

Statement of Qualifications

Routine Engineering Services for Drainage Projects

Jefferson Parish Government
Resolution No. 138811

March 31, 2022



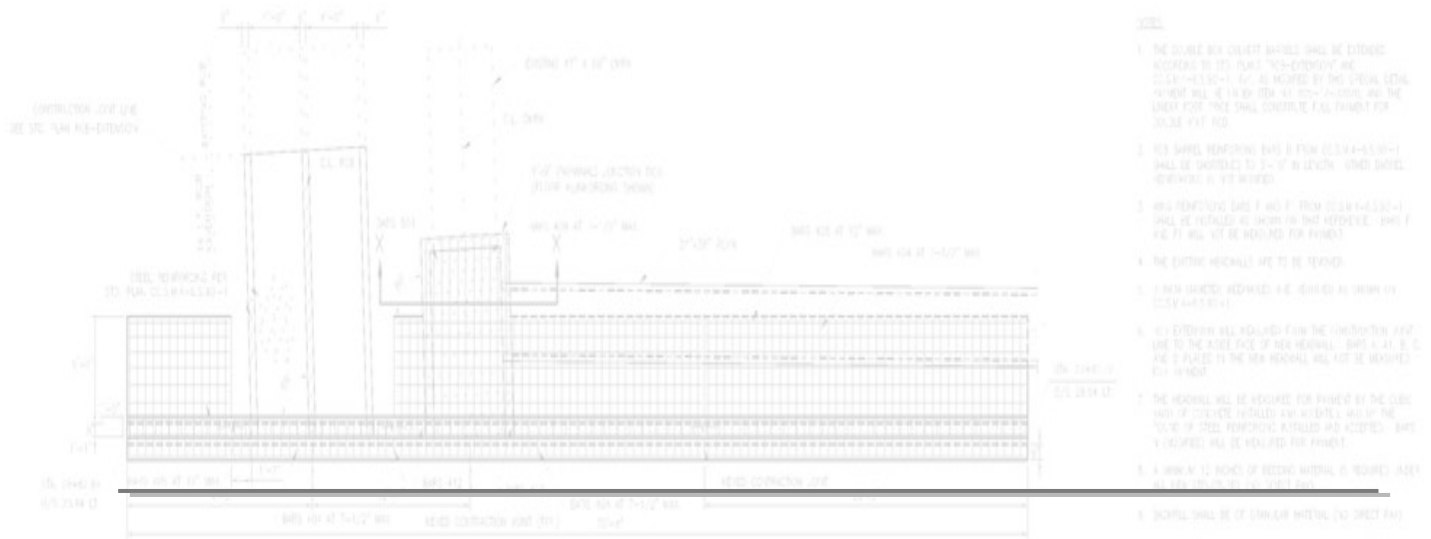
Submitted By:



PRINCIPAL *Infrastructure*®

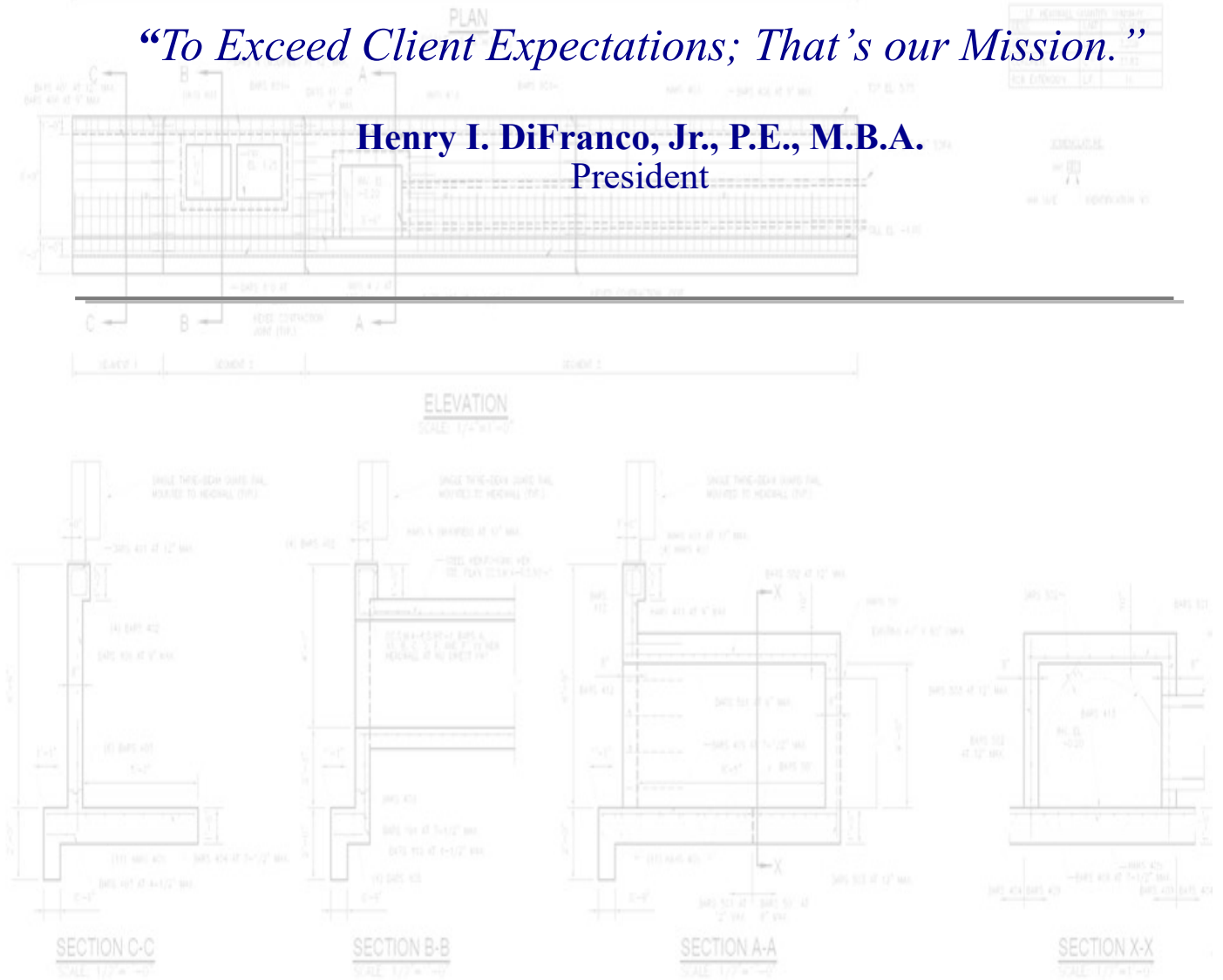


Architecture ♦ Engineering ♦ Construction



"To Exceed Client Expectations; That's our Mission."

Henry I. DiFranco, Jr., P.E., M.B.A.
President





1011 N Causeway Blvd, Suite 19 ♦ Mandeville, Louisiana 70471 ♦ Phone: 985.624.5001 ♦ Fax: 985.624.5303

March 25, 2022

Jefferson Parish
Procurement Department
200 Derbigny St., Suite 4400
Gretna, LA 70053

Re: Statement of Qualifications to provide routine engineering services for **Drainage Projects -- Resolution No. 138811**

Dear Sir or Madam,

PRINCIPAL Engineering, Inc. is pleased to submit our Statement of Qualifications for Routine Engineering Services for Drainage Projects in Jefferson Parish. We are a federal verified *Service-Disabled Veteran Owned Small Business (SDVOSB)* with an exceptionally qualified team of professionals capable of providing consulting engineering services.

We look forward to the opportunity to serve Jefferson Parish Government by providing quality engineering consulting services on an as-needed basis for miscellaneous projects located throughout Jefferson Parish. If you have any questions or require additional information, please contact me at the number above.

Sincerely,
PRINCIPAL Engineering, Inc.

A handwritten signature in blue ink that reads "Henry I. DiFranco, Jr.".

Henry I. DiFranco, Jr. PE
President



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www.pi-aec.com ♦ info@pi-aec.com

TEC Professional Services Questionnaire

A. Project Name and Advertisement Resolution Number:

Routine Engineering Services for Drainage Projects – Resolution No. 138811

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



**1011 N. Causeway Blvd., Suite 19
Mandeville, LA 70471**

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:

**Henry I. DiFranco, Jr., P.E.
President
1011 N. Causeway Blvd., Suite 19
Mandeville, LA 70471
(985) 624-5001 | henry@pi-aec.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.

**Dwayne Marlborough, P.E.
Project Manager
1011 N. Causeway Blvd., Suite 19
Mandeville, LA 70471
(985) 624-5001 | dwayne@pi-aec.com**

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

<u>3</u> Administrative	<u> </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>3</u> Graduate Engineers
<u>5</u> Civil Engineers	<u> </u> Interior Designers	<u>2</u> Project Managers
<u>6</u> Construction Inspectors	<u> </u> Landscape Architects	<u>2</u> Clerical
<u> </u> Ecologists	<u> </u> Land Surveyor	<u> </u> Grant/Funding Specialist
<u>1</u> Electrical Engineers	<u> </u> Mechanical Engineers	<u> </u> Sanitary Engineers
<u>2</u> Engineer Interns	<u> </u> Environmental Engineers	
<u> </u> Professional Land Surveyors	<u>6</u> CADD/Engineering Techs	<u>32</u>: TOTAL

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

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. This is not a Joint-Venture.
N/A

2. N/A

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):
N/A – Subcontractors for Surveying and/or geotechnical services shall be determined by the Parish upon selection of project assignments.		

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

10

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:

**Andre C. Monnot, PE
Vice President & Project Manager**

Project Assignment:

Professional in Charge of Project/Project Manager/H&H Modeling – meets minimum requirement “of a professional in charge of the project who is a registered professional engineer in the State of Louisiana with a minimum of five (5) years’ experience.”

Name of Firm with which associated:



Years' experience with this Firm:

13

Education: Degree(s)/Year/Specialization:

Bachelor of Science/Civil Engineering/2002.

Active registration: Year first registered/discipline:

Professional Engineer – 2007, Civil, Louisiana, #33626

Other experience and qualifications relevant to the proposed Project:

Mr. Monnot has a diverse range of engineering and management experience in both the public sector as a military engineer and as a private consultant. He has recently demonstrated experience in large-scale drainage modeling and planning, shoreline processes and shoreline protection. He has significant experience performing Master Drainage Plans utilizing XP-STORM, EPA-SWMM, HEC Delft3D Flow, Delft3D-Wave (SWAN), HEC-RAS, HEC-2, WSPRO, HY-8, RiverCAD, HEC-6T, CulvertMaster, MIKE URBAN, HEC-1, HEC-HMS, StormCAD, PondPack, FlowMaster, HydraFlow, LADOTD, HYDRO6020, AutoCAD Storm & Sanitary Analysis, and custom GIS-based applications for hydraulics and hydrology.

TEC Professional Services Questionnaire

Andre Monnot continued...

Project Experience:

Ozone Woods Drainage Improvements (H&H Modeling Report), St. Tammany Parish Gov't, LA

Mr. Monnot was the lead engineer for this project that included the H&H Modeling of the Ozone Woods Drainage basin in St. Tammany Parish, that consisted of detailed topographic survey, build of a calibrated existing condition hydrologic & hydraulic model in the EPA SWMM software platform for the 10-yr and 100-yr recurrence rainfall event, and modeling of improvement alternatives (~600 acres). Hydrologic and Hydraulic analysis of widespread area was performed to achieve desired water surface elevations through the pipe and ditch network. Design criteria for improvement modeling was established for the 10-yr event as storm water runoff contained within the ditch banks, and for the 100-yr event as generally below the finished floor elevation of structures. Two improvement alternatives, each satisfying one of the design criteria were developed, and the construction cost estimated. Given fiscal constraints, a reduced-criteria alternative was developed at lower construction cost; named the Modified 10-yr Improvement Alternative.

Lakefront Wetlands Restoration Permitting, City of Mandeville, LA

Mr. Monnot completed the permitting process for this Lake Pontchartrain shoreline project, including CUP authorization from DNR, section 404 permit from the USACE, Water Quality Certification from LADEQ, Class E Land Lease from LA State Lands Office, and U.S. Coast Guard Authorization. This included mitigation for submerged aquatic vegetation and implementation of construction noise reduction requirements to protect Gulf Sturgeon fingerlings and Manatee as required by NOAA.

St. Charles Parish – East Bank Master Drainage Plan, St. Charles Parish Gov't, LA

Mr. Monnot was the lead engineer for the development of an East Bank Master Drainage plan for St. Charles Parish for the Montz, Norco, New Sarpy and Ormond drainage basins (~5,000 acres). Mr. Monnot utilized XP-STORM, EPA SWMM and AutoDesk's Storm and Sanitary Analysis software platform to conduct H&H modeling for the 25-yr and 100-yr design storms (NOAA Atlas 14). The hydraulic model for this effort was developed using various datasets such as field surveys, GIS information and prior flood/drainage studies performed by the Parish. As a result, Principal provided various drainage improvement recommendations for the 25-yr and 100 yr storm event.

Waggaman Area Drainage Master Plan (H&H Modeling), Jefferson Parish Gov't, LA

Principal conducted an H&H study of the entire Lake Catouache drainage basin to determine which control projects will yield upstream flooding relief for residents, and open vacant property for development. Mr. Monnot was the project coordinator and responsible for overseeing plan preparation and quality control. Client: Jefferson Parish Gov't.


Mid-Barataria Sediment Diversion (MBSD) – CPRA (Client), Plaquemines Parish, LA

The Mid-Barataria Sediment Diversion project is one of the largest sediment capture and transport projects being undertaken under this aggressive program to rebuild the coast of Louisiana. Principal developed criteria to govern the alternative screening & selection, design, and detailing of armoring on the MRLs, headworks, and channel. Principal used H&H model result parameters (including inverted siphon diameters, profiles, weir geometry and elevations, approach geometry, outfall geometry, required blow-off locations and diameters) and operational requirements to develop concept-level plan and profile drawings of the inverted siphon conveyances and structures. Mr. Monnot is the lead PM for Principal Engineering and is providing hydraulic and structural engineering design for the project.

Waggaman Railroad Jack & Bore Drainage Improvements & R/R Crossing Study, Jefferson Parish Gov't, LA

Mr. Monnot was the lead Engineer where he was responsible for design of a new multiple 60-inch culvert crossing under the Union Pacific and BNSF Railroad embankment in Waggaman, Jefferson Parish. An additional 600 cfs will be drained to the south of the embankment during the 10-year event, relieving flooding in the local area. Nearly 7000 linear feet of drainage canal was enlarged to contribute and distribute flow to/from this new crossing. Construction cost: \$2.5M. Principal also performed an H&H Study to evaluate the area and all existing railroad crossings to recommend these improvements. Principal Engineering was responsible for Engineering drainage analysis, design and construction document preparation, bidding and construction administration and inspection.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Henry I. DiFranco, PE President & Principal Engineer
Project Assignment:
Project Principal/Contract Manager/QA/QC – Meets the requirement of one (1) principal who is a registered professional engineer in the State of Louisiana.
Name of Firm with which associated:

Years' experience with this Firm:
18
Education: Degree(s)/Year/Specialization:
Bachelor of Science/Civil Engineering/1991. MBA/Business Administration/1998.
Active registration: Year first registered/discipline:
Professional Engineer – 1997, Civil, Louisiana, #27448
Other experience and qualifications relevant to the proposed Project:
<p>Mr. DiFranco is the President of PRINCIPAL Engineering, Inc. and has over 31 years of experience in local, state and federal public works infrastructure engineering and management. Mr. DiFranco served as the Director of Public Works & Utilities for a local Parish and held numerous positions as a Parish Public Works Engineer (Jeff Parish) and Consulting Engineer throughout his career. As a Public Works Director/Engineer, he oversaw numerous drainage studies to include the SELA program (modeling) and a Parish wide Master Drainage Plan for St. John Parish. As a consultant, he worked on Master Drainage Plans and SDIPs for Jefferson Parish and numerous additional drainage projects that involved H&H Modeling. Mr. DiFranco is currently a Lt Colonel in the USAF Reserve serving as a Civil Engineer officer with the Air Force Civil Engineer Center and he is a veteran of Operation Iraqi Freedom and Noble Eagle. <i>Furthermore, Mr. DiFranco is the former Chairman of the St. Tammany, Levee, Drainage and Conservation District (Governor Appointed; 2014 – 2021), where he has been instrumental in the planning, scope writing and implementation for the development of a Coastal Master Plan for St. Tammany Parish.</i></p>

TEC Professional Services Questionnaire

Henry DiFranco continued...

Project Experience:

St. Charles Parish – East Bank Master Drainage Plan, St. Charles Parish Gov't, LA

Mr. DiFranco performed QA/QC for the development of an East Bank Master Drainage plan for St. Charles Parish for the Montz, Norco, New Sarpy and Ormond drainage basins (~5,000 acres). His team utilized XP-STORM, EPA SWMM and AutoDesk's Storm and Sanitary Analysis software platform to conduct H&H modeling for the 25-yr. and 100-yr. design storms (NOAA Atlas 14). The hydraulic model for this effort was developed using various datasets such as field surveys, GIS information and prior flood/drainage studies performed by the Parish. As a result, Principal provided various drainage improvement recommendations for the 25-yr. and 100 yr. storm event.

Old Mandeville Shoreline & Tidal Projection, City of Mandeville, LA

A drainage analysis and tidal/wave modeling were performed in an effort to protect areas along the Old Mandeville Lakefront from flooding during tidal/wave and rainfall events. Mr. DiFranco prepared the scope of work, reviewed all reports and models submitted by the design consultant, attended public meetings, and served as a liaison for the owner.

Ozone Woods Drainage Improvements (H&H Modeling Report), St. Tammany Parish Gov't, LA

Mr. DiFranco performed QA/QC for this the H&H Modeling Phase of the Ozone Woods Drainage Improvement project that consisted of detailed topographic survey, build of a calibrated existing condition hydrologic & hydraulic model in the EPA SWMM software platform for the 10-yr and 100-yr recurrence rainfall event, and modeling of improvement alternatives (~600 acres). Hydrologic and Hydraulic analysis of widespread area was performed to achieve desired water surface elevations through the pipe and ditch network. Design criteria for improvement modeling was established for the 10-yr event as storm water runoff contained within the ditch banks, and for the 100-yr event as generally below the finished floor elevation of structures. Two improvement alternatives, each satisfying one of the design criteria were developed, and the construction cost estimated. Given fiscal constraints, a reduced-criteria alternative was developed at lower construction cost; named the Modified 10-yr Improvement Alternative.

St. Tammany Parish Coastal Master Plan, St. Tammany Parish Gov't, LA

As the Chairman of the STLDCD, Mr. DiFranco developed the scope of work and is managing the collection and organizing of existing flood control assets and project data in the St. Tammany coastal zone; perform gap analysis to identify areas that are vulnerable to tidal surge, flooding and wetland loss/reduction; review current models to determine data gaps; develop conceptual coastal project alternatives, including costs; perform benefit/cost analyses; coastal engineering and design, as prioritized by the parish.

Waggaman Area Drainage Master Plan (H&H Modeling), Jefferson Parish Gov't, LA

Mr. DiFranco scoped and managed a H&H modeling study of the entire Lake Catouache drainage basin to determine which control projects will yield upstream flooding relief for residents, and open vacant property for development.


USACE IDIQ A/E Design and Construction Management - W912P8-09-D-0014, USACE New Orleans District, LA

Mr. DiFranco provided A/E design and construction management services for USACE flood control projects within the New Orleans district under a \$90M IDIQ Contract.

Airline Park Blvd. Drainage Improvements & Drainage Pump Station, Jefferson Parish Gov't, LA

The project includes the construction of a new drainage pump station at Airline Park and West Metairie Canal. PRINCIPAL analyzed area hydrology and performed hydraulic calculations to establish/verify proposed subsurface pipe sizes and to design a 45-cfs drainage pump station.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Dwayne Marlborough, P.E. Project Manager
Project Assignment:
Engineering Design - meets the minimum requirement of one (1) employee who is a registered professional engineer in the State of Louisiana in the applicable discipline involved.
Name of Firm with which associated:

Years' experience with this Firm:
2
Education: Degree(s)/Year/Specialization:
Bachelor of Science/Civil Engineering/1993.
Active registration: Year first registered/discipline:
Professional Engineer/2001/Civil/Louisiana, #29318
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Marlborough has over twenty-five years of experience in the civil and structural engineering design field. He has extensive experience in civil/structural engineering to include various types of flood control infrastructure design. He has designed numerous drainage projects to include structural and coastal protection efforts. Experienced in civil design, site, and structural design, developing and interpreting plans, cost estimating and on-site construction inspection and reporting. Mr. Marlborough worked on the St. Charles East Bank Master Drainage Plan, the Mid-Barataria Sediment Diversion and the Ozone Woods Drainage Improvement Project.</p>

TEC Professional Services Questionnaire

Dwayne Marlborough continued...

Project Experience:

Mid-Barataria Sediment Diversion (MBSD) – LA CPRA (Client), Plaquemines Parish, LA

The Mid-Barataria Sediment Diversion project is one of the largest sediment capture and transport projects being undertaken under this aggressive program to rebuild the coast of Louisiana. Principal developed criteria to govern the alternative screening & selection, design, and detailing of armoring on the MRLs, headworks, and channel. Principal used H&H model result parameters (including inverted siphon diameters, profiles, weir geometry and elevations, approach geometry, outfall geometry, required blow-off locations and diameters) and operational requirements to develop concept-level plan and profile drawings of the inverted siphon conveyances and structures. Mr. Marlborough is providing structural engineering for the project. The drainage structure includes 900 LF of six (6) 96-inch steel pipes with a variety of T-walls, wing walls and a 29-foot siphon wall.

Lower Lafitte (Orange Street Basin) Tidal Protection, Town of Jean Lafitte, LA

Principal is responsible for the design of new required earthen levees, including a description of the process for constructing required improvements to raise existing earthen levees to a top of levee elevation of 8.5 MSL, the design of new required Concrete-Capped Steel Sheet Pile Floodwalls to top of cap elevation 7.5 MSL. Also responsible for the determination of required rights-of-way, access easements, and limits-of-construction for the levees and floodwalls. Mr. Marlborough is providing structural engineering for the project.

Read Blvd. West Group C, New Orleans, LA (RR153), City of New Orleans DPW, LA

Acting as a Project Manager for the construction phase of this \$10.0 M project. The scope of this project includes subsurface drainage improvements, concrete roadway re-design and replacement, and water main improvements.


St. Charles Parish – East Bank Master Drainage Plan, St. Charles Parish Gov't, LA

Mr. Marlborough assisted with the development of an East Bank Master Drainage plan for St. Charles Parish for the Montz, Norco, New Sarpy and Ormond drainage basins (~5,000 acres). The engineering team utilized XPSTORM, EPA SWMM and AutoDesk's Storm and Sanitary Analysis software platform to conduct H&H modeling for the 25-yr and 100-yr design storms (NOAA Atlas 14). The hydraulic model for this effort was developed using various datasets such as field surveys, GIS information and prior flood/drainage studies performed by the Parish. As a result, Principal provided various drainage improvement recommendations for the 25-yr and 100 yr storm event. Mr. Marlborough was instrumental in assisting with the development of alternative solutions, incorporation into their existing flood control system and preparing cost estimates for the proposed improvements.

Ozone Woods Drainage Improvements (H&H Modeling Report), St. Tammany Parish Gov't, LA

Mr. Marlborough provided civil engineering drainage support for this project that included the H&H Modeling of the Ozone Woods Drainage basin in St. Tammany Parish, that consisted of detailed topographic survey, build of a calibrated existing condition hydrologic & hydraulic model in the EPA SWMM software platform for the 10-yr and 100-yr recurrence rainfall event, and modeling of improvement alternatives (~600 acres). Hydrologic and Hydraulic analysis of widespread area was performed to achieve desired water surface elevations through the pipe and ditch network. Design criteria for improvement modeling was established for the 10-yr event as storm water runoff contained within the ditch banks, and for the 100-yr event as generally below the finished floor elevation of structures. Two improvement alternatives, each satisfying one of the design criteria were developed, and the construction cost estimated. Given fiscal constraints, a reduced-criteria alternative was developed at lower construction cost; named the Modified 10-yr Improvement Alternative. Mr. Marlborough developed alternatives and cost estimates based on the design criteria.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Brien Croff, P.E. Project Engineer
Project Assignment:
Engineering Design
Name of Firm with which associated:

Years' experience with this Firm:
1
Education: Degree(s)/Year/Specialization:
Bachelor of Science/Civil Engineering/2015.
Active registration: Year first registered/discipline:
Professional Engineer – 2022/Civil/Louisiana/License No. 0046408 2020/Civil/Ohio/License No. 86190 Member of: Ohio EPA Certified Wastewater Treatment Operator
Other experience and qualifications relevant to the proposed Project: Mr. Croff will have responsibility for planning, reports, and reviews. Brien has experience in project management, design drafting, hydraulic modeling and analysis, and technical report writing specifically in the areas of water supply and wastewater infrastructure. Experience in Program/Contract Management: <ul style="list-style-type: none">-Data Analysis and Management-Environmental, Biological and Infrastructure Surveys-Environmental Studies and Reports-Water Resources Planning-Meeting/Reporting Requirements <p style="text-align: center;"><u>Project Experience:</u></p> Mid Barataria Sediment Diversion CPRA, Belle Chasse, LA <p>Project Engineer assistant for the design and cost estimate for a siphon in the Barataria Basin for the Mid-Barataria Sediment Diversion project for the State of Louisiana. This project consists of the analysis and design of different siphon structures to be integrated into the guide levees as well as the cost feasibility of alternatives Elements of design include reinforced concrete design and construction, using deep soil mixing for founding the structures and large-diameter pipelines, and access roads to and across the primary structures.</p>

TEC Professional Services Questionnaire

Brien Croff continued...

Project Experience:

Fontainebleau State Park Force Main, City of Mandeville

Mr. Croff is assisting with the design of this project in addition to completing the Coastal use permit application, permit drawings in progress, & submission of preliminary design draft as of early Jan. 2022. PRINCIPAL is performing Engineering Design and producing plans and specifications suitable for public bid, to replace the sanitary force main between City Lift Station 3, and the east bank of Bayou Castine. Design Submittals include 60%, 95% Pre-Final, and 100% Final. Engineer shall revise documents in accordance with City comments. Technical scope shall be according to the revised Pontchartrain Restoration Program (PRP) Work Plan.

St. Charles East Bank Master Drainage Plan-Phase I | St. Charles Parish Gov.

Phase I of the East Bank Master Drainage Plan for St. Charles Parish for the Montz, Norco, New Sarpy, and Ormond drainage basins (~5,000 acres of study area). Modeling platforms employed included XPSTORM, EPA SWMM, and Auto Desk's Storm and Sanitary Analysis. H&H modeling for the 25-yr and 100-yr design storms (NOAA Atlas14) was accomplished, and an integrated program of improvement projects developed for the design criteria. Datasets incorporated were drainage network GIS information validated against field survey; prior flood/drainage studies performed for the Parish in these areas, Lidar topography, public input and anecdotal evidence, present and historical aerial photography, and anticipated future flood control project effects (namely, West Lakeshore). The recommended program of Phase I projects total \$148M in construction cost, consisting of pumping station, conveyance, and detention improvements. (Completed: 2021) (Ongoing)

Quentin Road EQ Basin and Pump Station Improvements, Eastlake, Ohio

On this project, Mr. Croff was the design engineer. Responsibilities included developing a basis of design, drafting of construction plans, cost estimate, permit applications, and specifications. The purpose of the project was to construct a 1-million-gallon equalization storage basin on the site of an existing sewage pump station, as well as improvements to the existing pump station. The cost of the project was \$2.2 million.


Troy Oaks Pump Station – Geauga County, Ohio

On this project, Mr. Croff had the role of County project manager during design and construction. The purpose of the project was to decommission an existing wastewater treatment plant and construct a 75,000 gpd pump station in its place, which would discharge to another nearby treatment facility. The cost of the project was \$1.8 million.

List of Recently Worked / Working Projects:

- Third Street Drainage – Design 85% complete - **Jefferson Parish**
- Stall Ditch Drainage – Design 75% complete - **Jefferson Parish**
- Jung & Falcone Lift Station Improvements – Design 95% complete - **Jefferson Parish**
- Rachel St. Pump Station – Design 30% complete - Lafitte Levee District
- Effluent Pipeline Extension – Permitting 80% complete - City of Mandeville
- Herwig Bluff Lift Station Improvements – St. Tammany Parish
- Water Storage Tank Inspection and Rehab. – St. John The Baptist

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Natalya Munger, P.H., E.I. Project Manager
Project Assignment:
H&H Modeling / Engineering Design
Name of Firm with which associated:

Years' experience with this Firm:
1
Education: Degree(s)/Year/Specialization:
Master's Degree/Civil Engineering/1995.
Active registration: Year first registered/discipline:
American Institute of Hydrology/Professional Hydrologist (P.H.) No. 11-H-3005 E.I. Louisiana No. 0030985
Other experience and qualifications relevant to the proposed Project:
<p>Ms. Munger received her degree in civil engineering with minors in surface water hydrology and surveying (Accreditation Board for Engineering and Technology [ABET] accredited). Furthermore, Ms. Munger has professional qualifications as a professional hydrologist (surface water) from the American Institute of Hydrology and has received professional qualifications as a Certified Engineer Intern.</p> <p>Ms. Munger holds computer skills that enhance her credentials even further. Her computer skills include but are not limited to <i>AutoCAD</i>, <i>LA DOTD HYDROWINT</i>, <i>PCSWMM</i>, <i>FHWA WSPRO</i>, <i>HEC-18</i>, and <i>HEC-RA</i>.</p> <p>Natalya Munger will be the key engineer and professional hydrologist for hydrologic and hydraulic (H&H) and specialized modeling and overall environmental compliance.</p>

TEC Professional Services Questionnaire

Natalya Munger continued...

Prior Related Contract Roles:

- H&H Modeling
- Environmental and Risk Assessment Modeling
- Water Resources Planning

Project Experience:

St. Charles Parish East Bank Master Drainage Plan | St. Charles Parish, LA

Ms. Munger assisted in the preparation of Phase I of the East Bank Master Drainage Plan for the Montz, Norco, New Sarpy, and Ormond drainage basins. The model for this effort was developed through analysis of various datasets provided by the parish using XPSTORM, EPASWMM, and AutoDesk's Storm and Sanitary Analysis, resulting in detailed drainage improvement recommendations. (2020-2021)

Subsurface Drainage Design City of New Orleans Department of Public Works, Multiple Locations | New Orleans, Louisiana (ILSI Engineering, Inc.)

Ms. Munger prepared subsurface drainage design and hydraulic analysis using LADOTD HYDR6000 and HYDR6020 for multiple phases of New Orleans Department of Public Works project. Her work also included providing data points showing similar size and complexity. (2018 to 2020)

Southeast Louisiana Drainage Projects in Jefferson Parish | Jefferson Parish Department of Capital Projects | U.S. Army Corps of Engineers, Jefferson, Louisiana (BCG Engineering & Consulting)

Ms. Munger prepared design and construction cost credit reports for Southeast Louisiana Drainage Projects in Jefferson Parish. So far, 59 contracts have been issued under this program for drainage improvements, which included drainage canals, pumping stations, and bridges on both sides of the Mississippi River. The total program cost was \$650 million. (2012 to 2017)


Florida Avenue Development Federal Emergency Management Agency (FEMA) Eligible Road Repair | City of New Orleans Department of Public Works, New Orleans, LA (BCG Engineering & Consulting)

Ms. Munger prepared construction drawings and scoping reports for the Florida Avenue Development for road improvement projects that were eligible for FEMA funding. (2015 to 2018)


English Turn Drainage, City of New Orleans Sewerage and Water Board | New Orleans, LA (ILSI Engineering, Inc.)

Ms. Munger prepared a hydraulic model using PCSWMM for English Turn Subdivision to improve the capacity of the existing canals in the Algiers Sub-Basin and to increase the capacity of the nearby pump station. (2019)

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Eric Glynn, E.I. Project Engineer
Project Assignment:
Engineering Design
Name of Firm with which associated:

Years' experience with this Firm:
<1
Education: Degree(s)/Year/Specialization:
Bachelor of Science/Mechanical Engineering/2020.
Active registration: Year first registered/discipline:
2021/Engineer Intern (E.I.); Louisiana No. 0035028
Other experience and qualifications relevant to the proposed Project: <p>Mr. Glynn is currently assisting with modeling, site visits, plan markups, etc. etc. for PRINCIPAL on the following projects:</p> <ul style="list-style-type: none">• East Bank Drainage Master Plan – Modeling/Study 30% complete – St. Charles Parish• Ozone Woods Drainage - Design 100% complete - St. Tammany Parish• Lake Vista Group E – Design 100% complete - Department of Public Works New Orleans• Pointe a la Hache & Point Celeste Pump Station Rehabilitation – Evaluation 100%. Bellevue & Belair Pump Station Rehabilitation still evaluating – Plaquemines' Parish Gov.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Michael Melendez Senior Engineering Technician
Project Assignment:
CADD & H&H Modeling
Name of Firm with which associated:

Years' experience with this Firm:
17
Education: Degree(s)/Year/Specialization:
AS/Computer Aided Design Drafting/1999.
Active registration: Year first registered/discipline:
none
Other experience and qualifications relevant to the proposed Project: Mr. Melendez has an Associate's Degree of Occupational Science in Computer Aided Drafting from Southeast College of Technology. His coursework included drafting classes for architectural, mechanical, civil, piping, and electrical. During his studies, he maintained a 4.0 GPA and graduated with honors. His professional qualities include the ability to analyze a problem and present an accurate resolution. He is also detail oriented and focuses on quality and accuracy. Mr. Melendez is a seasoned Engineering Technician with the ability to perform engineering design and construction plan development in a professional and proficient manner. He has the technical know-how to produce a plan set in conformance with design standards for any type of Public Works Infrastructure improvement project with little up-front guidance. He is also proficient in all aspects of H&H modeling to include XPStorm, XPSWMM, StormCad, Civil 3D, GIS, and many software programs to include project cost estimating and scheduling.

TEC Professional Services Questionnaire

Michael Melendez continued...

Mr. Melendez was the lead Engineering CAD or Engineering Technician on the following projects:

Lower Lafitte (Orange Street Basin) Tidal Protection, Town of Jean Lafitte, LA

PRINCIPAL was responsible for the design of new required earthen levees, including a description of the process for constructing required improvements to raise existing earthen levees to a top of levee elevation of 8.5 MSL, the design of new required Concrete-Capped Steel Sheet Pile Floodwalls to top of cap elevation 7.5 MSL. Also responsible for the determination of required rights-of-way, access easements, and limits-of-construction for the levees and floodwalls.

Mid-Barataria Sediment Diversion – LA CPRA (Client), Plaquemines Parish, LA

The Mid-Barataria Sediment Diversion project is one of the largest sediment capture and transport projects being undertaken under this aggressive program to rebuild the coast of Louisiana. Principal developed criteria to govern the alternative screening & selection, design, and detailing of armoring on the MRLs, headworks, and channel. Principal used H&H model result parameters (including inverted siphon diameters, profiles, weir geometry and elevations, approach geometry, outfall geometry, required blow-off locations and diameters) and operational requirements to develop concept-level plan and profile drawings of the inverted siphon conveyances and structures.

St. Charles Parish – East Bank Master Drainage Plan (H&H Modeling), St. Charles Parish Gov't, LA

Mr. Melendez assisted with H&H models for the development of an East Bank Master Drainage plan for St. Charles Parish for the Montz, Norco, New Sarpy and Ormond drainage basins. He utilized XPSTORM, EPA SWMM and AutoDesk's Storm and Sanitary Analysis software platform to conduct H&H modeling for the 25-yr and 100-yr design storms (NOAA Atlas 14). The hydraulic model for this effort was developed using various datasets such as field surveys, GIS information and prior flood/drainage studies performed by the Parish. Modeling these areas will allow for an analysis to help prevent future street and house flooding on the Eastbank. As a result, Principal provided various drainage improvement recommendations for the 25-yr and 100-yr storm event.


Waggaman Area Drainage Master Plan (H&H Modeling), Jefferson Parish Gov't, LA

PRINCIPAL conducted an H&H study of the entire Lake Catouache drainage basin to determine which control projects will yield upstream flooding relief for residents, and open vacant property for development.

Airline Park Blvd. Drainage Pump Station, Jefferson Parish Gov't, LA

The project included the construction of a new drainage pump station at Airline Park and West Metairie Canal. PRINCIPAL analyzed area hydrology and performed hydraulic calculations to establish/verify proposed subsurface pipe sizes and to design a 45 cfs drainage pump station.

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Logan Richard Engineering Technician
Project Assignment:
CAD Design
Name of Firm with which associated:

Years' experience with this Firm:
1
Education: Degree(s)/Year/Specialization:
Bachelor of Science/Engineering Technology/2019.
Active registration: Year first registered/discipline:
NA
Other experience and qualifications relevant to the proposed Project: Mr. Richard has a Bachelor of Science in Engineering Technology. He has experience in the production of CADD designs for intricate coastal and drainage projects. Mr. Richard's strong work ethic and attention to detail does not go unnoticed by the PRINCIPAL <i>Engineering, Inc.</i> team. Logan Richard will be performing computer-aided design and drafting of figures and conceptual designs for upcoming projects . <div style="text-align: center;"><u>Project Experience:</u> St. Charles Parish East Bank Master Drainage Plan St. Charles Parish, La Mr. Richard assisted with the production of a recommended improvement report for Phase I of the East Bank Master Drainage Plan for St. Charles Parish for the Montz, Norco, New Sarpy, and Ormond drainage basins (approximately 5,000 acres of study area). This entailed assisting the engineering staff in the design of accurate drainage models for each drainage basin in the Autodesk® Storm and Sanitary Analysis (SSA) program. Models were created for both 25-year and 100-year storms & drainage improvement plans (& alternatives) were produced for each. (2021)</div>

TEC Professional Services Questionnaire

Logan Richard continued...

Project Experience:

Grand Isle Pump Station Jefferson Parish Government | Grand Isle, La (Principal Engineering, Inc.)

Mr. Richard assisted the engineering team by creating computer-aided drawings of project plans. The project objective is to construct a drainage pumping station at the site of an old pumping station, now out of service, at the north end of Chighizola Lane at the levee in Grand Isle, Louisiana. The station is to be constructed on an elevated timber platform, near the perimeter levee. Discharge will be through a short pipeline, through the levee, to the marsh north of the town. Access to the station deck will be by metal stairs from the levee access road. Pump hydraulics will be optimized for maximum flow given the town standard motor size (25 horsepower and 16 inches in diameter). A large diameter corrugated metal pipe culvert adjacent to the station will be replaced due to deterioration. The project requires a three-phase service, electric motor and diesel standby generator with manual transfer switch. (2021 to Present)

Delambert Pump Station Rehabilitation |St. Bernard Parish Government, St. Bernard Parish, La

Mr. Richard assisted the engineering team by creating computer-aided drawings for the sewer lift station rehabilitation project. (2021 to Present)

Ozone Woods Drainage |St. Tammany Parish Government, St. Tammany Parish, La

Mr. Richard assisted the engineering team by creating computer-aided drawings and exhibits for the drainage renovations to be conducted within the neighborhood of Ozone Woods. (2021 to Present)

Winchester National Cemetery |U.S. Department of Veterans Affairs, Winchester, Virginia

Mr. Richard assisted the engineering team by creating computer-aided drawings for the renovations to the existing buildings and utilities on cemetery grounds. (2021)

List of Most Recent Projects Worked/Working:

- Grand Isle Pump Station – Design 90% complete – **Jefferson Parish**
- Third Street Drainage - Design 85% complete – **Jefferson Parish**
- Woodmere Youth Center – Bidding Phase 0% – **Jefferson Parish**
- Woodmere Playground – Bidding Phase 75% – **Jefferson Parish** / Meyer Engineers
- Harbor Breakwater Repair – Design 99% complete – City of Mandeville
- Fontainebleau SP Force Main – Design 90% – City of Mandeville
- Grafton Dr. Pavement Rehab – Design 90% complete – Slidell
- EB Treatment Plant Roof – Design 10% complete – St. Charles Parish

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Emile Barré Construction Manager
Project Assignment:
Construction Administration
Name of Firm with which associated:

Years' experience with this Firm:
2
Education: Degree(s)/Year/Specialization:
Bachelor of Science/Mechanical Engineering/1994.
Active registration: Year first registered/discipline:
Engineer Intern (E.I.), No. 0001569 (Inactive; in process to renew E.I.)
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Barré is a dynamic professional with a proven record of building relationships, managing projects, guiding a team, while covering and reporting the details and finishing on time. Mr. Barré has over 27 years of experience in the construction and engineering profession. For the following projects, Mr. Barré serves as our construction administration.</p> <p style="text-align: center;"><u>Project Experience:</u></p> <p>Central Avenue Rehabilitation, Jefferson Parish, LA The project objective is to replace a 6" asbestos cement water main in the Central Ave. right of way between Airline Dr. and Karen Ave., with 12" C-900 PVC and 18" DR 11 HDPE. Existing fire hydrants, fittings, valves, domestic services, and fire services in the project limits will be replaced. Principal is providing engineering design, bidding, construction phase and project close-out services for the water main replacement. Project value \$3M.</p> <p>David Drive Corridor Improvements, Jefferson Parish, LA This project includes subsurface drainage improvements, concrete roadway replacement/widening, asphalt roadway mill and overlay with widening, 12" waterline installation, sidewalk replacement, driveway replacement and traffic signal modifications. Principal is administering construction. Project value \$8M.</p>

TEC Professional Services Questionnaire

Emile Barré continued...

Project Experience:

Roadway & Drainage Capital Improvement Program, City of Mandeville, LA

This project includes mill and overlay of asphalt streets citywide, concrete panel slab replacement, intersection redesigns, bridge repairs, and drainage improvements. Principal created the contract documents, performed engineering design, is administering construction, and providing resident inspection services. The contract has a value of \$5M.

Sewer and Water Maintenance Project, City of Mandeville, LA

This project is to provide maintenance to the City of Mandeville sewer and water system, including repair and/or replacement of sewer and water mains, service connections, manholes and fire hydrants. Project value \$2M.


Abita Springs Gravity Sewer Rehabilitation, St. Tammany Parish, LA

This project includes the rehabilitation of existing sanitary sewer mains, sanitary sewer laterals, sanitary sewer manholes and related appurtenances. Sewer mains predominantly rehabilitated by cured-in-place pipe. Sewer Laterals predominantly rehabilitated by chemical grout sealing. Some sections of sewer laterals dig and replace within roadway and include the rehabilitation of roadway. Project value \$2.5M.

List of Projects most recently worked / working:

- Upgrades to Leo Kerner Lafitte & Pritchard Sewer Lift Station – **Jefferson Parish** – Pre-Con. March 2022
- N. Pierce & Versailles Lift Station – **Jefferson Parish** – 97% Construction complete
- Lift Station 12 & 24 Rehab – City of Mandeville – 100% Close out
- Lift Station 16 & 26 Rehab – City of Mandeville – Beginning Construction
- Lift Station 35 & 38 Rehab – City of Mandeville – Bidding phase
- Life Station Rehabilitation – Town of Abita – 75% Construction complete
- Effluent Pump Station Rehab – City of Mandeville – 100% Close Out
- Sunset Point Restrooms – City of Mandeville – 96% Construction complete
- Westbank Trailhead – St. Charles – 99% Construction complete
- VA Fisher House Site Utility Design – Dept. of VA - 100% Close Out
- River Road Spillway Repair – St. Charles Parish - 100% Close Out
- Bayou Castine Bulkhead Repair – City of Mandeville – 100% Close Out
- Jesuit Bend Drainage Rehab – Plaquemines Parish Gov. – 100% Close Out
- Barrier Road Drainage Improvements – Plaquemines Parish Gov. – Beginning Construction
- Sisters Road Bridge Replacement – Tangipahoa Parish – 5% Construction complete

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Luther “Wade” Lucas Resident Inspector
Project Assignment:
Resident Inspection
Name of Firm with which associated:

Years’ experience with this Firm:
6
Education: Degree(s)/Year/Specialization:
N/A
Active registration: Year first registered/discipline:
N/A
Other experience and qualifications relevant to the proposed Project: Mr. Lucas has been a valuable part of the Principal Engineering resident inspection team bringing almost 20 years of experience in A/E/C industry. He has completed the following certifications and training: USACE QC Certification , 2007; OSHA 30HR, 2013; Advanced Blueprint Reading, 2009; Excavation Safety for Competent Person Training, 2008; Standard First Aid/CPR Training, 2008; Introductory to Crew Leadership, 2008; Level One CAT Tractor and Excavator Training , 2008; Construction Core Curriculum, 2007. <div style="text-align: center;"><u>Project Experience</u></div> Roadway & Drainage Capital Improvement Program, City of Mandeville, LA This project includes mill and overlay of asphalt streets citywide, concrete panel slab replacement, intersection redesigns, bridge repairs, and drainage improvements. Principal created the contract documents, performed engineering design, is administering construction, and providing resident inspection services. The contract has a value of \$5M. Mr. Lucas has performed resident inspection work on many locations related to this project.

TEC Professional Services Questionnaire

Wade Lucas continued...

Project Experience:

Central Avenue Rehabilitation, Jefferson Parish, LA

The project objective is to replace a 6" asbestos cement water main in the Central Ave. right of way between Airline Dr. and Karen Ave., with 12" C-900 PVC and 18" DR 11 HDPE. Existing fire hydrants, fittings, valves, domestic services, and fire services in the project limits will be replaced. Principal is providing engineering design, bidding, construction phase and project close-out services for the water main replacement. Project value \$3M.

Kenner Pavement Management, Kenner, LA

Part of field crew to evaluate 471 lane-miles of City-owned roadway. Collected data used to recommended optimum preventative maintenance, rehabilitation, and improvement budget level for Louisiana's 5th largest city. Defined specific project programs by year, according to City requirements.

Florida Extension Widening, City of Mandeville, LA

The project includes widening an existing one-way road into a two-way road. The road has several curves and limited right-of-way.


Oak Harbor Roadway Elevation RI, St. Tammany Parish, LA

Principal Engineering is responsible for providing the resident inspection services for this project which includes removing and replacing roadway pavement, raising the levee and roadway, hydro-seeding, installation of new drainage pipe and structures, incidental clearing, and other related work.

Other Projects:

- Jesuit Bend Drainage Rehab – Plaquemines Parish Government
- River Road Spillway Repair – St. Charles Parish
- St. Ann Water Tower Rehab – City of Mandeville
- Bayou Castine Sewall Repair – City of Mandeville
- Bayou Castine Bulkhead Repair – City of Mandeville
- Sewer & Water Maintenance – City of Mandeville
- New Golden Shores Water Main – City of Mandeville
- Three Rivers Road RI – St. Tammany Parish
- Oak Harbor Roadway Elevation RI – St. Tammany Parish

TEC Professional Services Questionnaire

KEY PERSON, SPECIALIST, OR INDIVIDUAL CONSULTANT:
Name & Title:
Kevin Burnthorne Resident Inspector
Project Assignment:
Resident Inspection
Name of Firm with which associated:

Years' experience with this Firm:
8
Education: Degree(s)/Year/Specialization:
NA
Active registration: Year first registered/discipline:
NA
Other experience and qualifications relevant to the proposed Project:
<p>Mr. Burnthorne has been an integral part of the Principal Engineering resident inspection team. His diligence and organization skills as well as being with PRINCIPAL for almost a decade makes him a valuable and reliable asset to our success.</p> <p style="text-align: center;"><u>Project Experience:</u></p> <p>Mariner's Village Water Main, City of Mandeville, LA Resident inspection for the installation of new water lines (approximately 5,400 linear feet of 8" PVC water line by open cut method, 2,600 linear feet of 8" fusible PVC water line by jack & bore or horizontal directional drilling, and 600 linear feet of 6" HDPE water line), replacement of fire hydrants, water meters, and service lines and all other incidental work.</p> <p>Central Avenue Rehabilitation, Jefferson, LA Replace a 6" asbestos cement water main in the Central Ave. right-of-way between Airline Dr. and Karen Ave. with 12" C-900 PVC and 18" DR 11 HDPE using direct bury and horizontal directional drilling. Existing fire hydrants, fittings, valves, domestic services, and fire services were replaced, and additional fire service taps and stub outs were added to service large commercial facilities. Principal Engineering was responsible for coordination of surveys and other investigations, preparation of detailed construction plans, specifications, and contract documents.</p>

TEC Professional Services Questionnaire

Kevin Burnthorne continued...

Project Experience:

Roadway & Drainage Capital Improvement Program, City of Mandeville, LA

This project includes mill and overlay of asphalt streets citywide, concrete panel slab replacement, intersection redesigns, bridge repairs, and drainage improvements. Principal created the contract documents, performed engineering design, is administering construction, and providing resident inspection services. The contract has a value of \$5M. Mr. Burnthorne has performed resident inspection work on many locations related to this project.

Kenner Pavement Management, Kenner, LA

Part of field crew to evaluate 471 lane-miles of City-owned roadway. Collected data used to recommend optimum preventative maintenance, rehabilitation, and improvement budget level for Louisiana's 5th largest city. Defined specific project programs by year, according to City requirements.

Read Boulevard West Group C, New Orleans, LA (RR153)

This project includes the design of \$14 million worth of street and water line improvements for the Read Blvd West neighborhood in New Orleans. The project consisted of rehabilitation of infrastructure that had been damaged and/or met its useful design life

Other Projects:

- Old Golden Shores Water Main – City of Mandeville
- New Golden Shores Water Main – City of Mandeville
- St. Ann Water Tower Rehab – City of Mandeville
- Monroe St. Drainage – City of Mandeville
- Water Meter System Upgrade – City of Mandeville
- Sewer & Water Maintenance – City of Mandeville
- Emerald Forest Extension – St. Tammany Parish

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:
St. Charles Parish – East Bank Master Drainage Plan St. Charles Parish, LA St. Charles Parish Department of Public Works 100 River Oaks Drive Destrehan, LA 70047 Miles Bingham, DPW Phone: (985) 783-5102	PRINCIPAL performed a Phase I East Bank Master Drainage plan for St. Charles Parish for the Montz, Norco, New Sarpy and Ormond drainage basins (~5,000 acres of study area). Phase I is 100% complete and the Parish engaged PRINCIPAL for a Phase II to include additional East Bank drainage basins. PRINCIPAL utilized XPSTORM, EPA SWMM and AutoDesk's Storm and Sanitary Analysis software platform to conduct H&H modeling for the 25-yr and 100-yr design storms (NOAA Atlas 14). The hydraulic model for this effort was developed using various datasets such as field surveys, GIS information and prior flood/drainage studies performed by the Parish. PRINCIPAL provided various drainage improvement recommendations for the 25-yr storm event.
Completion Date (Actual or estimated):	Estimated Cost:
	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%; text-align: center;">Entire Project:</div> <div style="width: 45%; text-align: center;">Work for which Firm was Responsible:</div> </div>
2022	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%; text-align: center;">\$700K (Engineering Fee – Phase I)</div> <div style="width: 45%; text-align: center;">100%</div> </div>

PROJECT NO. 2

Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:
Fairfield & Oakland Drainage System Improvements H&H Modeling St. Charles Parish, LA St. Charles Parish Department of Public Works 100 River Oaks Drive Destrehan, LA 70047 Miles Bingham, DPW Phone: (985) 783-5102	This project involved analyzing the existing drainage basin of the Fairfield and Oakland subdivisions and preparing an Evaluation and Conceptual Design report, and design plans for two new drainage pump stations. The existing system consists of two drainage pump stations with a combined capacity of 90 cubic feet per second pumping capacity and a drainage area of 140 acres. PRINCIPAL prepared an H&H model utilizing USACE HEC RAS & HMS software to evaluate the existing conditions to identify deficiencies within the conveyance and pumping systems. The current effort includes the preliminary design of new pump stations with the preparation of construction documents for a new discharge pipeline. Principal Engineering is responsible for Engineering Design & Construction Documents, Bidding, Construction Administration & Resident Inspection.
Completion Date (Actual or estimated):	Estimated Cost:
	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%; text-align: center;">Entire Project:</div> <div style="width: 45%; text-align: center;">Work for which Firm was Responsible:</div> </div>
Original Project – March 2014 Current Project – Ongoing	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%; text-align: center;">\$8.0M</div> <div style="width: 45%; text-align: center;">100%</div> </div>

TEC Professional Services Questionnaire

PROJECT NO. 3		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility	
Ozone Woods Drainage Improvements (H&H Modeling Report) St. Tammany Parish, LA St. Tammany Parish, LA Department of Engineering 21454 Koop Drive Mandeville, LA 70471 Daniel Hill, Director Phone: (985) 898-2552	The H&H Modeling Phase of Ozone Woods Drainage Improvements consisted of detailed topographic survey, build of a calibrated existing condition hydrologic & hydraulic model in the EPA SWMM software platform for the 10-yr and 100-yr recurrence rainfall event, and modeling of improvement alternatives (~600 acres). Hydrologic and Hydraulic analysis of widespread area was performed to achieve desired water surface elevations through the pipe and ditch network. Design criteria for improvement modeling was established for the 10-yr event as storm water runoff contained within the ditch banks, and for the 100-yr event as generally below the finished floor elevation of structures. Two improvement alternatives, each satisfying one of the design criteria were developed, and the construction cost estimated. Given fiscal constraints, a reduced-criteria alternative was developed at lower construction cost; named the Modified 10-yr Improvement Alternative.	
Completion Date (Actual or estimated)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2022	\$300,000 (fee)	100%

PROJECT NO. 4		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Waggaman Railroad Jack & Bore Drainage Improvements & R/R Crossing Study Jefferson Parish, LA Jefferson Parish Department of Drainage PM - Mitchell T. Theriot, P.E, Director 1221 Elmwood Park Blvd., Suite 907 Jefferson, La. 70123 Phone: (504) 736-6751	PRINCIPAL was responsible for design of a new multiple 60-inch culvert crossing under the Union Pacific and BNSF Railroad embankment in Waggaman, Jefferson Parish. An additional 600 cfs will be drained to the south of the embankment during the 10-year event, relieving flooding in the local area. Nearly 7000 linear feet of drainage canal was enlarged to contribute and distribute flow to/from this new crossing. Construction cost: \$2.5M. Principal also performed an H&H Study to evaluate the area and all existing railroad crossings to recommend these improvements. Principal Engineering was responsible for Engineering drainage analysis, design and construction document preparation, bidding and construction administration and inspection.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
January 2017	\$3,000,000	100%

TEC Professional Services Questionnaire

PROJECT NO. 5		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Mid-Barataria Sediment Diversion (BA-153) Plaquemines Parish, LA State of Louisiana Coastal Protection and Restoration Authority Sub-Consultant to AECOM Bruce Lelong, PE, AECOM (504) 799-1334	PRINCIPAL developed criteria to govern the alternative screening & selection, design, and detailing of armoring on the MRLs, headworks, and channel. Design Criteria was according to USACE EM guidance, experience from past MR diversion projects, and judgement applied to the MBSD project; and provided in written narratives and or/lists. Principal used H&H model result parameters (including inverted siphon diameters, profiles, weir geometry and elevations, approach geometry, outfall geometry, required blow-off locations and diameters) and operational requirements to develop concept-level plan and profile drawings of the inverted siphon conveyances and structures. Principal performed civil and structural engineering for the drainage structures of the inverted siphon that included 900 LF of 6-96-inch steel pipes with various T-Walls, Wing Walls, and intake/discharge structural headwalls (29-ft high) to 85% design completion.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2022 (Est.)	\$900,000,000 \$50,000,000 (Principal Portion)	100% scope above 5% of total contract

PROJECT NO. 6		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
U.S Army Corps of Engineers A/E Design & CPS IDIQ Contract #W912P8-09-D-0014 US Army Corps of Engineers New Orleans District (HPO) 7400 Leake Ave New Orleans, LA 70118 Al Naomi (AECOM) Phone: (504) 799-1322	PRINCIPAL provided design and construction services support for multiple levee and flood protection projects under seven separate task orders including; LPV 109.02A (South Point to CSX), LPV 111.01 (CSX to Michoud Canal) and LPV 109.02B (I-10 Ramp). Principal's duties were primarily to assist in the design process, prepare ROW drawings and misc. design support for the preparation of the construction documents for levee, flood wall and drainage pump station projects. Principal was also given two separate Task Orders to provide a Project Engineer and Field Inspector (QAR) for Construction Phase Services to the USACE New Orleans District for floodwall construction and elevation of hurricane protection levees to the 2011 100-yr level. This work was spread over four projects totaling over \$50M in construction cost.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2014	\$500,000 (sub-fee)	100%

TEC Professional Services Questionnaire

PROJECT NO. 7		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Waggaman/Avondale Area Drainage Master Plan- H&H Modeling Jefferson Parish, LA Jefferson Parish Department of Drainage PM - Mitchell T. Theriot, P.E, Director 1221 Elmwood Park Blvd., Suite 907 Jefferson, La. 70123 Phone: (504) 736-6751	PRINCIPAL completed a drainage H&H model to study the drainage conveyance and drainage pump stations in the Waggaman/Avondale area to include evaluating inadequate drainage crossings under the railroad tracks between the Mississippi River Levee and Hwy 90. The project required the collection of topographic survey data and the input of data into an existing conditions hydraulic model. A hydrologic model was constructed to simulate an actual rainfall event. USACE HEC-HMS and HEC RAS were used as the modeling software. A H&H study was conducted of the entire basin draining to Lake Catouache. Nearly 29 miles of open channel flow were modeled, contributing an estimated 13,500 cfs to the outfall. USACE HEC-HMS and HEC RAS was used to develop existing and improved state models, determining what combination of flood control projects will yield upstream flooding relief for residents, and open additional vacant property for development. This included various combinations of pump station alternatives along with major conveyance improvements.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2015	\$500,000 (fee)	100%

PROJECT NO. 8		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Subsurface Drainage Improvement Program (SDIP)- H&H Modeling Jefferson Parish, LA Jefferson Parish Department of Drainage PM - Mitchell T. Theriot, P.E, Director 1221 Elmwood Park Blvd., Suite 907 Jefferson, La. 70123 Phone: (504) 736-6751	PRINCIPAL performed and developed H&H models to evaluate repetitive loss/flooding areas within existing neighborhood subsurface drainage systems as a sub consultant. The models were created using a combination of and analyzing GIS, LiDAR, and topographic survey data for pipe sizes and invert elevations. The project included the creation of an existing condition model, calibration of the model, evaluating existing conditions to propose alternative solutions for a dry street and one passable lane condition and the development of a report with recommended solutions and cost estimates for delivery to the Parish. The project utilized EPA 5.0 SWMM hydraulic modeling software. Principal was also selected to perform engineering design for the Orleans Village Drainage Improvement Project which was one of the several study areas under this project. That project includes 2800 linear feet of drainage pipe installation up to 60" in diameter for a cost of \$3.0M.	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2012	\$300,000 (sub-fee)	100%

TEC Professional Services Questionnaire

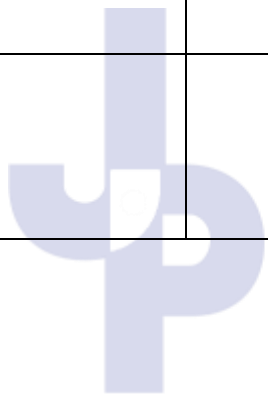
PROJECT NO. 9		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility:	
Orleans Village Drainage Improvements Jefferson Parish, LA Jefferson Parish Department of Drainage PM - Mitchell T. Theriot, P.E, Director 1221 Elmwood Park Blvd., Suite 907 Jefferson, La. 70123 Phone: (504) 736-6751	PRINCIPAL prepared design drawings and construction specifications for the upsizing of subsurface drainage conveyance piping in a residential area of Jefferson Parish. The project scope was a result of the work performed under the SDIP program where H&H interior conveyance modeling was performed, and solutions were recommended to the Administration. Over 2800 linear feet of pipe was replaced, up to 60" in diameter. Over 2600 linear feet of roadway was replaced during the installation of the new drain lines. The project had a construction cost of ~\$2.5M. Principal Engineering was responsible for Engineering Design & Construction Documents; Bidding, Construction Administration & Resident Inspection	
Completion Date (Actual or estimated):	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
May 2016	\$2.5M	100%

PROJECT NO. 10		
Project Name, Location and Owner's contact information:	Nature of Firm's Responsibility	
Airline Park Blvd Drainage & New Drainage Pump Station Jefferson Parish, LA Jefferson Parish Department of Drainage PM - Mitchell T. Theriot, P.E, Director 1221 Elmwood Park Blvd., Suite 907 Jefferson, La. 70123 Phone: (504) 736-6751	PRINCIPAL analyzed area hydrology and performed hydraulic calculations to establish/verify proposed subsurface pipe sizes and completed hydrodynamic computer modeling of the system to adequately address limited hydraulic storage available for a new 45 cfs drainage pump station (10-yr water surface elevation at outfall is higher than the street). This project also includes reconstruction of 2500 L.F. two-lane, two-way concrete roadway with parking lanes, removal and replacement of mainline subsurface drainage, maintenance of traffic through detour of west-bound W. Metairie Ave (arterial with over 20,000 ADT) to facilitate construction, replacement of concrete side streets at the intersections, replacement of water and sewer house connections, and adjustment/replacement of existing manholes, catch basins, water facilities, and sewer facilities as necessary. Analyzed area hydrology, performed hydraulic calculations to establish subsurface pipe sizes and inlet spacing	
Completion Date (Actual or estimated)	Estimated Cost:	
	Entire Project:	Work for which Firm was Responsible:
2018 (Construction)	\$4.5M	100%

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 - NONE		
2.		
3.		
4.		

 **Jefferson
Parish**
State of Louisiana

TEC Professional Services Questionnaire

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

Company Profile:

PRINCIPAL Engineering, Inc. (PRINCIPAL) is a full-service consulting Architecture, Engineering and Construction services (A/E/C) firm specializing in the following disciplines: **Architectural, Civil, Environmental, Structural, Electrical and Mechanical and Construction Engineering Services**. Founded in 2004, we have been successfully providing professional services to federal, state, parish, and city government agencies since our inception. Over **90 percent** of our work is from governmental agencies.

PRINCIPAL is pleased to report that we are solvent and in a solid financial condition. We have a healthy cash flow, no outstanding debts and a favorable cash reserve. In addition to our capital reserves, PRINCIPAL has a significant cash line of credit which gives us the capacity to deploy resources when and where needed to meet the needs of our clients. We have the capacity, capability, and experience to **evaluate and design drainage infrastructure improvements** for Jefferson Parish and we have successfully completed numerous public infrastructure engineering projects for Jefferson Parish to include a Master Drainage Plan for the Avondale/Waggaman drainage basin and we worked on the Storm Drainage Improvement Program (SDIP) for the Parish. PRINCIPAL's President and Vice President are former active-duty military engineering officers and current reserve forces military engineering officers that have past successful experience working on CONUS and OCONUS US Army and US Air Force DOD Facility and Civil Works Projects.

PRINCIPAL is a verified Service-Disabled Veteran Owned Small Business (SDVOSB) with the Center for Veterans Enterprise (CVE) and PRINCIPAL is also a certified Disabled Veteran and Hudson Initiative Small Business and a Small and Emerging Business Enterprise with the Louisiana Department of Economic Development.

PRINCIPAL Engineering, Inc. is fully licensed and insured to perform architectural and engineering services in the State of Louisiana. The firm is registered as a corporation with the State of Louisiana, Office of the Secretary of State and is licensed as an Engineering Firm with the **Louisiana Professional Engineering and Land Surveying Board; License no. 3168** and the **Louisiana Board of Architectural Examiners; License No. AE 0232**. In addition, we are currently licensed to practice professional engineering in **twenty-five states**.

PRINCIPAL Engineering® is a federally registered service mark.

Response to Selection Criteria

1. Professional Training and Experience

Since 2004, Principal Engineering has performed A/E services for nearly every municipal government agency in the New Orleans Metropolitan area and all are repeat clients. As a result, PRINCIPAL has a proven history of local public infrastructure engineering and construction success as well as established local relationships that have been built on these accomplishments. In addition, PRINCIPAL's president is a past local Public Works and Utilities Director and Public Works Engineer and is the former Chairman of the St. Tammany Levee, Drainage and Conservation District where local community involvement continued. PRINCIPAL is very familiar and has intimate knowledge of the Jefferson Parish Drainage Basins; therefore, PRINCIPAL can easily navigate and facilitate communication with all the stakeholders involved with any Master Drainage Plan Effort. Presently, PRINCIPAL prepared an **EAST BANK MASTER DRAINAGE PLAN for St. Charles Parish** where we have 100% completed Phase I which included four major drainage basins. As a result of our work, St. Charles Parish has selected us for Phase II which will include **H&H Modeling** of the remaining East Bank Drainage Basins. Furthermore, PRINCIPAL's President is a former USACE employee that has deep institutional knowledge regarding H&H modeling to include federal policies, programs, procedures, and design criteria with regard to civil works infrastructure improvement endeavors.

TEC Professional Services Questionnaire

Professional Training and Experience Continued....

PRINCIPAL employs engineers that are fully capable of conducting complex engineering and design for Drainage Master Plan endeavors. Our engineers utilize state-of-the-art modeling and GIS applications in all phases of water resources planning and engineering, including hydrodynamic, hydrologic, hydraulic, wave mechanics, and water quality analysis. **Our Team's software competency includes Delft3D Flow, Delft3D-Wave (SWAN), HEC-RAS, HEC-2, WSPRO, HY-8, RiverCAD, HEC-6T, CulvertMaster, EPA-SWMM, MIKE URBAN, HEC-1, HEC-HMS, StormCAD, PondPack, FlowMaster, HydraFlow, LADOTD, HYDRO6020, XPStorm 19.1, AutoCAD Storm & Sanitary Analysis, and custom GIS-based applications for hydraulics and hydrology.**

Key Personnel Training & Experience

- **Henry DiFranco, PE**, is **President** of Principal Engineering, Inc. and has over 31 years of experience in local, state and federal public works engineering and management. Mr. DiFranco served as the **Director of Public Works & Utilities** for a local Parish and held numerous positions as a Parish Public Works Engineer and Consulting Engineer. He is also a **Lt Colonel in the USAF Reserve** serving as a **Civil Engineer officer** with the Air Force Civil Engineer Center and is a **veteran of Operation Iraqi Freedom and Noble Eagle**. Furthermore, Mr. DiFranco is the **former Chairman of the St. Tammany, Levee, Drainage and Conservation District (Governor Appointed - 2014 to 2021)**, where he has been instrumental in the planning, scope writing and implementation for the development of a **Coastal Master Plan for St. Tammany Parish**.
- **Andre Monnot, PE**, is **Vice President** of Principal Engineering, Inc. and has a diverse range of planning, engineering design and management experience in both the public sector, as a military engineer, and as a private consultant. He has demonstrated experience in large-scale H&H drainage modeling and planning, shoreline processes and shoreline protection. He has been the lead engineer for the CPRA's Mid Barataria Sediment Diversion project and the **Lake Pontchartrain Shoreline Protection and Restoration** for the City of Mandeville. Mr. Monnot was the **ENGINEER IN CHARGE** of the **Jefferson Parish Avondale/Waggaman Area Master Drainage Plan**, Waggaman Railroad Jack & Bore, Orleans Village (SDIP) project and he is currently the lead on the **St. Charles East Bank Master Drainage Plan**.
- **Dwayne Marlborough, PE**; over twenty-five years of experience in public works engineering infrastructure improvement projects. He most recently performed hydraulic and structural engineering analysis for the Mid-Barataria Sediment Diversion (MBSD) project that included the design of large diameter culvert crossings, T-Wall flood control and intake structures and wing walls. He is experienced in numerous software applications and has worked on major flood control projects in south Louisiana. In addition, he provided cost estimating analysis for recommended flood control and drainage improvement projects for Principal Engineering's **Master Drainage Plan** alternative improvements presented to St. Charles Parish
- **Brien Croff, PE**; Mr. Croff has experience in project management, design drafting, hydraulic modeling and analysis, and technical report writing specifically in the areas of water supply and wastewater infrastructure. He will support the project planning and conceptual design of coastal and water resource projects as well as site visits as needed.
- **Natalya Munger, PH, EI**; received her degree in civil engineering with minors in surface water hydrology and surveying (Accreditation Board for Engineering and Technology [ABET] accredited). Furthermore, Ms. Munger has professional qualifications as a professional hydrologist (surface water) from the American Institute of Hydrology and has received professional qualifications as a Certified Engineer Intern. Ms. Munger holds computer skills that enhance her credentials even further. Her computer skills include but are not limited to AutoCAD, LA DOTD HYDROWINT, PCSWMM, FHWA WSPRO, HEC-18, and HEC-RAS. PRINCIPAL Engineering, Inc. is honored to have Mr. Munger's background/experience as a vital contribution to our team.

TEC Professional Services Questionnaire

2. Capacity for Timely Completion

Based on a review of our current and projected workload, our current staff has the capacity to add new projects to our current design workload. Principal strives to carefully schedule our workload and we would not bring on any assignment if we did not have the capacity, experience, or resources to complete the project within the client's anticipated schedule. We work closely with the client to develop a schedule that meets their needs for completion. A snapshot of some of our current Jefferson Parish workload, current phase and recent project additions include the following:

- ◆ JPG – N. Pierce & Versailles Sewer LS – Construction – 97% Complete
- ◆ JPG – Marrero WWTP Imp – Construction – 95% Complete
- ◆ JPG – Lafitte & Pritchard Sewer LS – Bidding/Contract Phase – 100% - Pre-Construction Meeting March 2022
- ◆ JPG – Jung Blvd & Falcone St. – Design – 95% Complete
- ◆ JPG – Smart Growth – Whitney Ave Bike Lane – Design – 95% Design Submitted
- ◆ JPG – Cleary & Bright Playground Gym Reno – Record Drawing – 100% Complete – Close Out 50%
- ◆ JPG – Destrehan Sewer Lift Station – Design – 30% Review Submitted
- ◆ JPG – Grand Isle Pump Station – Design – 90% Complete
- ◆ JPG – CA for David Drive Imp – Construction – 50% Complete
- ◆ JPG – Laketown Boat Launch – Design – 90% Complete
- ◆ JPG – Laketown Rock Jetty – Design – 50% Complete
- ◆ JPG – Woodmere Playground – Design 90% Complete (Sub to Meyer)
- ◆ JPG – Third Street Drainage – Design – 85% Complete
- ◆ JPG – Stall Ditch Drainage – Design – 75% Complete
- ◆ JPG – Bucktown Marsh Overlook Structure – Design – 90% Complete
- ◆ JPG – Woodmere Youth Center Renovations – Bidding Phase

Furthermore, with an average of thirty-two (32) full-time employees PRINCIPAL has an approximate current capacity of \$5.5M annually. Our current monthly billing average is approximately \$350K for an average yearly gross billing of \$4.2M. Therefore, our current existing capacity to initiate backlog and take on new projects is over \$1.0M annually.

3. Location of the Principal Office Performing Work

Our St. Tammany Parish, LA office, located right off the Causeway bridge at **1011 N. Causeway Blvd., Suite 19, Mandeville, LA.**

4. Adversarial Legal Proceedings

Principal Engineering, Inc. has no past or current litigation with Jefferson Parish Government, and we have no history of litigation with any governmental/municipal client.

5. Prior Successful Completion of Projects of this Type and Nature

As our project qualifications indicate, we have very recently completed a Phase I East Bank Master Drainage Plan for St. Charles Parish Government. In addition, PRINCIPAL performed Master Drainage Plan work directly for Jefferson Parish and has performed numerous H&H studies for a variety of drainage improvement projects. Furthermore, we have completed numerous drainage pump station design and construction projects across SE LA. References for our projects as presented in the TEC Questionnaire are provided for each of the listed projects. A partial list of local governmental clients is also provided below, and we welcome the selection committee to contact our references.

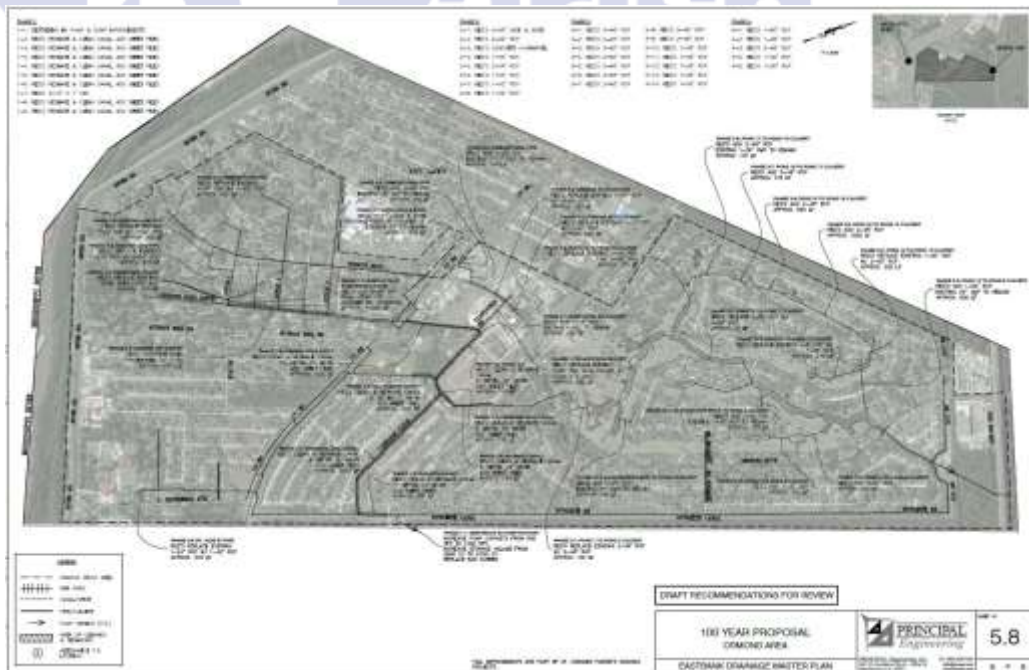
TEC Professional Services Questionnaire

5. (Continued)

As an example of Principal Engineering's recent work for St. Charles Parish Gov't on their **East Bank Master Drainage Plan**, below are "example" exhibits from the 100% report submitted:



Existing Condition 100 yr Flood Maps – Ormond Drainage Basin (Above)



100 Year Proposed Improvements – Ormond Drainage Basin (Above)

TEC Professional Services Questionnaire

6. Size of the Firm

Principal Engineering has a staff of thirty-two professional and technical employees, including engineers and engineering technicians with specialization in the evaluation, design and construction document preparation for drainage infrastructure projects. As our qualifications indicate, PRINCIPAL is housed with an abundance of knowledge and experience in project evaluation, planning, engineering design, drafting of technical plans, development of technical specifications and performing construction phase services to include contract administration and resident project representation services.

7. Past Performance

Principal Engineering has an excellent professional reputation with all our governmental agency clients. Principal has provided services to nearly every public agency in the New Orleans metropolitan area as well as various State and Federal agencies. Every Governmental client is and has been a repeat customer. A partial list of our New Orleans regional area clients includes the following:

- ◆ City of New Orleans, Department of Public Works
- ◆ City of Kenner, Department of Public Works
- ◆ City of Covington, Department of Engineering
- ◆ City of Mandeville, Department of Public Works
- ◆ City of Hammond, Department of Engineering
- ◆ Jefferson Parish, Department of Public Works
- ◆ Jefferson Parish, Department of Ecosystem & Coastal Management
- ◆ Tangipahoa Parish, Department of Engineering
- ◆ Jefferson Parish School Board
- ◆ St. Tammany Parish, Department of Engineering
- ◆ St. Tammany Parish, Department of Environmental Services
- ◆ Town of Abita Springs
- ◆ City of Slidell, Department of Engineering
- ◆ Plaquemines Parish Government, Department of Public Works
- ◆ St. Bernard Parish Government, Department of Public Works
- ◆ Sewerage and Water Board of New Orleans
- ◆ Housing Authority of Jefferson Parish
- ◆ St. Charles Parish, Department of Public Works
- ◆ St. John the Baptist Parish Department of Public Works & Public Utilities

Furthermore, Principal Engineering Inc., has past and current engineering experience and success working with the following **state and federal agencies**:

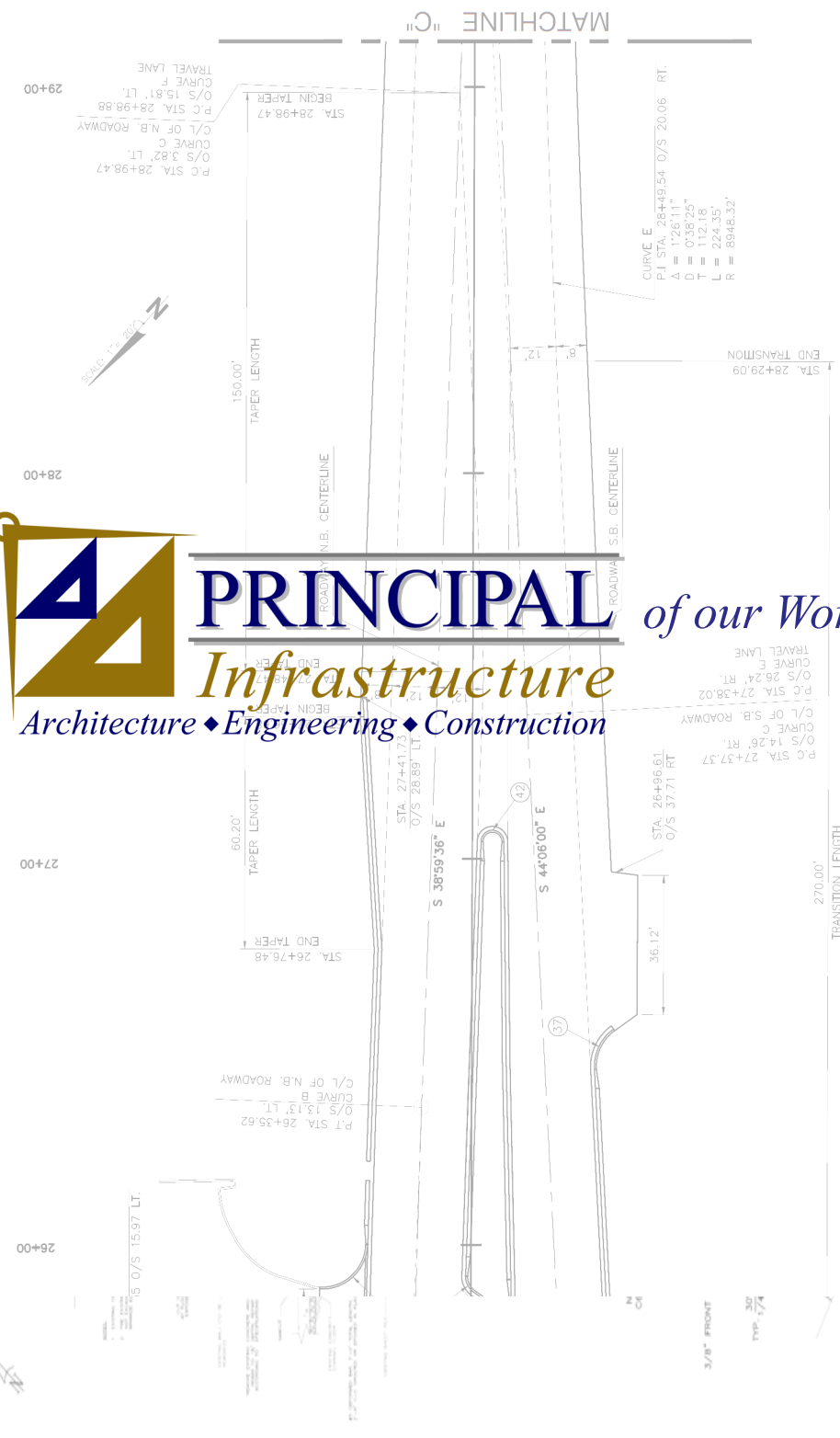
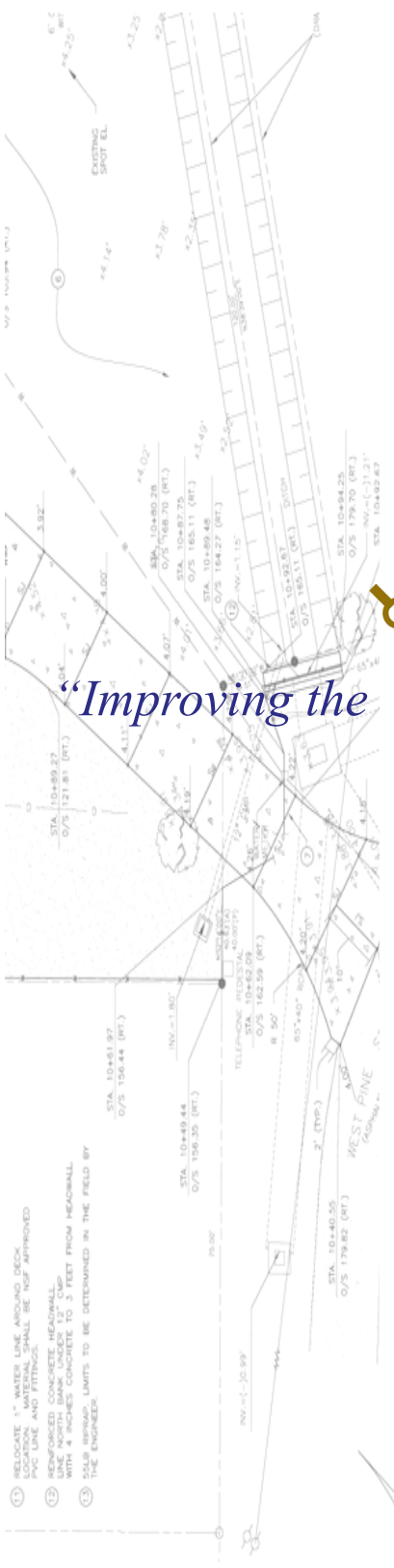
U.S. Army Corps of Engineers, Department of Veterans Affairs, Coastal Protection and Restoration Authority and the Department of Transportation and Development.

In Closing: We will provide the highest quality of personalized, professional, and state of the art technology to Jefferson Parish. PRINCIPAL is committed to assisting our clients by offering inventive solutions to evaluate, plan, design, construct and restore the infrastructure under their jurisdiction and to provide professional engineering services to safeguard life, health, and property of the residents that they serve.

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

Signature: Henry I. DiFranco, Jr. Print Name: Henry I. DiFranco, Jr.

Title: President Date: March 25, 2022



PRINCIPAL
Infrastructure
 Architecture ♦ Engineering ♦ Construction

