Flood Damage Reduction; 3D Modeling; Design Report; Civil Engineering; Channels; Drainage Structures.

**Key Personnel Participation:**

Robert E. Nockton, P.E.; Nathan J. Junius, P.E., P.L.S.; Charles T. Knight, P.E.

Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2020 A	\$1.16 Million (Fee)	\$1.16 Million (Fee)



## **TEC Professional Services Questionnaire**

<b>PROJECT NO. 4</b>								
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:							
<p><b>Hoey's Basin HEC-UNET Modeling</b> Jefferson Parish, LA</p> <p><b>Jefferson Parish Government</b> <b>Department of Drainage</b> <b>1221 Elmwood Park Blvd., Suite 907</b> <b>Jefferson, LA 70123</b> <b>Mr. Mitch Theriot, P.E.</b> <b>(504) 736-6751</b></p> <div style="text-align: center; margin-top: 20px;">  </div>	<p>The Hoey's Drainage Basin is a 2,500 acre basin on the east bank of Jefferson Parish which forms a part of the 10,000 acre 17<sup>th</sup> St. Canal Drainage Basin. Linfield, Hunter &amp; Junius, Inc. has been actively involved in hydrologic and hydraulic modeling in the basin since 1982. One of our more recent projects included hydrologic and hydraulic modeling of the basin utilizing HEC-UNET. This modeling was performed in accordance with USCOE requirements to document cost to benefit ratios of alternate improvements so that SELA funding for drainage improvements may be obtained.</p> <p>HEC-UNET is a quasi two dimensional non steady state hydraulic modeling program that routes drainage runoff through a linked system of storage reservoirs and drainage channels. HEC-HMS (HEC-1 was its predecessor) is utilized to develop inflow hydrographs for areas draining to the system of canals and storage reservoirs. HEC-UNET then routes these hydrographs through the system utilizing a numerical procedure to solve the implicit difference form of the differential equations for conservation of mass and conservation of momentum. The technique utilized by HEC-UNET allows the effect of downstream drainage controls to be felt by storage areas upstream. This provides a more accurate solution than obtained by standard HEC-1 and HEC-2 modeling of the system in which downstream effects cannot be explicitly included. HEC-UNET also allows the modeling of a canal system in which flow splits occur at junctions as one proceeds downstream. This feature allows for modeling of a gridded canal network such as exists on the east bank of Jefferson Parish. Modeling of the system included delineating hydrologic sub-basins, documentation and conversion of elevation datums to provide consistent elevation control in the model, computing stage storage relationships for the sub-basins based upon Jefferson Parish GIS elevations, inputting canal cross-sections from existing construction plans and field surveys, inputting pump routines for modeling Pumping Station 6, and tweaking of modeling coefficients to accurately obtain back water curves for the canal system. Numerous alternative improvements were then run on the HEC-UNET model to identify the best package of alternatives available to maximize fundable project benefits. HEC-HMS was utilized in the preliminary stages of the study to determine hydrologic sub-basins, the sensitivity of the model to hydraulic parameters, and to screen alternative improvements. HEC-HMS modeling provided a tool for projecting HEC-UNET modeling results and identifying important modeling decisions.</p> <p><b><u>Key Features Related to this Solicitation:</u></b> Jefferson Parish Project; Drainage Studies; Hydraulic and Hydrologic Computer Modeling; Stormwater Management</p> <p><b><u>Key Personnel Participation:</u></b> Robert E. Nockton, P.E.; Luis F. Sosa, P.E.</p>							
<p style="text-align: center;"><b>Completion Date (Actual or estimated):</b></p>	<p style="text-align: center;"><b>Estimated Cost:</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #00a0e3; color: white;"> <th style="width: 35%; text-align: center; padding: 5px;">Entire Project:</th> <th style="width: 65%; text-align: center; padding: 5px;">Work for which Firm was Responsible:</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 10px;">Ongoing</td> <td style="padding: 10px;"> <table style="width: 100%;"> <tr> <td style="width: 50%; text-align: center; padding: 5px;">\$40 Million in Recommended Improvements Were Identified</td> <td style="width: 50%; text-align: center; padding: 5px;">\$40 Million in Recommended Improvements Were Identified</td> </tr> </table> </td> </tr> </tbody> </table>		Entire Project:	Work for which Firm was Responsible:	Ongoing	<table style="width: 100%;"> <tr> <td style="width: 50%; text-align: center; padding: 5px;">\$40 Million in Recommended Improvements Were Identified</td> <td style="width: 50%; text-align: center; padding: 5px;">\$40 Million in Recommended Improvements Were Identified</td> </tr> </table>	\$40 Million in Recommended Improvements Were Identified	\$40 Million in Recommended Improvements Were Identified
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Ongoing	<table style="width: 100%;"> <tr> <td style="width: 50%; text-align: center; padding: 5px;">\$40 Million in Recommended Improvements Were Identified</td> <td style="width: 50%; text-align: center; padding: 5px;">\$40 Million in Recommended Improvements Were Identified</td> </tr> </table>	\$40 Million in Recommended Improvements Were Identified	\$40 Million in Recommended Improvements Were Identified					
\$40 Million in Recommended Improvements Were Identified	\$40 Million in Recommended Improvements Were Identified							

## TEC Professional Services Questionnaire




PROJECT NO. 5		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p><b>Audubon Park Drainage Improvements</b> New Orleans, LA</p> <p><b>Audubon Nature Institute</b> 6500 Magazine Street New Orleans, LA 70118 Ms. Cecilie L. Halliwil, CPPB (504) 212-5325</p> <div style="text-align: center;">  <p>Audubon Nature Institute <i>Celebrating the Wonders of Nature</i></p> </div> <div style="margin-top: 10px;">  </div> <div style="margin-top: 10px;">  </div>	<p>Exposition Boulevard is a heavily trafficked pedestrian boulevard located along the eastern edge of Audubon Park in New Orleans, Louisiana. Numerous historic houses about the boulevard along its length and face the park.</p> <p>The area along Exposition Boulevard regularly floods during heavy rainfall events and the lowest levels of many of the houses adjacent to Exposition Boulevard also often flood. Drainage is provided by a subsurface collection system along Exposition Boulevard that connects to and discharges into the City of New Orleans drainage collection system at adjacent side streets. As a first step to improve the drainage along Exposition Boulevard, Linfield, Hunter &amp; Junius, Inc. performed a study to develop a comprehensive conceptual plan for this area. This comprehensive conceptual drainage plan drainage identified necessary drainage improvements throughout the area, including those to increase subsurface collection system capacities and those to detain and manage storm water on site.</p> <p>A detailed topographic survey of Exposition Boulevard and adjacent areas of Audubon Park was initially performed. Locations of subsurface drainage facilities, cross sections and a grid of elevations were obtained. A map of the area, including contour grade lines, was developed.</p> <p>Next, a drainage analysis of the area along Exposition Boulevard was performed. To accomplish this, the existing drainage collection system along Exposition Boulevard and the adjacent side streets was hydraulically analyzed to identify areas requiring improvement. Once the existing drainage collection system was hydraulically analyzed, a conceptualized schematic plan of an improved drainage system within the study area was prepared. Numerous alternative improvements such as subsurface capacity improvements, stormwater diversion and management facilities and detention storage facilities were analyzed and recommended.</p> <p>The results of this work were documented in a bound report. Recommended drainage improvements and storm water management facilities were plotted on an overall map of the study area and a construction phasing program with preliminary construction cost estimates for the improvements were also provided.</p> <p><b><u>Key Features Related to this Solicitation:</u></b> Drainage Studies; Hydraulic and Hydrologic Computer Modeling; Stormwater Management; Analysis of Storm Water Detention Facilities</p> <p><b><u>Key Personnel Participation:</u></b> Robert E. Nockton, P.E.; Nathan J. Junius, P.E., P.L.S..</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2015 A	\$1.4 Million In Recommended Improvements Were Identified	\$1.4 Million In Recommended Improvements Were Identified

## TEC Professional Services Questionnaire


PROJECT NO. 6		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p><b>Dillard University Drainage Improvements</b> New Orleans, LA</p> <p><b>Dillard University</b> 2601 Gentilly Blvd. New Orleans, LA 70122 Mr. Adonis Woods (504) 816-4375</p> <div style="display: flex; justify-content: space-around; margin-top: 20px;">   </div>	<p>LH&amp;J was tasked by Dillard University to engineer the improvements to the Campus' drainage system which was subject to frequent and severe flooding. LH&amp;J began the project by conducting a full campus hydraulic analysis to determine the cause of the flooding. The hydraulic analysis revealed that the campus suffered both from a poor and under capacity subsurface system and poor stormwater management system which caused stormwaters to flow from high areas to lower areas without a way to escape. LH&amp;J proposed and designed a system that included moving stormwaters around so that it can be stored in detention ponds and building a subsurface drainage system that could handle a major storm event.</p> <p>The Rear Campus project included multiple detention ponds, ditches and wet areas that allowed for stormwaters to be detained during high intensity rain events. These detention and wet areas would drain after the City system was caught up. In the Front Campus the Student Union Facility was designed as LEED Gold and is currently the largest LEED Gold facility in the New Orleans area. LH&amp;J was responsible for the design of all the sitework in this project.</p> <p>The LEED Gold requirements for the sitework included water conservation facilities including bioswales, rain gardens, water reservoirs, natural filtration systems, wet area, and underground storm storage system, and pervious pavements. This project demonstrates the firms' experience and capability in designing LEED compliant drainage projects.</p> <div style="text-align: center; margin-top: 20px;">  </div>	
	<p><b>Key Related to this Solicitation:</b> Drainage Studies; Hydraulic and Hydrologic Computer Modeling; Stormwater Management; Analysis of Storm Water Detention Facilities</p> <p><b>Key Personnel Participation:</b> Robert E. Nockton, P.E.; Nathan J. Junius, P.E., P.L.S., Luis F. Sosa, P.E.; Mark K. Annino, E.I.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2014 A	\$4.5 Million	\$4.5 Million



## **TEC Professional Services Questionnaire**

<b>PROJECT NO. 7</b>		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p><b>Closure of Veterans Memorial Boulevard Canal</b> Metairie, LA</p> <p><b>Jefferson Parish Government</b> Department of Capital Projects 1221 Elmwood Park Blvd., Suite 906 Jefferson, LA 70123 Mr. Neil Schneider, CCM, P.E. (504) 736-6833</p> <div style="text-align: center; margin-top: 20px;">  </div> <div style="text-align: center; margin-top: 20px;">  <p style="font-size: small;">VETERANS MEMORIAL BLVD.   MULTI-USE MEDIAN</p> </div>	<p>Jefferson Parish is currently considering the installation of a new box culvert and the enclosure of approximately three miles of the existing open canal located in the Veterans Memorial Boulevard median. As a first step, Linfield, Hunter &amp; Junius, Inc. (LH&amp;J) is evaluating the feasibility of this work. A major part of this evaluation consists of the interpretation of the Parish's SWMM model of the entire drainage basin and the using of model output data to identify alternative box culvert configurations for further study.</p> <p>Initially, the SWMM model was evaluated to identify design drainage flows for the study reach of the Veterans Canal. These design flows were used to identify alternative box culvert configurations. These alternative box culvert configurations were then modeled in the SWMM model to assess their impacts on the hydraulic grade lines throughout the basin. This modeling and SWMM analysis of alternative box culvert configurations was then used to screen box culvert alternatives for structural analysis, an analysis of constructability and cost estimation.</p> <div style="text-align: center; margin-top: 20px;">  <p style="font-size: small;">VETERANS MEMORIAL BLVD.   MULTI-USE MEDIAN</p> </div> <p><b><u>Key Features Related to this Solicitation:</u></b> Drainage Studies; Hydraulic and Hydrologic SWMM Computer Modeling; Stormwater Management.</p> <p><b><u>Key Personnel Participation:</u></b> Robert E. Nockton, P.E.; Nathan J. Junius, P.E., P.L.S., Luis F. Sosa, P.E.; Mark K. Annino, E.I.</p>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
Ongoing	\$400,000 (Fee)	\$400,000 (Fee)

## **TEC Professional Services Questionnaire**

<b>PROJECT NO. 8</b>		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p><b>Kenner Rivertown Drainage Improvements Kenner, LA</b></p> <p><b>City of Kenner Department of Public Works 1610 Reverend Richard Wilson Drive Kenner, LA 70062 Mr. Tom Schreiner, P.E. (504) 468-7515</b></p> <div style="text-align: center; margin: 20px 0;">  </div> <div style="text-align: center;">  </div>	<p>Located in the City of Kenner, Louisiana, Rivertown is a sixteen-block historic district offering numerous cultural and family attractions. Situated in a relatively high portion of Kenner adjacent to the Mississippi River levee, the area nonetheless floods regularly during high intensity rain events as stormwater runoff is impeded by a railroad embankment that runs along the north edge of the district with relatively small diameter pipes beneath the embankment to carry the stormwater across the embankment to the Duncan Canal, the drainage outfall located north of the railroad embankment. This flooding has been responsible for repeated automobile and building damages in the district. Flooding often lasts long after the end of the storm, requiring complete closure of Williams Boulevard, the main artery of Rivertown, for many hours or even days. These extended road closures not only disrupt traffic but hamper access to the many attractions in Rivertown.</p> <p>As part of the goal to reduce street flooding, traffic interruptions and damages to local homes, businesses and automobiles, the City of Kenner is pursuing drainage improvements in the area. Proposed improvements include the upgrading of catch basins and drain pipes along Williams Boulevard, installation of approximately 2,600 linear feet of a 36-inch diameter trunk line to carry water from Williams Boulevard beneath the railroad embankment and directly to the Duncan Canal. To accommodate the increased flows and to enhance the performance of the new trunk line and work along Williams Boulevard, approximately 1,100 feet of the Duncan Canal will also be widened.</p> <p>Funding of the project is through the FEMA Hazard Mitigation Grant Program. As part of the coordination with FEMA, a Hydrologic and Hydraulic (H&amp;H) Study with computer modeling was performed to assess existing damages and to evaluate project benefits. A Benefit-Cost Analysis (BCA) was in turn conducted using the project benefits from the H&amp;H Study.</p> <p>LH&amp;J is providing topographic surveying services, engineering design and construction administration services, assistance with permitting and grant program coordination services. Construction observation services will be performed during construction.</p> <p><b><u>Key Features Related to this Solicitation:</u></b></p> <p>Drainage Studies; Hydraulic and Hydrologic Computer Modeling; Stormwater Management.</p> <p><b><u>Key Personnel Participation:</u></b></p> <p>Robert E. Nockton, P.E.; Nathan J. Junius, P.E., P.L.S., Luis F. Sosa, P.E.; Mark K. Annino, E.I.</p>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
<p>Ongoing</p>	<p>\$430,000 (Fee)</p>	<p>\$430,000 (Fee)</p>

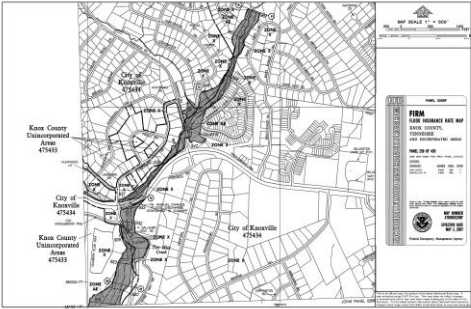



## TEC Professional Services Questionnaire

PROJECT NO. 9						
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:					
<p><b>Closure of District 4 Canals</b>  <b>Metairie and Kenner, LA</b></p> <p><b>Jefferson Parish Government</b>  <b>Department of Capital Projects</b>  <b>1221 Elmwood Park Blvd., Suite 906</b>  <b>Harahan, LA 70123</b>  <b>Mr. Neil Schneider, CCM, P.E.</b>  <b>(504) 736-6833</b></p> <div style="text-align: center; margin: 20px 0;">  </div> <div style="text-align: center;">  </div>	<p>Jefferson Parish is currently considering the covering and development of open canals for self-supporting uses beneficial to the Parish and compatible with surrounding areas. As a first step, Linfield, Hunter &amp; Junius, Inc. (LH&amp;J) is evaluating the feasibility of this work. A major part of this evaluation consists of the use of the Parish's SWMM model of the entire drainage basin to identify alternative box culvert configurations for evaluation.</p> <p>Initially, an analysis and evaluation of canal hydraulics was conducted to assess whether the covering of selected reaches of the open canals will negatively impact the basin, i.e. increase the flood levels in one or more areas within the drainage basin. Alternative box culvert configurations were identified and then modeled in the SWMM model to assess their impacts on the hydraulic grade lines throughout the basin. This modeling and SWMM analysis of alternative box culvert configurations was then used to identify reaches of open canal for further feasibility evaluation for potential development.</p> <div style="text-align: center; margin: 20px 0;">  </div> <p><b><u>Key Features Related to this Solicitation:</u></b>            Drainage Studies; Hydraulic and Hydrologic SWMM Computer Modeling; Stormwater Management.</p> <p><b><u>Key Personnel Participation:</u></b>            Robert E. Nockton, P.E.; Nathan J. Junius, P.E., P.L.S., Luis F. Sosa, P.E.; John M. Jackson, P.E..</p>					
<p><b>Completion Date (Actual or estimated):</b></p>	<p style="text-align: center;"><b>Estimated Cost:</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #00a0e3; color: white;"> <th style="width: 35%; padding: 5px;">Entire Project:</th> <th style="width: 65%; padding: 5px;">Work for which Firm was Responsible:</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 20px;">Ongoing</td> <td style="text-align: center; padding: 20px;"> <div style="display: flex; justify-content: space-around;"> <div style="width: 45%;">\$300,000 (Fee)</div> <div style="width: 45%;">\$300,000 (Fee)</div> </div> </td> </tr> </tbody> </table>		Entire Project:	Work for which Firm was Responsible:	Ongoing	<div style="display: flex; justify-content: space-around;"> <div style="width: 45%;">\$300,000 (Fee)</div> <div style="width: 45%;">\$300,000 (Fee)</div> </div>
Entire Project:	Work for which Firm was Responsible:					
Ongoing	<div style="display: flex; justify-content: space-around;"> <div style="width: 45%;">\$300,000 (Fee)</div> <div style="width: 45%;">\$300,000 (Fee)</div> </div>					

## TEC Professional Services Questionnaire

### PROJECT NO. 10

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p><b>Floodplain Encroachment Investigation For Memory Care</b> Knoxville, TN</p> <p><b>Mainland Retail, LLC</b> 118 16<sup>th</sup> Ave. South, Suite 230 Nashville, TN 37203 Mr. David Fleming (615) 491-9665</p> 	<p>Linfield, Hunter &amp; Junius, Inc. (LH&amp;J) was retained to provide civil site design services for a new Memory Care facility in Knoxville, Tennessee. The proposed site is located within a floodway identified by FEMA. As part of the civil site design services, LH&amp;J performed a hydraulic analysis of the floodway to confirm that the proposed development would not adversely affect the floodway.</p>  <p>Initially, the FEMA HEC-RAS computer model of the floodway was evaluated to identify computed water surface elevations throughout the floodway reach. The proposed development was subsequently modeled in HEC-RAS and the results compared to those of the FEMA model to confirm that there was no computed rise in water surface elevations upstream of the proposed development. Documented results of the HEC-RAS computer modeling were submitted to governing agencies for regulatory approval of the development.</p> <p><b>Key Features Related to this Solicitation:</b> Drainage Studies; Hydraulic Computer Modeling; Stormwater Management</p> <p><b>Key Personnel Participation:</b> Robert E. Nockton, P.E.; Nathan J. Junius, P.E., P.L.S., Casey Genovese, P.E..</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2016 A	\$25,000 (Fee)	\$25,000 (Fee)

## TEC Professional Services Questionnaire

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

Parties		Status/Result of Case:
Plaintiff:	Defendant:	
1. None		
2.		
3.		
4.		

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

### **INTRODUCTION**

**Linfield, Hunter & Junius, Inc. (LH&J)** is pleased to submit its proposal for the **Professional Engineering and Supplemental Services for a Drainage Master Plan for the East Bank of Jefferson Parish**. LH&J and our predecessor firms have been providing quality engineering and architectural services for over 55 years and to Jefferson Parish since 1993. As the design engineering consultant for a number of previous modeling and drainage improvement projects, LH&J is well postured to provide Jefferson Parish with a team of highly experienced and extremely capable engineers, land surveyors, and other design professionals who are intimately familiar with the critical design and construction considerations that are unique to this very important project. Our past experience in Jefferson Parish gives us the knowledge and understanding of the needs for this project, in particular Master Drainage Planning. This along with our extensive experience in civil engineering design and land surveying puts LH&J in the unique position of being able to dive straight into the project without a learning curve. LH&J will provide in-house expertise and personnel for **Drainage Modeling and Master Planning, Civil Engineering and Land Surveying**.

For this project, LH&J has teamed with CDM Smith, C.H. Fenstermaker & Associates, L.L.C., and Pivotal Engineering, L.L.C., to provide additional depth and capacity to supplement our extensive in-house capabilities.

CDM Smith's partnership with Jefferson Parish, over many years, has resulted in a multitude of drainage, water, and wastewater improvement projects for the citizens of the Parish. Their experience both with the Parish and in the region will provide a benefit as their strong local drainage and stormwater management team, bolstered by regional experts, understands the context of challenges

## TEC Professional Services Questionnaire

and opportunities in Jefferson Parish.

Fenstermaker is a Louisiana-based consulting firm providing multidisciplinary services specializing in civil engineering, surveying and environmental services, with offices in New Orleans, Mandeville, Baton Rouge, Lafayette, Lake Charles, and Shreveport. Their highly qualified professional staff is supported by a technologically robust management system and continuity of operations, as most senior staff members have been with the firm for decades. They have a long-standing involvement and extensive experience in stormwater master planning, hydraulic and hydrologic modeling, floodplain and watershed management, drainage engineering and planning. They pride themselves on being client focused and technology driven with a focus on improving current conditions and developing sustainable and resilient long-term solutions.

Pivotal Engineering, LLC is a full-service engineering design firm based in New Orleans, Louisiana. Pivotal has established a reputation for providing superior service to its clients and delivering quality work on time and within budget. Pivotal's principals and staff have in excess of 200 years of combined experience in civil engineering, mechanical engineering, electrical engineering, environmental engineering and program/project management for both public and private entities across the Gulf South Region. The current staff of Pivotal has extensive experience managing a variety of complex projects, from conception to construction.

Further information on CDM Smith, C.H. Fenstermaker & Associates, L.L.C., and Pivotal Engineering, L.L.C. experience and capabilities is provided in their accompanying TEC Professional Services Questionnaire.

Should this project require specialty subconsultants such as Mechanical, Electrical or Geotechnical Engineering, etc. we will supply appropriate subconsultants in accordance with the Jefferson Parish Code of Ordinance.

We offer a very compact team of local professionals with specialized experience specific to the scope of work required by this solicitation. Furthermore, LH&J's in-house land surveyors will be prioritized to this project to ensure that any field survey data required to develop drainage modeling and recommended improvements is rapidly obtained and furnished to our modeling and design team. Also, any requirements to obtain supplemental data as the project progresses will be quickly addressed to avoid delays.

A brief outline of our proposed approach to this project can be summarized as follows:

- Obtain current maps of the drainage system on the East Bank of Jefferson Parish and prepare a full inventory of the existing drainage system
- Identify drainage basins and sub catchment areas for the East Bank Drainage System
- Identify hydrologic characteristics of each drainage basin and sub catchment area
- Develop hyetographs for the design storms based upon 24-hour storm events
- Develop SWMM computer model of the existing East Bank Drainage System and calibrate the model to reflect available historic data
- Review the SWMM computer model results with Jefferson Parish and in conjunction with Parish input identify areas for improvement analysis
- Identify alternative improvements throughout the drainage system
- Develop SWMM computer models of the alternative improvements and evaluate the impact of each alternative improvement
- Develop a Recommended System that includes recommended drainage improvements to the existing drainage system
- Summarize the findings of the SWMM computer modeling in a bound report



## TEC Professional Services Questionnaire

### **A. MINIMUM REQUIREMENTS FOR SELECTION**

#### **A.1 The persons or firms under consideration shall have at least one (1) principal who is a licensed, registered professional engineer in the State of Louisiana.:**

Nathan J. Junius, P.E., P.L.S. has over 20 years of design experience in Civil Engineering projects including major drainage analysis and design, culvert design, roadway design, traffic design and project management.

#### **A.2 The persons or firms under consideration shall have a professional in charge of the Project who is a licensed, registered professional engineer in the State of Louisiana with a minimum of five (5) years experience.**

Our proposed Project Manager, Robert E. Nockton, P.E. has over 25 years of design experience in Civil Engineering projects including drainage studies, planning and analysis, drainage design, culvert design, canal and pumping station design, roadway design, sewerage and waterline design and project management.

#### **A.3 The persons or firms under consideration shall have one (1) employee who is a licensed, registered professional engineer in the State of Louisiana. A subcontractor may meet this requirement only if the advertised Project involves more than one discipline.**

Linfield, Hunter & Junius, Inc. (LH&J) has twelve (12) full-time professional engineers registered in the State of Louisiana with over 150 years combined experience in preparing drainage studies, planning and analysis, drainage design, culvert design canal and pumping station design, and roadway design. LH&J will make available as many as five (5) professional engineers for this project.

Nathan J. Junius, P.E., P.L.S. is a Professional Land Surveyor registered in Louisiana with more than twenty (20) years of experience in conducting topographic surveys.

William J. Muller, P.L.S. is a Professional Land Surveyor registered in Louisiana with more than thirty (30) years of experience in conducting topographic surveys.

### **B. EVALUATION CRITERIA**

#### **B.1 Professional Training and Experience**

Our Team is well qualified to provide the services required for this project. We anticipate that the following services will be required and we have the complete team and will add to the Team as directed by the Parish to provide all these services.

- ✓ Storm Water Modeling and Planning
- ✓ Drainage and Civil Engineering
- ✓ Land Surveying

#### **Drainage and Civil Engineering (Linfield, Hunter & Junius, Inc.)**

Linfield, Hunter & Junius, Inc. (LH&J) is a premier drainage expert in the metropolitan New Orleans area. Our drainage studies have varied from as small as that of a site for a retail strip mall to as large as an entire parish. We are intimately familiar with every aspect of storm drainage design used to date in Jefferson Parish including culverts, pump stations, drainage canals, detention basins, ditches, watershed management systems, subsurface drainage systems, floodwalls, levees, locks, gates and many others. We have studied and designed a tremendous number of drainage facilities and structures for the **Jefferson Parish Department of Drainage**.



## TEC Professional Services Questionnaire

A summary of Linfield, Hunter & Junius, Inc.'s professional training and experience in the areas of drainage includes:

- ✓ Professional staff with well over 150 cumulative years of experience in drainage projects (see Items K and L).
- ✓ Firm background of over 35 years of major drainage experience.
- ✓ A proven track record of completed drainage projects from feasibility studies following through to completed construction.
- ✓ Recent completion of successful drainage projects which are similar to the scope of work of your current project.
- ✓ A working knowledge of state-of-the-art computerized methods and procedures for studies and design.

The firm has an extensive track record of major drainage and site work projects including development of the master plan for drainage in the 17<sup>th</sup> St. Canal Drainage Basin. The 10,000 acre 17<sup>th</sup> St. Canal Drainage Basin drains most of Uptown New Orleans and Old Metairie. This master plan has served as the basis of implementation of over \$80,000,000 dollars of drainage improvements since 1983. Linfield, Hunter & Junius, Inc. provided full design and contract administration services for over \$50,000,000 of these drainage improvements.

The firm has provided engineering services for Jefferson Parish, the City of New Orleans, Louisiana Department of Transportation and Development, Sewerage and Water Board of New Orleans, St. Charles Parish, U.S. Corps of Engineers, Port of New Orleans, U. S. Navy, Entergy Corporation and the Rouse Corporation and for numerous other clients since the mid 1970's. In the last 10 years the firm has been responsible for the design and contract administration of over \$100,000,000 of improvements.

**Relevant projects** include:

- ✓ Canal Street Improvements
- ✓ 17<sup>th</sup> Street Canal Improvements
- ✓ Hoey's Canal Drainage Improvements (Phase II and III)
- ✓ Hoey's Canal Bypass
- ✓ Livingston Place East and West Drainage Improvements
- ✓ Cuddihy Drive and Woodvine Avenue Drainage Improvements
- ✓ Geisenheimer Canal Improvements
- ✓ Rehabilitation of Magazine and Prytania Streets
- ✓ Dillard University Student Union Site Development
- ✓ General DeGaulle Crossings
- ✓ Claiborne Avenue Covered Canal I Project
- ✓ Russell Street Improvements
- ✓ Hollygrove Drainage Improvements

## TEC Professional Services Questionnaire



Cuddihy Drive Drainage Improvements



Geisenheimer Canal Improvements  
Covered Canal

### Land Surveying (Linfield, Hunter & Junius, Inc.)

Linfield, Hunter & Junius, Inc. (LH&J) employs **two full time Registered Professional Land Surveyors** and maintains **four fully staffed survey field crews** who are equipped with modern vehicles and state of the art survey equipment for both conventional and GPS surveying. Our crews have worked in difficult terrain conditions, including coastal marshes, and are equipped for and experienced at performing topographic, boundary, topographic bathymetric, right-of-way, control, and hydrographic surveys as well as performing bench leveling, construction layout surveys and settlement monitoring surveys. Our CADD Drafters are highly experienced in working with both Bentley MicroStation and Autodesk AutoCAD as required. LH&J also utilizes add in modules such as ArcView, Civilsoft and InRoads to enhance the efficiency of data processing and project deliverables. We are competent at working with any vertical and horizontal datum as specified by the Client's requirements. We utilize computer based survey data processing software to achieve maximum efficiency and ensure rapid and reliable deliverables for our Clients. Since placing an increased emphasis on land surveying services, the firm has completed over \$1,000,000 in land surveys for in-house designs and others.

#### **Public**

- Jefferson Parish Department of Public Works
- LA Department of Transportation and Development
- Audubon Park, New Orleans
- U.S. Army Corps of Engineers
- City of New Orleans Department of Public Works
- Sewerage and Water Board of New Orleans
- Plaquemines Parish Government
- Pontchartrain Levee District
- St. Tammany School Board
- City of Hammond
- Tangipahoa Parish
- City of Baton Rouge
- University of New Orleans

#### **Private**

- CVS/Pharmacies – over 100
- Dillard University
- Tulane University
- Children's Hospital
- Woodward Design+Build
- Friends of City Park, New Orleans, LA
- Dollar General Stores – over 50
- Exxon/Mobile Corporation
- New Orleans Park-N-Fly
- Multiple design consultants statewide

#### **Registered Surveyors**

Nathan J. Junius, P.E., P.L.S.

William J. Muller, P.L.S.

BSCE, MSCE

20 years experience

30 + years experience

## TEC Professional Services Questionnaire

Nathan J. Junius, P.E., P.L.S. is a licensed surveyor and heads up Linfield, Hunter & Junius, Inc. surveying. In addition to extensive experience as a civil engineer, Mr. Junius has extensive experience in all aspects of land surveying.

William J. Muller, P.L.S. has extensive experience in all aspects of land surveying throughout Louisiana. He worked in the offshore industry spotting well locations, run field crews for numerous Louisiana Power and Light topographic and boundary surveys, analyzed thousands of boundary surveys, and supervised multiple field crews, draftsmen and land surveys.

Examination of the attached resumes project descriptions in Items K and L demonstrates that the firm has the professional training and experience to provide complete land surveying services.

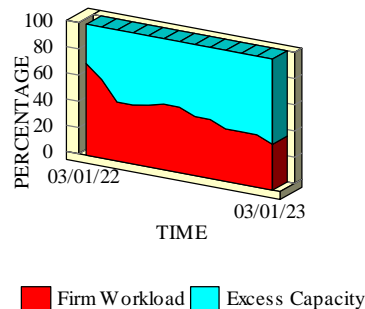
### **B.2 Capacity for Timely Completion of Newly Assigned Work**

The design of several large drainage projects have been recently completed or are near completion. Therefore, we have a large engineering team available to jump on this project. This project can be easily absorbed by the firm, as we have substantial reserve production capacity to meet any reasonable project scheduling.

Our current and projected firm capacity shown below indicates a 40% capacity shortfall by April 2022. The 15% capacity anticipated for this project would be very welcome and needed to maintain our current staff levels.

#### **Linfield, Hunter & Junius, Inc.**

*Firm Capacity*



Fast turnaround time is an excellent indication of our ability to respond to the needs of our clients.

**Linfield, Hunter & Junius, Inc. has a well-deserved reputation for completing public projects on time; in fact, our firm often completes designs awarded to several firms at the same time before other firms' designs have been completed. Recent examples of our fast turnaround include:**

- **17<sup>th</sup> Street Canal Widening – Hoey's Canal to Airline Drive**

The schedule for this project was accelerated to accommodate aggressive grant funding deadlines. Linfield, Hunter & Junius, Inc. completed design sufficiently ahead of schedule such that the project was bid and construction begun several weeks before the grant deadline date for construction.

- **Hoey's Canal Bypass**

Linfield, Hunter & Junius, Inc. completed design of the first phase of this project ahead of schedule to meet aggressive grant funding deadlines.

- **Alcee Fortier/Pressburg Streets**

This project was designed by Linfield, Hunter & Junius, Inc. and constructed ahead of similarly-sized projects awarded to other firms at the same time.

## TEC Professional Services Questionnaire

- **Earhart Boulevard**

Five firms were awarded similarly-sized parts of this project; Linfield, Hunter & Junius, Inc. received the last of these awards yet completed its design first.

- **Leon C. Simon and Gentilly Road Bridges**

Of the eight bridge projects awarded to various firms, Linfield, Hunter & Junius, Inc.'s two bridge projects were the first designs completed, and construction of these bridges was completed first.

- **Hollygrove Area Drainage Project**

This may be the largest single SELA drainage project. The design was completed on time under a very aggressive schedule and the firm was given the **USACE's highest rating of "EXCELLENT" including an "OUTSTANDING" rating** for the "Management and Adherence to Schedules" category. Construction is complete.

- **17<sup>th</sup> St. Canal Levee Breach Repairs, Interim Closure Structure, and Interim Pumping System**

This was among the most visible and important public projects in New Orleans and Jefferson Parish subsequent to Hurricane Katrina. The design was completed under a very aggressive fast track schedule while the firm reestablished operations and restored its flooded offices in Metairie. More than \$200 Million dollars of improvements were designed within one year. Gates and temporary drainage pumps were in place and operational in time for the 2006 hurricane season less than one year after Hurricane Katrina. The Corps of Engineers issued a **Certificate of Appreciation to the firm for Outstanding Service** in providing engineering support in Southeast Louisiana subsequent to Hurricane Katrina. **The firm received a National Honor Award in 2009** from the American Council of Engineering Companies for design of the 17<sup>th</sup> St. Canal Interim Closure Structure.

### **B.3 Location of Principal Office Where Work Will Be Performed**

Linfield, Hunter & Junius, Inc. is located in Jefferson Parish at **3608 18<sup>th</sup> Street, Metairie, LA 70002**. We are centrally located in the parish, and all work will be performed from this office.



### **B.4 Status of Current Litigation with Jefferson Parish**

Linfield, Hunter & Junius, Inc. has no previous or on-going litigation with Jefferson Parish.



## TEC Professional Services Questionnaire

### **B.5 Prior Successful Completion of Projects of the Type and Nature of Engineering Services, as defined, for Which Firm Has Provided Verifiable References**

Linfield, Hunter & Junius, Inc. has a staff of engineers with significant experience providing the professional services required for this project. **Examination of the Resumes in Item K and the Project Descriptions in Item L demonstrates the extensive experience of our staff** in providing the services required for this project. Our team has a proven track record of completed major projects from feasibility studies following through to completed construction, and has recently completed a number of successful drainage projects which are related to the scope of work of this project and in the same geographical area.

The below Charts are representative of the ACASS Ratings LH&J has earned by providing Professional Engineering Services to the U.S. Army Corps of Engineers, New Orleans District. These ratings are a direct indicator of LH&J's past performance on critical, time sensitive projects.



Composite ACASS Ratings from Prior LH&J Contracts with the USACE New Orleans District

### **B.6 Size of Firm**

Linfield, Hunter & Junius, Inc. employs thirty seven (37) individuals, as shown in Item E above. The size of our firm is ideal for projects such as the proposed project because:

- ✓ The firm is large enough that it can absorb projects of the size of the proposed project and not become overburdened by them.
- ✓ The firm is small enough to be nimble and responsive to the client.
- ✓ The management structure is not multi-layered, which facilitates resolution of issues that could otherwise slow down a project.

### **B.7 Past Performance by Person or Firm on Parish Contracts**

To date LH&J has received the following drainage engineering assignments from Jefferson Parish:

- ✓ Canal Street Improvements – COMPLETED
- ✓ Widening and Deepening of the 17th Street Canal – COMPLETED
- ✓ Hoey's Canal Drainage Improvements (Phase II and III) – Phase III-a - COMPLETED
- ✓ Hoey's Canal Drainage Improvements (Phase II and III) – Phase III-b - COMPLETED
- ✓ Hoey's Canal Drainage Improvements (Phase II and III) – Phase III-c – IN DESIGN
- ✓ Hoey's Bypass Canal – Phase I - COMPLETED
- ✓ Hoey's Bypass Canal – Phase II - COMPLETED

## TEC Professional Services Questionnaire

- ✓ Livingston Place East and West Drainage Improvements - COMPLETED
- ✓ Cuddihy Drive and Woodvine Avenue Drainage Improvements – COMPLETED
- ✓ Geisenheimer Basin Drainage Study - COMPLETED
- ✓ Russell Street Drainage Improvements - COMPLETED
- ✓ Geisenheimer Canal Improvements - COMPLETED
- ✓ Dakin St. Pump Station - COMPLETED

See Item L for additional details regarding work for Jefferson Parish for selected projects.

We have had repeat assignments from all of our public sector clients demonstrating our capabilities to perform at a high level, regardless of the project scope. To the best of our knowledge, **all public projects have been completed within the allotted design time and to the clients' satisfaction.**

Fast turnaround time is an excellent indication of our ability to respond to the needs of our clients; **quality is attested to by the number of repeat public clients we have.** Throughout Linfield, Hunter & Junius, Inc.'s history we have maintained an excellent working relationship with each public client. This is a significant accomplishment of which we are very proud.

### **Major continuing repeat public clients include:**

- ✓ Jefferson Parish since 1991 (31 years)
- ✓ The Port of New Orleans since 1971 (51 years)
- ✓ U.S. Army Corps of Engineers since 1973 (49 years)
- ✓ Plaquemines Parish Government since 1973 (49 years)
- ✓ City of New Orleans since 1974 (48 years)
- ✓ U.S. Navy, Southern Division since 1975 (47 years)
- ✓ Sewerage & Water Board of New Orleans since 1979 (43 years)
- ✓ Tangipahoa Parish since 2006 (16 years)

Below is a sampling of awards and commendations our projects have received:

- The New Orleans District of the Corps of Engineers gave Linfield, Hunter & Junius, Inc. a rating of **“Excellent”** for the \$38 million Hollygrove Area Drainage Improvements project.
- The Vicksburg District of the Corps of Engineers recently formally rated the firm's performance as **“Highly Recommended”**.
- A City of New Orleans department director recently told us (and others) that **Linfield, Hunter & Junius, Inc. should be used as the example for other consulting engineering firms to emulate.**
- The Board of Commissioners of the Port of New Orleans recently commended the firm's **“outstanding professional services”** in an emergency situation, which allowed the board “to receive bids and award a construction contract in record time”.
- The Corps of Engineers issued a **Certificate of Appreciation to the firm for Outstanding Service** in providing engineering support in Southeast Louisiana subsequent to Hurricane Katrina.
- The firm received a **National Honor Award** from the American Council of Engineering Companies for design of the 17th St. Canal Interim Closure Structure in 2009.
- The firm received an **Award of Excellence** for the Harvey Floodwall Project in 2009.
- The **New Orleans Business Round Table commended the firm** for the Reconstruction of Tidewater Road in 2009;
- **ACI awarded an Engineering Excellence Award** to the firm for design of the Metairie Road Bridge Project in 2000.



## **Closing Statement**

We are extremely interested in this solicitation.

Linfield, Hunter & Junius, Inc. has extensive experience in the modeling, planning and design of drainage improvement, canal and pumping station projects in Jefferson Parish and throughout the New Orleans Metropolitan Area.

Linfield, Hunter & Junius, Inc. has the capacity to easily absorb this project assignment.

Please give us your most serious consideration.

Signature: \_\_\_\_\_

Printed Name: Nathan J. Junius, P.E., P.L.S.

Title: President

Date: March 24, 2022

The Louisiana Professional Engineering and Land Surveying Board has the following information on file:

Name: Public Address:  
Linfield, Hunter & Junius, Inc. 3608 18th Street, Suite 200  
Metairie, LA 70002

License/Certificate Information w/ Supervision

License	Status	First Issuance Date	Expiration Date	Supervisor(s)
EF.0000510	ACTIVE	05/23/1979	03/31/2023	Mr. Nathan John Junius # PE.0031843 - Active

The Louisiana Professional Engineering and Land Surveying Board has the following information on file:

Name: Public Address:  
Linfield, Hunter & Junius, Inc. 3608 18th Street, Suite 200  
Metairie, LA 70002

License/Certificate Information w/ Supervision

License	Status	First Issuance Date	Expiration Date	Supervisor(s)
VF.0000532	ACTIVE	06/15/2004	09/30/2022	Mr. Nathan John Junius # PLS.0004958 - Active

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9643 Brookline Avenue | Suite 121 | Baton Rouge, LA 70809-1433  
225-925-6291 | Fax 225-925-6292

# TEC Professional Services Questionnaire

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

**Provide professional engineering and supplemental services for a Drainage Master Plan for the East Bank of Jefferson Parish (SOQ# 22-014)**

**B. Firm Name & Address:**

CDM Smith  
1515 Poydras Street, Suite 1130  
New Orleans, LA 70112

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

Jessica Watts, PE, CFM, DWRE, ENV SP  
Principal, Water Resources Engineer  
1515 Poydras Street, Suite 1130  
New Orleans, LA 70112  
504.799.1167

**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.**

Michael Schmidt, PE, BCEE, DWRE  
Senior Vice President  
4651 Salisbury Road, Suite 420  
Jacksonville, FL 32256  
904.527.6735

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

<u>345</u> Administrative	<u>72</u> Estimators	<u>25</u> Specification Writers
<u>53</u> Architects (Licensed)	<u>201</u> Geologists	<u>163</u> Structural Engineers
<u>46</u> Chemical Engineers	<u>132</u> Geotechnical Engineers	<u>N/A</u> Graduate Engineers*
<u>462</u> Civil Engineers	<u>N/A</u> Interior Designers*	<u>N/A</u> Project Managers*
<u>360</u> Construction Inspectors	<u>12</u> Landscape Architects	<u>N/A</u> Clerical
<u>12</u> Ecologists	<u>47</u> Land Surveyor	<u>N/A</u> Grant/Funding Specialist*
<u>166</u> Electrical Engineers	<u>78</u> Mechanical Engineers	<u>53</u> Sanitary Engineers
<u>N/A</u> Engineer Intern*	<u>583</u> Environmental Engineers	
<u>5</u> Professional Land Surveyors		<b><u>5,434</u> TOTAL</b>

\*CDM Smith does not track these categories. Staff who serve in these roles are included in other categories.  
Numbers include firm-wide staff.

**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.**

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

1.

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. N/A		
2.		
3.		

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

20 staff in Louisiana; 5,434 worldwide

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

**PROFESSIONAL IN CHARGE OF PROJECT:**

**Name & Title:**

Jessica Watts, PE, CFM, DWRE, ENV SP  
Principal, Water Resources Engineer

**Project Assignment:**

Project Manager: Leveraging over 20 years of experience specializing in stormwater management and modeling in southeastern Louisiana, Ms. Watts' responsibilities will include a combination of project decisions and recommendations with foresight and judgment in planning, organizing, and guiding project and technical activities, as well as coordinating critical issues with Linfield, Hunter & Junius, Inc. (LHJ) and CDM Smith teams. She will ensure that all project aspects adhere to stringent CDM Smith Quality Management protocols, and that staff stay on target and on schedule to deliver successful projects for Jefferson Parish.

**Name of Firm with which associated:**

CDM Smith

**Years' experience with this Firm:**

15 years

**Education: Degree(s)/Year/Specialization:**

MS/2006/Environmental and Water Resources Engineering  
BS/1996/Civil Engineering

**Active registration: Year first registered/discipline:**

PE/LA/2010/Civil  
PE/MS/2007/Civil  
PE/TX/2019/Civil

**Other experience and qualifications relevant to the proposed Project:**

Ms. Watts is a water resources engineer with over 20 years of experience specializing in drainage, green infrastructure, and civil/site development. Her project experience encompasses modeling, site development, and design,. Jessica's experience includes serving as a Task Manager on the Urban Water Plan, working as Task Force Leader for New Orleans Infrastructure Assessment after Hurricane Katrina disaster, serving as Assistant Project Manager and lead modeler on Pontilly HMGP Project, working as Project Manager for Louisiana's West Bank Subsurface Drainage Improvement Program, and Project Engineer for Long Term Hazard Mitigation Project for U.S. Army Corps of Engineers and Jefferson Parish in Southern Louisiana.

Please see Ms. Watts' resume for detailed experience information.



## TEC Professional Services Questionnaire

**Jessica Watts, P.E., CFM, DWRE, ENV SP**  
**Project Assignment – Principal, Water Resources Engineer**

**Project Technical Leader, San Patricio County Drainage Master Plan, San Patricio County, Texas. (Ongoing)** Ms. Watts serves as a Project Technical Leader for the development of the San Patricio Drainage Master Plan, performing the tasks of modeling, and project management. The project objective is to create a flood plan to identify and recommend future improvements for all areas of the County, including the Cities of Sinton, Portland, Aransas Pass, Ingleside, Ingleside on the Bay, Mathis, Taft, Odem, Gregory, Lakeside, Lake City, and San Patricio to prevent flooding, improve streets, roads, and drainage. Project is to assess existing conditions, identify future infrastructure capacities and constraints, and develop a list of improvements needed. Project also includes significant stakeholder and community engagement, in which the team works to engage officials for input and information with the ultimate result of developing a plan of prioritized recommended improvements of infrastructure enhancements, funding options, and drainage system mapping.

**Project Technical Lead and Lead Modeler, Drainage Pump Station 01 (Broadmoor) Drainage Upgrades and Green Infrastructure, New Orleans, Louisiana. (9/2015 – Ongoing)** Ms. Watts serves as the project technical lead (PTL) for this \$50 million (construction) project which includes a two-pronged approach to reduce flooding and mitigate hazards resulting from the high intensity, short duration rainfall that frequently occurs in New Orleans. The project includes both upgrades to the City's stormwater drainage infrastructure and improved upstream storage through green infrastructure installations. The geographic scope of the project is a "slice" along New Orleans' Mississippi River crescent and includes the neighborhoods of Central City, Broadmoor, the Garden District and Lower Garden District, St. Thomas Development, Touro, East Riverside, and Milan. This project is currently in the construction document phase.

**Engineer of Record, HMGP Marigold Street Drainage, Laplace, Louisiana, (1/2015 - 3/2018).** Ms. Watts is the engineer of record for this St. John the Baptist Parish (Parish) project. The Parish was awarded a Hazard Mitigation Grant for engineering evaluation, design services, and construction to improve storm water drainage within the Mount Airy subdivision of Laplace. The engineering evaluation included development of a SWMM hydrology and hydraulic (H&H) model to evaluate the impacts of the drainage improvements on the watershed to ensure that no community was negatively impacted upstream or downstream of the project location. Project design included demolition and removal of 3,360 linear feet of existing drainage piping; demolition, removal, and replacement of 10,700 square feet of driveways and sidewalks; installation of 370 linear feet of 18" reinforced concrete pipe; 2,060 linear feet of 24" reinforced concrete pipe; and 930 linear feet of 30" reinforced concrete pipe.

**Lead Modeler, South Cypress Creek Master Plan, Memphis, Tennessee.** Ms. Watts served as a lead modeler for the development of a stormwater master plan for South Cypress Creek watershed in the City of Memphis. The project involved the use of InfoSWMM to evaluate necessary infrastructure improvements to resolve roadway and structural flooding complaints. In addition, the project included the development of a stormwater infrastructure inventory in a GIS environment.

**Project Manager, Jean Lafitte & Vicinity Drainage Project, Lafitte, Louisiana. (1/2013-9/2016)** Ms. Watts managed the deliverable of the design, bid, and construction administration for 400 linear feet of drainage improvements to existing open canals. Deliverables include determining the level of service/capacity of existing system, calculation of the required level of service for a ten-year storm conveyance, coordination with client to determine specific existing drainage problems, and preparation of construction drawings.

**Project Manager and Lead Modeler, Pontilly Stormwater Hazard Mitigation Grant Program (HMGP), New Orleans, Louisiana. (3/2012 – Ongoing)** The New Orleans Redevelopment Authority (NORA), as a subgrantee through the City of New Orleans, was awarded an HMGP grant to reduce the stormwater flooding impacts in the neighborhoods of Pontchartrain Park and Gentilly Woods, collectively known as, "Pontilly". This HMGP project is to design stormwater best management practice (BMP) solutions that provide \$13.5M in flood mitigation throughout the Pontilly Study Area over the course of 50 years. The design solution includes: re-purposing post-Katrina un-restored residential lots and other existing green spaces into urban pocket parks with stormwater detention and wetlands, pervious pavement, urban bio-swales, street basins, and widening of the existing Dwyer Canal and incorporating overland flow from areas with topographic impediments to standard drainage design. Ms. Watts was responsible for the overall technical scope, modeling, design, BCA development, and project management activities.

**Modeler, Greater New Orleans Urban Water Plan, New Orleans, Louisiana. (3/2012- 10/2013)** The purpose of the GNO Urban Water Plan was to propose and define sustainable investments in flood protection and drainage infrastructure to ensure higher standards of safety, lower flood risks, enhanced quality of life, and sustainable urban and economic development for all southeastern Louisiana. By incorporating international best practices, the strategy was formulated through five primary phases: data collection, creation of an overall water system district planning, implementation strategy, and design and cost

## TEC Professional Services Questionnaire

**Jessica Watts, P.E., CFM, DWRE, ENV SP**  
**Project Assignment – Principal, Water Resources Engineer**

of pilot projects. The final deliverable was an implementable strategy for water management that included water management tools and recommendations for developing a regional and local capacity for water management. Ms. Watts' role on this project was as a system team member and local modeling expert.

**Project Engineer, West Bank Surface Drainage Improvement Program, Jefferson Parish, Louisiana.** For Jefferson Parish in Southern Louisiana, Ms. Watts managed the data collection and capital improvements suggestions for the subsurface drainage system for designated drainage problems areas. Phase I of the program included data collection and inventory of the existing drainage system and development of a stormwater management program for the unincorporated West Bank of Jefferson Parish. Phase II of the program included the development of seven SWMM hydrologic and hydraulic models with a total area of over 1,500 acres and with a 64.7 miles of pipe analyzed. Preliminary construction costs were determined and both a general overall alternative as well as a first phase project were suggested.

**Project Manager, Love Field Stormwater Drainage Feasibility Study, Dallas, Texas.** Ms. Watts serves as the project manager and technical coordinator for the Love Field Stormwater Drainage Feasibility Study which is evaluating the feasibility of discharging a portion of Dallas Love Field stormwater drainage into Bachman Lake by modifying the dam and removing it as a regulated structure. The scope includes determining the alternatives to modifying Bachman Dam and removing it from being a TCEQ structure; conducting hydrologic and hydraulic, geotechnical, and park programming analyses of the alternatives; developing feasibility level opinions of probable construction costs; determining the risks and benefits for each of the alternatives; and facilitating public outreach.

**Assistant Project Manager, Hurricane Katrina Infrastructure Repairs – Buena Vista West Area Sewer, Water, and Storm Drainage Replacement, Biloxi, Mississippi.** For the City of Biloxi, Mississippi's Hurricane Katrina-related, FEMA funded restoration, CDM Smith provided basic design phase and construction phase engineering for the total replacement of wastewater collection, water distribution, stormwater drainage systems and streets base and pavement for the subdivision of Buena Vista West. This project has an estimated construction value over \$13.6 million. Ms. Watts was responsible for facilitating the final phases of the overall design and developing the proposed stormwater management system modeling and design utilizing both SWMM and StormCAD software. The project includes approximately two miles of stormwater pipe, three miles of sanitary sewer, and five miles of watermain with appurtenances.

**Engineer of Record, Green Infrastructure Toolkit, New Orleans, Louisiana. (4/2016 – 5/2018)** Ms. Watts is the engineer of record for the Green Infrastructure Toolkit, a comprehensive set of tools for governmental agencies and private developers to use when designing green infrastructure projects in New Orleans. The toolkit includes standard design details, specifications, guidance documents, and a stormwater calculator for determining site development need and ability to meet current City stormwater permitting requirements.

**Assistant Project Manager, Hurricane Katrina Infrastructure Repairs – St. Michaels Phase 1 and 2 Area Sewer, Water, and Storm Drainage Replacement, Biloxi, Mississippi.** For the City of Biloxi, Mississippi's Hurricane Katrina-related, FEMA funded restoration, CDM Smith provided basic design phase and construction phase engineering for the total replacement of wastewater collection, water distribution, stormwater drainage systems and streets base and pavement for the subdivision of St. Michaels, areas 1 and 2. This project has an estimated construction value over \$32 million. Ms. Watts was responsible for facilitating the final phases of the overall design and developing the proposed stormwater management system modeling and design utilizing StormCAD software. The project includes approximately six miles of stormwater pipe, six miles of sanitary sewer, and ten miles of watermain with appurtenances.

**KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:****Name & Title:**

Michael Schmidt, PE, BCEE, DWRE  
Senior Vice President, Water Resources Engineer

**Project Assignment:**

SME/QA/QC: Mr. Schmidt will be responsible for drainage master planning related services. He will ensure that all aspects of water resources and deliverables adhere to Jefferson Parish and CDM Smith Quality Management protocols.

**Name of Firm with which associated:**

CDM Smith

**Years' experience with this Firm:**

38 years

**Education: Degree(s)/Year/Specialization:**

BS/1984/Environmental Engineering

**Active registration: Year first registered/discipline:**

PE/LA/2009/Civil  
PE/FL/1989/Civil

**Other experience and qualifications relevant to the proposed Project:**

Mr. Schmidt is CDM Smith's Global Practice Leader for Water Resources Infrastructure and Resiliency. He has 38 years of experience in sustainable and resilient stormwater, modeling, civil works, flood control, green infrastructure, coastal, ecosystem restoration, water resource, watershed master planning, research, facilities evaluations and design, permitting, operations, asset and data management, implementation, training, public information, and funding. He has managed or directed more than 400 stormwater and water resource management projects in 38 states, including: Louisiana, Alabama, Arkansas, Florida, Georgia, Mississippi, Tennessee, and Texas. Mr. Schmidt has also directed design and operations innovations that have saved over \$365M on more than \$1B of retrofit projects with green stormwater, flood control, coastal, water supply, and environmental restoration infrastructure.

Please see Mr. Schmidt's resume for detailed experience information.

## TEC Professional Services Questionnaire

**Michael Schmidt, P.E., BCEE, DWRE**

**Project Assignment – Senior Vice President, Water Resources Engineer**

**Technical Manager Stormwater Drainage Master Plan (SDMP) New Orleans, LA.** Mr. Schmidt served as technical manager for this SDMP which included stormwater system inventory and detailed hydrologic and hydraulic modeling of the City system of pipes 36 inches and smaller and interaction with the Sewerage and Water Board of New Orleans stormwater drainage system and large flood control pump stations.

**Technical Advisor-Reviewer for the Pontilly and Broadmoor Stormwater Drainage and Green Infrastructure Improvements HMGP Designs and Green Infrastructure Toolkit, New Orleans, LA.** He serves as the technical advisor-reviewer for these designs which are \$15 million and \$50 million hazard mitigation grant projects with flood control and green infrastructure with water, sewer, and transportation upgrades. He also served as technical advisor for the City's Green Infrastructure Toolkit which developed ten standard Green Best Management Practice (BMP) design sizing guidance, plans details, specifications, and calculation methods for practitioners.

**Technical Director-Advisor, Stormwater Master Plan for the Gayoso Bayou Basin, City of Memphis, TN.** Mr. Schmidt serves as reviewer-advisor for the SWMP evaluations including hydrologic and hydraulic (H&H) modeling of the stormwater system, mapping and identification of stormwater drainage system and outfalls, alternatives evaluation for stormwater improvements, and recommendations for operation and maintenance (O&M), capital project planning, and support for NPDES MS4 permit documentation.

**Lead Engineer, Comprehensive Stormwater and Coastal Resilience Master Plan, City of Miami, Florida, 2018-present.** Mr. Schmidt is responsible for technical direction and review for the stormwater management and coastal resilience program to plan, model, evaluate various existing and future climate conditions for sea level rise, tidal surge and extreme rainfall. Levels of service (LOS) for Miami flood control, water quality treatment for Biscayne Bay, and aquifer recharge were defined to develop alternative mitigative measure evaluations, which included multi-benefit resilient and adaptable green and grey stormwater and coastal components, benefit-cost analysis using FEMA HAZUS for a 50 year planning horizon with conditions for resilient features through 2100.

**Technical Manager, Blind River Freshwater Diversion Feasibility Study, EIS, and Conceptual Design, LA CPRA and USACE New Orleans District, LA.** He served as technical manager for the Coastal Protection and Restoration Authority (CPRA) and USACE New Orleans District Blind River Freshwater Diversion project to re-establish hydroperiod, and sediment and nutrient fluxes to support wetland forest growth and regeneration. The project will divert 3,000 cfs to restore up to 36 sq. mi. of coastal wetlands. He identified a dual use option for water distribution with the flood control system that will save between \$30M and \$40M in capital costs and over 1 sq. mi. of forested wetlands. Project feasibility evaluations included three sea level rise scenarios over the 50-year planning horizon.

**Technical Director HCFCD, Tropical Storm Allison Project (TSARP) Support and Watershed Master Plan and Main Stem Analysis, Harris County, TX.** Mr. Schmidt developed methodologies for the program team for H&H modeling, alternatives analyses, and model support tools to help HCFCD develop flood control plans for 22 watersheds. He led H&H pilot studies for converting HEC-RAS steady models to unsteady (dynamic) models for Buffalo Bayou and Goose Creek to determine whether these models could be effectively used in the alternative evaluation phase of the project. He developed guidance criteria and programs for volume-time detention basin sizing and to use HCFCD GIS data to automate computation of kinematic wave parameters for use in HEC-HMS.

**Technical Advisor/Reviewer, Marina Barrage, Singapore.** Mr. Schmidt served as advisor/reviewer for the H&H, water quality modeling, circulation, and green infrastructure components of the Marina Barrage project.

**Technical Advisor/Reviewer, Baton Rouge SSO Management Program.** Mr. Schmidt served as advisor/reviewer for the SSO modeling and deep tunnel options to control SSOs and meet consent decree requirements.

**Stormwater and Flood Management Projects.** Among the 380+ stormwater and flood control programs he has managed or directed, Mr. Schmidt served as technical director-manager for the Hartsfield-Jackson Atlanta International Airport, Daytona Beach, Denver, East Volusia Regional Water Authority, Fulton County (Atlanta), Harris County (Houston), Kansas City, Key West, Kissimmee, Los Angeles, Miami, Miami Beach, Miami International Airport, Milwaukee, New Orleans, Orange County, Orlando, Rouge River Wet Weather Demonstration Program, Seminole County, SFWMD, SJRWMD, St. Louis, West Palm Beach.

**Model Research, Development, and Implementation.** Mr. Schmidt has served as stormwater model caretaker and

## TEC Professional Services Questionnaire

**Michael Schmidt, P.E., BCEE, DWRE**

**Project Assignment – Senior Vice President, Water Resources Engineer**

stormwater watershed director for CDM Smith's Water Resource Practice Group. As part of this assignment, Mr. Schmidt was the caretaker and led methodology and code development for the U.S. EPA Storm Water Management Model (SWMM) with Dr. Wayne Huber for 12 years (1988 through 1999) and for the FDEP Watershed Management Model (WMM), along with several graphical user interfaces (GUIs), over the past 24 years. Both these tools are supported in the public domain.

**Technical Advisor, Baptiste-Collette Navigation Channel Feasibility Study, Plaquemines Parish, LA.** He served as a technical advisor for the navigation channel evaluation for an improved outlet from the Mississippi River, including multi-dimensional hydrodynamic and water quality modeling, wetlands evaluations, engineering and cost evaluations, and beneficial use of dredge material for wetlands creation.





**KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:****Name & Title:**

Rich Wagner, PE, DWRE  
Principal Water Resources Engineer

**Project Assignment:**

Task Manager

**Name of Firm with which associated:**

CDM Smith

**Years' experience with this Firm:**

34 years

**Education: Degree(s)/Year/Specialization:**

MS/1983/Civil Engineering  
BS/1981/Civil Engineering

**Active registration: Year first registered/discipline:**

PE/1989/Civil/VA  
PE/1989/Civil/FL

**Other experience and qualifications relevant to the proposed Project:**

Mr. Wagner is a principal water resources engineer at CDM Smith with 39 years of experience and specializes in watershed and water quality studies. He has contributed to the development of Total Maximum Daily Load (TMDL) studies, stormwater master plans, nonpoint pollution management studies, water supply studies, waste load allocation studies and water quality data assessments. He has applied numerous computer models in the simulation of hydrology, hydraulics and water quality impacts and has experience in applying statistical packages to water quality data. His experience includes modeling of conventional and toxic pollutants, assessing applicability of innovative permitting schemes to specific organic chemicals and heavy metals, comparing the theory and capabilities of a variety of estuary models, reviewing industrial discharge permit limits and managing water quality databases. Mr. Wagner has provided technical support for flood insurance studies, dam inspections, dam break analyses, storm sewer analyses and hydrologic studies. His responsibilities have included collection and input of data, model calibration and analysis of results and construction cost analyses.

Please see Mr. Wagner's resume for detailed experience information.

## TEC Professional Services Questionnaire

**Rich Wagner, P.E., DWRE**

**Project Assignment – Principal Water Resources Engineer**

**Technical Reviewer, Stormwater Master Plan Modeling and Design Implementation, City of Hollywood, FL.** Mr. Wagner is providing technical review of several stormwater models developed using the SWMM software for the City of Hollywood. The models have been initially developed and validated by comparing modeled flooding to observed flooding during two historical storm events. The validated models have been used to evaluate flooding for several design storms of varying return periods. It is anticipated that future phases of the project will include the evaluation of alternative management strategies to reduce flooding impacts in the city.

**Technical Reviewer, Shine and Colonial Drainage Study, Orlando, FL.** This project involved the development of a master plan to address multiple flooding areas for 647 acres located within the Lake Rowena Basin. The master plan's purpose was to develop conceptual improvements to resolve the historical flooding that occurs in the vicinity of Shine Avenue, Colonial Drive, Marks Street, and Oregon Street. He assisted with the development of a stormwater model representation of the 647 acre tributary area, prepared an engineering report summarizing the findings of the master plan, and developed a geographic information system (GIS) database using ESRI Arc Hydro tools and the Geographic Watershed Information System (GWIS) originally developed by the Southwest Florida Water Management District.

**Project Manager, Stormwater Modeling for Nova/Halifax Canal, Port Orange, FL.** The City of Port Orange experienced a large rainfall event that resulted in significant flooding near the intersection of Dunlawton Avenue and Spruce Creek Road. The flooding occurred despite the recent design and construction (by others) of a suite of drainage and stormwater management improvements in the area, including retention ponds and a stormwater pump station to facilitate discharge to the Halifax Canal. The original design included a berm on the Halifax Canal, which was omitted from construction, and the City requested that CDM Smith evaluate the potential hydraulic consequences of that omission and quantify what flood control benefits, if any, could be provided should the berm be restored.

**Project Manager, Beaufort County Stormwater Master Plan, Beaufort County, SC.** Mr. Wagner led a team that developed a stormwater master plan for Beaufort County. The project included a number of elements, including hydrologic/hydraulic modeling of the county's primary drainage system, watershed and tidal river water quality modeling, infrastructure inventory of the primary drainage system, and plan development. He provided technical oversight and review of the application of the ICPR model for the hydrologic/hydraulic modeling, which evaluated the capacity of the existing drainage system and identified problem areas. Mr. Wagner guided and reviewed the evaluation of alternative solutions for the problem areas using the ICPR model. He provided technical guidance in the development of CDM Smith's Watershed Management Model (WMM), and reviewed model calculations of annual pollution loads from county watersheds under existing and future land use conditions, and evaluated alternative management measures to reduce impacts of existing and future development. Mr. Wagner developed WASP computer models of the tidal rivers in Beaufort County, and calibrated the models to existing conditions based on measured fecal coliform bacteria in the rivers and the bacteria loads calculated by WMM. The WASP models were applied by Mr. Wagner for future conditions to evaluate potential impacts of future development.

**Project Engineer, Stormwater Management Master Plan, Prince William County, VA.** Mr. Wagner served as project engineer for the development of a stormwater management master plan for the Broad Run watershed. He assisted with the application of Hydraulic Engineering Center (HEC)-1 and HEC-2 modeling to evaluate the existing drainage system under existing and future land use conditions in the 90-square-mile study area, and to site regional facilities to alleviate flooding and erosion problems.

**Project Engineer, Stormwater Management Master Plan, Henrico County, VA.** Serving as project engineer for the development of a stormwater management master plan for Henrico County, Mr. Wagner assisted with the application of Stormwater Management Model (SWMM)-RUNOFF and SWMM-EXTRAN to evaluate the existing drainage system under existing and future land use conditions to determine solutions for predicted flooding problems, and to estimate costs for the remedial measures.

**Senior Technical Review, Blind River Diversion Project Feasibility Report, St. James Parish, LA.** CDM Smith was the prime consultant supporting development of a feasibility study for the Blind River Freshwater Diversion Project in St. James Parish, under contract with the Louisiana Department of Natural Resources and Office of Coastal Protection and Restoration Authority. Mr. Wagner provided senior technical review of the hydrologic, hydraulic, and water quality modeling conducted during the study. The hydrologic and hydraulic modeling included the evaluation of design storm and continuous flows using HEC-HMS, and the evaluation of flow distribution and flood control benefits using HEC-RAS. EFDC was applied to evaluate water depths, velocities, and sediment accumulation in the wetland areas under existing conditions and various management alternatives. Mr. Wagner provided review and input to the methodology applied for all models and commented on the technical validity of the model results.

**KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:****Name & Title:**

Thomas Nye, PhD, PE  
Senior Water Resources Engineer

**Project Assignment:**

SME/Quality Assurance Quality Control (QAQC)

**Name of Firm with which associated:**

CDM Smith

**Years' experience with this Firm:**

23 years

**Education: Degree(s)/Year/Specialization:**

PhD/1992/Applied Marine Physics  
BS/1987/Civil Engineering  
BS/1987/Geology

**Active registration: Year first registered/discipline:**

PE/FL/2003

**Other experience and qualifications relevant to the proposed Project:**

Dr. Nye's extensive professional expertise in water resources includes modeling stormwater, wastewater, groundwater, and river basins as well as watershed planning, operations, permitting, and conceptual design. He serves as team leader and technical specialist in the development of stormwater master plans (SWMP), and is a Technical Review Committee member for stormwater management projects for both airport and municipal clients. His model experience includes various versions of the U.S. Environmental Protection Agency's Stormwater Management Model (SWMM), the U.S. Army Corps of Engineers' Hydrologic Modeling System (HEC-HMS) and Adaptive Hydraulics Model (ADH), and the U.S. Geological Survey's MODFLOW. In addition, Dr. Nye was TRC Lead for the Jefferson Parish SWMP modeling in 2010.

Dr. Nye participates in ongoing research and development of pre- and post-processing tools and has developed the Dynamic Floodway Utility (DFU), a tool used to perform floodway analysis for FEMA Flood Insurance Studies using SWMM. His previous experience includes academic research in various water resources topics.

Please see Dr. Nye's resume for detailed experience information.

## TEC Professional Services Questionnaire

**Thomas Nye, PhD, PE**  
**Project Assignment – Senior Water Resources Engineer**

**Lead Modeler, New Orleans Drainage Master Plan Stormwater Modeling, New Orleans, LA.** Dr. Nye conducted SWMM stormwater modeling for the City of New Orleans Drainage Improvement Plan. Tasks included model setup, calibration, and alternative evaluations. He directed a team of seven modelers in the development of 15 neighborhood-scale models of up to 3000 nodes each that encompass the entire city. He wrote multiple sections of the report including Model Development, Design Alternatives/Methodology and the System Assessment Summary.

**Urban Water Plan, New Orleans, LA.** Dr. Nye was the lead modeler for additional SWMM stormwater modeling in New Orleans for the IWMS, which proposes comprehensive and sustainable investments in flood protection and drainage infrastructure for the city. This project is an international collaboration to ensure higher standards of safety, lower flood risks, and enhanced quality of life for Southeastern Louisiana.

**Stormwater Modeler/Technical Reviewer, New Orleans Department of Public Works, 2015 - 2016. Broadmoor Stormwater Drainage Upgrades and Green Infrastructure, New Orleans, LA.** Dr. Nye served as stormwater modeler and technical reviewer for this \$50 million (construction) project, which presented a two-pronged approach to reduce flooding and mitigate hazards resulting from the high intensity, short duration rainfall that frequently occurs in New Orleans. The project includes both upgrades to the City's stormwater drainage infrastructure and improved upstream storage through green infrastructure installations. The geographic scope of the project is a "slice" along New Orleans' Mississippi River crescent and includes the neighborhoods of Central City, Broadmoor, the Garden District and Lower Garden District, St. Thomas Development, Touro, East Riverside, and Milan. This project is currently in the schematic design phase.

**Modeler, Hydrologic Modeling, Los Angeles County Drainage Area (LACDA), Los Angeles, CA.** Dr. Nye conducted HEC-HMS and GeoHMS modeling of the Los Angeles and San Gabriel Watersheds in Los Angeles County (1,480 sq. mi.). Tasks included converting the existing HEC-1 models to HEC-HMS, using ArcHydro and GeoHMS tools to delineate/validate subbasins, and to develop a more refined, gridded HMS model of the Sepulveda Dam Watershed. He also wrote the report for USACE.

**Technical Reviewer, Gayoso Bayou Basin Drainage Plan, Memphis, TN.** Dr. Nye is the project technical reviewer for the City of Memphis' Gayoso Bayou Basin Drainage Plan. Gayoso Bayou is a highly urbanized watershed comprising much of downtown Memphis and the Pinch District, including St. Jude Medical Center. This project will develop effective flood mitigation projects within the basin. His role is to review the SWMM model construction, calibration, and alternatives developments.

**Project Engineer, Stormwater Modeling, Dallas Love Field Airport (DAL), Dallas, TX.** Dr. Nye conducted SWMM stormwater modeling for the Stormwater Drainage Master Plan (SDMP) for Love Field. Tasks included building the model from GIS, survey and plans, model validation, and alternative evaluations including airport-wide conveyance and detention options. He wrote multiple sections of the SDMP report, and reviewed the entire plan. A 2-D version of SWMM was built and used to aid in the preparation of the 1-D model that was delivered to the client.

**Lead Modeler, South Miami Heights (SMH) H&H Modeling, Miami- Dade County, FL.** In preparation for the construction of water treatment plant (WTP) improvements by Miami-Dade Water and Sewer Department (WASD), CDM Smith performed a climate change adaptation review that resulted in recommended actions to protect the WTP components from flooding, sea level rise concerns, coastal subsidence, and increased storm surges, thus ensuring the resiliency of this facility. Dr. Nye developed stormwater modeling in XP-SWMM, and advised for the sea level rise analysis as requested by WASD using the model developed by the County's RER DERM for the C-1 Canal.

**Modeling Task Leader/Lead Modeler, Stormwater Master Plan Update, Miami, FL.** Dr. Nye is leading efforts to model the City to a resolution of approximately 10 acres, which includes 2,500 subbasins in eight separate watersheds. The project includes hydrologic and hydraulic models that will map the primary stormwater management system down to a level of 24-inch diameter pipe and greater, as well as canals, ditches, pumps, weirs, and other stormwater structures. The models will be calibrated to historical storms and run multiple South Florida Water Management District design storms to determine existing levels of service (LOS). Part of the SWMP is to determine the LOS of the existing seawalls and how high they would need to be to protect the City. Alternative corrective measures will also be analyzed to improve LOS.

**Lead Modeler, Stormwater Master Plan Update, Village of Royal Palm Beach, FL.**

Dr. Nye conducted SWMM stormwater modeling for the Village of Royal Palm Beach Stormwater Master Plan Update. Tasks included model setup, model validation, and design storm evaluations. The model update included using a LiDAR-derived DEM to

## TEC Professional Services Questionnaire

**Thomas Nye, PhD, PE**

**Project Assignment – Senior Water Resources Engineer**

provide topographic accuracy to delineate between areas with direct runoff to canals, and areas with runoff to the primary stormwater system. The additional topographic accuracy allows better estimates of precipitation-driven flood levels within these neighborhoods, and better estimates of canal stages where out-of-bank flows can inundate the adjacent neighborhoods. Dr. Nye managed the project, wrote the report, and presented the findings to the Mayor and City Council.





<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
Rania Bekheet, PhD, PE Water Resources Engineer
<b>Project Assignment:</b>
Lead Modeler
<b>Name of Firm with which associated:</b>
CDM Smith
<b>Years' experience with this Firm:</b>
1
<b>Education: Degree(s)/Year/Specialization:</b>
PhD/Irrigation Engineering & Hydraulics/2013 MSc/Irrigation Engineering & Hydraulics/2005 Hons BSc/Civil Engineering/1999
<b>Active registration: Year first registered/discipline:</b>
PE/Civil, Water Resources, and Environmental/TX RE/Civil/Egypt
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Dr. Bekheet is an experienced water resources engineer with over 23 years of experience, with additional background in university teaching and research. Her technical specialties include hydraulic/hydrologic analysis, hydraulic systems design, watershed and river basin analysis, sea level rise impacts and coastal vulnerability assessment, GIS and geospatial analysis, and bridge scour analysis. She is skilled in AutoCAD Civil 3D, ArcMap, Arc Hydro, SMS (SRH-2D model), PC SWMM, HEC-RAS (1D and 2D models), and HEC-HMS.</p> <p>Please see Ms. Bekheet's resume for detailed experience information.</p>

## TEC Professional Services Questionnaire

**Rania Bekheet, PhD, PE**  
**Project Assignment – Water Resources Engineer**

**Water Resources Engineer and Modeler, South Carolina DOT Statewide Scour Critical Assessment and Management System Project, SCDOT, SC.** Dr. Bekheet developed an SRH-2D model for use in an HEC-18 analysis of the potential scour for a coastal bridge to determine its safety and condition. She assessed potential scour for several other bridges across the state using the USGS Envelope Curves. In addition, she serves as one of SCDOT's designees to review adequacy of scour studies (quality assurance) for over 1200 bridges.

**Water Resources Engineer, South Carolina Department of Health and Environmental Control Dams Safety Program, SC.** Dr. Bekheet developed professional training material in support of a hydrologic modeling and reservoir routing using HEC-HMS Workshop for state employees.

**Water Resources Engineer, Burnet Road-Koenig Lane to White Horse Trail (Project C-1), Austin, TX.** Dr. Bekheet designed the rain garden for the triangular median at the Allandale Road, including water quality control and infiltration calculations; inlet, pipelines, and headwall design; and specifications and waivers from design standards requests, all in accordance with the City of Austin standard specifications.

**Technical Specialist, Expansion of Tameer Corridor, Egyptian Corps of Engineers, Alexandria, Egypt.** Dr. Bekheet guided and reviewed the design of drainage pipes connecting the fish farms to West Nubarya main drain, passing through the main pump station, and rehabilitation of culverts connecting the solar pond on both sides of the road (35 km) where a set of 7 square culverts substituted 22 one-meter pipes, in addition to design of the rerouting of El-Kala drain (7 km).

**Technical Specialist, Bernis Naval Base, Egyptian Corps of Engineers, Red Sea, Egypt.** Dr. Bekheet guided and reviewed hydrological studies for 5 million square meters (nearly 1200 acres), including design plans and reports for required culverts, parallel drainage, and protection flood walls for roads and buildings against flooding.

**Task Leader, Sidi-Salem – Al-Riyad Road (36 km), Egypt Ministry of Housing, Utilities and Urban Communities, Kafr El-Sheikh, Egypt.** Dr. Bekheet designed hydraulic rehabilitation for the main drain (bed width varying from 8 to 17 meters), and cross drainage inlets, and designed systems for flooding protection against elevated ground water levels resulting from nearby fisheries and agricultural lands, including the side ditch and culverts.

**Technical Specialist, Expansion of Yanbu – Al-Nakhl – Al-Ays Road, Ministry of Transportation, Saudi Arabia.** Dr. Bekheet guided and reviewed hydrological studies for the site (approximately 90 km), including culverts and slope protection against flooding.

**Technical Specialist, Gargoub Naval Base, Egyptian Corps of Engineers, Matrouh, Egypt.** Dr. Bekheet guided and reviewed hydrological studies for 9 million square meters (nearly 2230 acres), including cross drainage culverts, and slope protection for roads and buildings against flooding.

**Task Leader, Expansion of Al-Taieff – Al-Baha – Abha Road, Ministry of Transportation, Saudi Arabia.** Dr. Bekheet conducted hydrological studies for the site (approximately 120 km road), and designed bridges, culverts, and slope protection for road protection against flooding.

**Technical Leader, Vulnerability and Risk Assessment of Alexandria City Coastal Area to Sea Level Rise, Institute of Graduate Studies and Research, Egypt.** Dr. Bekheet developed the technical proposal, co-managed the pursuit, and led contract negotiations with the client. She supervised and led the research lab in conducting a geo-spatial survey for the urbanized shoreline of Alexandria (25 km) using ArcGIS; developed a geo-coded database using a calibrated DTM, shoreline survey data, and land use data; and developed flood maps and analyzed the impact of different scenarios of sea level rise. She developed the project documentation, and final report, including documentation of QC efforts.

**Technical Specialist, San Stefano Marina and Private Beach, San Stefano for Real Estate Investment, Alexandria, Egypt.** Dr. Bekheet conducted independent checking of stability calculations and designs for three rubble-mound breakwaters, and three vertical quay walls. She performed technical specialist reviews for civil design drawings and design reports.

## TEC Professional Services Questionnaire

**Rania Bekheet, PhD, PE**

**Project Assignment – Water Resources Engineer**

**Lead Engineer, West Alexandria Modern Irrigation Networks Plan, Ministry of Water Resources and Irrigation, Alexandria, Egypt.** Dr. Bekheet developed a framework for planning and design of drip/sprinkler irrigation networks for large scale land reclamation projects in Visual Basic. She conducted hydraulic and economic design of irrigation networks for five large scale farms in West Alexandria, Egypt. She analyzed the feasibility of regional deployment of drip/sprinkler irrigation networks within water resources constraints and developed the final report, including documentation of QC efforts.



**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. 1

<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p>West Bank Surface Drainage Improvement Program Jefferson Parish, LA</p> <p>Jefferson Parish 1221 Elmwood Park Boulevard Jefferson, LA 70123</p> <p>504-736-6751</p>	<p>Providing design services for the program, CDM Smith supported both phases of the West Bank Surface Drainage Improvement Program for Jefferson Parish. Phase I included data collection and inventory of the existing drainage system and development of a stormwater management program for the unincorporated West Bank of Jefferson Parish. Phase II included development of seven SWMM hydrologic and hydraulic models with a total of over 1,500 acres and 64.7 miles of pipe analyzed. Preliminary construction costs were determined and both a general overall alternative and first phase project were suggested.</p>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
August 2010	\$1M	\$1M

### PROJECT NO. 2

<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p>Urban Water Plan GNO, Inc. New Orleans, LA</p> <p>Sub to Waggonner &amp; Ball 2200 Prytania Street New Orleans, LA 70130</p> <p>504-524-5308</p>	<p>The GNO Urban Water Plan was a multi-discipline, multinational effort to envision a complete water system plan for the Greater New Orleans area. The plan proposed and defined sustainable investments in flood protection and drainage infrastructure to ensure higher standards of safety, lower flood risks, enhanced quality of life, and sustainable urban and economic development for all of southeastern Louisiana. CDM Smith's role included strategy development, planning, and implementation strategies. By incorporating international best practices, the strategy was formulated through five primary phases: data collection, creation of an overall water system district planning, implementation strategy, and design and cost of pilot projects. The final deliverable was an implementable strategy for water management that included water management tools and recommendations for developing a regional and local capacity for water management.</p>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
October 2013	Total cost of the Urban Water Plan at completion is estimated at \$6.2B	\$76k

<b>PROJECT NO. 3</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility</b>	
Town of Lafitte, Jean Lafitte & Vicinity Drainage Improvements Jefferson Parish, LA  Sub to Meyers Engineering, LTD 4937 Hearst Street Metairie, LA 70001  504-885-9892	CDM Smith provided engineering design and bid services and construction administration as a sub-contractor to Meyer Engineers, Ltd. for the Town of Jean Lafitte in Jefferson Parish, Louisiana. This project includes 400 linear feet of drainage improvements consisting of replacing an existing open channel with reinforced concrete pipe. Deliverables included determining the level of service/capacity of existing system, calculation of the required level of service for a ten-year storm conveyance, coordination with the Town of Lafitte to determine specific existing drainage problems, design of a solution, preparation of construction drawings, and coordination on specifications.	
<b>Completion Date (Actual or estimated)</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
December 2016	\$38k	\$38k

<b>PROJECT NO. 4</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
Drainage Master Plan New Orleans, LA  City of New Orleans 1300 Perdido Street New Orleans, LA 70112  504-658-8420	CDM Smith lead and developed the City of New Orleans Drainage Master Plan which provides guidance to reduce existing flooding to a desired level of service, prioritizes drainage infrastructure improvements, and includes collaboration with the Sewerage and Water Board of New Orleans for implementation. The plan defined and prioritized needed drainage system upgrades, maintenance, implementation, and funding requirements and supporting utility rate structures. Included was field inspection and survey of over 10,000 catch basins and assessment of general condition and maintenance level of existing system structures. The data collected was incorporated into a Geographic Information System (GIS) data repository, and was utilized to support model development, asset management, and maintenance needs assessment tasks. The U.S. EPA Storm Water Management Model (SWMM) provided the framework to analyze hydrologic/hydraulic performance, quantify existing levels of service, and formulate capacity and storage improvements.	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
March 2012	\$2.4M	\$1.9M



<b>PROJECT NO. 5</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p>Pontilly Stormwater Hazard Mitigation Program New Orleans, LA</p> <p>City of New Orleans 1300 Perdido Street New Orleans, LA 70112</p> <p>504-658-8420</p>	<p>The New Orleans Redevelopment Authority (NORA), as a subgrantee through the City of New Orleans, was awarded Hazard Mitigation Grant Program (HMGP) funding to reduce stormwater flooding impacts in the neighborhoods of Pontchartrain Park and Gentilly Woods, known as "Pontilly." CDM Smith performed extensive modeling, developed and evaluated stormwater best management practices (BMP), designed, and provided construction management services to install \$13.5M in flood mitigation infrastructure throughout the Pontilly study area over the course of 50 years. CDM Smith's design solution included re-purposing post-Katrina unrestored residential lots and other existing green spaces into urban pocket parks with stormwater detention and wetlands; pervious pavement; bio-swales; streetside bio-retention cells redirecting stormwater runoff into detention facilities; widening of existing Dwyer Canal; and incorporating overland flow from areas with topographic impediments to standard drainage design.</p>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
October 2022	\$13.5M	\$1.5M

<b>PROJECT NO. 6</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p>DPS 01 Watershed (Broadmoor) Drainage Upgrades and Green Infrastructure New Orleans, LA</p> <p>City of New Orleans 1300 Perdido Street New Orleans, LA 70112</p> <p>504-658-8475</p>	<p>CDM Smith was selected to develop the Drainage Pump Station 01 (DPS 01) Watershed drainage upgrades and green infrastructure. While DPS 01 is located in Broadmoor, this project addresses the entire watershed with a large geographic footprint extending from DPS 01 in Broadmoor to the Mississippi River, and includes the neighborhoods of Central City, Broadmoor, Garden District, Lower Garden District, St. Thomas Development, Touro, East Riverside, and Milan. The project presents a two-pronged approach to reduce flooding and mitigate hazards resulting from the high intensity, short duration rainfall that frequently occurs in the New Orleans region. The project includes extensive modeling, designing upgrades to the City's stormwater drainage infrastructure and improved upstream storage through green infrastructure installations. The objective is to reduce localized flooding and implement green infrastructure improvements to the maximum extent practicable, while achieving a favorable benefit cost ratio of 1.0 or greater for the available budget of up to \$50M, demonstrated through modeling. CDM Smith's role includes project management, modeling, design, and construction administration.</p>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
December 2024	\$50M	\$4.7M

PROJECT NO. 7		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>San Patricio County Drainage Master Plan San Patricio County, TX</p> <p>San Patricio County 400 W. Sinton Street Sinton, TX 78387</p> <p>361-364-9300</p>	<p>CDM Smith developed a Drainage Master Plan for San Patricio County which included the services of assessing existing conditions, modeling, identifying future infrastructure capacities and constraints, developing a list of infrastructure improvements, and performing stakeholder and community engagement. The objective is to identify and recommend future improvements that will prevent flooding, improve streets, roads, and drainage for all areas of the County (693 sq/m), including the Cities of Sinton, Portland, Aransas Pass, Ingleside, Ingleside on the Bay, Mathis, Taft, Odem, Gregory, Lakeside, Lake City, and San Patricio. Stakeholder and community engagement are a significant activity in the project, in which the CDM Smith team worked to engage officials for input and information with the ultimate result of developing a high value and accepted plan of prioritized recommended improvements of infrastructure enhancements, funding options, and drainage system mapping.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
Ongoing	\$852k	\$712k

PROJECT NO. 8		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Drainage Master Plan Duval County, TX</p> <p>Duval County Texas 539 Highway 83 South Uvalde, TX 78801</p>	<p>CDM Smith prepared an overview of current drainage, water, and wastewater infrastructure for Duval County with maps, descriptions of assessments performed, watershed modeling, key issues identified, a prioritized list of proposed solutions and required future planning efforts, along with costs, funding opportunities and schedules for identified projects. The final deliverable of the Master Plan included all infrastructure data that was collected provided as a geodatabase, and all layers utilized to create the maps included within the Master Plan along with digital survey files.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2015	\$400K	\$400K

<b>PROJECT NO. 9</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
South Cypress Creek Stormwater Master Plan Memphis, TN  City of Memphis 125 N. Main Street Memphis, TN 38103  901-636-6762	CDM Smith is developing a Stormwater Master Plan for the City of Memphis for South Cypress Creek which is the largest basin-wide plan performed by the City to date. This project is part of the City's initiative to eventually model all of the major watersheds city-wide. The South Cypress Creek watershed is located south of downtown Memphis and drains approximately 15 square miles of the City. The primary drivers for the project include flooding concerns and numerous calls/complaints from citizens about on-going drainage issues. CDM Smith's scope of work for this project includes the collection and mapping of all stormwater infrastructure larger than 24 inches within the watershed, hydrologic/hydraulic modeling, public information/outreach and master plan development.	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
Ongoing	\$702k	\$535k

<b>PROJECT NO. 10</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
Tannehill Branch Creek Stormwater Improvements Austin, TX  City of Austin, TX 505 Barton Springs Road Austin, TX 78704  512-974-7065	CDM Smith is preparing a Preliminary Engineering Report (PER) including 30% conceptual schematic drawings for the retrofit of two existing impoundments to serve as regional Stormwater Control Measures. The project includes application of the EPA Stormwater Management Model (SWMM) to characterize the existing impoundments and associated tributary areas, and evaluate several alternatives. The PER includes an alternative evaluation matrix which compares alternatives for each pond assessing feasibility, implementation, performance, permitting, and code compliance. Life cycle cost estimates will be developed as well as estimates cost effectiveness of TSS removal over a 10 year model simulation period. The PER will recommend preferred alternatives for advancement to design and construction phase. Other services provided with this project include coordination of survey, geotech, environmental review and permitting, QA/QC, and CADD Drawing Support.	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
Ongoing	\$773k	\$523k

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

Parties:		Status/Result of Case:
Plaintiff:	Defendant:	
1. N/A		
2.		
3.		
4.		

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

CDM Smith's partnership with Jefferson Parish, over many years, has resulted in a multitude of drainage, water, and wastewater improvement projects for the citizens of the Parish. Our experience both with the Parish and in the region will provide a benefit as our strong local drainage and stormwater management team, bolstered by regional experts, understands the context of challenges and opportunities in Jefferson Parish. The availability of the staff we have selected for this project enables us to assign the appropriate number of fully qualified professionals who can commit to project activities. This approach will enable our team to support the Parish on an aggressive schedule, if needed. CDM Smith has sought to combine the best people in our industry, who possess the right combination of skills and experience, to work closely with LHJ and Jefferson Parish to continue providing the excellent service you have come to expect. Together with our technical expertise and knowledge of Jefferson Parish's assets and needs, we can continue to make Jefferson Parish the best it can be for all residents.

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

Signature:  Print Name: Patrick Victor

Title: Vice President Date: March 22, 2022

## TEC Professional Services Questionnaire

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

Jefferson Parish Government  
SOQ No. 22-014 Drainage Master Plan for the East Bank of Jefferson Parish  
Resolution No. 138896

### B. Firm Name & Address:

C. H. Fenstermaker & Associates, L.L.C.  
1100 Poydras Street, Suite 1550  
New Orleans, LA 70163



C. H. Fenstermaker & Associates, L.L.C.

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

Jeanne Arceneaux, M.S., P.E., CFM – Director, Engineer  
Office: (337) 314-053; Mobile: (337) 504-4344  
[jeanne@fenstermaker.com](mailto:jeanne@fenstermaker.com)

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

William Katzenmeyer, P.E.-Engineer II  
Office: (504) 210-0785; Mobile: (504) 919-6615  
[billk@fenstermaker.com](mailto:billk@fenstermaker.com)

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

<u>39</u> Administrative	<u>0</u> Estimators	<u>0</u> Specification Writers
<u>0</u> Architects (Licensed)	<u>0</u> Geologists	<u>0</u> Structural Engineers
<u>0</u> Chemical Engineers	<u>2</u> Geotechnical Engineers	<u>0</u> Graduate Engineers
<u>24</u> Civil Engineers	<u>0</u> Interior Designers	<u>21</u> Project Managers
<u>8</u> Construction Inspectors	<u>0</u> Landscape Architects	<u>7</u> Clerical
<u>10</u> Ecologists	<u>48</u> Land Surveyor (field crew)	<u>2</u> Grant/Funding Specialist
<u>0</u> Electrical Engineers	<u>0</u> Mechanical Engineers	<u>0</u> Sanitary Engineers
<u>24</u> Engineer Intern	<u>1</u> Environmental Engineers	<u>13</u> Land Surveyors
<u>13</u> Professional Land Surveyors	<u>4</u> CADD Technicians	<u>53</u> Other Survey Staff
		<u>31</u> Other Staff
		<b><u>300</u> TOTAL</b>

### 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 areas of responsibility (including administrative, technical, and financial) for each firm. Please attach additional pages if necessary.**

1. N/A

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):
		

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

11 plus additional staff available

## TEC Professional Services Questionnaire

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

### **PROFESSIONAL IN CHARGE OF PROJECT:**

**Name & Title:**

Jeanne Arceneaux Hornsby, M.S., P.E., CFM  
Director, Engineer

**Project Assignment:**

Director (Professional in Charge of Project)

**Name of Firm with which associated:**

C. H. Fenstermaker & Associates, L.L.C.

**Years' experience with this Firm:**

16

**Education: Degree(s)/Year/Specialization:**

B.S / 2005 / Civil Engineering  
M.S. / 2007 / Hydraulics and Environmental Engineering

**Active registration: Year first registered/discipline:**

2011 / Louisiana PE #0036717  
2019 / Certified Floodplain Manager No. US-19-10976

**Other experience and qualifications relevant to the proposed Project:**

Jeanne Arceneaux Hornsby is an Engineering Director at Fenstermaker with 16 years of numerical modeling, water resource engineering, planning, and project management experience and leads Fenstermaker's Water Resources Team. She has obtained her experience and expertise by working on projects of various sizes and complexity from regional HUC 4 models to detailed HUC 12 models. Within these systems she has completed numerous numerical modeling analyses on inland and coastal systems, floodplain mapping, FEMA Letter of Map Revisions (LOMR), stormwater planning, hydraulic design, environmental impact studies, field reconnaissance, hydrologic and hydraulic data collection, and flood mitigation projects. She is proficient in the suite of USACE HEC software, the Danish Hydraulic Institute's (DHI) MIKE suite, other modeling and mapping software such as **SWMM**, ArcGIS, EPA WASP, EcoLab, and Berkley Madonna. As a Certified Floodplain Manager, Ms. Hornsby assists many area communities in flood mitigation project funding through HMGP, CDBG, and other grant programs.

**Marais des Cannes Model Community Development Plan (Lafayette Parish, LA)** Marais des Cannes is a flood prone area located in Lafayette Parish along Coulee Ile des Cannes, a natural stream draining a 44.3 square mile watershed, the largest in parish. The project entailed changing the existing drainage patterns to provide for commercial development and a conservation area. As a sub to Mesehle & Associates, Fenstermaker provided hydrological modeling and planning services using **EPA's Storm Water Master Planning (SWMM)** model software. Ms. Hornsby served as the project manager.

**Louisiana Watershed Initiative Region 4 (De Soto, Sabine, Vernon, Rapides, Beauregard, Allen, Jefferson Davis, Calcasieu, and Cameron Parishes)** Ms. Hornsby is serving as the Lead Hydrologic & Hydraulic Engineer for the Louisiana Watershed Initiative Region 4, an unprecedented project that will manage the future flood risk in the State of Louisiana through watershed-based solutions. Ms. Hornsby is responsible for the oversight of all hydrologic and hydraulic tasks, data collection, model development, and engineering to successfully complete an interactive, usable, and manageable hydraulic and hydrologic Region 4, which encompasses De Soto, Sabine, Vernon, Rapides, Beauregard, Allen, Jefferson Davis, Calcasieu, and Cameron Parishes in the State of Louisiana. These models will consider the degree to which communities within a watershed are hydraulically and hydrologically connected, and will lead decisions regarding land use, policy, and infrastructure at the watershed level to effectively manage flood risk.

## TEC Professional Services Questionnaire

**Continued - Other experience and qualifications relevant to the proposed Project:** Jeanne Hornsby, M.S., P.E., CFM

**FEMA Cooperating Technical Partners Program (Lower Red Lake, Tensas Watershed, Upper Calcasieu watersheds, LA)**

Ms. Hornsby is leading the effort with Halff Associates Inc to provide services for Flood Risk Projects through FEMA's Cooperating Technical Partners program, including Phase 1 (Discovery) for Lower Red Lake, HUC#1114027; Phase 1 (Discovery) for Tensas Watershed, HUC#08050003; Phase 1 (Discovery) for Lower Calcasieu, HUC#08080203. Services include Community Assessments including telephone discussions and in person meetings with local officials to discuss local needs, community snapshot summaries and figures for each parish and incorporated area, and preparation of Discovery Coordinated Needs Management Strategy geospatial database.

**LCG 2020 Drainage Master Plan, Phase 1: Drainage Maintenance Program (Lafayette Parish, LA)** Fenstermaker has been contracted to develop proactive drainage maintenance program. The project includes completing an inventory of the City's drainage staffing levels, equipment, and funding requirements; holding workshops with Parish Staff from maintenance, public works, finance, and civil service to review process and procedures; developing crew, equipment, and contracting options to reduce Requests for Services from an 18-month backlog to four months; prioritizing proactive drainage maintenance for roadside ditches, subsurface drainage, and laterals to reduce service request response time; creating a Story Map for all drainage information in which this webpage will include informative information as well as the capability to track ongoing and future project status. Ms. Hornsby worked with the Parish to develop a maintenance plan and prioritization.

**Ile des Cannes Watershed Study (HUC 10) & Physical Map Revision (Lafayette Parish, LA)** Fenstermaker was contracted to develop a hydrologic and hydraulic numerical model and map the flood zones and floodways of the Ile de Cannes Watershed. Ms. Hornsby developed an unsteady HEC-RAS model, calibrated and validated the model using data collected from two different storm events, and then used the model to determine the 100-year flood extents. She also assisted in the preparation of the Letter of Map Revision (LOMR) submittal to FEMA which resulted in a Physical Map Revision (PMR) that impacted 11 Flood Insurance Rate Maps (FIRM) panels.

**Post Storm Services – March 2012 and August 2016 (Lafayette, Iberia, & Acadia Parishes, LA)** In 2012 and 2016, several parishes experienced historical rainfall and flooding. Ms. Hornsby was the City Engineer for Scott, Louisiana and was the lead project manager and technical lead for developing hydrologic and hydraulic one and two-dimensional HEC-HMS and HEC-RAS models using storm data to predict future flooding in areas having both unmapped and Zone X FEMA FIRM designations.

**Lafayette Parish FEMA Model Analysis and Review; FEMA Community Rating System (CRS) Management (Lafayette Parish, LA)** Fenstermaker has been working with the Lafayette Consolidated Government, as well as the Cities of Scott and Carencro, to finalize the Lafayette Parish FEMA flood maps. Ms. Hornsby assisted in the review of the preliminary FEMA flood maps and models, the completion of the field investigation and structure inventory, and the development of the FEMA appeals.

**Bayou Teche Watershed 2D Regional (HUC 8) Model (St. Martin Parish, LA)** Ms. Hornsby served as the project manager and lead numerical modeler for the creation of an Areas of Mitigation Interest (AOMI) dataset in collaboration with St. Martin Parish Government and FEMA Region 6. The AOMI dataset serves as a tool to support flood reduction opportunities and/or success stories.

**Calcasieu Parish Regional (HUC 8) Watershed Modeling & Planning (Calcasieu Parish, LA)** Ms. Hornsby is the lead client contact, project manager, and lead hydraulic modeler directly responsible for all aspects of the project including developing one- and two-dimensional watershed models (Using HEC-HMS and HEC-RAS), developing future planned conditions, developing floodplain and watershed management ordinances, evaluating mitigation projects utilizing the Deltares Dynamic Adaptive Pathways and Policies (DAPP) process, completing a detailed hydraulic inventory, updating their flood alert system, generating a drainage report card, and conducting all public and agency meetings

## TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
<b>Name &amp; Title:</b>
Stefan Bourgeois, P.E. Manager, Engineer
<b>Project Assignment:</b>
Engineer Manager
<b>Name of Firm with which associated:</b>
C. H. Fenstermaker & Associates, L.L.C.
<b>Years' experience with this Firm:</b>
11
<b>Education: Degree(s)/Year/Specialization:</b>
B.S / 2009 / Civil Engineering
<b>Active registration: Year first registered/discipline:</b>
2014 / Louisiana PE #0038623
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Stefan Bourgeois, P.E., is a Senior Engineer with over 12 years of professional experience in design, planning, municipal code development and review, construction engineering, and project management. He is the Office Manager for Fenstermaker's New Orleans office. In addition to Mr. Bourgeois' experience in municipal engineering and management, he has been the engineer of record for the design of various project types such as hydrologic and hydraulic modeling and analysis, sewer lift station design, wastewater treatment design, and structural design.</p> <p><b>City of Carencro Engineer, General Engineering Contract (Carencro, LA)</b> In 2013, Mayor Glenn Brasseaux formally selected and delegated Mr. Bourgeois as the official city engineer of the city. With a population of over 10,000, the City of Carencro is becoming one of the fastest growing communities in the state. During Mr. Bourgeois' tenure as city engineer, he was instrumental in working with both the city and parish to update the city's land use and flood plain ordinances to deal with the repetitive flooding history the city had incurred. Mr. Bourgeois collaborated with surrounding regions and Region 6 FEMA staff to establish better policy recommendations for the city's mayor and council for ordinance adoption. Mr. Bourgeois instituted a new development review policy due to the increase flux in both residential and commercial development along the I-49 corridor. This policy focused on the development of a comprehensive checklist for the review process of hydrologic and hydraulic analysis when submitted by various engineers of record representing these new developments. This process helped streamline consistency in analysis approach and held developments to a higher standard that what was accustomed to in the region regarding floodplain management, land use, and development ordinances. Upon completing his term as city engineer, Mr. Bourgeois became the assistant city engineer and continues to provide engineering services for development reviews and floodplain management for the city.</p> <p><b>Andre St. Drainage &amp; Utility Improvements (Carencro, LA)</b> Mr. Bourgeois served as the project engineer and directed all efforts related to the project such as design, survey, geotechnical coordination, ROW and servitude acquisitions, plans production, and utility coordination. This project consists of improving approximately 1,200' of drainage channel by lining it with concrete lining and articulated block mat. One major lift station was upgraded to allow for the channel improvements. The new lift station serves as Carencro's largest lift station, pumping up to 3.2 MGD for present day demand and 9.5 MGD for the 20-year planning period. The project consists of a 16" sewer force main and 21" sewer gravity main.</p>

## TEC Professional Services Questionnaire

**Continued - Other experience and qualifications relevant to the proposed Project: Stefan Bourgeois., P.E.**

**FEMA RR045 – Filmore South Group D (FRC) (New Orleans, LA)** Fenstermaker was contracted to provide professional engineering design and construction administration services for FEMA-eligible street reconstruction in the Filmore South neighborhood. Mr. Bourgeois is the engineer of record and project manager. The provided services include topographic and right-of-way surveys, roadway and drainage design, final design (construction documents), bid & award services, construction administration, construction close out, inspection, reporting, and verification. The design is following FEMA guidelines as well as the guidelines set forth by City of New Orleans Department of Public Works.

**FEMA RR021 - Central City Group A (New Orleans, LA)** The City of New Orleans Department of Public Works selected Fenstermaker to provide baseline and topographic survey, roadway and utility design, and construction administration for full street reconstruction in the Central City neighborhood. Replacement of waterlines were included on several streets and waterline designs were provided by the Sewerage and Water Board. Mr. Bourgeois is leading the project team in the construction administration phase.

**Apollo Road Extension Utilities (Scott, LA)** The City of Scott contracted Fenstermaker to prepare plans and specifications for the Apollo Road Extension Water and Sewer Project. The project included the design and layout of approximately 10,100 feet of water line. Mr. Bourgeois provided technical support to the design team throughout the design phase and provided QA/QC of the plans.

**East Pont Des Mouton, Phase II: Roadway Widening (Lafayette Parish, LA)** Fenstermaker led the design efforts of the roadway and storm drainage system, all construction and contract documents, and construction administration for this roadway project. This project entailed the widening of a two-lane, asphalt road into a five-lane, concrete road with a boulevard. Responsibilities also included managing the finances of the project such as resource allocation on work tasks and monthly billing. Mr. Bourgeois served as Project Engineer.

**East Pont Des Mouton, Phase I: Water and Sewer (Lafayette Parish, LA)** Mr. Bourgeois assisted with the design of the improvements to the sanitary sewer collection system (gravity and force main), the design of a new lift station, and improvements to the water distribution system, all construction and contract documents, production of construction plans, and construction administration for this roadway project. This sanitary sewer portion of this project entailed the design and installation of over 8,000 cumulative feet of 8", 15", 18", 21", and 24" gravity sewer lines, 1,500 feet of 10" force main, and a 2 MGD lift station. The project involved the installation of water and sewer mains while maintaining existing water and sewer service as well as continuous traffic on East Pont Des Mouton.



## TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
<b>Name &amp; Title:</b>
William Katzenmeyer, P.E., CFM Engineer II
<b>Project Assignment:</b>
Project Manager
<b>Name of Firm with which associated:</b>
C. H. Fenstermaker & Associates, L.L.C.
<b>Years' experience with this Firm:</b>
1
<b>Education: Degree(s)/Year/Specialization:</b>
B.S / 2008 / Civil Engineering
<b>Active registration: Year first registered/discipline:</b>
2011 / Louisiana PE #0036775 2021 / Certified Floodplain Manager No. US-21-11950
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Mr. Katzenmeyer is a Professional Engineer with over 13 years' experience working in South Louisiana and the New Orleans Metropolitan area. His areas of expertise include project management, design engineering, and FEMA PA disaster grant management. His design engineering experience includes roadway and drainage design, stormwater management including green infrastructure, hydrologic and hydraulic modeling, stormwater and sewer pumping stations, utility design, heavy construction, and site development.</p> <p><b>Calcasieu Parish Regional (HUC 8) Watershed Modeling &amp; Planning (Calcasieu Parish, LA)</b> Mr. Katzenmeyer has completed the preparation of 2-Dimensional HEC-RAS regional watershed existing model for Ward 1 of Calcasieu Parish, utilizing both HEC-HMS and HEC-RAS 2D Rain on Grid, building structure inventories, modeling logs, as well as mentorship and oversight of Engineer Interns assisting with model development, debugging and calibration. Mr. Katzenmeyer provided extensive technical investigations into leveraging cloud resources to achieve lower model runtimes, as well as authoring guidance documents to improve the stability and accuracy of 2-D RAS models, as well as providing technical assistance to multiple watershed modelers in achieving computationally efficient models and reducing runtimes.</p> <p><b>Blue Dome Operating LLC No Rise Analysis (Harrison County, TX):</b> Mr. Katzenmeyer provided technical oversight, management of engineering resources, and QA/QC of a no-rise analysis and report for Blue Dome Operating LLC in support of a development permit. This project leveraged publicly available data to provide a floodplain analysis in HEC-RAS to determine the development impact of a proposed drill pad site, as well as recommending site plan revisions to minimize floodplain impacts, resulting in a favorable review and successful permitting effort.</p> <p><b>Calcasieu Parish Residential Hazard Mitigation Grant Management (Calcasieu Parish, LA):</b> Mr. Katzenmeyer provided technical support in the preparation of Hazard Mitigation Grants for over 90 properties in Calcasieu Parish. Engineering and Floodplain Management support included data gathering from existing hydraulic model inventories and preparing Modeled Damages Benefit Cost Analyses (BCA) to support mitigation efforts, determination of Base Flood Elevations and QA/QC of data provided by homeowners Parish datasets and building documentation for submittal with grant applications. Additionally, a comprehensive analysis of Sea Level Rise and Subsidence using the 2017 CRPA Coastal Master Plan resulted</p>

## TEC Professional Services Questionnaire

**Continued - Other experience and qualifications relevant to the proposed Project:** William Katzenmeyer., P.E., CFM

in a set of design values adopted by the Parish to leverage FEMA's inclusion of Sea Level Rise in its BCA toolkit. These efforts resulted in a viable project that would not have been adequately supported solely using Historical Analysis methods, as well as addressing Sea Level Rise in the proposed lift heights for mitigation.

**Cuddihy Dr. & Woodvine Ave Drainage Improvements (Jefferson Parish, LA)** Mr. Katzenmeyer was the civil engineer responsible for engineering design and preparing of plans and specifications, bidding, and construction management. The project consisted of upgrading the subsurface drainage system along Cuddihy Dr. and a part of Woodvine Avenue and full reconstruction of roadway and drainage and utility infrastructure within the public right. Design plans were completed for both segments of the project, and Mr. Katzenmeyer oversaw construction of the Cuddihy Dr. segment of the project.

**17<sup>th</sup> Street Canal Widening Between Hoey's Canal and Airline Drive (Jefferson & Orleans Parishes LA)** Mr. Katzenmeyer was the engineer responsible for preparing civil plans and specifications for this project, as well as multidisciplinary efforts. The project consisted of the constructions of approximately 700LF of a ten-foot-high pile-supported concrete floodwall, 750 linear feet of a two-foot-high concrete retaining wall, pile-supported slope paving, removal of existing timber canal bottom and slope paving, reconstruction of concrete roadway, and performing other incidental construction. The goal of this state-funded project was to provide increased hydraulic capacity within the limits of the existing right of way and mitigation of future flooding hazards through the implementation of Jefferson Parish's Drainage Improvements Master Plan.

**Hoey's Canal Bypass – Phase II (Jefferson Parish, LA)** Mr. Katzenmeyer was the civil engineer responsible for preparing plans and specifications for this project. Phase II of the Hoey's Canal Bypass entailed the construction of approximately 450 feet of pile-supported, concrete-lined canal, including a 200-foot-long 31-foot by 10-foot-high pile-supported covered concrete box culvert. The goal of this State-funded project was to provide increased hydraulic capacity to the Airline Highway (Hwy 61) culvert crossing by providing a bypass canal between Hoey's Canal/Geisenheimer Canal and the 17<sup>th</sup> of way. The goal of the project was to mitigate frequent roadway flooding events which were being caused by long-term differential settlement of the subgrade materials and substandard drainage infrastructure.

**Hoey's Canal Improvements (Phases II & III) (Jefferson Parish, LA)** Mr. Katzenmeyer was responsible for preparing plans and specifications for Phases II and III. Phase II entailed the construction of approximately 1,800 feet of sheet pile lined pile-supported concrete flume with concrete side slopes from Deckbar Avenue to Lebarre Road. Phase II also included an in-line pile-supported culvert beneath a railroad spur. Phase III consisted of the construction of approximately 1,500 feet of sheet pile lined concrete flume with concrete side slopes from Labarre Road to Causeway Boulevard. The goal of this State-funded project was to provide increased hydraulic capacity within the limits of the existing right of way and to provide mitigation of future flood hazards through the implementation of Jefferson Parish's Drainage Improvements Master Plan.

**Audubon Park Drainage System Study (Orleans Parish, LA)** Mr. Katzenmeyer provided engineering, drafting and hydraulic design for this drainage system study. Exposition Boulevard, a concrete-paved pedestrian walkway along the eastern edge of Audubon Park, regularly floods during heavy rainfall events, rendering it unusable and generating ongoing complaints from adjacent residents and the occasional inundation of adjacent structures. This study identified and prioritized numerous discrete drainage improvements which could be constructed to mitigate the hazards to structures and inundation of pedestrian thruways caused by repetitive flooding events.

**Port of New Orleans Drainage Study (Orleans Parish, LA)** Mr. Katzenmeyer was the civil engineer responsible for the hydraulic evaluation of the existing drainage system along France Road south of I-10. He recommended drainage improvements to mitigate the flood hazard risk to adjacent rail tracks which were subject to repetitive flooding events at multiple locations throughout the project area.

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
Mark Dubroc, P.E. Engineer III
<b>Project Assignment:</b>
Technical Lead
<b>Name of Firm with which associated:</b>
C. H. Fenstermaker & Associates, L.L.C.
<b>Years' experience with this Firm:</b>
1
<b>Education: Degree(s)/Year/Specialization:</b>
B.S / 1980 / Civil Engineering
<b>Active registration: Year first registered/discipline:</b>
1987 / Civil Engineering / Louisiana PE #0022618
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Mr. Dubroc is a Senior Engineer with over 39 years of professional civil engineering experience. As Principal of Dubroc Engineering, Inc. for 23 years, Mr. Dubroc gained extensive experience in civil engineering consulting, with a wide variety of clients and projects including urban and rural roadway and drainage designs, highway bridge design, solid waste transfer facilities, site planning, residential land developments, municipal water and sewer collection systems, and various other civil and structural design projects. His extensive and deeply embedded participation in every aspect of design and construction administration of such a variety of similar projects uniquely qualify him to provide the general oversight and quality assurance necessary for the project at hand. Most recently, Mr. Dubroc served as Public Works Director of Lafayette Consolidated Government, where he managed 335 Public Works employees, with an operating budget of \$58M, an annual Capital Improvement Program of \$50M, and a 5-Year Capital Plan budget of \$250M, which included 375 projects. He managed the Capital Improvements Division, that included the Design &amp; Development Section, ROW Section, Project Control Section and the Estimates and Administration Section. He also managed the Operations Divisions, which included street, drainage and vehicle maintenance divisions, and the Traffic and Transportation Division responsible for traffic engineering, traffic maintenance (signs and markings), traffic signals maintenance transit operations, and parking.</p> <p><b>Apollo Rd at LA93 (Dulles Dr) Roundabout (Lafayette Parish, LA)</b> Fenstermaker was selected to provide engineering services to the City of Scott to extend Apollo Road to Dulles drive. This fourteen-million-dollar construction project included two miles of a four-lane boulevard and eight-foot sidewalks to accommodate both bicyclist and pedestrians. The new roadway intersected LA 90 and LA 93, which were designed for a bow-tie intersection and roundabout, respectively. Mr. Dubroc performed the quality assurance review for the project plans.</p> <p><b>Camellia Boulevard Extension – Phase III (Lafayette Parish, LA)</b> Mr. Dubroc served as the principal in charge and project manager for this \$16.8M project for the new construction of 1.1 miles of urban four lane median divided arterial roadway with subsurface drainage systems, including XP-SWMM 1D modelling and design analysis of multiple stormwater detention ponds serving the 300-acre watershed. He led the design team for all aspects of Preliminary and Final Plans and Specifications, and Construction Administration for this Lafayette Consolidated Government project.</p>

## TEC Professional Services Questionnaire

**Continued - Other experience and qualifications relevant to the proposed Project:** Mark Dubroc., P.E.

**Eraste Landry Road Widening (Multiple Phases) (Lafayette Parish, LA)** Mr. Dubroc served as project engineer and design engineer for this multiphase \$10.6M project for the widening of 1.8 miles of two-lane rural roadway to urban five lane arterial roadway with extensive subsurface drainage systems. He managed all design tasks for one phase of the project, and provided design engineering for drainage systems, geometric designs, structural design of box culverts and small bridge structures, and various other aspects of Topographic and Right of Way Surveys, Design Plans and Specifications, and Construction Administration.

**East University Avenue Extension (Lafayette Parish, LA)** Mr. Dubroc served as design engineer for this \$4.6 million project for the extension of 0.8 miles of urban four lane median-divided arterial roadway with extensive subsurface drainage systems. The project included a railroad underpass with drainage pump station, a fixed-span bridge over the Vermilion River, retaining walls for transverse grade differentials, a major intersection located in the local FAA airspace, and a section traversing a closed landfill (EPA, LA-DEQ). Mr. Dubroc provided design engineering for drainage systems, geometric designs, structural design of concrete retaining walls, bridge spans and girders, and various other aspects of Topographic and Right of Way Surveys and Maps, Preliminary Plans, Final Plans and Specifications, and Construction Administration for this City of Lafayette project.

**Verot School Rd. Urban Section (LA 339) Widening and H.005698 Drainage Outfalls (Lafayette Parish, LA)** Mr. Dubroc served as the Principal and Project Manager for this \$44.2 million project for the widening of 3.3 miles of rural 2-lane open ditch highway to urban 4-lane median-divided and 5-lane arterial roadway with extensive subsurface drainage systems, including major drainage improvements to 3 extensive subsurface drainage systems. Mr. Dubroc provided design engineering for drainage, geometric designs, structural design of culverts, Topographic and ROW Surveys and maps, and preliminary and final plans for this LADOTD project.

**Bluebird Drive Extension – Phase II (Lafayette Parish, LA)** Mr. Dubroc served as the Principal and Project Manager for this \$1.2 million project for the design and construction of 0.6 miles of urban four lane median divided collector roadway with subsurface drainage systems. Mr. Dubroc led the design team for Topographic and Right of Way Surveys and Maps, Preliminary and Final Plans and Specifications, and Construction Administration for this Lafayette Consolidated Government project. Quality assurance was an integral part of the design and administration of the work.

**Ascension Episcopal School (Youngsville, Louisiana)** Mr. Dubroc served as the Principal and Project Manager for this \$4 million site civil project, for the planning, design and construction of a \$24 million private high school. Mr. Dubroc led the design team for topographic surveys, platting, preliminary and final plans and specifications and construction administration for sewer and water utility systems, curb and gutter parking and roadways, and subsurface drainage systems. The drainage systems included multiple integrated detention basins modelled and designed with XP\_SWMM. Quality assurance was an integral part of the design and administration of the work.

**Cenac Commercial Park Phase 1 (Carenco, Louisiana)** Mr. Dubroc served as the Principal and Project Manager for this \$1 million site civil project, for the planning, design and construction of a 59-acre commercial subdivision. Dubroc led the design team for topographic and boundary surveys, platting, preliminary and final plans and specifications and construction administration for sewer and water utility systems, curb and gutter roadways, and subsurface drainage systems with detention facilities. The drainage system was modelled and designed with **XP\_SWMM**.

**Wills Drive Drainage Improvements (Lafayette, Louisiana)** Mr. Dubroc served as the principal in charge and project manager for the design of this \$1.5 million project for the improvement of a local urban drainage outfall serving a 285-acre watershed, including 2,036' of reinforced concrete pipe storm drainage ranging in size from 72" RCP to 84" RCP and associated catch basins and yard drains. **XP-SWMM** 1D modelling and design analysis were utilized for the entire drainage system and watershed. He led the design team for all aspects of Preliminary and Final Plans and Specifications, and Construction Administration for this Lafayette Consolidated Government project.



## TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
<b>Name &amp; Title:</b>
Ian Trahan, P.E. Engineer III
<b>Project Assignment:</b>
QA/QC
<b>Name of Firm with which associated:</b>
C. H. Fenstermaker & Associates, L.L.C.
<b>Years' experience with this Firm:</b>
1.5
<b>Education: Degree(s)/Year/Specialization:</b>
B.S / 1997 / Civil Engineering
<b>Active registration: Year first registered/discipline:</b>
2004 / Louisiana PE #0031410
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Ian B. Trahan, P.E. is a Senior Engineer that obtained his Bachelor of Science degree in Civil Engineering in 1997 (Magna Cum Laude). He obtained his Professional Engineering License in Illinois in 2002, and his Professional Engineering License in Louisiana in 2004. He brings twenty-four (24) years of engineering experience to Fenstermaker. Mr. Trahan has a diverse portfolio of engineering experience he has accumulated throughout his career. Prior to coming to Fenstermaker, Mr. Trahan was the Louisiana Department of Transportation and Development (DOTD) Program Manager for DOTD's participation in the Louisiana Watershed Initiative (LWI). Mr. Trahan oversaw the DOTD/LWI Statewide Modeling Program, as well as serving as a Project Manager for four of seven modeling teams across the entire State of Louisiana. He participated on various LWI Technical Advisory Groups, represented DOTD on the LWI Working Group, and represented DOTD on the LWI Technical Design and Quality (TDQ) Team. Mr. Trahan has worked in both private and government sectors of the engineering industry and brings a wealth of knowledge and practical experience to Fenstermaker.</p> <p><b>Calcasieu Parish Regional (HUC 8) Watershed Modeling &amp; Planning (Calcasieu Parish, LA)</b> The Parishwide Watershed Planning and Strategic Analysis Project is an effort of the Calcasieu Parish Police Jury to develop a Calcasieu Parish Watershed Master Plan (CPWMP). Fenstermaker is responsible for providing engineering, modeling, and planning services for the project. The generation of the CPWMP will be completed over a five-year contract term analyzing the eleven (11) watersheds located within Calcasieu Parish and the project began in May 2018. Mr. Trahan is serving as the project manager for this project.</p> <p><b>Louisiana Watershed Initiative Statewide Modeling Program</b> Mr. Trahan was the program manager overseeing and managing DOTD's statewide hydrologic and hydraulic (H&amp;H) modeling program for the LWI, which is an effort between several state agencies to coordinate efforts to develop a new approach to reduce flood risk throughout the state. He was also tasked with managing regional modeling consultant contracts and task orders associated with LWI/DOTD statewide hydrologic and hydraulic modeling program and associated topographic and bathymetric surveying. Defined project task order scope and objectives while predicted resources needed to reach objectives and manage those resources in an effective and efficient manner. He prepared budgets based on task order scope of work. He developed and managed detailed project schedules and associated Gantt charts in Microsoft Project. He provided LWI/DOTD statewide modeling updates on a consistent basis to the section head, immediate supervisor, regional steering committees, and stakeholders.</p>



## TEC Professional Services Questionnaire

### **Continued - Other experience and qualifications relevant to the proposed Project: Ian Trahan, P.E.**

Reviewed flood mitigation project applications received through the LWI. He participated as a member of the LWI Working Group representing DOTD, Technical Advisory Groups for Data and Modeling, and the Technical Design and Quality Team. He oversaw the regional modeling consultants and the regional steering committee coordination related to regional flooding issues and mitigation efforts. Mr. Trahan Provided technical based oversight to ensure that LWI flood mitigation projects do not create additional adverse flooding impacts in the watershed. He participated in LWI project development by reviewing plans and specifications as required to in LWI project development by reviewing plans and specifications ensure that projects comply with LWI program requirements and department policies.

**Ford Street Extension (Baton Rouge, LA)** Mr. Trahan was the Engineering Manager & Engineer of Record for Civil Design & Construction tasked with the drainage design for Ford Street Extension, a curb and gutter boulevard roadway from Howell Boulevard to Plank Road. His design responsibilities included development of the existing and proposed drainage maps, sub-surface storm sewer design, inlet spacing, and sizing the required structure to accommodate design flows of an existing lateral of Monte Sano Bayou.

**South Claiborne Avenue Realignment (New Orleans, LA)** Mr. Trahan was the Engineering Manager & Engineer of Record for Civil Design & Construction tasked with design of the realignment of South Claiborne Avenue for the Sewage and Water Board of New Orleans' Water Hammer Mitigation project. His responsibilities included all demolition, erosion control, roadway typical sections, roadway horizontal and vertical alignments, sidewalks and ADA ramps, grading, storm drainage, erosion control, pavement marking, roadway signing, and construction details.

**Pecue Lane/I-10 Interchange (Baton Rouge, LA)** Mr. Trahan collaborated with the design team to review the preliminary layout of horizontal and vertical alignments. He was the engineer in charge of creating roadway templates and corridors to utilize in Bentley Inroads Roadway Designer for the creation of a design surface and cross-sections. He also performed grading of the intersecting roadways and reviewed the drainage design.

**I-49 South at Verot School Road (Lafayette, LA)** Mr. Trahan was the engineer in charge of creating the Existing Drainage Map for the project.

**USACE Comite River Diversion Project (Baton Rouge, LA)** Mr. Trahan was the Engineer for the firm's sub role as Cost Engineer for the design phase. Mr. Trahan's responsibilities for the project included assistance in providing detailed Construction Cost estimates based on construction sequencing and detailed Cost Loaded Construction Schedules. Cost Estimates were completed in MCASES MII and Construction Schedules were done in Primavera P6.

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
Kazungu Maitaria, Ph.D. Subject Matter Expert
<b>Project Assignment:</b>
Subject Matter Expert
<b>Name of Firm with which associated:</b>
C. H. Fenstermaker & Associates, L.L.C.
<b>Years' experience with this Firm:</b>
1.5
<b>Education: Degree(s)/Year/Specialization:</b>
B.S. / 1990 / Civil Engineering M.S. / 1998 / Water Resources Engineering Ph.D. / 2009/ Hydrology
<b>Active registration: Year first registered/discipline:</b>
N/A
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Dr. Kazungu Maitaria, Ph.D. is a Subject Matter Expert at Fenstermaker with 18 years of experience. He has expert knowledge of a broad range of environmental issues including scientific programing, scientific assignments, and provision of scientific advice. His work experience includes a thorough understanding of the methods and procedures for conducting independent or collaborative scientific research and operation (including knowledge of research instruments, measurements, and data quality control procedures). From 2015 to 2020 he worked at the only U.S. National Water Center where they sought to understand and predict changes in climate, weather, oceans, and coasts. Dr. Maitaria's contributions in addressing these complicated and important interdisciplinary questions in hydrology, engineering and oceanography has inspired governmental and state agencies to consider applying an integrated coastal modeling system for accurate coastal zone flood forecasting. In Kenya, Dr. Maitaria was in academia as a senior lecturer of civil engineering, was a member of Kenya's Board of Engineers and served on Kenya's several national scientific advisory committees, groups, and panels, including being Kenya's lead expert in environment impact assessment matters. Dr. Maitaria possesses advanced knowledge and skills in configuring and deployment of hydrologic, hydraulic, hydrodynamic and watershed models (e.g., HEC-HMS, HEC-RAS, Deltares D-Flow FM, USGS MODFLOW, MATLAB™ and proficiency in numerical methods) for water resources applications. Dr. Maitaria is expertly skilled in scientific and technical aspects of surface and subsurface hydrology; is called upon for authoritative advice regarding its science, result interpretation, and updating the US highway design standards in tandem with the non-stationarity characteristics of climatology. Dr. Maitaria has co-authored many NOAA ATLAS 14. Additionally, Dr. Maitaria has presented numerous papers at international scientific meetings in the US, Europe, and Africa.</p> <p><b>Calcasieu Parish Regional (HUC 8) Watershed Modeling and Planning (Calcasieu Parish, LA)</b> Fenstermaker was contracted by Calcasieu Parish Police Jury (CPPJ) to update their existing models by migrating 1D models to coupled 1D/2D HEC-HMS and HEC-RAS models and expand the modeling domain to encompass all the watersheds within the Parish. The model domain includes four HUC 8 watersheds tiered to the HUC-12 level. As the Water Resources Specialist, Dr. Maitaria is assisting with all aspects of hydrodynamic modeling and providing independent technical reviews of all output deliverables.</p> <p><b>Louisiana Watershed Initiative, Region 4 (Calcasieu Parish, LA)</b> Fenstermaker is performing a strategic analysis for watershed planning in Calcasieu Parish. Mr. Maitaria is performing research associated with the Parish's Coastal Master Plan and creating models of the watershed.</p>

## TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
<b>Name &amp; Title:</b>
Mallory Rodrigue, M.S., P.E. Engineer II
<b>Project Assignment:</b>
Lead Modeler
<b>Name of Firm with which associated:</b>
C. H. Fenstermaker & Associates, L.L.C.
<b>Years' experience with this Firm:</b>
4
<b>Education: Degree(s)/Year/Specialization:</b>
B.S. / 2008 / Civil & Environmental Engineering M.S. / 2010 / Civil Engineering – Concentration in Hydraulic Engineering
<b>Active registration: Year first registered/discipline:</b>
2013 / Louisiana PE #0038168
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Mallory Rodrigue, M.S., P.E. is an Engineer II at Fenstermaker specializing in hydraulics and hydrology for the Water Resources Group of the Engineering Division. She has experience with project management, numerical modeling, drainage design, roadway design, civil site design, permitting, and the analysis of riverine, estuarine, and coastal systems. She has gathered field data, developed hydrologic, hydraulic, and ecologic numerical models, helped numerically analyze natural and man-made drainage systems, designed open-channel and sub-surface drainage features, designed aggregate roads and berms, provided flood-proofing and drainage design recommendations, and obtained permits from various agencies. Ms. Rodrigue studied river hydrodynamics, including the effects of relative sea level rise, channel modifications, and proposed freshwater diversions, while working on her master's degree. She is proficient in EPA SWMM, Berkeley Madonna, Fortran, HEC-RAS, HEC-GeoRAS, HEC-HMS, HEC-GeoHMS, ArcHydro, ArcGIS, HYDRWIN, and MicroStation (including InRoads &amp; AutoTURN). She has experience with drafting reports and journal articles, and she participates in the creation of proposals for various upcoming projects.</p> <p><b>Calcasieu Parish Regional (HUC 8) Watershed Modeling &amp; Planning (Calcasieu Parish, LA)</b> Mr. Katzenmeyer has completed the preparation of 2-Dimensional HEC-RAS regional watershed existing model for Ward 1 of Calcasieu Parish, utilizing both HEC-HMS and HEC-RAS 2D Rain on Grid, building structure inventories, modeling logs, model development, debugging and calibration.</p> <p><b>Marais des Cannes Community Development Model (Lafayette Parish, LA)</b> Ms. Rodrigue was responsible for estimating the retention and detention rates of proposed storage ponds for a development in Lafayette Parish near the City of Scott, LA. Ms. Rodrigue, along with the help of Dr. McCorquodale of UNO, developed an <b>EPA SWMM</b> model to simulate the inflow and runoff patterns occurring with and without the proposed storage ponds. Her model's outputs were used to estimate the removal efficiency of total suspended solids and a representative pollutant. Ms. Rodrigue was also responsible for creating the channel cross-sections for the connections to the storage ponds from the Coulee Ile des Cannes, as well as creating sections of the final report.</p>

## TEC Professional Services Questionnaire

**Continued - Other experience and qualifications relevant to the proposed Project:** Mallory Rodrigue, M.S., P.E.

**Bayou Boyle Detention Pond – Duplantis Design Group (Ascension Parish, LA)** Gonzales, LA has currently experiences nuisance flooding, road overtopping, and structural inundation, highlighting the need for drainage improvements. DDG was tasked with performing hydrodynamic model simulations to assess the effects of implementing a 42.5-acre detention pond along Bayou Boyle in the Gonzales area to improve drainage conditions in the region. Ms. Rodrigue was responsible for implementing the proposed pond and its auxiliary structures in an existing 2D HEC-RAS model. SA. She ran the existing and proposed conditions simulations, created analysis maps, and drafted the technical report for submittal to GSA.

**LA 22 Drainage Improvements - Duplantis Design Group (Ascension Parish, LA)** DDG was tasked with performing hydrodynamic model simulations to assess the effects of implementing the Laurel Ridge Levee Extension along with LA Highway 22 improvements to benefit conveyance in the region. The improvements include digging two channels under LA 22 and other excavation in the Acy area, as well as turning sections of LA 22 into bridges. Ms. Rodrigue was responsible for implementing these improvements in an existing HEC-RAS model, along with adding existing culverts along the Amite River Diversion Canal. She ran the existing and proposed conditions simulations, created analysis maps, and drafted the technical report for submittal to GSA.

**Derby Heights - Duplantis Design Group (DDG) (Lafayette, LA)** The Derby Heights Subdivision was inundated during and following the August 2016 Flood. A HEC-RAS model was developed by DDG to simulate proposed alternatives to reduce the potential flooding impact on the Subdivision, thereby preventing additional property damage. Ms. Rodrigue was responsible for implementing and modeling four new proposed project alternatives in the 1D model, including a floodwall, concrete-lined channel, and an additional outfall culvert. The results were compared to the existing conditions and will help inform LCG of the best path forward to prevent future flooding.

**Louisiana Water Initiative Assistance Duplantis Design Group (St. Tammany Parish, LA)** The LWI Application process requires the completion of their Hydraulics and Hydrology (H&H) Checklist for proposed drainage projects. DDG was tasked with assisting the Parish with completing the applications for several of their proposed projects. Mrs. Rodrigue assisted with the retrieval and compilation of data from previous numerical modeling reports for four proposed projects in St. Tammany Parish (Coquille, Goodbee, LaTice, and Venchy Drainage Studies). The compiled data were delivered to the Parish as a technical memo for review.

**France Road Drainage Study (New Orleans, LA)** France Road is an asphalt roadway that serves an industrial area along the Inner Harbor Navigational Canal in New Orleans, LA. The roadway itself had not been resurfaced since the 60's/70's, and therefore had several small-to-very large (> 9') potholes and other miscellaneous cracking throughout. Additionally, the roadside ditches held water for days to weeks at a time after rain events. Mrs. Rodrigue was tasked with investigating the drainage features of the roadway and making recommendations for potential improvements. She performed multiple site visits, collected and reviewed existing data and plans, and drafted a final report. Her recommendations included performing additional site investigations by geotechnical engineers, surveyors, and a diving crew (to identify the outfalls and assess their condition), replacing existing and missing drainage features (broken or missing catch basins and corroded or missing culverts), and resurfacing or replacing the roadway to accommodate the existing and future traffic loads. Her report was submitted to the Engineering Department and a road resurfacing and drainage project was undertaken in 2018.

**Baker Canal – Final Roadway Plans (East Baton Rouge Parish, LA)** Fenstermaker provided a feasibility study comparing the cost of bridge reconstruction or replacement, preliminary, and final engineering of all bridge and roadway improvements. Final plans included phased bridge replacement, drainage improvements, geometric improvements, diversion roads, pavement reconstruction, and hydrologic analysis of the existing and design drainage plans. As the Hydraulic Engineer, Mrs. Rodrigue used MicroStation with InRoads, HYDRWIN, and Excel to design the open-channel and sub-surface drainage features, including the erosion control measures. She also created the DOTD drainage report, which was approved, and helped create the drainage structures table and existing and proposed drainage maps using MicroStation and InRoads. During construction, Mrs. Rodrigue assisted with RFIs from the contractor



## TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
<b>Name &amp; Title:</b>
Murtada Mousa, M.S., EI Engineer Intern
<b>Project Assignment:</b>
Engineer Intern Modeler
<b>Name of Firm with which associated:</b>
C. H. Fenstermaker & Associates, L.L.C.
<b>Years' experience with this Firm:</b>
<1
<b>Education: Degree(s)/Year/Specialization:</b>
B.S. / 2016 / Civil & Environmental Engineering M.S. / 2019 / Engineering
<b>Active registration: Year first registered/discipline:</b>
2017 / Louisiana EI #0033412
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Murtada Mousa, E.I., is an engineer intern with nearly four years of professional experience in design, hydrological and hydraulic modeling, project management and construction. Mr. Mousa is currently pursuing a doctoral degree in civil engineering with a water resource/geotechnical engineering concentration at the University of New Orleans. Mr. Mousa has been involved in planning and designing various types of projects such as roadway and drainage design, coastal protection design, construction projects, and hydrological and hydraulic modeling and analysis.</p> <p><b>LA 23: Intersection Improvements at Gretna Blvd. (Jefferson Parish, LA)</b> This project included both surface drainage and subsurface drainage improvements. New catch basins were required to be installed to collect the runoffs from a new left turn lane. Mr. Bourgeois served as the project designer and coordinated all efforts related to design, survey, geotechnical coordination, right-of-way, and servitude acquisitions, plans production, and utility coordination.</p> <p><b>LA 3154: Right Turn Lane at Dock St. (Jefferson Parish, LA)</b> This project consisted of improving an intersection on LA 3154 at Dock St. While, numerous of catch basins will be converted to manholes, new catch basins will be installed to align with the new proposed curb line that is required for a new right turn lane. RPC storm drain will also be installed to convey flows from the newly installed catch basins to the newly converted manholes. Mr. Mousa was the main designer on this project through both the planning and design phases.</p> <p><b>I-10 Pipe Repairs near Metairie Rd (Orleans Parish, LA)</b> This project consisted of removing and replacing a damaged storm drain pipe and installing new catch basins to improve the efficiency of the drainage system. Mr. Mousa worked on the survey, preliminary design, specifications, and plans production of this project.</p> <p><b>The Hopewell North Pad No Rise Analysis (Harrison County, TX)</b> Mr. Mousa was the hydraulic modeler for this oil and gas project. Some of the project falls within the FEMA Floodplain Zone A. A detailed study for the project was created using FEMA-approved modeling software. The model was used to evaluate the flood risk associated with the proposed well pad.</p> <p><b>Louisiana Watershed Initiative–Whisky Chitto HUC8 (West-Central Louisiana)</b> Mr. Mousa is the main hydraulic modeler for HUC8. The project requires using The USACE Hydrologic Engineering Center's Hydrologic Modeling System (HEC-HMS) and the USACE HEC River Analysis System (HEC-RAS) to develop a hydraulic model that adheres to the guidance of the Louisiana Watershed Initiative Total Design Quality Team (TDQ).</p>



## TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
<b>Name &amp; Title:</b>
Coy LeBlanc, M.S. GIS Specialist II
<b>Project Assignment:</b>
GIS Lead
<b>Name of Firm with which associated:</b>
C. H. Fenstermaker & Associates, L.L.C.
<b>Years' experience with this Firm:</b>
9
<b>Education: Degree(s)/Year/Specialization:</b>
B.S. / 2016 / Environmental and Sustainable Resources, Wetlands M.S. / 2019 / Coastal Ecology and Advanced Technologies
<b>Active registration: Year first registered/discipline:</b>
N/A
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Coy LeBlanc is a GIS Specialist II in Fenstermaker's Engineering group. He performs Phase I Environmental Site Assessments for commercial and private development clients. Mr. LeBlanc is a recognized leader in the use of advanced UAV technology and collecting, analyzing, and visualizing GIS data. Mr. LeBlanc previously worked with Fenstermaker's Wetlands team and was responsible for Wetland Delineations, Wetland Characterization, Wetland Damage Assessment, Threatened and Endangered Species Surveys, Oyster Assessments and Wetland Permitting.</p> <p><b>Louisiana Watershed Initiative Region 4 (De Soto, Sabine, Vernon, Rapides, Beauregard, Allen, Jefferson Davis, Calcasieu, and Cameron Parishes)</b> Mr. Leblanc is serving as the Data Management and GIS Lead for the Louisiana Watershed Initiative Region 4, an unprecedented project that will manage the future flood risk in the State of Louisiana through watershed-based solutions. Mr. Leblanc is responsible for the management and oversight to source, collect, organize, and distribute data to successfully complete an interactive, usable, and manageable hydraulic and hydrologic Region 4, which encompasses De Soto, Sabine, Vernon, Rapides, Beauregard, Allen, Jefferson Davis, Calcasieu, and Cameron Parishes in the State of Louisiana. These models will consider the degree to which communities within a watershed are hydraulically and hydrologically connected, and will lead decisions regarding land use, policy, and infrastructure must now be coordinated, made, and implemented at the watershed level if flood risk is to be effectively managed.</p> <p><b>Retainer Contract for Environmental Permitting Services: LA 471: Dartigo Creek &amp; Creek Bridges (Grant Parish, LA)</b> Fenstermaker was required to conduct a routine wetland delineation for this project. Mr. Leblanc was the Project Manager responsible for field investigation, wetland mapping, and final reports.</p> <p><b>Sasol LCCP-Heavy Haul Road Engineering and Construction (LA378 &amp; LA379) (Calcasieu Parish, LA)</b> Mr. LeBlanc's responsibilities included wetland delineations, Threatened and Endangered Species Survey and assisting permit agent. Permits acquired include securing Railroad, State Highway, and Parish Road Crossing Permits.</p> <p><b>Lake Charles LNG Traffic Impact Analysis and Road Improvements including CE&amp;I LA384 &amp; LA385 (Calcasieu Parish, LA)</b> Mr. LeBlanc's responsibilities included wetland delineations, Threatened and Endangered Species Survey and assisting permit agent. Permits acquired include securing USACE Jurisdictional Determination and USACE Permits for jurisdictional wetland and water impacts.</p>

## TEC Professional Services Questionnaire

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

**Name & Title:**

Travis Bodin, MBA, PMP, PLS  
Vice President, Survey

**Project Assignment:**

Survey Lead

**Name of Firm with which associated:**

C. H. Fenstermaker & Associates, L.L.C.

**Years' experience with this Firm:**

17

**Education: Degree(s)/Year/Specialization:**

B.S. / 2004 / Industrial Technology  
MBA / 2021 / Business Administration

**Active registration: Year first registered/discipline:**

2011 / Louisiana PLS # 0005067

**Other experience and qualifications relevant to the proposed Project:**

Mr. Bodin is a Professional Land Surveyor at Fenstermaker. His main areas of responsibilities include preparing boundary survey plats, subdivision plats, topographic plats, roadway plans, right of way plats and survey field work. Mr. Bodin is experienced in the use of the newest versions of Microstation, owned by Bentley, Inc. and AutoCad, owned by Autodesk, Inc., Trimble Business Center, owned by Trimble. He is also responsible for directing survey crews for engineering and processing survey data.

**Calcasieu Parish Regional (HUC 8) Watershed Modeling and Planning (Calcasieu Parish, LA)** Fenstermaker provided surveying services within the project area in support of the modeling efforts for the project. The survey task consisted of the collection of roadside ditch inverts, cross drains, high and low cords on existing bridge decks, along with documentation of the existing conditions of the crossings. Mr. Bodin served as the survey director on this project, overseeing all survey tasks and ensuring all data is collected is in conformance with FEMA survey standards.

**Louisiana Watershed Initiative Region 4 (De Soto, Sabine, Vernon, Rapides, Beauregard, Allen, Jefferson Davis, Calcasieu, and Cameron Parishes)** Mr. Bodin is serving as the Lead Surveyor for the Louisiana Watershed Initiative Region 4, an unprecedented project that will manage the future flood risk in the State of Louisiana through watershed-based solutions. Mr. Bodin is responsible for all aspects of surveying, data collection, and management to successfully complete an interactive, usable, and manageable hydraulic and hydrologic Region 4, which encompasses De Soto, Sabine, Vernon, Rapides, Beauregard, Allen, Jefferson Davis, Calcasieu, and Cameron Parishes in the State of Louisiana. These models will consider the degree to which communities within a watershed are hydraulically and hydrologically connected, and will lead decisions regarding land use, policy, and infrastructure must now be coordinated, made, and implemented at the watershed level if flood risk is to be effectively managed.

**Post Storm Services – March 2012 and August 2016 (Iberia, Lafayette, & Acadia Parishes, LA)** Following the major flood events that occurred throughout South-Central Louisiana in 2012 and 2016, the City of Scott engaged Fenstermaker to provide mitigation alternatives for future events. The data collection phase of the project included surveying services such as collecting information on existing drainage culverts, high water marks left by the flood event, channel profiles, and roadbed elevations. Mr. Bodin was responsible for the survey effort for this project and oversaw the collection, processing, and delivery of the collected information.

## 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. 1

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Calcasieu Parish Regional (HUC 8) Watershed Modeling and Planning</p> <p>Calcasieu Parish, Louisiana</p> <p>Terry Frelot</p> <p>Calcasieu Parish Police Jury</p> <p>1015 Pithon Street, 4th Floor</p> <p>Lake Charles, LA 70601</p> <p>(337) 721-3700; Email: tfrelot@cppj.net</p>	<p>Fenstermaker updated the Parish's existing models by migrating 1D models to coupled 1D/2D HEC-HMS and HEC-RAS models and expanded the modeling domain to encompass all of the watersheds within the Parish. The model domain includes four HUC 8 watersheds tiered to the HUC-12 level. The goal of the project was to develop an adaptive plan that includes projects, programs, and policies that will be screened utilizing the Deltares Dynamic Adaptive Policy Pathways (DAPP) approach by analyzing various future conditions that account for relative sea level rise, future development, and increased storm intensities. This approach allows the Parish to make informed decisions on managing their watersheds.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
Ongoing – Est. 2022	\$11.7M	\$8.8M

### PROJECT NO. 2

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Marais des Cannes Floodplain Development Project</p> <p>Lafayette Parish, Louisiana</p> <p>Mike Hollier</p> <p>Lafayette Consolidated Government</p> <p>P.O. Box 4017-C</p> <p>Lafayette, LA 70506</p> <p>(337) 291-8016</p> <p><a href="mailto:mhollier@lafayettegov.net">mhollier@lafayettegov.net</a></p>	<p>Marais des Cannes is a Lafayette Parish Model Community Watershed Development (MCWD) Plan designed to protect against flooding while enhancing water quality and improving economic and ecologic growth. This 820-acre MCWD is located within the Coulee Ile des Cannes floodway and required fill to lift residential and commercial property above the Base Flood Elevation (BFE) and mitigation measures to show no-rise/no-impact to water levels. The mitigation measures (ponds, swales, etc.) were designed to improve water quality using constructed wetlands, vegetated filters, and settling ponds to remove suspended particles. Fenstermaker estimated flow capacity, excess stormwater capacity, cut quantities, and detention/retention rates of proposed ponds; designed a hydrological plan and open-channel cross-sections; developed hydraulic models to determine water level and discharge impacts, hydrologic models to determine stormwater capacities, and water quality models to determine removal efficiency of pollutants; drafted reports for drainage structure typologies, stormwater structures, and MCWD utility systems. An <b>EPA SWMM 5 model</b> was created to calculate the detention/retention rates of the ponds. Then, a <b>Fortran code</b> was developed to estimate the removal efficiency of Total Suspended Solids (TSS) and a representative pollutant. Below is a description of the inputs and assumptions that were made for each of the two models.</p>	

## TEC Professional Services Questionnaire

	<p><b>SWMM Model:</b> Cross sections from the Coulee Ile des Cannes HEC-RAS model was used to create the main channel. Discharges from the HEC-RAS model were also used to create the upstream boundary condition for the 2, 5, 10, 25, and 100-year design storms. The downstream boundary condition was set at the Normal depth. Precipitation records for the 2, 5, 10, 25, and 100-year design storms were obtained from the HEC-HMS model to create a time-series for the rain gauge. The project area was divided into six sub-catchments and the volumes from each were combined to create one representative pond within the corresponding sub-catchments.</p> <p><b>Fortran Code:</b> The water quality formulations were based on the mass balance concept. Discharge hydrographs from the SWMM output were used to create the flow conditions. Due to a lack of data in the project area, Total Suspended Solids (TSS) concentrations for tributaries of Lake Pontchartrain were used to create the initial runoff and Coulee Ile des Cannes concentrations. The model assumes that 50% of the suspended solids are settleable within 24 hours. The other major assumption is that the inflow to the ponds is diluted by an average of 1:4 on entry and as a result, the concentrations in the outflow are reduced accordingly.</p>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2014	\$89,763	\$89,763

<b>PROJECT NO. 3</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility</b>	
<p>IDIQ Contracts for Louisiana Watershed Initiative (LWI) Modeling Contract – Region No. 4, Task Order No. 1</p> <p>Parishes of DeSoto, Sabine, Vernon, Rapides, Beauregard, Allen, Calcasieu, Jefferson Davis, and Cameron</p> <p>William "Billy" Williamson Louisiana Department of Transportation and Development 1201 Capitol Access Road Baton Rouge, LA 70802 (225) 379-3023 billy.williamson@la.gov</p>	<p>Fenstermaker is contracted by LADOTD for this unprecedented project that will manage the future flood risk in the State of Louisiana through watershed-based solutions. Fenstermaker is overseeing all hydrologic and hydraulic tasks, data collection, model development, and engineering to successfully complete interactive, usable, and manageable hydraulic and hydrologic models. These models will consider the degree to which communities within a watershed are hydraulically and hydrologically connected, and will lead decisions regarding land use, policy, and how infrastructure must be coordinated, made, and implemented at the watershed level if flood risk is to be effectively managed. In addition to developing a modeling approach for each watershed, Fenstermaker is coordinating with local government officials and stakeholders, performing a data gap analysis, and providing survey services including verifying existing data and ensuring it meets FEMA standards as well as obtaining new data. Scalable HEC-HMS hydrologic and coupled 1D-2D HEC-RAS hydraulic models are being developed, which can be modified to support future needs of the State.</p>	
<b>Completion Date (Actual or estimated)</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
Ongoing	\$499,000	\$316,193

## TEC Professional Services Questionnaire

### PROJECT NO. 4

PROJECT NO. 4		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Lafayette Consolidated Government (LCG) 2020 Drainage Master Plan — Phase 1: Drainage Maintenance Program Lafayette Parish, Louisiana  Jessica Cornay, P.E. Lafayette Consolidated Government 1515 E University Avenue Lafayette, LA 70501 (337) 291-7015	Fenstermaker has had a standing drainage consulting contract with the Lafayette Consolidated Government since 2007, performing services such as FEMA model reviews, grant applications, model updates, post storm event services, and public outreach. As with many South Louisiana Parishes, drainage has been a major priority of the current administration. Fenstermaker was contracted to assist the Parish in developing a Parish-wide Drainage Master Plan. The goals of this plan focused on maintenance activities, as well as drainage project prioritization, and public communications.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2020	\$180,000	\$180,000

### PROJECT NO. 5

PROJECT NO. 5		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Hazard Grant Mitigation Services to the City of Carencro – Drainage Projects  City of Carencro, Lafayette Parish, LA PO Drawer 10 210 East St. Peter Street Carencro, LA 70520  Don Chauvin, City Manager (337) 896-8481 citymanager@carencro.org	In March 2012, the City of Carencro received a 500-year flood event. Many of the City's wastewater, stormwater, and roadway infrastructure were severely damaged or destroyed. Fenstermaker was hired by the City to survey and map high water marks throughout the City and quantify the amount of inundation and damage to the City's infrastructure. Fenstermaker led a nearly four-year collaboration with FEMA and GOHSEP to identify improvement projects that will repair and protect the City's infrastructure from the 500-year storm event. Fenstermaker secured federal funding from FEMA's Hazard Mitigation Grant Program (HMGP) because of this event. <b>RICHARD ST. DRAINAGE IMPROVEMENTS FEMA No. 0216</b> - Design of concrete drainage structures and bank reinforcement Project armored an existing channel to mitigate erosion; and <b>ANDRE STREET DRAINAGE IMPROVEMENTS FEMA No. 0089</b> - Completed design, bid and contract, construction, and inspection of channel improvements and structure replacement. This project included the installation of a conspan structure. A no rise analysis was completed on these improvements.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2020	\$1,100,000	\$1,020,000



## TEC Professional Services Questionnaire

PROJECT NO. 6		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
City of Scott Drainage Improvement Plan  Scott, Louisiana  Mayor Jan-Scott Richard 125 Lions Club Road Scott, LA 70583 (337) 233-1130 <a href="mailto:jrichard@cityofscott.org">jrichard@cityofscott.org</a>	The City of Scott has two of the largest drainage systems in the Vermilion Watershed, traversing through its corporate limits including Ile des Cannes and Coulee Mine. Fenstermaker was contracted by the City of Scott to develop a Drainage Improvement Plan. This included the field assessment and prioritization plan to address the routine maintenance of all ditches, subsurface drainage, and laterals. A town hall meeting was held to address public concerns with drainage as well as inform them on programs, policies, and projects. Fenstermaker analyzed and developed a capital improvement plan for regional detention and channel improvement projects, as well as identified funding sources for such projects.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2020	\$101,290	\$101,290

PROJECT NO. 7		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Ile des Cannes Watershed Study (HUC 10) and Physical Map Revision  Scott, Louisiana  Mayor Jan-Scott Richard 125 Lions Club Road Scott, LA 70583 (337) 233-1130 <a href="mailto:jrichard@cityofscott.org">jrichard@cityofscott.org</a>	Including 39 miles of channels, passing through three parishes, and covering 33,500 acres, the Ile des Cannes is the largest watershed draining into the Vermilion River. Fenstermaker was contracted through a joint endeavor between the City of Scott and the Lafayette Consolidated Government (LCG) to develop a hydrologic and hydraulic numerical model to map the FEMA Flood Hazard Areas of the Watershed. Fenstermaker setup an unsteady HEC-RAS model, calibrated and validated it using data collected from two separate storm events, and used the model to determine the 100-year flood extents. This model was used to assess various channel improvement projects along the laterals including channel widening, channel dredging, and regional detention facilities. The final channel section was increased from a 6 ft to a 20 ft bottom width, 2:1 side slope, and 75 ft top width. Upon final design and construction, a letter of Map Revision was submitting to FEMA, changing 11 Flood Insurance Rate Map (FIRM) panels and the Flood Insurance Study (FIS). This project removed approximately 3,400 acres from the FEMA floodplain and approximately 1,175 structures. The project also showed base flood reductions as much as 3.5 feet.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2018	\$187,000	\$187,000



## TEC Professional Services Questionnaire

### PROJECT NO. 8

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>Post Storm – March and August 2012; August 2016 Flood Services</p> <p>Acadia, Lafayette and Iberia Parishes, Louisiana</p> <p>Acadia Parish Tax Assessor, 500 Court Circle, Crowley, LA 70527, (337) 788-8871, <a href="mailto:acadiaassessor@gmail.com">acadiaassessor@gmail.com</a></p> <p>City of Scott, P.O. Box 517 Scott, LA, 70583, (337) 233-1130, <a href="mailto:jrichard@cityofscott.org">jrichard@cityofscott.org</a></p> <p>Lafayette Consolidated Government, 1515 E. University Avenue, Lafayette, LA 70501, (337) 291-8553, <a href="mailto:jcornay@lafayettela.gov">jcornay@lafayettela.gov</a></p> <p>City of Carencro, 210 East St. Peter Str. Carencro, LA 70520, (337) 896-8481, <a href="mailto:mayor@carencro.org">mayor@carencro.org</a></p>	<p>Fenstermaker assisted several cities and parishes in their 2012 and 2016 storm recovery efforts. In March 2012 the City of Carencro received over 14" of rain amounting to a 500 yr. flood event. Fenstermaker assisted the City by surveying and mapping high water marks, quantifying infrastructure damage, and leading to a nearly 4-year collaboration with FEMA and GOHSEP to identify improvement projects. In 2016, Fenstermaker provided post-storm data collection of high-water marks for Acadia Parish, the City of Scott, Lafayette Parish, Iberia Parish, and the City of Carencro. High water marks and flooded homes were mapped using ESRI products and internal mapping tools. Drone technology was used to capture flood extents utilized for model calibration and flood mapping. Additionally, Fenstermaker completed post storm documentation and applied for and received over \$20 million in post storm funding.</p> <p><b>Owner's contact information (cont'd):</b>  Iberia Parish Government, 300 Iberia Street, Suite 400 New Iberia, LA 70560, (337) 365-8246, <a href="mailto:mlarryrichard@iberiagov.net">mlarryrichard@iberiagov.net</a></p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2016	\$2,068,000	\$2,068,000

### PROJECT NO. 9

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p>FEMA Model Analysis and Review; FEMA Community Rating System (CRS) Management</p> <p>Lafayette Parish, Louisiana</p> <p>Jessica S. Cornay, P.E., CFM Lafayette Consolidated Government 1515 E University Avenue Lafayette, LA 70501 (337) 291-8553, <a href="mailto:jcornay@lafayettela.gov">jcornay@lafayettela.gov</a></p>	<p>Fenstermaker assessed the Preliminary Flood Insurance Rate Maps (FIRMs) and numerical models provided by FEMA for Lafayette Consolidated Government. Fenstermaker worked with LCG and the Cities of Carencro, Scott, and Youngsville to finalize the Parish FEMA flood maps, reviewed Effective and Preliminary FEMA models and maps, performed field investigations and structure inventories, documented High Water Marks (HWM), collected topographic and bathymetric survey data, developed refined HEC GeoHMS/HEC-RAS hydrologic and hydraulic models to predict water levels and flood zones during specified storm events, and created maps showing hazard areas. Fenstermaker met FEMA's modeling and mapping standards and worked with FEMA to publish the models and maps.</p>	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
Ongoing	\$391,000	\$380,000

## TEC Professional Services Questionnaire

<b>PROJECT NO. 10</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p>Bayou Teche Watershed 2D Regional Model – Areas of Mitigation Interest</p> <p>St. Martin Parish</p> <p>Christopher N. Sims U.S. Army Corps of Engineers 1110 S. River Road, Suite 200, Baton Rouge, LA 70802 <a href="mailto:Christopher.N.Sims@usace.army.mil">Christopher.N.Sims@usace.army.mil</a></p>	<p>Fenstermaker was contracted by The Water Institute of the Gulf to assist with the creation of an Areas of Mitigation Interest (AOMI) dataset in collaboration with St. Martin Parish Government (SMPG) and Federal Emergency Management Agency Region 6 (FEMA R6) for the Louisiana Silver Jackets Team, headed by the USACE – New Orleans District. The AOMI dataset is a tool used to support ongoing conversations about flood risk reduction opportunities and/or success stories. This dataset allows local stakeholders to provide information about local mitigation successes, integrates available data relevant to mitigation, and adds key mitigation related findings from this modeling study. The results help local stakeholders gain a more holistic picture of flood risk related issues that may impact the communities, as well as allowing stakeholders to take a more systematic approach to addressing their community's overall flood risk. The AOMI dataset contains attributed point features that can be stored in the Flood Risk Database (FRD) to represent items that warrant flood risk mitigation attention. Fenstermaker coupled a published HUC 8 2D HEC-RAS Base Level Elevation (BLE) model along with a Fenstermaker developed 1D HEC-RAS model of the Lower Bayou Teche to establish base conditions. Fenstermaker then utilized this model to analyze 10 AOMI projects to determine if they should be evaluated a more detailed level. These projects included projects such as river diversions, levee systems, regional detention, and looking at the addition, removal, and changes in operations of flood control structures in the watershed. In addition, Fenstermaker lead the agency coordination between all government agencies. A detailed report documenting the model setup, analysis, assumptions, and project results was generated. This technical analysis and feasibility report are currently being utilized to submit projects for funding through the Louisiana Watershed Initiative.</p>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2019	\$100,000	\$20,000

**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:	

N/A

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



Fenstermaker is a Louisiana-based consulting firm providing multidisciplinary services specializing in civil engineering, surveying and environmental services, with offices in New Orleans, Mandeville, Baton Rouge, Lafayette, Lake Charles, and Shreveport.

**The Fenstermaker Advantage:**

- Stormwater Modeling and Master Planning Expertise
- Hydrologic & Hydraulic Studies
- Commitment to Quality
- 72 Year Family-Run, Louisiana-based Firm
- Available Staff in New Orleans, Mandeville, Baton Rouge and Lafayette

Fenstermaker maintains a diverse client base consisting of municipalities, state government, large, medium, and small companies in a variety of industries. Fenstermaker's highly qualified professional staff is supported by a technologically robust management system and continuity of operations, as most senior staff members have been with the firm for decades. **Fenstermaker is well equipped to assist Linfield, Hunter & Junius, Inc. with Jefferson Parish's Drainage Master Plans for the East and West Banks. Fenstermaker will be providing stormwater modeling, hydrologic and hydraulic engineering, and stormwater master planning. Fenstermaker has 24 numerical modelers who have the routine task of performing both hydrologic and hydraulic numerical modeling using a**

**variety of software including but not limited to the U.S. Army Corps of Engineers HEC software, EPA's SWMM and WASP software, Bentley Civil Storm, HydroCAD, LADOTD Hydraulics tools (HYDRWIN), ArcGIS, EcoLab, Berkley Madonna, the Danish Hydraulic Institute's software (MIKE 11, MIKE 21, MIKE FLOOD), Deltares, and other privately-owned software (H3D, etc.). Fenstermaker stands behind our qualifications, the capabilities of our personnel, and the integrity of our work.**

Fenstermaker has a long-standing involvement and extensive experience in stormwater master planning, hydraulic and hydrologic modeling, floodplain and watershed management, drainage engineering and planning. Fenstermaker prides themselves on being client focused and technology driven with a focus on improving current conditions and developing sustainable and resilient long-term solutions. Over the past 20 years, Fenstermaker has been retained by various **federal, state, and local agencies and private companies to develop one, two, and three dimensional steady and unsteady numerical hydraulic models.** These models have been used on various projects ranging from coastal engineering projects aimed at managing water levels and the control of saltwater intrusion into marsh environments to developing both regional to local flood inundation models that are still being used today to manage floodplains and evaluate watersheds throughout the State of Louisiana. Fenstermaker has been involved in the **development of many of the key models that our state uses for decision making purposes;** such as the Mississippi River Hydro Model that has been used for assessing sediment diversions along the River, the Southwest Coastal Model of the Chenier Plain, the intercompartmental model developed as part of the State's Coastal Master Plan, as well as many of the local HEC-RAS floodplain models certified by FEMA and used by local governments for floodplain management and project analyses. Fenstermaker has proven modeling experience and expertise in both inland and coastal areas.

Since the floods of March and August 2016 Fenstermaker has become **directly involved in representing many parishes within the local planning organizations with the primary mission being to focus more on objective decision-making, using engineering and science to better manage stormwater, regionally and at a watershed level.** Fenstermaker continues to be long-time advocates in the belief that although project implementation and continued development is important to the vitality of communities, it cannot continue to proceed without having better tools in place to understand the importance of watershed interconnectivity and the impacts these actions may have on other jurisdictions

Fenstermaker's staff of highly qualified professionals can provide Jefferson Parish with the necessary knowledge and experience required to assist **Linfield, Hunter & Junius, Inc.** with this contract. With 71 years of engineering, surveying, and environmental experience in south Louisiana, Fenstermaker maintains a unique understanding of these types of projects and their relation to the Parish's current and future infrastructure needs.

**1) Professional training and experience in relation to the type of work required for the engineering services:**

Fenstermaker has a dedicated team that specializes in stormwater modeling and master planning, hydrologic and hydraulic studies. The key personnel that will work on this project have extensive experience in the required services.



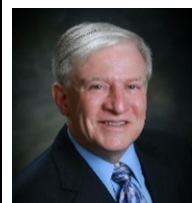
**Jeanne Arceneaux Hornsby, M.S., P.E., CFM** has 16 years of numerical modeling, water resource engineering, planning, and project management experience and leads Fenstermaker's Water Resources Team. Her experience includes projects of various sizes and complexity from regional HUC 4 models to detailed HUC 12 models. Within these systems she has completed numerous numerical modeling analyses on inland and coastal systems, floodplain mapping, FEMA Letter of Map Revisions (LOMR), stormwater planning, hydraulic design, environmental impact studies, field reconnaissance, hydrologic and hydraulic data collection, and flood mitigation projects. As a Certified Floodplain Manager, Ms. Hornsby assists many area communities in flood mitigation project funding through HMGP, CDBG, and other grant programs.



**Stefan Bourgeois, P.E.** is the New Orleans Office Manager and has 12 years of experience in design, planning, municipal code development and review, construction engineering, and project management. During Mr. Bourgeois' tenure as City Engineer of Carencro, he was instrumental in working with the city and parish to update land use and flood plain ordinances to deal with the repetitive flooding history the city has incurred. Mr. Bourgeois collaborated with surrounding regions and Region 6 FEMA staff to establish better policy recommendations for the city's mayor and council for ordinance adoption.



**William "Bill" Katzenmeyer, P.E.** has over 13 years' experience working in South Louisiana and the New Orleans Metropolitan area. His expertise includes FEMA PA disaster grant management experience, drainage design, stormwater management including green infrastructure, hydrologic and hydraulic modeling, and stormwater and sewer pumping stations.



**Mark Dubroc, P.E.** has over 39 years of experience. He was the former Public Works Director for Lafayette Consolidated Government, has extensive drainage design experience with SWMM as well as experience performing development reviews which included SWMM calculations.

**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:**

Our New Orleans office, with staff from our Mandeville, Baton Rouge and Lafayette offices, is available to complete this project. Fenstermaker will make available any of its qualified and knowledgeable staff to complete the project on time and to Parish requirements. The Team is available and fully capable of performing the requirements for this contract on time and within budget. Fenstermaker has a long history of successful project management and understands the importance of timely project completion and cost control on municipal projects. Our project managers and engineers perform quality work in a timely and professional manner. Fenstermaker's project managers meet weekly to review project status and review project budgets monthly. Fenstermaker possesses the engineering expertise and availability required to successfully assist with this project.

**3) Location of the principal office where work will be performed:**

Fenstermaker's fundamental strength relies on a highly qualified professional staff supported by a technologically robust management system. Most senior staff members have been with the firm for several decades. Fenstermaker has maintained a permanent New Orleans office since 1986 and has strengthened the management structure in New Orleans. **This project will be managed through Fenstermaker's New Orleans office at 1100 Poydras Street.**

**4) Adversarial legal proceedings between the Parish and the person or firm performing professional services, in which the Parish prevailed or any ongoing adversarial legal proceedings between the Parish and the person or firm performing professional services, excluding those instances or cases where the person or firm was added as an indispensable party, or where the person or firm participated in or assisted the public entity in prosecution of its claim:**

Fenstermaker has never been engaged in any legal proceedings with Jefferson Parish.

**5) Prior successful completion of projects of the type and nature of the engineering services, as defined, for which firm has provided verifiable references:**

Fenstermaker has experience on a multitude of public contracts at the state, local, and federal levels. The best measure of quality of work performed by Fenstermaker is observed in the number of repeat clients over the past seven decades. Over the past 20 years Fenstermaker has grown from 60 employees to nearly 300 personnel. Below is a list of client references:

Calcasieu Parish Police Jury  
1015 Pithon Street, 4<sup>th</sup> Floor, Lake Charles, LA 70601  
POC: Terry Frelot (337) 721-3700

Louisiana Department of Transportation and  
Development  
1201 Capitol Access Road, Baton Rouge, LA 70802  
POC: William "Billy" Williamson (225) 379-3023

City of Carencro  
210 E. St. Peter St., Carencro, LA 70520  
POC: Mayor Glenn L. Brasseaux (337) 896-8481

Lafayette Consolidated Government  
P.O. Box 4017-C, Lafayette, LA 70506  
POC: Mike Hollier (337) 291-8016  
POC: Jessica Cornay, P.E. (337) 291-7015

City of Scott  
125 Lions Club Road, Scott, LA 70583  
POC: Jan-Scott Richard (337) 233-1130

**6) Size of firm considering the number of professional and support personnel required to perform the type of engineering tasks:**

Across our six south Louisiana offices (New Orleans, Mandeville, Lafayette, Baton Rouge, Lake Charles and Jennings) we currently have 26 licensed Professional Engineers on staff supported by a strong team of 24 licensed Engineering Interns (E.I.) and Subject Matter Experts. Fenstermaker focuses on improving current conditions and developing new infrastructure to provide innovative, long-term solutions for over 35 years.

**7) Past Performance by person or firm on Parish projects:**

Fenstermaker has over 71 years of experience in South Louisiana and has performed services on projects for local governments for over 35 years, including engineering design, permitting, and agency coordination. We have provided services to the following public sector clients:



- City of New Orleans
- New Orleans Regional Planning Commission
- Ascension Parish Government
- Plaquemines Parish Government
- Plaquemines Parish School Board
- Southeast Louisiana Flood Protection Authority-East
- Orleans Levee District
- City of Gonzales
- City of Covington
- City of Baton Rouge and Parish of East Baton Rouge
- City of Denham Springs
- US Army Corps of Engineers

- Calcasieu Parish Police Jury
- Cameron Parish Police Jury
- Louisiana Department of Transportation
- City of Lake Charles
- Lafayette Consolidated Government
- City of Carencro
- City of Scott
- City of Youngsville
- Iberia Parish
- Acadiana Planning Commission
- Acadia Parish Tax Assessor
- St. Martin Parish

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

**Signature:** Angelle Guilbeau **Print Name:** Angelle Guilbeau

**Title:** Director of Risk Management and Compliance **Date:** March 31, 2022

## TEC Professional Services Questionnaire

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

**Professional Engineering & Supplemental Services for a Drainage Master Plan for the  
East Bank of Jefferson Parish Resolution No 138896**

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



3925 N. I-10 Service Road W., Suite 109R  
Metairie, LA 70002

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

**Avinash Mehta, PE**

**Principal-In-Charge**

3925 N. I-10 Service Road W., Suite 109R  
Metairie, LA 70002  
Office 504-799-3653  
amehta@pivotaleng.com

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

**Avinash Mehta, PE**

**Principal-In-Charge**

3925 N. I-10 Service Road W., Suite 109R  
Metairie, LA 70002  
Office 504-799-3653  
amehta@pivotaleng.com

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

<u>2</u> Administrative	<u>2</u> Estimators	<u>  </u> Specification Writers
<u>1</u> Architects (Licensed)	<u>  </u> Geologists	<u>1</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>1</u> Project Managers
<u>8</u> Construction Inspectors	<u>  </u> Landscape Architects	<u>1</u> Clerical
<u>  </u> Ecologists	<u>  </u> Land Surveyor	<u>  </u> Grant/Funding Specialist
<u>2</u> Electrical Engineers	<u>1</u> Mechanical Engineers	<u>  </u> Sanitary Engineers
<u>3</u> Engineer Intern	<u>2</u> Environmental Engineers	
<u>  </u> Professional Land Surveyors		<b><u>29</u> TOTAL</b>

**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 areas of responsibility (including administrative, technical, and financial) for each firm. Please attach additional pages if necessary.**

1. N/A

**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):
N/A		

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

## TEC Professional Services Questionnaire

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

### **PROFESSIONAL IN CHARGE OF PROJECT:**

**Name & Title:**

**Avinash Mehta, PE; President**

**Project Assignment:**

**Principal-In-Charge**

**Name of Firm with which associated:**

The logo for Pivotal Engineering features the word "pivotal" in a large, lowercase, sans-serif font, with "engineering" in a smaller, lowercase, sans-serif font directly below it. The text is white and set against a dark blue rectangular background.

**Years' experience with this Firm:**

8

**Education: Degree(s)/Year/Specialization:**

**M.S. Civil Engineering, University of Central Florida, 2003**

**B.S. Civil Engineering, NMU – India, 2000**

**Active registration: Year first registered/discipline:**

**Louisiana PE #35100 Civil**

**Other experience and qualifications relevant to the proposed Project:**

Mr. Mehta serves as the Principal of Pivotal Engineering. Mr. Mehta has over 16 years of experience managing Civil and Environmental Engineering projects including project budget, schedule and scope, coordination of resources, business development and client liaison activities. His experience includes the street design, pocket park improvements, roadway enhancements, drainage studies, process and design, water and wastewater master planning, drainage design permitting, wastewater system design, potable water system design and conceptual planning and design for coastal restoration projects.

#### **Experience includes:**

#### **Clearview & Airline Intersection Improvements**

Mr. Mehta serves as the principal-in-charge for this project. Pivotal was retained to assist in the Clearview-Airline Intersection Improvements project. The scope of the project includes the following: widening of the median along Airline Drive to provide for triple left turn lanes, modifying the intersection of Airline Drive and Central Avenue, relocating and replacing the 20' transit water line, modifying the existing traffic signal system along Airline Drive at the intersection of Clearview Parkway and Central Avenue, and extending Rosedale to tie into Airline Drive.

#### **Cousins Blvd Extension**

Mr. Mehta serves as the principal-in-charge for this project. Pivotal was retained by Jefferson Parish to complete the Louisiana Department of Natural Resources Revolving Loan Fund Application for the Extension

## **TEC Professional Services Questionnaire**

of Cousins Boulevard (Woodmere Boulevard to Lapalco Boulevard) project.

### **Design & Drainage Improvements at Labarre Rd. Railroad Crossing**

Mr. Mehta serves as the principal-in-charge for this project. Pivotal Engineering was retained by Jefferson Parish to provide preliminary and final design phase services for design and construction plan preparation of the Labarre Road Railroad Crossing Drainage Improvement. The major scope of the improvement included: The construction of a box at the south west corner of Labarre and the Norfolk railroad; construction of a box at the south east corner of Labarre and the Norfolk railroad; replacement of sidewalk access across the ditch adjacent to the tracks; and provide handicap ramps across the street from the crossing, due to the tight right of way at the corner. The designer makes sure that the handicap ramp was built within Parish right of way.

### **Pritchard Road Extension**

Mr. Mehta serves as the principal-in-charge for this project. Pivotal Engineering is retained by Jefferson Parish to design roadway reconstruction and extension of Pritchard Road. The project scope includes the following:

- Removal and replacement of existing 20 ft wide concrete roadway with 26 ft wide roadway and extend 130 ft to connect Pritchard Road to Sprig Street.
- Removal and replacement of existing drainage piping. The design of drainage pipe networks is completed for a 10 years storm period using LADOTD drainage software.
- Relocation of existing street side ditch with a new ditch and box culvert. Drainage ditch, box culvert and junction box designed for 10 years storm period.
- Offset existing 10" and 18" SFM both vertically and horizontally.

### **Drainage Improvements to 14<sup>th</sup> Street; Jefferson Parish, LA**

Mr. Mehta served as the principal-in-charge for this project. Overall, the project goal is to improve the drainage network along 14th Street. Project scope items include the following: construction of new sidewalks and ADA ramps, replacement of pavement and driveways, adjustment of required sewer connections, adjustment of identified water lines and the construction of a new outfall for the canal.

### **Planters Drainage Pump Station**

Mr. Mehta serves as the principal-in-charge for this project. Pivotal Engineering is retained by Jefferson Parish to provide engineering services for the Planters Pump Station Improvements project. The scope of engineering services includes the removal and replacement of diesel engines, exhaust silencers, process controls and instrumentations, miscellaneous piping and electrical, installation of air-cooled heat exchangers, and refurbishment of gear box for drainage pumps of No. 1, 2, 3 and 4.

### **N. Arnoult Drainage Pump Station Improvements; Jefferson Parish, LA**

Mr. Mehta served as the principal-in-charge for this project. Pivotal is retained by Jefferson Parish under a prime consultant of Hartman Engineering, Inc for a design and construction management of N. Arnoult Drainage Pump Station Improvements. The scope of the project includes the demolishing of existing building, replacing 2 existing vertical turbine pumps with 2 new 25 HP pumps, replacing existing pump control with VFD, ATS and associated electrical upgrades, SCADA, and replacing 100KW diesel generator with sound enclosures and fuel tank.

### **Wright Road Improvements; New Orleans, LA**

Pivotal personnel were retained by the City of New Orleans for the design of Wright Road located in New Orleans East. Mr. Mehta serves as the principal-in-charge for this project. The project entailed the design of a new roadway section, subsurface sewer, water and drainage facilities, the relocation of conflicting utilities, as



## **TEC Professional Services Questionnaire**

well as the development of specifications and construction oversight. Pivotal engineering staff has also been required to provide public coordination, agency approvals, oversee contractor compliance, and represent the Owner at various public meetings.

### **France Road North Improvements**

Mr. Mehta serves as the principal-in-charge for this project. Pivotal performed design & construction administration services for France Rd. The project included 1.5 miles of full roadway reconstruction design. The scope of this project is to remove and replace roadway & drainage improvements.

*The execution and delivery of this project demonstrates that Pivotal engineer's expertise on the following required criteria of specialized experience and technical competence:*

- Louisiana Standards for Roads & Bridges
- FHWA, AASHTO, ADA and other Federal, States, & Local Public Works requirements
- Performance history, competency, responsiveness, cost control, work quality and the ability to meet schedules and deadlines.

### **RR 016-019 Improvements**

Mr. Mehta served as the principal-in-charge for these projects. Pivotal is currently retained by City of New Orleans to provide roadway full reconstruction including subsurface improvements (drainage, sewer and water line improvement). The project entails roadway rehabilitation for nine (9) blocks (3245 ft) in the neighborhoods of B.W. Cooper, Gert Town and Dixon. This design of multiple streets are required to meet rehabilitation goals set by FEMA and CNO and water line replacement program set by S&WB. The project also includes identifying and designing the geometrics of the streets, preparation of capital cost estimates and construction documents for the project.

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
<b>Yoseph Shifare, PE, PTOE; Project Director</b>
<b>Project Assignment:</b>
<b>Project Manager/ Sr. Civil Engineer</b>
<b>Name of Firm with which associated:</b>

<b>Years' experience with this Firm:</b>
8
<b>Education: Degree(s)/Year/Specialization:</b>
M.S. Civil Engineering, University of Louisville, Kentucky, 2014 B.S. Civil Engineering, University of Asmara, Eritrea, 2001
<b>Active registration: Year first registered/discipline:</b>
2018 / Civil Engineering / LA PE # 42747 Louisiana PTOE
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Mr. Shifare serves as the project director of Pivotal Engineering in charge of civil/transportation projects. He has over 19 years engineering, project and construction management experience for public infrastructure as well as for industrial, commercial and private facility projects. As project director, leads and manages the day-to-day efforts of engineers on projects that include roadway, traffic analyses, pavement structural design, use of geosynthetics, geometric design, line/grade analyses, pavement marking, intersection improvements, pedestrian/bicycle lanes/paths, excavation/embankment, traffic, drainage/storm water management, water/wastewater infrastructure and landfills. In addition, Mr. Shifare has extensive experience in hydraulic and green infrastructure project design, such as experience providing complex engineering services for hazard mitigation projects for government clients, including but not limited to detention and filtration of stormwater, open channel and pipe flow drainage systems, created wetlands structures, bioretention, and design of hydraulic control structures. He is responsible to client liaison, management of the strategic aspects of project engagement, high-level review of project deliverables, leadership, project accounting and ensuring that engineering practices meets or exceeds industry standards.</p>
<b>Experience includes:</b>
<b><u>Clearview &amp; Airline Intersection Improvements</u></b>
<p>Mr. Shifare serves as the project manager for this project. Pivotal was retained to assist in the Clearview-Airline Intersection Improvements project. The scope of the project includes the following: widening of the median along Airline Drive to provide for triple left turn lanes, modifying the intersection of Airline Drive and Central Avenue, relocating and replacing the 20' transit water line, modifying the existing traffic signal system along Airline Drive at the intersection of Clearview Parkway and Central Avenue, and extending Rosedale to tie into Airline Drive.</p>

## **TEC Professional Services Questionnaire**

### **Cousins Blvd Extension**

Mr. Shifare serves as the project manager for this project.

### **Design & Drainage Improvements at Labarre Rd. Railroad Crossing**

Mr. Shifare serves as the project manager for this project. Pivotal Engineering was retained by Jefferson Parish to provide preliminary and final design phase services for design and construction plan preparation of the Labarre Road Railroad Crossing Drainage Improvement. The major scope of the improvement included: The construction of a box at the south west corner of Labarre and the Norfolk railroad; construction of a box at the south east corner of Labarre and the Norfolk railroad; replacement of sidewalk access across the ditch adjacent to the tracks; and provide handicap ramps across the street from the crossing, due to the tight right of way at the corner. The designer makes sure that the handicap ramp was built within Parish right of way.

### **Pritchard Road Extension**

Mr. Shifare serves as the project manager for this project. Pivotal Engineering is retained by Jefferson Parish to design roadway reconstruction and extension of Pritchard Road. The project scope includes the following:

- Removal and replacement of existing 20 ft wide concrete roadway with 26 ft wide roadway and extend 130 ft to connect Pritchard Road to Sprig Street.
- Removal and replacement of existing drainage piping. The design of drainage pipe networks is completed for a 10 years storm period using LADOTD drainage software.
- Relocation of existing street side ditch with a new ditch and box culvert. Drainage ditch, box culvert and junction box designed for 10 years storm period.
- Offset existing 10" and 18" SFM both vertically and horizontally.

### **Drainage Improvements to 14<sup>th</sup> Street; Jefferson Parish, LA**

Mr. Shifare serves as the project manager for this project. Overall, the project goal is to improve the drainage network along 14th Street. Project scope items include the following: construction of new sidewalks and ADA ramps, replacement of pavement and driveways, adjustment of required sewer connections, adjustment of identified water lines and the construction of a new outfall for the canal.

### **Planters Drainage Pump Station**

Mr. Shifare serves as the project manager for this project. Pivotal Engineering is retained by Jefferson Parish to provide engineering services for the Planters Pump Station Improvements project. The scope of engineering services includes the removal and replacement of diesel engines, exhaust silencers, process controls and instrumentations, miscellaneous piping and electrical, installation of air-cooled heat exchangers, and refurbishment of gear box for drainage pumps of No. 1, 2, 3 and 4.

### **N. Arnoult Drainage Pump Station Improvements; Jefferson Parish, LA**

Mr. Shifare serves as the project manager for this project. Pivotal is retained by Jefferson Parish under a prime consultant of Hartman Engineering, Inc for a design and construction management of N. Arnoult Drainage Pump Station Improvements. The scope of the project includes the demolishing of existing building, replacing 2 existing vertical turbine pumps with 2 new 25 HP pumps, replacing existing pump control with VFD, ATS and associated electrical upgrades, SCADA, and replacing 100KW diesel generator with sound enclosures and fuel tank.

### **Wright Road Improvements; New Orleans, LA**

Pivotal personnel were retained by the City of New Orleans for the design of Wright Road located in New Orleans East. Mr. Shifare serves as the project manager for this project. The project entailed the design of a new

## **TEC Professional Services Questionnaire**

roadway section, subsurface sewer, water and drainage facilities, the relocation of conflicting utilities, as well as the development of specifications and construction oversight. Pivotal engineering staff has also been required to provide public coordination, agency approvals, oversee contractor compliance, and represent the Owner at various public meetings.

### **France Road North Improvements**


Mr. Shifare serves as the project manager for this project.

### **RR 016-019 Improvements**

Mr. Shifare serves as the project manager for this project. Pivotal is currently retained by City of New Orleans to provide roadway full reconstruction including subsurface improvements (drainage, sewer and water line improvement). The project entails roadway rehabilitation for nine (9) blocks (3245 ft) in the neighborhoods of B.W. Cooper, Gert Town and Dixon. This design of multiple streets are required to meet rehabilitation goals set by FEMA and CNO and water line replacement program set by S&WB. The project also includes identifying and designing the geometrics of the streets, preparation of capital cost estimates and construction documents for the project.



## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
<b>Bassam Mekari, PE; Sr. Electrical Engineer</b>
<b>Project Assignment:</b>
<b>Sr. Electrical Engineer</b>
<b>Name of Firm with which associated:</b>

<b>Years' experience with this Firm:</b>
<b>8</b>
<b>Education: Degree(s)/Year/Specialization:</b>
<b>MS in Electrical Engineering - 3 hours remaining</b>
<b>BS in Electrical Engineering, 1987, Louisiana State University</b>
<b>Active registration: Year first registered/discipline:</b>
<b>Licensed PE - # 31801</b>
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Mr. Mekari serves as the principal of Pivotal Engineering and the Engineering Manager in charge of all of the electrical engineering projects. He has developed tremendous experience in designing and installing Medium and Low Voltage Electrical Distribution Systems for commercial and industrial facilities lift stations, water treatment plants, Schools, Justice Centers, Police Stations, and industrial Thermal Reactors. He also designed/built electrical sub-stations for industrial systems and supervised actual installations throughout the US and worldwide. Mr. Mekari has designed over 200 electrical projects and will be instrumental in the overall plant electrical systems design. He also developed tremendous experience in sizing VFDs, UPSs, LED lighting, Dry and Liquid-Fill Transformers, Motors, Medium and Low Voltage Grounding Systems, Panelboards and Switch Gears, ATs, Back Up Generators and possesses hands on field installations' experience and construction administration. Mr. Mekari developed expertise is all applicable codes pertaining to his projects such as NEC, NFPA 70E, NFPA 820, UL and local codes.</p>
<b>Experience includes:</b>
<u><b>Clearview &amp; Airline Intersection Improvements</b></u>
<p>Mr. Mekari serves as the senior electrical engineer for this project. Pivotal was retained to assist in the Clearview-Airline Intersection Improvements project. The scope of the project includes the following: widening of the median along Airline Drive to provide for triple left turn lanes, modifying the intersection of Airline Drive and Central Avenue, relocating and replacing the 20' transit water line, modifying the existing traffic signal system along Airline Drive at the intersection of Clearview Parkway and Central Avenue, and extending Rosedale to tie into Airline Drive.</p>
<u><b>Cousins Blvd Extension</b></u>
<p>Mr. Mekari serves as the senior electrical engineer for this project. Pivotal was retained by Jefferson Parish to complete the Louisiana Department of Natural Resources Revolving Loan Fund Application for the Extension</p>



## **TEC Professional Services Questionnaire**

of Cousins Boulevard (Woodmere Boulevard to Lapalco Boulevard) project.

### **Design & Drainage Improvements at Labarre Rd. Railroad Crossing**

Mr. Mekari serves as the senior electrical engineer for this project. Pivotal Engineering was retained by Jefferson Parish to provide preliminary and final design phase services for design and construction plan preparation of the Labarre Road Railroad Crossing Drainage Improvement. The major scope of the improvement included: The construction of a box at the south west corner of Labarre and the Norfolk railroad; construction of a box at the south east corner of Labarre and the Norfolk railroad; replacement of sidewalk access across the ditch adjacent to the tracks; and provide handicap ramps across the street from the crossing, due to the tight right of way at the corner. The designer makes sure that the handicap ramp was built within Parish right of way.

### **Pritchard Road Extension**

Mr. Mekari serves as the senior electrical engineer for this project. Pivotal Engineering is retained by Jefferson Parish to design roadway reconstruction and extension of Pritchard Road. The project scope includes the following:

- Removal and replacement of existing 20 ft wide concrete roadway with 26 ft wide roadway and extend 130 ft to connect Pritchard Road to Sprig Street.
- Removal and replacement of existing drainage piping. The design of drainage pipe networks is completed for a 10 years storm period using LADOTD drainage software.
- Relocation of existing street side ditch with a new ditch and box culvert. Drainage ditch, box culvert and junction box designed for 10 years storm period.
- Offset existing 10" and 18" SFM both vertically and horizontally.

### **Drainage Improvements to 14<sup>th</sup> Street; Jefferson Parish, LA**

Mr. Mekari serves as the senior electrical engineer for this project. Overall, the project goal is to improve the drainage network along 14th Street. Project scope items include the following: construction of new sidewalks and ADA ramps, replacement of pavement and driveways, adjustment of required sewer connections, adjustment of identified water lines and the construction of a new outfall for the canal.

### **Planters Drainage Pump Station**

Mr. Mekari serves as the senior electrical engineer for this project. Pivotal Engineering is retained by Jefferson Parish to provide engineering services for the Planters Pump Station Improvements project. The scope of engineering services includes the removal and replacement of diesel engines, exhaust silencers, process controls and instrumentations, miscellaneous piping and electrical, installation of air-cooled heat exchangers, and refurbishment of gear box for drainage pumps of No. 1, 2, 3 and 4.

### **N. Arnoult Drainage Pump Station Improvements; Jefferson Parish, LA**

Mr. Mekari serves as the senior electrical engineer for this project. Pivotal is retained by Jefferson Parish under a prime consultant of Hartman Engineering, Inc for a design and construction management of N. Arnoult Drainage Pump Station Improvements. The scope of the project includes the demolishing of existing building, replacing 2 existing vertical turbine pumps with 2 new 25 HP pumps, replacing existing pump control with VFD, ATS and associated electrical upgrades, SCADA, and replacing 100KW diesel generator with sound enclosures and fuel tank.

### **Wright Road Improvements; New Orleans, LA**

Pivotal personnel were retained by the City of New Orleans for the design of Wright Road located in New

## **TEC Professional Services Questionnaire**

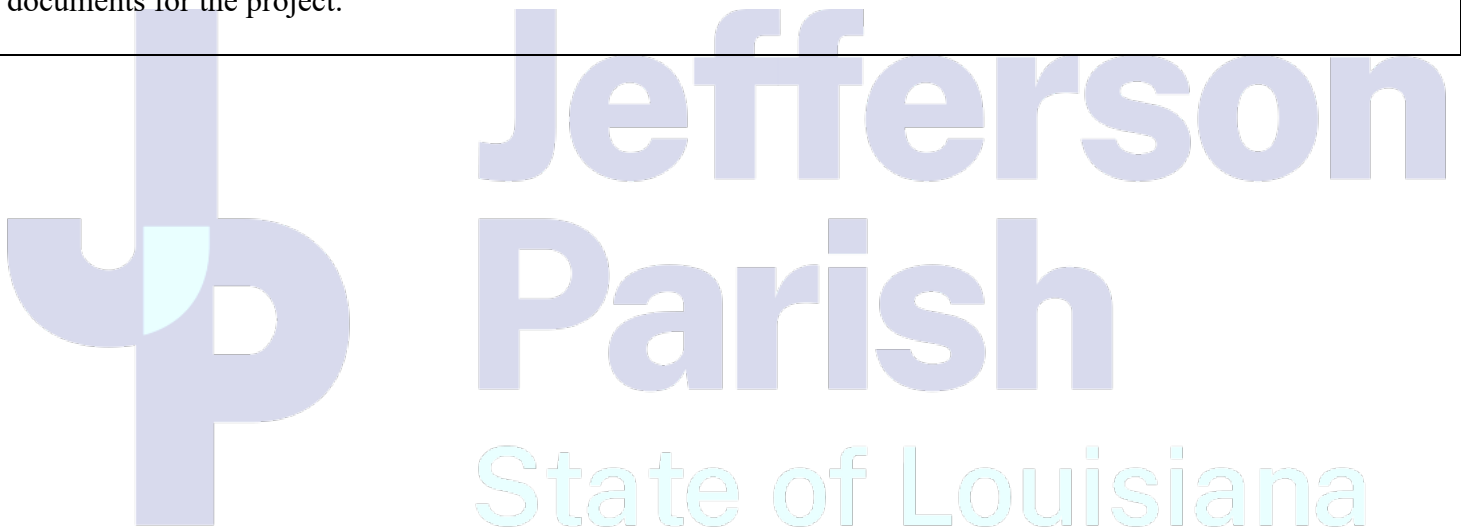
Orleans East. Mr. Mekari serves as the senior electrical engineer for this project. The project entailed the design of a new roadway section, subsurface sewer, water and drainage facilities, the relocation of conflicting utilities, as well as the development of specifications and construction oversight. Pivotal engineering staff has also been required to provide public coordination, agency approvals, oversee contractor compliance, and represent the Owner at various public meetings.

### **France Road North Improvements**


Mr. Mekari serves as the senior electrical engineer for this project.

### **RR 016-019 Improvements**

Mr. Mekari serves as the senior electrical engineer for this project. Pivotal is currently retained by City of New Orleans to provide roadway full reconstruction including subsurface improvements (drainage, sewer and water line improvement). The project entails roadway rehabilitation for nine (9) blocks (3245 ft) in the neighborhoods of B.W. Cooper, Gert Town and Dixon. This design of multiple streets are required to meet rehabilitation goals set by FEMA and CNO and water line replacement program set by S&WB. The project also includes identifying and designing the geometrics of the streets, preparation of capital cost estimates and construction documents for the project.



## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
<b>Johnny A. Mekari, PE; Sr. Electrical Engineer</b>
<b>Project Assignment:</b>
<b>Electrical Engineer</b>
<b>Name of Firm with which associated:</b>

<b>Years' experience with this Firm:</b>
<b>8</b>
<b>Education: Degree(s)/Year/Specialization:</b>
<b>BS in Electrical Engineering, 1987, Louisiana State University</b>
<b>Active registration: Year first registered/discipline:</b>
<b>LA PE # 25415</b> <b>MS PE # 14670</b> <b>TX PE # 87303</b> <b>IEEE Member</b>
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>30 years Electrical Systems Design &amp; Installations</p> <p>Mr. Mekari serves as the Vice President of Pivotal Engineering for the Baton Rouge Operations. He has developed extensive experiences in designing and installing Electrical Distribution Systems and Control Systems for industrial, commercial and municipal facilities. The footprint of the projects designed by Mr. John Mekari extends to local, national and international levels.</p>
<b>Experience includes:</b>
<p><b>East West Bank New Orleans Waste Water Treatment Plant</b></p> <p>This project encompasses the design and installation of a New 13.8KV automatic transfer switch (ATS) at the East Bank Waste Water Treatment Facility.</p> <p>The project scope was to provide a new ATS to allow a time-delayed automatic switching between the two main Entergy feeds and the emergency generator. The main 13.8KV circuit breakers had to be remotely operated for arc flash safety. In addition, hard wired Interlocks had to be designed preventing paralleling of the feeders at any time since the phases were not synchronized.</p> <p>The project's objectives were achieved by automating the existing gear using control logic and PLCs in lieu of new ATS additions and installations. This innovative design resulted in substantial savings to the client in budget and schedule.</p> <p>The new design is safer and more economical and requires less maintenance. The redundant PLCs and hard-wired interlock logic system allowed the safe automatic transfer switching of the existing 13.8 KV circuit breakers. Remote power transfer was also incorporated into the design. The project is currently in the construction phase.</p>

## **TEC Professional Services Questionnaire**

### **Veolia West Bank New Orleans Waste Water Treatment Plant**

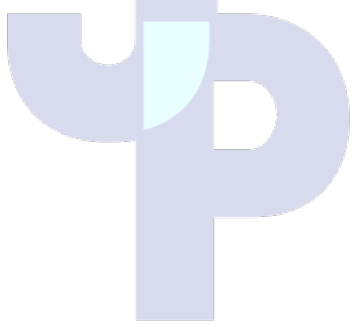
Mr. Mekari designed the replacement of an existing 4160V MTS outdoor switchgear lineup with a new outdoor ATS switchgear lineup. Also, Mr. Mekari conducted a comprehensive Power Study encompassing the existing and new electrical facilities.

The project scope of work included upgrading the existing underground cables and raceways along with the necessary electrical equipment, providing One Line Diagram as-builts, conducting short circuit, relay coordination and arcfash calculations and analysis.

The challenges of this project were to field verify the existing conditions and underground utilities due to lack of documentation. Mr. Mekari successfully led the effort to field trace and document the existing 13.8KV, 4160V and 480V feeders and related equipment. Another critical project challenge was to minimize the plant downtime to less than 3 hours during construction. The design documents provided and incorporated a sequence of installation to accommodate this objective. The project is currently in the construction phase.

### **Cleco Power Plants – Various Sites in LA**

Mr. Mekari served as the QA/QC Electrical Engineer for updating the one-line diagrams for all generating units (13.8 KV, 2.4KV, and 480VAC distribution systems) by collecting the pertinent field data, modeling the data in ETAP, SKM, or Easypower software system(s), running the short circuit analysis, arc flash studies, protective relay coordination and load studies. Recommendations were made to correct deficiencies discovered by the studies such as replacing over-duty electrical equipment (MCCs and Power Distribution Boards/panels), retrofitting breakers with solid-state protection and control relays to minimize the arc-flash hazard classification. Issue and install arcfash warning labels on various electrical equipment per code requirements.



Parish

State of Louisiana

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
<b>James Amodeo, PE; Sr. Mechanical Engineer</b>
<b>Project Assignment:</b>
<b>Mechanical Engineer</b>
<b>Name of Firm with which associated:</b>

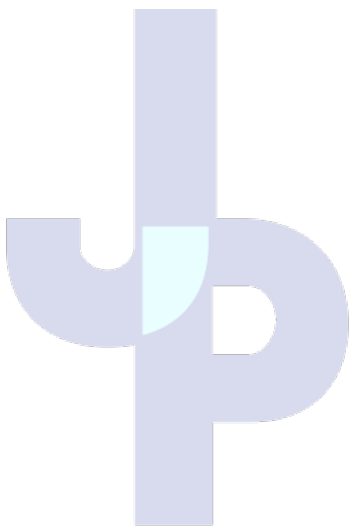
<b>Years' experience with this Firm:</b>
<b>8</b>
<b>Education: Degree(s)/Year/Specialization:</b>
<b>BS / 1994 / Mechanical Engineering</b>
<b>Active registration: Year first registered/discipline:</b>
<b>LA PE #36489 – Mechanical - 2011</b>
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Mr. Amodeo serves as the Senior Mechanical Engineer for Pivotal Engineering. Mr. Amodeo has more than 20 years of experience in the analysis, design and project construction management for various types of building mechanical systems, plumbing design, and code compliance.</p> <p>Working on more than 20 FEMA projects post Katrina, Mr. Amodeo has developed tremendous FEMA experience and reviewing PWs and providing cost estimates.</p> <p>Mr. Amodeo will be designated as the Sr. Mechanical Engineer for this project. Mr. Amodeo will be responsible for all mechanical and plumbing design, review of all applicable code requirements, methodologies and design recommendations and schematics</p>
<b>Experience includes:</b>
<b><u>Planters Drainage Pump Station; Jefferson Parish, LA</u></b>
Mr. Amodeo serves as the senior mechanical engineer for this project. Pivotal Engineering is retained by Jefferson Parish to provide engineering services for the Planters Pump Station Improvements project. The scope of engineering services includes the removal and replacement of diesel engines, exhaust silencers, process controls and instrumentations, miscellaneous piping and electrical, installation of air-cooled heat exchangers, and refurbishment of gear box for drainage pumps of No. 1, 2, 3 and 4.
<b><u>Cleveland &amp; Avron Sewer Lift Station Rehabilitation; Jefferson Parish, LA</u></b>
Mr. Amodeo served as a Sr. Mechanical Engineer for the lift station upgrades for this project. Pivotal was retained by Jefferson Parish to replace the existing submersible pumps with new submersible pumps with Premium Efficiency Motors and Variable Frequency Drives (VFD) as well as new controls, piping, and valves. 3-15HP pumps will be replaced with 2-25Hp Pumps.



## **TEC Professional Services Questionnaire**

### **N. Sibley & Boone Lift Station Improvements; Jefferson Parish, LA**

Mr. Amodeo served as a Sr. Mechanical Engineer for the lift station upgrades for this project. Pivotal Engineering was retained by Jefferson Parish to provide preliminary and final design phase services for design and construction plan preparation of the C4-1A (N. Sibley and Boone) Lift Station Rehabilitation project. The major scope of the improvement is replacement of all existing submersible pumps with new submersible pumps with Premium Efficiency Motors and Variable Frequency Drive (VFD) as well as new controls, piping, and valves. 2-15 HP pumps will be r



**Jefferson  
Parish**  
State of Louisiana

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
<b>Terry Elnaggar, PE; Sr. Civil/Environmental Engineer</b>
<b>Project Assignment:</b>
<b>Sr. Civil Engineer</b>
<b>Name of Firm with which associated:</b>

<b>Years' experience with this Firm:</b>
<b>8</b>
<b>Education: Degree(s)/Year/Specialization:</b>
<b>MS / 1988 / Civil and Environmental Engineering / Univ. of California, Berkley</b>
<b>BS / 1985 / Civil Engineering / Louisiana State University</b>
<b>Active registration: Year first registered/discipline:</b>
<b>LA PE #23832 – Civil/Environmental</b>
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Mr. Elnaggar serves as a Principal of Pivotal Engineering LLC. He is the lead civil and environmental engineer for the company. His 30 years of experience includes project management and design work in roadways, drainage, sewer, earthen levees, floodwalls, floodgates and pump stations. He has performed multiple engineering projects for public and private clients on the local, state and federal level. He has served as Project Design Manager for numerous projects including, pavement widening and rehabilitation work. He takes a hands-on approach to successfully managing the design, QA/QC, stakeholder coordination, discipline leads, and schedule management. He has managed and prepared design-build construction plans, utility coordination, drainage, stormwater management, right-of-way plats, complex E&amp;SC, environmental documentation/permitting, and environmental mitigation/restoration. He has also served on the construction program management side with both municipal, and industrial clients, providing oversight of projects designed by other consultants, providing design reviews and coordination between the consultant and the multiple other agencies involved. His experience includes design and construction management for civil and environmental projects including municipal and industrial solid waste permitting, risk assessments, water permitting and compliance, air permitting and compliance, emission inventories and reporting, groundwater investigations, regulatory compliance, environmental process design, permitting, and waste treatment system design.</p>
<b>Experience includes:</b>
<b><u>Wright Road Improvements; New Orleans, LA</u></b>
<p>Mr. Elnaggar served as the Project Engineer for the design of Wright Road located in New Orleans East. The project included subsurface drainage, roadway paving, curb and gutter, utility's location and relocation, sidewalks. Mr. Elnaggar was responsible for coordination and oversight of all engineering and design tasks, and construction management for this project. Mr. Elnaggar also ensured all design guidelines were followed, the project remained within budget, milestone dates were met, and the needs and concerns of the client were addressed. The project was valued at \$9 million.</p>

## **TEC Professional Services Questionnaire**

### **Broadmoor Lift Station Upgrades; Shreveport**

The Project includes the rehabilitation of the facility building including pumps, pipes, screening system, odor control system, and designing of an access road. Mr. Elnaggar reviewed, designed and sized the temporary by pass system; reviewed and designed the horizontal and vertical alignment of a concrete pavement access road. Further, Mr. Elnaggar reviewed and managed the project design package including the specification, capital project estimate and Construction document.

### **CC1 Lift Station Improvements; Luling, LA**

The Project includes analysis and design to increase the existing capacity of the lift station. For this project Mr. Elnaggar reviewed, and analyzed the design of the Odor Control System; reviewed a simply supported two-way slab wet well cover for H2O Loading. Further reviewed and calculated capital cost estimate of the project and Construction document.

### **City of New Orleans Hurricane Ida Emergency Status Damage Assessments, New Orleans, LA**

In the wake of Hurricane Ida (August 2021), Pivotal Engineering was retained by City of New Orleans to perform emergency status damage assessments and repair cost estimates for each of their 416 facilities. Facility types included administrative buildings, recreation centers, parks, playgrounds, life safety stations and other types. Pivotal developed a comprehensive, GIS-based logistical framework for efficient staff management and planning. Due to the constant communication with the teams and client, Pivotal was able to make changes to priority locations within the day. Pivotal used a team of dedicated cost estimators to perform all cost estimates, based on the RSMeans database. Pivotal was able to deploy drone imagery for additional inspection of roof and other inaccessible items. Progress was shared with the City daily via an email summary as well as a real-time, cloud-based data dashboard. Pivotal staff worked seven (7) days per week for six (6) weeks to complete the project.

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
<b>Sundiata Marcelin, PE; Sr. Civil Engineer</b>
<b>Project Assignment:</b>
<b>Civil Engineer</b>
<b>Name of Firm with which associated:</b>

<b>Years' experience with this Firm:</b>
<b>2+</b>
<b>Education: Degree(s)/Year/Specialization:</b>
<b>B.S. Civil Engineering, 2004</b>
<b>Active registration: Year first registered/discipline:</b>
<b>2013 / Civil Engineering / LA PE # 38589</b>
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Mr. Marcelin has over 10 years of experience in both civil and structural engineering as well as over 15 years of experience in construction management. This civil engineering experience includes complete urban roadway restoration design with new sewage, water, drainage, and full right-of-way layout in Jefferson, St Bernard, and Orleans Parish. Mr. Marcelin has extensive knowledge of the civil infrastructure and design standards of Orleans Parish. This knowledge base allows him to efficiently review designs for both above ground and sub-surface infrastructure. His project experience includes roadway, traffic analyses, pavement structural design, use of geosynthetics, geometric design, line and grade analyses, pavement marking, intersection improvements, pedestrian and bicycle lanes or paths, excavation and embankment, traffic, drainage/storm water management, water and wastewater systems.</p>
<b>Experience includes:</b>
<b><u>14th Street Drainage Improvements; Jefferson Parish, LA</u></b>
<p>Mr. Marcelin serves as a senior engineer for this project, responsible for project coordination, generation of overall design (including calculations and modeling) and the project schedule. Overall, the project goal is to improve the drainage network along 14th Street. Project scope items include the following: construction of new sidewalks and ADA ramps, replacement of pavement and driveways, adjustment of required sewer connections, adjustment of identified water lines and the construction of a new outfall for the canal.</p>
<b><u>Wright Road Improvements; New Orleans, LA</u></b>
<p>Mr. Marcelin serves as a senior engineer for this project, responsible for project coordination, generation of overall design (including calculations and modeling) and the project schedule. Pivotal personnel were retained by the City of New Orleans for the design of Wright Road located in New Orleans East. The project entailed the design of a new roadway section, subsurface sewer, water and drainage facilities, the relocation of conflicting utilities, as well as the development of specifications and construction oversight. Pivotal engineering staff has also been required to provide public coordination, agency approvals, oversee contractor compliance, and represent the Owner at various public meetings.</p>

## **TEC Professional Services Questionnaire**

### **RR016 BW Cooper Gert Town Dixon Group C; New Orleans, LA**

Mr. Marcelin is the senior engineer for this project. He is tasked with the completing above and below ground design of the restoration of approximately nine (9) blocks (3,245 ft) in the neighborhood of B.W. Cooper, Gert Town and Dixon. This design includes the horizontal and vertical roadway alignment and right-of-way design complete with new drainage structures based on an updated more resilient analysis procedure, limited waterline and sewer line replacement, and Sidewalk and ADA ramp layout. His work also required coordination and compatibility with adjacent active and future construction projects.


### **RR076 Lake Vista Group D; New Orleans, LA**

Mr. Marcelin serves as a senior engineer for this project, responsible for project coordination, generation of overall design (including calculations and modeling) and the project schedule. Pivotal is retained by City of New Orleans to provide roadway full reconstruction including subsurface improvements (drainage, sewer and water line improvement). The project entails roadway rehabilitation for five (5) blocks (1,750 ft) in the neighborhood of Lake Vista. This design of multiple streets is required to meet rehabilitation goals set by FEMA and CNO and water line replacement program set by S&WB. The project also included identifying and designing the geometrics of the streets, preparation of capital cost estimates and construction documents for the project.





## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
<b>Bryan B. Smith, PE; Environmental Engineer</b>
<b>Project Assignment:</b>
<b>Project Engineer</b>
<b>Name of Firm with which associated:</b>

<b>Years' experience with this Firm:</b>
4
<b>Education: Degree(s)/Year/Specialization:</b>
<b>BS / 2011 / Environmental Engineering</b>
<b>MS / 2014 / Civil and Environmental Engineering</b>
<b>Active registration: Year first registered/discipline:</b>
<b>2015 / Environmental / PE # 43843</b>
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Mr. Smith serves as a senior environmental engineer and construction manager with Pivotal Engineering. Mr. Smith has more than eight (8) years of experience with the public works and environmental project types, including the design of subsurface utilities and roadways. He is well-rounded in technical approaches for the design, site inspection and coordination of municipal infrastructure projects.</p> <p>Additionally, he is well established in both state and federal regulations for water quality, NPDES compliance and SWPPP preparation. His projects include both public and private sector that require his time in both the office and the field.</p>
<b>Experience includes:</b>
<b><u>France Road North; New Orleans, LA</u></b>
For this project, Mr. Smith assisted with the scoping phase, including site documentation, identification of critical improvements and determination of the extent of drainage/roadway modifications. Pivotal performed design & construction administration services for France Rd. The project included 1.5 miles of full roadway reconstruction design. The scope of this project was to remove and replace roadway & drainage improvements.
<b><u>Plum Orchard -West Lake Forest Group B (New Orleans, LA</u></b>
Mr. Smith performed the design services for the RR3 Plum Orchard/West Lake Forest Group B project. Scope of work included photographic documentation of existing conditions, FEMA-eligible repairs and additional repairs for considerations as well as designing eligible improvements in AutoCAD Civil3d. Additional tasks included revisions to drawings for adherence to CNO, SWBNO and FEMA guidelines.
<b><u>Bonnabel Bike Path; Jefferson Parish, LA</u></b>
Mr. Smith performed scoping phase services for the Bonnabel Bike Path project. As this project was developed to increase community access to quality-of-life resources (Lake Pontchartrain as well as nearby open-space

## **TEC Professional Services Questionnaire**

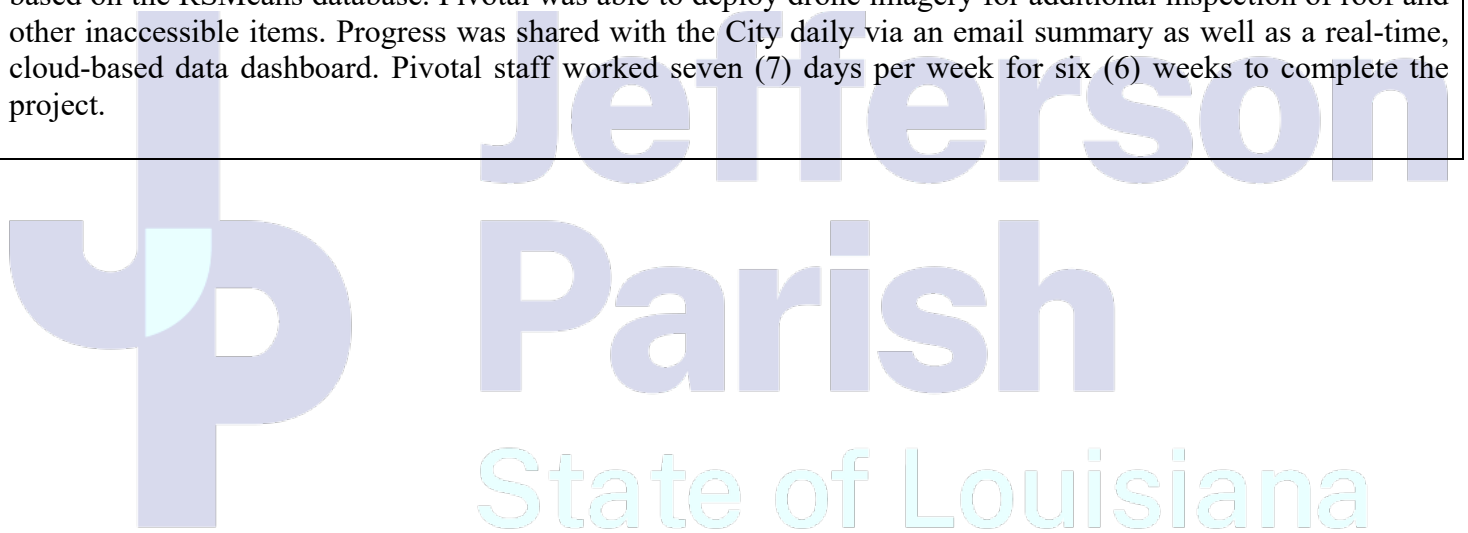
places), maximum attention was given to the configuration of the bike path along Bonnabel Street. Existing trees were integrated into the design as well as standard traffic control devices.

### **Water Effectiveness in Broadmoor; New Orleans, LA**

For this project, Mr. Smith reviewed the design drawings, managed geotechnical soil investigation and performed water quality testing for on-site, pre-construction conditions. His knowledge of green infrastructure design, water quality requirements for such installations and generation construction experienced allowed him to positively impact the project and ensure that the tasks were completed on time.

### **City of New Orleans Hurricane Ida Emergency Status Damage Assessments, New Orleans, LA**

In the wake of Hurricane Ida (August 2021), Pivotal Engineering was retained by City of New Orleans to perform emergency status damage assessments and repair cost estimates for each of their 416 facilities. Facility types included administrative buildings, recreation centers, parks, playgrounds, life safety stations and other types. Pivotal developed a comprehensive, GIS-based logistical framework for efficient staff management and planning. Due to the constant communication with the teams and client, Pivotal was able to make changes to priority locations within the day. Pivotal used a team of dedicated cost estimators to perform all cost estimates, based on the RSMeans database. Pivotal was able to deploy drone imagery for additional inspection of roof and other inaccessible items. Progress was shared with the City daily via an email summary as well as a real-time, cloud-based data dashboard. Pivotal staff worked seven (7) days per week for six (6) weeks to complete the project.




## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
<b>Madison Mikes, EI; Environmental Project Engineer</b>
<b>Project Assignment:</b>
<b>Project Engineer</b>
<b>Name of Firm with which associated:</b>

<b>Years' experience with this Firm:</b>
<b>2</b>
<b>Education: Degree(s)/Year/Specialization:</b>
<b>MS / 2020 / Environmental Engineering</b>
<b>BS / 2017 / Environmental Engineering</b>
<b>Active registration: Year first registered/discipline:</b>
<b>LA EI #33878 - Environmental</b>
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Ms. Mikes serves as project engineer with Pivotal Engineering. She assists within environmental engineering projects and has been able to add considerable value in a short amount of time. She has served as project engineer on a number of project types ranging from design and permitting of wastewater treatment systems to air permitting and compliance monitoring. Her projects include both public and private sector that require her time in both the office and the field.</p>
<b>Experience includes:</b>
<p><b><u>Roy S. Nelson Generating Plant Solid Waste Permitting; Westlake, LA</u></b> Assisted with solid waste permit renewal application preparation, attachment compilation, and review for the Nelson Plant Coal Ash Disposal Landfill, Unit 6 Settling Pond, and Wastewater Neutralization Basin.</p>
<p><b><u>Entergy Nelson SRA Pond Recommendations for Handling Solids Memo; Westlake, LA</u></b> Conducted a literature review on dioxin and furans to assess their distribution around the globe. Applied this research and calculated RECAP standards to develop a recommendation's memo for handling solids containing minor concentrations of dioxins found at the Nelson SRA pond.</p>
<p><b><u>Chemical Waste Management Generator Regulatory Permit; Sulphur, LA</u></b> Calculated estimated annual emissions for a 500-kW emergency engine based on specifications and federal regulations. Completed a Regulatory Permit Notification Form for the utilization of this generator</p>
<p><b><u>Chemical Waste Management Pilot Testing Case by Case Insignificant Activity Notification Form; Sulphur, LA</u></b> Implemented Tanks 4.0.9d program and calculated estimated VOC and PM emissions from handling and processing soils spiked with petroleum fuel that could potentially be emitted during pilot testing of a soil treatment system. Completed a Case-by-Case Insignificant Activity form using calculated emission data.</p>

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
<b>Eliot Guerin, EI; Civil Project Engineer</b>
<b>Project Assignment:</b>
<b>Project Engineer</b>
<b>Name of Firm with which associated:</b>

<b>Years' experience with this Firm:</b>
<b>3</b>
<b>Education: Degree(s)/Year/Specialization:</b>
<b>2018 / E.I. Civil Engineering</b>
<b>Active registration: Year first registered/discipline:</b>
E.I. TX
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Mr. Guerin is a civil designer with over three (3) years of experience at Pivotal Engineering. Throughout this time, he has focused on design of roadways, sanitary sewer systems and storm drainage collection systems (including applicable green infrastructure components) More specifically, he is well-established in traffic analyses, pavement structural design, use of geosynthetics, geometric design, line and grade analyses, pavement marking, intersection improvements, pedestrian and bicycle lanes or paths, excavation and embankment, traffic, drainage/storm water management, water and wastewater, and landfills. He is a very competent design engineer with strong skillset in hydraulic &amp; hydrologic modeling and AutoCAD Civil 3D.</p>
<b>Experience includes:</b>
<p><b><u>Pritchard Road Extension</u></b></p> <p>Mr. Guerin serves as a civil designer for this project. Pivotal Engineering is retained by Jefferson Parish to design roadway reconstruction and extension of Pritchard Road. The project scope includes the following:</p> <ul style="list-style-type: none"><li>• Removal and replacement of existing 20 ft wide concrete roadway with 26 ft wide roadway and extend 130 ft to connect Pritchard Road to Sprig Street.</li><li>• Removal and replacement of existing drainage piping. The design of drainage pipe networks is completed for a 10 years storm period using LADOTD drainage software.</li><li>• Relocation of existing street side ditch with a new ditch and box culvert. Drainage ditch, box culvert and junction box designed for 10 years storm period.</li><li>• Offset existing 10" and 18" SFM both vertically and horizontally.</li></ul>
<p><b><u>Drainage Improvements to 14<sup>th</sup> Street; Jefferson Parish, LA</u></b></p> <p>Mr. Guerin serves as a civil designer for this project. Overall, the project goal is to improve the drainage network along 14th Street. Project scope items include the following: construction of new sidewalks and ADA ramps, replacement of pavement and driveways, adjustment of required sewer connections, adjustment of identified water lines and the construction of a new outfall for the canal.</p>

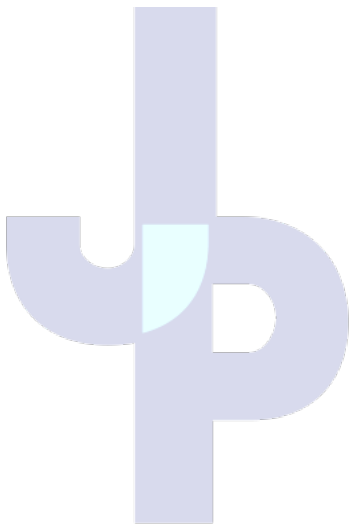
## **TEC Professional Services Questionnaire**

### **Wright Road Improvements; New Orleans, LA**

Mr. Guerin serves as a civil designer for this project. The project includes removing the existing street, drainage and sewer structures and designing new alignment and profile, drainage and sewer structures. He was responsible for designing horizontal and vertical roadway alignment, drainage collection systems, water line replacements, sewer line replacements, geometrics of the streets as well as preparing both capital cost estimates and construction documents.

### **RR 016-019 Improvements**


Mr. Guerin serves as a civil designer for this project. Pivotal is currently retained by City of New Orleans to provide roadway full reconstruction including subsurface improvements (drainage, sewer and water line improvement). The project entails roadway rehabilitation for nine (9) blocks (3245 ft) in the neighborhoods of B.W. Cooper, Gert Town and Dixon. This design of multiple streets are required to meet rehabilitation goals set by FEMA and CNO and water line replacement program set by S&WB. The project also includes identifying and designing the geometrics of the streets, preparation of capital cost estimates and construction documents for the project.




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## TEC Professional Services Questionnaire

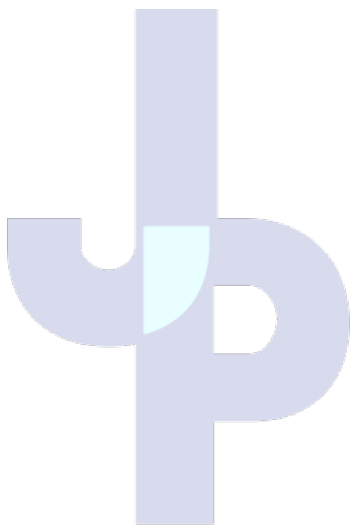
<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
<b>Kepal Patel, EI; Electrical Project Engineer</b>
<b>Project Assignment:</b>
<b>Electrical Designer</b>
<b>Name of Firm with which associated:</b>

<b>Years' experience with this Firm:</b>
<b>2</b>
<b>Education: Degree(s)/Year/Specialization:</b>
<b>BS Electrical Engineering 2019</b>
<b>Active registration: Year first registered/discipline:</b>
<b>2019 LA EI # 0034453</b>
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Mr. Patel serves as an electrical/roadway designer for Pivotal Engineering. Mr. Patel designing experience includes CADD work, generally to show the pole location, laying out circuit design from the power source to individual poles, type of foundation used, type of fixture used and include its specifications. Currently, he is working on several JP streetlight projects and his role requires voltage drop calculations, conduit sizes, wire sizes, grounding and bonding etc. and thus determine what kind of electrical components would be required for the installations.</p>
<b>Experience includes:</b>
<p><u><b>Planters Drainage Pump Station; Jefferson Parish</b></u></p> <p>Mr. Patel serves as an electrical/roadway designer for this project. Pivotal Engineering is retained by Jefferson Parish to provide engineering services for the Planters Pump Station Improvements project. The scope of engineering services includes the removal and replacement of diesel engines, exhaust silencers, process controls and instrumentations, miscellaneous piping and electrical, installation of air-cooled heat exchangers, and refurbishment of gear box for drainage pumps of No. 1, 2, 3 and 4.</p>
<p><u><b>Wright Road Improvements; New Orleans, LA</b></u></p> <p>Mr. Patel serves as an electrical/roadway designer. Pivotal personnel were retained by the City of New Orleans for the design of Wright Road located in New Orleans East. The project entailed the design of a new roadway section, subsurface sewer, water and drainage facilities, the relocation of conflicting utilities, as well as the development of specifications and construction oversight. Pivotal engineering staff has also been required to provide public coordination, agency approvals, oversee contractor compliance, and represent the Owner at various public meetings.</p>
<p><u><b>Cousins Blvd Extension</b></u></p> <p>Mr. Patel serves as an electrical/roadway designer for this project.</p>

## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
<b>Javier Rondan Zambra; Project Engineer</b>
<b>Project Assignment:</b>
<b>Civil Designer</b>
<b>Name of Firm with which associated:</b>

<b>Years' experience with this Firm:</b>
<b>1</b>
<b>Education: Degree(s)/Year/Specialization:</b>
<b>M.S. Civil Engineering - 2021</b>
<b>B.S. Civil Engineering - 2018</b>
<b>Active registration: Year first registered/discipline:</b>
<b>n/a</b>
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Mr. Rondan serves as a civil project engineer with over two (2) years of experience in the transportation sector with a special focus on highway design, construction, and maintenance. He is knowledgeable in traffic engineering design and operation. He is well versed in construction scheduling, means &amp; methods for utility installations and green infrastructure integration.</p>
<b>Experience includes:</b>
<p><b><u>14th Street Drainage Improvements; Jefferson Parish, LA</u></b></p> <p>Mr. Rondan's involvement in this project consists of plan drafting, quantities estimation, cost estimation and documentation for project submittal. Overall, the project goal was to improve the drainage network along 14th Street. Project scope items include the following: construction of new sidewalks and ADA ramps, replacement of pavement and driveways, adjustment of required sewer connections, adjustment of identified water lines and the construction of a new outfall for the canal.</p>
<p><b><u>Wright Road Improvements; New Orleans, LA</u></b></p> <p>Mr. Rondan's involvement in this project consists of plan drafting, quantities estimation, cost estimation and documentation for project submittal. Pivotal personnel were retained by the City of New Orleans for the design of Wright Road located in New Orleans East. The project entailed the design of a new roadway section, subsurface sewer, water and drainage facilities, the relocation of conflicting utilities, as well as the development of specifications and construction oversight. Pivotal engineering staff has also been required to provide public coordination, agency approvals, oversee contractor compliance, and represent the Owner at various public meetings.</p>

### **Smith & Toulouse Lift Station Upgrades; Jefferson Parish, LA**

This project consists of abandonment of existing dry well and retrofit of existing wet well, construction of new wet well, valve pit, and force main bypass, and installation of new sewer and pipes and sewer force main, as well as removal and replacement of asphalt roadway with concrete roadway, and drainage improvements. Mr. Rondan's responsibilities include plan drafting, budget and quantities estimation, and documentation for project submittal.




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## TEC Professional Services Questionnaire

<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
<b>Irish Jones; Sr. Electrical Designer</b>
<b>Project Assignment:</b>
<b>Electrical Designer</b>
<b>Name of Firm with which associated:</b>

<b>Years' experience with this Firm:</b>
<b>8</b>
<b>Education: Degree(s)/Year/Specialization:</b>
<b>5 years of college in Electrical Engineering – University of Texas at Arlington</b>
<b>Active registration: Year first registered/discipline:</b>
<b>n/a</b>
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Mr. Jones serves as the senior electrical designer of Pivotal Engineering. He has over 40 years of experience in designing electrical installations (power distributions) for industrial and commercial applications of all magnitudes. He obtained his first-Class A electrical license in 1967 in Georgia. Being an electrical contractor for over 40 years, Mr. Jones has developed an extensive experience in not only designing and laying out electrical designs, but also in supervising the installations in the construction phase. His expertise allows the team to provide the best and most economical electrical design for any facility. Due to his experience as an electrician and a contractor, Pivotal will not need to depend on the in- plant electrician while conducting the electrical components field investigations.</p>
<b>Experience includes:</b>
<p><b><u>Planters Drainage Pump Station</u></b></p> <p>Mr. Jones serves as the senior electrical engineer for this project. Pivotal Engineering is retained by Jefferson Parish to provide engineering services for the Planters Pump Station Improvements project. The scope of engineering services includes the removal and replacement of diesel engines, exhaust silencers, process controls and instrumentations, miscellaneous piping and electrical, installation of air-cooled heat exchangers, and refurbishment of gear box for drainage pumps of No. 1, 2, 3 and 4.</p>
<p><b><u>N. Arnoult Drainage Pump Station Improvements; Jefferson Parish, LA</u></b></p> <p>Mr. Jones serves as the senior electrical engineer for this project. Pivotal is retained by Jefferson Parish under a prime consultant of Hartman Engineering, Inc for a design and construction management of N. Arnoult Drainage Pump Station Improvements. The scope of the project includes the demolishing of existing building, replacing 2 existing vertical turbine pumps with 2 new 25 HP pumps, replacing existing pump control with VFD, ATS and associated electrical upgrades, SCADA, and replacing 100KW diesel generator with sound enclosures and fuel tank.</p>

## TEC Professional Services Questionnaire

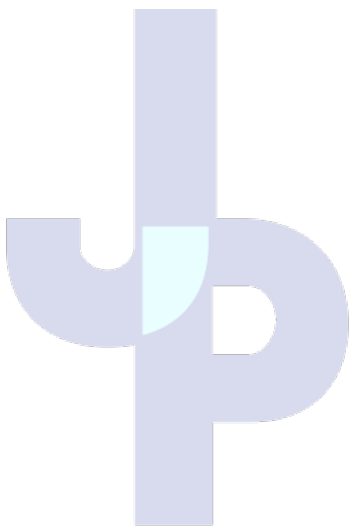
<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
<b>Elena LeBlanc; Data Analyst</b>
<b>Project Assignment:</b>
<b>Construction Specifications Support</b>
<b>Name of Firm with which associated:</b>

<b>Years' experience with this Firm:</b>
<b>5 months</b>
<b>Education: Degree(s)/Year/Specialization:</b>
<b>B.S. / 2019 / Industrial Engineering</b>
<b>Active registration: Year first registered/discipline:</b>
<b>Louisiana / Lean &amp; Six Sigma Green Belt / 2018</b>
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Ms. LeBlanc serves as a data analyst and quality control specialist at Pivotal Engineering, LLC in support of projects across all departments. She has experience in data collection, data management, large-scale disaster recovery, project planning &amp; development, lean &amp; six sigma, and community outreach. Ms. LeBlanc has organized incoming data while providing QA/QC that positively impacted project success.</p>
<b>Experience includes:</b>
<p><b><u>City of New Orleans Hurricane Ida Emergency Status Damage Assessments; New Orleans, LA</u></b></p> <p>In the wake of Hurricane Ida (August 2021), Pivotal Engineering was retained by City of New Orleans to perform emergency status damage assessments and repair cost estimates for each of their 416 facilities. Facility types included administrative buildings, recreation centers, parks, playgrounds, life safety stations and other types. Pivotal developed a comprehensive, GIS-based logistical framework for efficient staff management and planning. Due to the constant communication with the teams and client, Pivotal was able to make changes to priority locations within the day. Pivotal used a team of dedicated cost estimators to perform all cost estimates, based on the RSMeans database. Pivotal was able to deploy drone imagery for additional inspection of roof and other inaccessible items. Progress was shared with the City daily via an email summary as well as a real-time, cloud-based data dashboard. Pivotal staff worked seven (7) days per week for six (6) weeks to complete the project.</p> <p>Ms. LeBlanc managed incoming assessment data, tracking the statuses of over 400 facility assessments, coordinating with field assessment teams and report reviewers. She developed a data dashboard of key performance indicators and metrics, used for clear data visualization. She assisted in the QA/QC of cost estimates and final reports, ensuring deliverables of the project were compiled and ready for submission.</p>
<p><b><u>Disaster Recovery Post-Hurricane Ida Street Light and Traffic Sign Assessment; New Orleans, LA</u></b></p> <p>Ms. LeBlanc assisted with the data tracking of street light/traffic sign assessments. She participated in the QA/QC of assessments, and documentation of the final report.</p>



## **TEC Professional Services Questionnaire**


### **Disaster Recovery Post-Hurricane Ida Traffic Signal Construction Management; New Orleans, LA**

Ms. LeBlanc tracked the statuses of over 50 intersections throughout New Orleans, managing data of material quantities and compiling daily and weekly reports submitted to the city. She built out the real-time dashboard, used for clear data visualization. Ms. LeBlanc also tracked material costs in conjunction with the project budget.



**Jefferson  
Parish**  
State of Louisiana

## TEC Professional Services Questionnaire

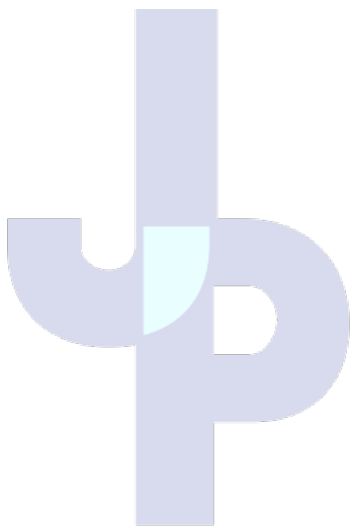
<b>KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:</b>
<b>Name &amp; Title:</b>
<b>Michael Malley; Data Analyst</b>
<b>Project Assignment:</b>
<b>GIS Specialist</b>
<b>Name of Firm with which associated:</b>

<b>Years' experience with this Firm:</b>
<b>5 months</b>
<b>Education: Degree(s)/Year/Specialization:</b>
<b>B.S. / 2013 / Computer Engineering</b>
<b>Active registration: Year first registered/discipline:</b>
<b>n/a</b>
<b>Other experience and qualifications relevant to the proposed Project:</b>
<p>Mr. Malley serves as a data analyst and GIS specialist at Pivotal Engineering, LLC in support of engineering, construction management and grant management projects. He has experience in project planning logistics, coding, GIS, large-scale disaster recovery, and data systems management. Mr. Malley has managed both logistics and GIS mapping for disaster recovery assessments, as well as managing data collection resources and methodologies for real-time analysis.</p>
<b>Experience includes:</b>
<p><b><u>City of New Orleans Hurricane Ida Emergency Status Damage Assessments; New Orleans, LA</u></b></p> <p>In the wake of Hurricane Ida (August 2021), Pivotal Engineering was retained by City of New Orleans to perform emergency status damage assessments and repair cost estimates for each of their 416 facilities. Facility types included administrative buildings, recreation centers, parks, playgrounds, life safety stations and other types. Pivotal developed a comprehensive, GIS-based logistical framework for efficient staff management and planning. Due to the constant communication with the teams and client, Pivotal was able to make changes to priority locations within the day. Pivotal used a team of dedicated cost estimators to perform all cost estimates, based on the RSMeans database. Pivotal was able to deploy drone imagery for additional inspection of roof and other inaccessible items. Progress was shared with the City daily via an email summary as well as a real-time, cloud-based data dashboard. Pivotal staff worked seven (7) days per week for six (6) weeks to complete the project.</p> <p>Mr. Malley managed day-to-day logistics of field assessments, coordinating with teams and ensuring optimal assessment report submissions. He also developed GIS mapping systems for data tracking of over 400 facilities throughout the city of New Orleans, and used this information to continuously plan assessment strategies.</p>
<p><b><u>Disaster Recovery Post-Hurricane Ida Street Light and Traffic Sign Assessment; New Orleans, LA</u></b></p> <p>Mr. Malley managed day-to-day logistics of field assessments, coordinating with teams and ensuring optimal assessment report submissions. He also developed GIS mapping systems for data tracking of over 17,000 traffic lights and traffic signs spanning over 600 miles of roadway throughout the city of New Orleans, and used this</p>

## **TEC Professional Services Questionnaire**

information to continuously plan assessment strategies through the usage of real-time dashboards and data analytics.

### **Disaster Recovery Post-Hurricane Ida Traffic Signal Construction Management; New Orleans, LA**

Mr. Malley developed the data mapping system merged with the dashboard used for tracking construction statuses for over 50 intersections across the city of New Orleans.




Jefferson  
Parish  
State of Louisiana


## 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. 1

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
<p><b>Clearview Airline Intersection Improvements</b> <b>Jefferson Parish, LA</b></p> <p>Jefferson Parish Engineering Department 1221 Elmwood Pkwy., Suite 802 Jefferson, LA 70123 (504) 736-6000</p>	<p><i>Roadway Paving and Curb Design</i> <i>Subsurface Drainage</i> <i>Construction Management</i></p> <p>Pivotal was retained to assist in the Clearview-Airline Intersection Improvements project. The scope of the project includes the following: widening of the median along Airline Drive to provide for triple left turn lanes, modifying the intersection of Airline Drive and Central Avenue, relocating and replacing the 20' transit water line, modifying the existing traffic signal system along Airline Drive at the intersection of Clearview Parkway and Central Avenue, and extending Rosedale to tie into Airline Drive.</p> 	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2019	4.5M	1.2M

## TEC Professional Services Questionnaire


<b>PROJECT NO. 2</b>						
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>					
<p><b>N. Arnoult Drainage Pump Station Improvements; Jefferson Parish, LA</b></p> <p>Jefferson Parish, Capital Projects 1221 Yenni Building, Suite 906 Jefferson, LA 70123 (504) 736-6833</p>	<p>Pivotal is retained by Jefferson Parish for design and construction management of N. Arnoult Drainage Pump Station Improvements. The scope of the project includes the demolishing of existing building, replacing 2 existing vertical turbine pumps with 2 new 25 HP pumps, replacing existing pump control with VFD, ATS and associated electrical upgrades, SCADA, and replacing 100KW diesel generator with sound enclosures and fuel tank.</p> <div style="text-align: center; margin-top: 20px;">  </div>					
<p><b>Completion Date (Actual or estimated):</b></p>	<p style="text-align: center;"><b>Estimated Cost:</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%; padding: 5px;"><b>Entire Project:</b></th> <th style="width: 50%; padding: 5px;"><b>Work for which Firm was Responsible:</b></th> </tr> <tr> <td style="text-align: center; padding: 10px;">TBD</td> <td style="text-align: center; padding: 10px;"> <div>\$841,800</div> <div>\$257,590</div> </td> </tr> </table>		<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>	TBD	<div>\$841,800</div> <div>\$257,590</div>
<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>					
TBD	<div>\$841,800</div> <div>\$257,590</div>					

## TEC Professional Services Questionnaire

<b>PROJECT NO. 3</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility</b>	
<p style="text-align: center;"><b>Planters Pump Station Improvements</b>  <b>Jefferson Parish, LA</b></p> <p style="text-align: center;">Neil Schneider  Jefferson Parish, Capital Projects  1221 Yenni Building, Suite 906  Jefferson, LA 70123  (504) 736-6833</p>	<p>Pivotal Engineering is retained by Jefferson Parish to provide engineering services for the Planters Pump Station Improvements project. The scope of engineering services includes the removal and replacement of diesel engines, exhaust silencers, process controls and instrumentations, miscellaneous piping and electrical, installation of air cooled heat exchangers, and refurbishment of gear box for drainage pumps of No. 1, 2, 3 and 4.</p> <div style="text-align: center;">  </div>	
<b>Completion Date (Actual or estimated)</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2021	\$533,552	\$533,552




## TEC Professional Services Questionnaire

<b>PROJECT NO. 4</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p style="text-align: center;"><b>Labarre Rd. Railroad Crossing Drainage Improvement Jefferson Parish, LA</b></p> <p>Jefferson Parish, Capital Projects 1221 Elmwood Park Blvd., Ste. 906 Jefferson, LA 70123 (504) 736-6833</p>	<p>Pivotal was retained by Jefferson Parish to provide preliminary and final design phase services for design and construction plan preparation of the Labarre Rd. Railroad Crossing Drainage Improvement. The major scope of the improvement includes:</p> <ol style="list-style-type: none"> <li>1. The construction of a box at the south west corner of Labarre and the Norfolk railroad; construction of a box at the south east corner of Labarre and the Norfolk railroad; replacement of sidewalk access across the ditch adjacent to the tracks; and provide handicap ramps across the street from the crossing, due to the tight right of way at the corner. The designer makes sure that the handicap ramp is being built within Parish right of way.</li> <li>2. The boxes are designed to accommodate all of the existing drain lines in the area in order to preserve current drainage patterns at the crossing.</li> <li>3. Construction of the box on the east required removal and replacement of ½ of Labarre Road and of the rail road crossing arm.</li> <li>4. Construction requires deep sheeting, due to proximity of tracks, possibly a coffer dam.</li> <li>5. Full width of Labarre will be milled and overlaid.</li> </ol> <div style="text-align: center; margin-top: 20px;">  </div>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2019	\$53,345	\$53,345


## TEC Professional Services Questionnaire

<b>PROJECT NO. 5</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p><b>Wright Road Improvements</b> <b>New Orleans, LA</b></p> <p>Nguyen Phan City of New Orleans 1300 Perdido Street New Orleans, LA (504) 658-8000</p>	<p><i>Roadway Paving and Curb Design</i> <i>Subsurface Drainage and Sewer Design</i> <i>Construction Management</i></p> <p>Pivotal personnel were retained by the City of New Orleans for the design of Wright Road located in New Orleans East. The project entailed the design of a new roadway section, subsurface sewer, water and drainage facilities, the relocation of conflicting utilities, as well as the development of specifications and construction oversight. Pivotal engineering staff has also been required to provide public coordination, agency approvals, oversee contractor compliance, and represent the Owner at various public meetings.</p> <p>Reviewed the required topographical survey of existing site conditions prior to start of design phase. Designed new drainage network for 10 years return period. Designed new gravity sewer collection system to replace existing system that had been in service for more than 40 years. Designed new water main and located it on the median. Designed new street for tie-in to side streets.</p>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2013	9M	9M

## TEC Professional Services Questionnaire

<b>PROJECT NO. 6</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p style="text-align: center;"><b>France Rd. North Paving and Drainage Improvement New Orleans, LA</b></p> <p style="text-align: center;">Port of New Orleans 1350 Port of New Orleans Place New Orleans, LA 70130 504-528-2551</p>	<p><i>Roadway Design &amp; Drainage Improvements</i></p> <p>Pivotal performed design &amp; construction administration services for France Rd. The project included 1.5 miles of full roadway reconstruction design. The scope of this project is to remove and replace roadway &amp; drainage improvements.</p> <div style="text-align: center;">  </div>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2020	\$114,000	\$114,000

## TEC Professional Services Questionnaire

<b>PROJECT NO. 7</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p style="text-align: center;"><b>Pritchard Road Extension</b> <b>Jefferson Parish, LA</b></p> <p>Jefferson Parish, Capital Projects 1221 Yenni Building, Suite 906 Jefferson, LA 70123 (504) 736-6833</p>	<p>Pivotal Engineering is retained by Jefferson Parish to design roadway reconstruction and extension of Pritchard Road. The project scope includes the following:</p> <ol style="list-style-type: none"> <li>1. Remove and replace existing 20 ft wide concrete roadway and replace with 26ft wide roadway and extend 130 ft to connect Pritchard Road to Sprig Street.</li> <li>2. Remove and replace existing drainage piping. The design of drainage pipe networks is completed for a 10 years storm period using LADOTD drainage software.</li> <li>3. Relocated existing street side ditch with a new ditch and box culvert. Drainage ditch, box culvert and junction box is designed for 10 years storm period.</li> <li>4. Existing 10" and 18" SFM were required to be vertical and horizontal offset.</li> </ol> <div style="text-align: center;">  </div>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2020	1.3M	1.3M

## TEC Professional Services Questionnaire

<b>PROJECT NO. 8</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p><b>Cousins Blvd. Extension; Jefferson Parish, LA</b></p> <p>Director, Engineering Dept. Jefferson Parish 1221 Elmwood Park Blvd., Suite 802 Jefferson, LA 70123 Phone: (504) 736-6500</p>	<p>Pivotal provided engineering services for Load Rating Analysis on the Con Span Bridge culvert of the Cousins Blvd. Extension Street Lighting Scope (Woodmere Blvd. to Lapalco). The general analysis requirement of work for this improvement included the following:</p> <ol style="list-style-type: none"> <li>1. Provided as designed and as built AASHTO Bridge Load Rating Analysis to satisfy the LDOTD requirements.</li> </ol>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2018	\$7.7M	\$2.7M

## TEC Professional Services Questionnaire

<b>PROJECT NO. 9</b>										
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>									
<p><b>14th Street Drainage Improvements Jefferson Parish, LA</b></p> <p>Jefferson Parish, Capital Projects Director 1221 Elmwood Park Blvd., Suite 906 Jefferson, LA 70123 (504) 736-6833</p>	<p>Pivotal was retained by Jefferson Parish to provide preliminary and final design phase services for construction plan preparation and construction administration. The major scope of the improvement will include the following:</p> <ol style="list-style-type: none"> <li>1. As requested by the parish the project scope will extend a 36" down Avenue D to Leo Street as shown in sketch attached. The 36" will tie into the already proposed line to be installed on 14th. We have also added 2-24" to connect Avenue C to 14th street for future continuation. (see Attachment C for the schematic locations of the new drainage system.</li> <li>2. All catch basins to be replaced</li> <li>3. Existing drain line is off of street and new line will be placed off of street</li> <li>4. No lateral pipes Crossing Street on Avenue D.</li> <li>5. Utility conflicts will be addressed. Engineer will contact private companies for their utility locations.</li> </ol>									
<b>Completion Date (Actual or estimated):</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center; padding: 5px;"><b>Estimated Cost:</b></th> </tr> <tr> <th style="width: 50%; padding: 5px;"><b>Entire Project:</b></th> <th style="width: 50%; padding: 5px;"><b>Work for which Firm was Responsible:</b></th> </tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 10px;">2020</td> <td style="text-align: center; padding: 10px;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center; padding: 10px;">\$1.6M</td> <td style="width: 50%; text-align: center; padding: 10px;">\$27,527</td> </tr> </table> </td> </tr> </tbody> </table>		<b>Estimated Cost:</b>		<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>	2020	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center; padding: 10px;">\$1.6M</td> <td style="width: 50%; text-align: center; padding: 10px;">\$27,527</td> </tr> </table>	\$1.6M	\$27,527
<b>Estimated Cost:</b>										
<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>									
2020	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center; padding: 10px;">\$1.6M</td> <td style="width: 50%; text-align: center; padding: 10px;">\$27,527</td> </tr> </table>	\$1.6M	\$27,527							
\$1.6M	\$27,527									



## TEC Professional Services Questionnaire

<b>PROJECT NO. 10</b>		
<b>Project Name, Location and Owner's contact information:</b>	<b>Nature of Firm's Responsibility:</b>	
<p><b>RR016: B.W. Cooper, Gert Town, Dixon Group C New Orleans, LA</b></p> <p>Khalid L. Saleh, Ph.D, Senior Design Engineer, City Of New Orleans DPW, 1300 Perdido Street New Orleans, LA 70112 (504) 658-8208 ksaleh@nola.gov</p>	<p>Pivotal is retained by City of New Orleans to provide roadway full reconstruction including subsurface improvements (drainage, sewer and water line improvement). The project entails roadway rehabs 9 blocks (3245 ft) in the neighborhood of B.W. Cooper, Gert Town and Dixon. This design of multiple streets are required to meet rehabilitation goals set by FEMA and CNO and water line replacement program set by S&amp;WB. The project also included identifying and designing the geometrics of the streets, preparation of capital cost estimates and construction documents for the project.</p> <p>Pivotal is also responsible for administering the required topographical survey of existing site conditions prior to start of design phase; and for coordinating all efforts with various private &amp; public utility companies, state &amp; local agencies, as well as civic &amp; community organizations.</p> <p>This project was federally funded.</p> <div style="text-align: center;">  </div>	
<b>Completion Date (Actual or estimated):</b>	<b>Estimated Cost:</b>	
	<b>Entire Project:</b>	<b>Work for which Firm was Responsible:</b>
2021	4.8M	\$25,149

## TEC Professional Services Questionnaire

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

Parties:		Status/Result of Case:
Plaintiff:	Defendant:	
1. N/A		There are no prior/on-going litigations between Pivotal & Jefferson Parish.
2.		
3.		
4.		

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

### **PIVOTAL ENGINEERING, LLC**

**Pivotal Engineering, LLC** is a full-service engineering design firm based in New Orleans, Louisiana. Pivotal has established a reputation for providing superior service to its clients and delivering quality work on time and within budget. Pivotal's principals and staff have in excess of 200 years of combined experience in civil engineering, mechanical engineering, electrical engineering, environmental engineering and program/project management for both public and private entities across the Gulf South Region. The current staff of Pivotal has extensive experience managing a variety of complex projects, from conception to construction.

Pivotal is a certified Small Business Enterprise with both the Small Business Administration and City of New Orleans. Furthermore, Pivotal has been certified as a Disadvantaged Business Enterprise by the City of New Orleans, Sewerage and Water Board of New Orleans, the New Orleans Aviation Board and Harrah's Casino. Pivotal Engineering is also certified by the Louisiana Department of Economic Development as a Small Entrepreneurship SE (Hudson Initiative) firm.

## **TEC Professional Services Questionnaire**

### **Required Personnel/Required Firm Qualifications**

**The person or firm submitting a Statement of Qualifications shall have the following minimum qualifications:**

- 1. one principal who is a professional engineer who shall be registered as such in Louisiana**

Avinash Mehta, PE  
LA PE # 35100 Civil Engineering

- 2. a professional in charge of the project who is a professional engineer who shall be registered as such in Louisiana with a minimum of five (5) years' experience in the disciplines involved**

Avinash Mehta, PE  
LA PE # 35100 Civil Engineering

- 3. one employee who is a professional engineer registered as such in Louisiana in the field or fields of expertise required for the project (A sub-consultant may meet the requirement only if the advertised project involves more than one discipline.)**

Yoseph Shifare, PE  
LA PE# 42747 Civil Engineering

### **Evaluation Criteria**

- 1) Professional training and experience in relation to the type of work required for the engineering services**

The Pivotal Engineering staff members that will be assigned to this contract have extensive, specialized experience in Engineering Design and Construction Management for Private Entities, and Government and Municipal Agencies in the Gulf South area. Our Principals and Staff have gained this experience not only through many years of providing services to this variety of clients on a very diverse portfolio of projects, but also through focused continuing education. Pivotal Engineering's principals and staff have all been given accolades on their technical competence and knowledge of administering the contract plans and specifications per agency policy and procedure.

Our management team is comprised of experienced managers and task leaders with proven leadership, thoughtfully bringing together capable team members with exceptional technical skills, and supporting them with good QA/QC processes. Open lines of communication and weekly internal conference calls will ensure that the project is managed successfully, within budget and schedule.

Our Team is committed to defining the project and setting expectations as our first step toward making that project a success. We as a team will apply various techniques for project estimation and cost control including:

- Set Expectations Early, Review Often
- Planning the Project Budget
- Keeping Track of Costs

## **TEC Professional Services Questionnaire**

- Establishing a Communication Plan
- Effective Time Management
- Project Change Control
- Use of Earned Value to Monitor Both Cost and Schedule

Our integrated team will provide an optimized concurrent engineering environment that provides an opportunity to substantially reduce the total cost of a project. Benefits of our integrated team with members of various skilled disciplines enable a simultaneous contribution to an early project definition and increase the likelihood of a reduced lifecycle cost by avoiding costly alterations later in the design process.

### **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**

Pivotal Engineering has a depth of technical capabilities and expertise to complete the assigned work in a timely manner. We have the needed technical personnel to assure the Parish that all work will be performed in accordance to the contract scope of work and in strict conformance with the latest City guidelines and standards. Pivotal has the manpower, equipment, and expertise to execute any given project within a reasonable time frame. Pivotal staff has a reputation of project delivery both on time and within budget. Pivotal Engineering's current workload will allow for quick assignment of technical resources to the project at hand. The firm has the required management and field personnel readily available to begin the necessary services upon written notification.

Historically, Pivotal has provided a direct line of communication to anyone who is a representative of the client to the assigned Project Principal and Manager. It has been our goal to make communication a priority. We've provided cell lines as the first line of communication, followed by e-mail transmissions and office lines as last resorts. We do not let calls or e-mails go unanswered more than 24-hours and with this have seen huge success as it relates to our client's reliance on us as their consultant of choice.

#### ***Approach to Agency Coordination:***

The Pivotal Team will identify responsible agencies as early as practical. The Team will notify the Jefferson Parish and address technically any issues of concern regarding the project's scope, potential infrastructure, environmental, social, or economic impacts that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project. The team will assure that agencies are fully engaged in the scoping of the project and the decisions regarding alternatives to be evaluated in detail in the design.

The Team understands an agency's role in the development of the project and may include the following as they relate to areas of expertise:

1. Provide meaningful and early input to address concerns and impacts.
2. Identify issues that could substantially delay or prevent granting of permits/approvals.
3. Identify opportunities for collaboration, including participating in coordination meetings and joint field reviews, as appropriate.
4. Provide timely compliance with review and comment on preliminary documents to reflect the views and concerns of their respective agencies, alternatives considered and anticipated impacts and mitigation.

## TEC Professional Services Questionnaire

### *Approach To Coordinating Project Delivery Tasks:*

The Team will use an Integrated Project Delivery (IPD) approach that integrates staff, systems, team company's structures and professional practices into a process that collaboratively harnesses the talents and insights of all participants to optimize project results, increase value to the owner, to the community, reduce waste, and maximize efficiency through all phases of design, bid, and construction.

The Integrated Project Delivery is assembling a team that is committed to collaborative processes and is capable of working together effectively. In order to accomplish this, Principal project manager will:

1. Identify the Team's roles that are most important to the project.
2. Consider interests and seek involvement of select additional parties, such as agency official(s), local utility companies, and other stakeholders.
3. Define in a mutually understandable fashion the values, goals, interests and objectives of the project to the larger program goals.
4. Identify the Team's organizational and business structure best suited to IPD that is consistent with the Team's capacity and constraints. The choice should not be rigidly bound to traditional project delivery methods, but should be flexibly adapted to the project.
5. Develop project agreement(s) to define the roles and accountability of the Team members. The project agreements should be synchronized to assure that company's roles and responsibilities are defined identically in all agreements and are consistent with the agreed Team organizational and business models. Key provisions regarding compensation, obligation and risk allocation will be clearly defined and should encourage open communication and collaboration.

### **3) Location of the principal office**

Pivotal Engineering, LLC has an office located in Jefferson Parish at 3925 N. I-10 Service Rd. West, Suite 109R, Metairie, LA 70002. This shall prove to be a valuable asset to Jefferson Parish as our staff can be at the Parish's office at moment's notice to attend critical meetings.

### **4) Adversarial legal proceedings between the Parish and the person or firm performing professional services, in which the Parish prevailed, or any ongoing adversarial legal proceedings between the Parish and the person or firm performing professional services, excluding those instances or cases where the person or firm was added as an indispensable party, or where the person or firm participated in or assisted the public entity in prosecution of its claim**

Pivotal Engineering, LLC is not, nor has it ever been, involved in any litigation with the Jefferson Parish or any other Parish/State/Federal agencies.

## **TEC Professional Services Questionnaire**

### **5) Prior successful completion of projects of the type and nature of the engineering services, as defined, for which firm has provided verifiable references**

- Nguyen Phan, P.E., Chief Engineer City of New Orleans DPW. (504) 658-8000, [nphan@nola.gov](mailto:nphan@nola.gov)
- Khalid L. Saleh, Ph.D, Senior Design Engineer, City Of New Orleans DPW, (504) 658-8208, [ksaleh@nola.gov](mailto:ksaleh@nola.gov)
- Neil Schneider, CCM, P.E. Director of Capital Projects, Jefferson Parish Department of Capital Projects (504) 736-6833, [nschneider@jeffparish.net](mailto:nschneider@jeffparish.net)
- Mike Lockwood, Director of Sewerage, Jefferson Parish Department of Sewer (504) 736-6661, [mlockwood@jeffparish.net](mailto:mlockwood@jeffparish.net)
- Mark Drewes, PE; Director of Public Works, Jefferson parish, Department of Public Works, (504) 736-6783, [mdrewes@jeffparish.net](mailto:mdrewes@jeffparish.net)
- Angela DeSoto, PE; Director of Engineering; Jefferson Parish, Department of Engineering, (504) 736-6500, [adesoto@jeffparish.net](mailto:adesoto@jeffparish.net)
- Myra Alexis-Valentine, Grants Administer, St. John Parish, (985) 652-9569, [m.alexisv@stjohn-la.gov](mailto:m.alexisv@stjohn-la.gov)
- Jean Todd, Contracting Officer, US Army Corps of Engineers, (901) 828 – 1503, [jean.f.todd@usace.army.mil](mailto:jean.f.todd@usace.army.mil)
- Wes Wyche; Director of Public Works; City of Shreveport; (318) 673-6000, [Wes.Wyche@shreveportla.gov](mailto:Wes.Wyche@shreveportla.gov)
- Christopher Racca; Environmental Protection Manager; Waste Management; (225) 637-2385, [cracca@wm.com](mailto:cracca@wm.com)

### **6) Size of firm, considering the number of professional and support personnel required to perform the type of engineering tasks**

As outlined in this Statement of Qualifications Pivotal not only presents the number of professional and support personnel available to perform this type of engineering tasks, but also demonstrates the breadth and diversity of the capabilities of the staff. Beyond this diversity of capabilities, Pivotal Engineering's Environmental, Planning, Design and Inspection staff has combined experience of greater than 200 years of experience in all phases of project delivery, including electrical, civil, mechanical, environmental, planning, management, design, and construction supervision experience. Professional qualifications include city, state, and federal certifications in safety, management, and a list of other certifications. The Pivotal drafting team is well versed in a variety of software including CIVIL 3D, HEC RAS, H2O MAP and Arc GIS. We ask that you note the resumes included herein for further information.

### **7) Past Performance by person or firm on Parish contracts**

Pivotal Engineering has a history of providing lift station design, facility and building design, wastewater, street, water, and drainage design and construction administration services to many municipalities and state agencies in the region including; The City of New Orleans, The City of Shreveport, Sewerage and Water Board, The City of Kenner, St. Charles, St. John and Jefferson Parishes. These services have also been provided to private clients such as Entergy and Waste Management. Pivotal Engineering has in depth understanding of local, state, and federal governmental agencies procedures and regulations. The scope of work on which our staff has worked on includes: water treatment plant improvements, master planning, elevated storage tank designs, sewer treatment plant upgrades, lift stations, build/repair streets, sidewalks, bike paths, drainage systems and utilities. Our engineers have great track records with helping our clients meet compressed deadlines yet delivering the project within budget. Pivotal personnel have heavy construction background capabilities and have several construction inspectors with extensive experience on board.



## **TEC Professional Services Questionnaire**

Our staff has proven excellence in managing projects from cradle to grave while providing value engineering which saved our clients hundreds of thousands of dollars. Our staff was essential in helping the city of New Orleans expediting its recovery post Katrina by handling and completing over 50 critical FEMA funded projects. Our staff has extensive experience in managing multi-million-dollar projects and programs for public infrastructure and CDBG disaster recovery.

The following is a brief list of the team's relevant experience:

- **Clearview & Airline Intersection Improvements, Jefferson Parish, LA**
- **Cousins Blvd Extension, Jefferson Parish, LA**
- **Design of Drainage Improvements at Labarre Road Railroad Crossing, Jefferson Parish, LA**
- **Pritchard Road Extension, New Orleans, LA**
- **Drainage Improvements to 14<sup>th</sup> Street, New Orleans, LA**
- **Planters Drainage Pump Station, New Orleans, LA**
- **N. Arnoult Drainage Pump Station Improvements, Jefferson Parish, LA**
- **Wright Road Improvements, New Orleans, LA**
- **France Road North Improvements, New Orleans, LA**
- **RR 016-019 Improvements, New Orleans, LA**

### **Quality Assurance / Quality Control Plan**

Our management team is comprised of experienced managers and task leaders with proven leadership who can thoughtfully bring together capable team members with exceptional technical skills, and support them with good QA/QC processes. Open lines of communication and weekly internal conference calls will ensure that the project is managed successfully within budget and schedule.

Pivotal maintains a comprehensive program to ensure that our projects bring the most value to our clients and are of high quality. Each Pivotal project has a comprehensive QA/QC plan to make sure our procedures and documentation conforms to our corporate policies and our client's requirements. QA/QC is much more than providing reviews and checking computations. Quality is a mindset that is shared by every member of the Pivotal team. It starts by clearly understanding expectations and making a commitment to meet them every day and with every deliverable. Each project review also includes some elements of internal value engineering. Our senior staff focuses not only on accuracy and completeness, but on value, optimization, simplicity, operations, maintenance, power cost, and constructability.

Our principals and staff have gained this experience not only through many years of providing services to this variety of clients on a very diverse portfolio of projects, but also through focused continuing education.

## TEC Professional Services Questionnaire

Pivotal Engineering's principals and staff have all been given accolades on their technical competence and knowledge of administering the contract plans and specifications per agency policy and procedure.

Pivotal believes that quality products and services result from having sound business practices, retaining talented staff, and focusing on being responsive to our client's needs. Our clients respect us for our philosophy of "doing the right things for the right reasons."

Quality is integrated into Pivotal's day-to-day business activities through our Quality Management System (QMS). The programs, policies, and business processes that comprise the QMS have four key elements:

- Focus - Management actively promotes quality in our business activities and defines responsibilities for maintaining a quality focus.
- Service - Staff members are trained, available, and committed to providing quality services.
- Delivery - Processes and procedures are in place that promotes quality in the delivery of our products and services.
- Improvement - Continual improvement is achieved through performance measurement and identification of areas for improvement.

Pivotal's senior management demonstrates its commitment to quality through establishing responsibilities for quality at all levels of the company, from company principals to members of management to the project team. Responsibilities are documented in Pivotal's QA/QC Program procedures. These procedures define how Pivotal delivers products and services to our clients.

### *Experience in creating and working with multi-disciplinary project delivery team:*

Pivotal Engineering's management team is comprised of experienced managers and task leaders with proven leadership, thoughtfully bringing together capable team members with exceptional technical skills, and supporting them with good QA/QC processes. Open lines of communication and weekly internal conference calls will ensure that the project is managed successfully, within budget and schedule.

Pivotal's approach to the assigned project includes integrated and comprehensive engineering services that include facility inventories, development of design criteria, assessment of major engineering components, preparation of specifications, and plans and associated construction cost.

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

Signature:  Print Name: Avinash Mehta, PE

Title: Principal-In-Charge Date: 3/11/2022

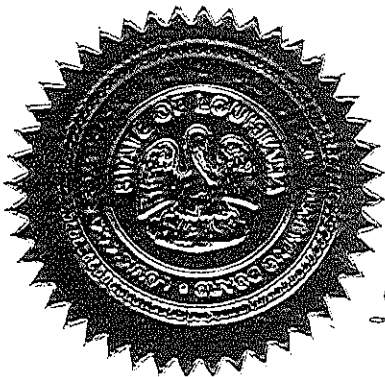
# Louisiana Professional Engineering and Land Surveying Board

*Hereby Certifies that*

Pivotal Engineering LLC

*has complied with the regulation of this Board and is authorized  
to provide or to offer to provide engineering services in the State of  
Louisiana contingent upon payment of the annual renewal fee.*

*Baton Rouge, Louisiana · 12/20/2012*



*License Number 5213*


*Michael J. Davis*  
\_\_\_\_\_  
*Jane E. Bawie* *Chairman*  
\_\_\_\_\_  
*Secretary*



LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD

As of 12/06/2018 , the Louisiana Professional Engineering and Land Surveying Board (LAPELS) has the following information on file:

Mr. Avinash Mehta  
1201 Giuffrias Avenue  
Metairie, LA 70001

	<b>LOUISIANA PROFESSIONAL ENGINEERING &amp; LAND SURVEYING BOARD (LAPELS)</b>	
	9643 Brookline Avenue, Suite 121 Baton Rouge, LA 70809 Phone (225) 925-6291 www.lapels.com	
<b>Mr. Avinash Mehta</b>		
License/Certificate Type - Number	Expiration Date	
PE.0035100	03/31/2022	
Status:	Active	
<p>Please be advised that your license must be in "Active" status in order for you to (a) provide or offer to provide engineering or land surveying services in Louisiana or (b) use the words "engineer", "engineering", "land surveyor", "land surveying" or any modification or derivative thereof in your name or in connection with your business or activities in Louisiana. Licensees whose licenses are in "Retired", "Inactive", or "Expired" status are prohibited from engaging in the activities described above in items (a) and (b).</p> <p>LA R. S. 37:689 requires firms practicing or offering to practice engineering or land surveying in the state of Louisiana to be licensed by the Board prior to offering such services.</p>		

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## LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD

As of 8/12/2021, the Louisiana Professional Engineering and Land Surveying Board (LPELS) has the following information on file:

Mr. Yoseph Yemane Shifare  
63 Eugenie Court  
New Orleans, Louisiana 70131

	<b>LOUISIANA PROFESSIONAL ENGINEERING &amp; LAND SURVEYING BOARD (LPELS)</b>	
	9643 Brookline Avenue, Suite 121 Baton Rouge, LA 70809 Phone (225) 925-6291 <a href="http://www.lapels.com">www.lapels.com</a>	
<b>Mr. Yoseph Yemane Shifare</b>		
License/Certificate Type - Number	Expiration Date	
<b>PE.0042747</b>	<b>03/31/2023</b>	
<b>Status: Active</b>		
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## LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD

As of 3/21/2022 the Louisiana Professional Engineering and Land Surveying Board (LPELS) has the following information on file:

Mr. Bassam Abdallah Mekari  
1515 Poydras Street, Suite 1875  
New Orleans, Louisiana 70112

	<b>LOUISIANA PROFESSIONAL ENGINEERING &amp; LAND SURVEYING BOARD (LPELS)</b>	
	9643 Brookline Avenue, Suite 121 Baton Rouge, LA 70809 Phone (225) 925-6291 www.lapels.com	
<b>Mr. Bassam Abdallah Mekari</b>		
License/Certificate Type - Number	Expiration Date	
<b>PE.0031801</b>	<b>09/30/2022</b>	
<b>Status: Active</b>		
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## LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD

As of 12/06/2018, the Louisiana Professional Engineering and Land Surveying Board (LPELS) has the following information on file:

Mr. James Edward Amodeo  
1511 Dublin Street  
New Orleans, LA 70118

	<b>LOUISIANA PROFESSIONAL ENGINEERING &amp; LAND SURVEYING BOARD (LPELS)</b>	
	9643 Brookline Avenue, Suite 121 Baton Rouge, LA 70809 Phone (225) 925-6291 <a href="http://www.lapels.com">www.lapels.com</a>	
<b>Mr. James Edward Amodeo</b>		
License/Certificate Type - Number	Expiration Date	
<b>PE.0036489</b>	<b>03/31/2022</b>	
<b>Status: Active</b>		
<p>Please be advised that your license must be in "Active" status in order for you to (a) provide or offer to provide engineering or land surveying services in Louisiana or (b) use the words "engineer", "engineering", "land surveyor", "land surveying" or any modification or derivative thereof in your name or in connection with your business or activities in Louisiana. Licensees whose licenses are in "Retired", "Inactive", or "Expired" status are prohibited from engaging in the activities described above in items (a) and (b).</p> <p>LA R. S. 37:689 requires firms practicing or offering to practice engineering or land surveying in the state of Louisiana to be licensed by the Board prior to offering such services.</p>		

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## LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD

As of 3/21/2022 the Louisiana Professional Engineering and Land Surveying Board (LPELS) has the following information on file:

Mr. John Adam Mekari  
438 Highland Trace Drive  
Baton Rouge, Louisiana 70810

	<b>LOUISIANA PROFESSIONAL ENGINEERING &amp; LAND SURVEYING BOARD (LPELS)</b>	
	9643 Brookline Avenue, Suite 121 Baton Rouge, LA 70809 Phone (225) 925-6291 <a href="http://www.lapels.com">www.lapels.com</a>	
<b>Mr. John Adam Mekari</b>		
License/Certificate Type - Number	Expiration Date	
<b>PE.0025415</b>	<b>09/30/2023</b>	
<b>Status: Active</b>		
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## LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD

As of 8/12/2021, the Louisiana Professional Engineering and Land Surveying Board (LPELS) has the following information on file:

Mr. Tarek Elnaggar  
192 Forest Oaks Drive  
New Orleans, Louisiana 70131

	<b>LOUISIANA PROFESSIONAL ENGINEERING &amp; LAND SURVEYING BOARD (LPELS)</b>	
	9643 Brookline Avenue, Suite 121 Baton Rouge, LA 70809 Phone (225) 925-6291 <a href="http://www.lapels.com">www.lapels.com</a>	
<b>Mr. Tarek Elnaggar</b>		
License/Certificate Type - Number	Expiration Date	
<b>PE.0023832</b>	<b>03/31/2023</b>	
<b>Status: Active</b>		
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## LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD

As of 12/06/2018, the Louisiana Professional Engineering and Land Surveying Board (LPELS) has the following information on file:

Mr. Sundiata Milton Marc  
5607 Baccich Street  
New Orleans, LA 70122

	<b>LOUISIANA PROFESSIONAL ENGINEERING &amp; LAND SURVEYING BOARD (LPELS)</b>	
	9643 Brookline Avenue, Suite 121 Baton Rouge, LA 70809 Phone (225) 925-6291 <a href="http://www.lapels.com">www.lapels.com</a>	
<b>Mr. Sundiata Milton Marcelin</b>		
License/Certificate Type - Number	Expiration Date	
<b>PE.0038589</b>	<b>09/30/2022</b>	
<b>Status: Active</b>		
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## LOUISIANA PROFESSIONAL ENGINEERING AND LAND SURVEYING BOARD

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Mr. Bryan Benjamin Smith  
2411 Richland Avenue, Apt. 231  
Metairie, Louisiana 70001

	<b>LOUISIANA PROFESSIONAL ENGINEERING &amp; LAND SURVEYING BOARD (LPELS)</b>	
	9643 Brookline Avenue, Suite 121 Baton Rouge, LA 70809 Phone (225) 925-6291 <a href="http://www.lapels.com">www.lapels.com</a>	
<b>Mr. Bryan Benjamin Smith</b>		
License/Certificate Type - Number	Expiration Date	
<b>PE.0043843</b>	<b>03/31/2022</b>	
<b>Status: Active</b>		
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