

2020-0181

**INTRODUCED BY: MATTHEW JEWELL, PARISH PRESIDENT
(DEPARTMENT OF PUBLIC WORKS)**

ORDINANCE NO. 20-7-6

An ordinance to approve and authorize the execution of an engineering services agreement with Principal Engineering, Inc. for providing all necessary services for the 2020 East Bank Master Drainage Plan (MDP), Project No. P200601.

WHEREAS, the landscape and development of the East Bank has changed considerably, and a current functioning model is critical in managing impacts on Parish infrastructure; and,

WHEREAS, the St. Charles Parish Council desires to perform a MDP for the East Bank that will improve drainage for the entire East Bank of the Parish; and,

WHEREAS, the attached Agreement between St. Charles Parish and Principal Engineering, Inc. describes the details of the proposed services and compensation; and,

WHEREAS, because of the complexity of the project, it will be implemented in the following areas and phases so as to control project timing:

- Montz
- Norco
- New Sarpy
- Ormond
- Destrehan Pantation
- Plantation Business Center
- Destrehan West
- Destrehan East
- St. Rose
- Dianne Place
- Bar None
- Turtle Pond
- Almedia.

THE ST. CHARLES PARISH COUNCIL HEREBY ORDAINS:

SECTION I. That the Engineering Services Agreement between St. Charles Parish and Principal Engineering, Inc. for services as required by the Department of Public Works is hereby approved and accepted.

SECTION II. That the Parish President is hereby authorized to execute said contract on behalf of the Parish of St. Charles.

The foregoing ordinance having been submitted to a vote, the vote thereon was as follows:

YEAS: BENEDETTO, FONSECA, DARENSBOURG GORDON, CLULEE, DUFRENE,
 FISHER, FISHER-PERRIER

NAYS: GIBBS, BELLOCK

ABSENT: NONE

And the ordinance was declared adopted this 6th day of July, 2020, to become effective five (5) days after publication in the Official Journal.

CHAIRMAN: [Signature]

SECRETARY: [Signature]

DLVD/PARISH PRESIDENT: July 7, 2020

APPROVED: _____ DISAPPROVED: _____

PARISH PRESIDENT: Math Jewell

RETD/SECRETARY: July 8, 2020

AT: 12:47 pm RECD BY: [Signature]

ENGINEERING SERVICES AGREEMENT

THIS AGREEMENT made and effective as of the ____ day of _____, 2020 by and between ST. CHARLES PARISH acting herein by and through its President, who is duly authorized to act on behalf of said Parish, hereinafter called the OWNER, and Principal Engineering, Inc. a corporation acting herein by and through its Contracting Officer, hereinafter called ENGINEER. Whereas the Owner desires to employ a professional consulting engineering firm to perform engineering services for the East Bank Master Drainage Plan project as described in Ordinance No. 20-7-6 which is attached hereto and made a part hereof.

1.0 GENERAL TERMS

The Owner agrees to employ the Engineer and the Engineer agrees to perform professional services required for the project described above. Engineering will conform to the requirements of the Owner and to the standards of the agencies participating with the Owner in the Project. The Engineer will coordinate all work between the Owner and all participating agencies and regulating agencies, if needed. Written authorization to begin different phases of the project will be given to the Engineer by the Owner. The Owner may terminate the Contract by written notification and without cause per Section 10.0 during any phase of the project.

The Engineer shall at all times during this Agreement maintain a valid Louisiana Engineering License and any other applicable licenses necessary for performance of the Project.

All work shall be under the direction of the Owner, and all plans, specifications, etc. shall be submitted to the Owner and all approvals and administration of this contract shall be through the Owner.

2.0 PROJECT

2.1 The Owner hereby contracts with the ENGINEER to perform all necessary professional services in connection with the Project as specified in attached proposal from Principal Engineering, Inc., dated June 11, 2020, and all other requirements in this Agreement.

2.2 In general, the Project consists of major elements including collecting background information, reviewing previous studies, performing hydrologic/hydraulic analyses, and preparing reports.

2.3 The Engineer agrees to comply with all Federal, State, and Local Laws and Ordinances applicable to the scope of services and work or in entering any other agreement with any another party to complete the work.

3.0 SERVICES OF ENGINEER

- 3.1 Engineer shall provide Owner professional engineering services in all phases of the Project to which this Agreement applies and as hereinafter provided to properly plan and execute the work on the project(s) assigned to the Engineer. These services may include but may not be limited to serving as Owner's professional engineering representative for the Project, providing professional engineering consultation and advice, and furnishing customary civil, surveying, geotechnical, structural, mechanical, electrical, instrumentation and control engineering services and construction engineering and inspection.
- 3.2 Services provided by the Engineer shall be performed in accordance with generally accepted professional engineering practice at the time and the place where the services are rendered.
- 3.3 Engineer shall obtain from Owner authorization to proceed in writing for each phase of the Project.
- 3.4 Engineer shall provide minutes of all meetings with St. Charles Parish regarding any phase of the Project.
- 3.5 Engineer shall provide basic services to complete the project, including all necessary services described herein or usually implied as a prerequisite for the performance of the services whether or not specifically mentioned in this agreement, including attendance by the Engineer at project conferences and public hearings.
- 3.6 Planning Phase
 - 3.6.1 Conducting a Planning Meeting Workshop with the Owner.
 - 3.6.2 Advising the Owner as to the necessity of providing or obtaining from others additional data or services. These additional services may include photogrammetry, reconnaissance surveys, property surveys, topographical surveys, geotechnical investigations and consultations, compilation of hydrological data, materials engineering, and environmental assessments and impact statements.
 - 3.6.3 Identifying and analyzing requirements of governmental authorities having jurisdiction to approve the design of the Project, and participating in consultations with such authorities.
 - 3.6.4 Preparing a comprehensive Planning Report presenting multiple solutions to the Owner with the Engineer's findings and recommendations. The Report will contain as a minimum:
 - a. Discussion of project background and need.
 - b. Schematic layouts, sketches, or photographs.
 - c. Conceptual design criteria with appropriate exhibits to indicate clearly the considerations involved.
 - d. Any special material specifications including major equipment specifications.
 - e. A preliminary cost estimate for each alternative.
 - f. Engineer's conceptual opinion of probable costs for the selected alternative.

- g. Discussion as to what permits are needed, time to acquire approvals, and potential adjacent landowner authorizations/servitudes that need addressing.
- h. Discussion of the type of additional services that will be needed.
- 3.6.5 Meeting with the Owner and presenting findings of the Planning Report.
- 3.6.6 The Planning Report and Engineer's documentation and opinion of costs, along with the following documents and files, shall be delivered to Owner within 30 calendar days, or as otherwise stated in the written authorization from Owner to Engineer to proceed with Planning Services.
 - a. Two (2) copies of the report for review.
 - b. Once the report has been finalized, submit two (2) copies of the revised report plus one (1) electronic file copy in PDF format.

4.0 OWNERSHIP OF DOCUMENTS

- 4.1 Documents including but not limited to plans, specifications, maps, basic survey notes, sketches, charts, computations and all other data prepared or obtained under the terms of this authorization shall become the property of the Owner and shall be made available for Owner's inspection at any time during the Project and, shall be delivered to the Owner prior to termination or final completion of the Contract.
- 4.2 Engineer may retain a set of documents for its files.
- 4.3 Reuse of Documents. Any reuse of documents or materials without written authorization or adaptation by Engineer to the specific purpose intended will be at Owner's sole risk and without liability or legal exposure to Engineer or to Engineer's independent professional associates, subcontractors, and consultants.
- 4.4 No materials, to include but not limited to reports, maps or other documents produced as a result of this Contract, in whole or in part, shall be available to Engineer for copyright purposes. Any such materials produced as a result of this Contract that might be subject to copyright shall be the property of the Owner and all such rights shall belong to the Owner, and the Owner shall be sole and exclusive entity who may exercise such rights.

5.0 SUPPLEMENTARY SERVICES

The Engineer shall provide, when requested in writing by the Owner, supplementary services not included in the basic services.

The compensation to the Engineer for the supplemental services, when performed by the Engineer, shall be in the form of a lump sum, billable hours, or "not to exceed" hourly rate which is mutually agreeable to the Owner and the Engineer in writing.

Such supplementary services may include the following:

- A. Soil investigations
- B. Laboratory inspection of materials and equipment
- C. Right-of-Way, easement and property acquisition surveys, plats, maps and documents

- D. Any major revisions for which the Engineer is not responsible, that are authorized by the Owner after the completion and approval of either the preliminary or final plans and specifications
- E. Services concerning replacement of any work damaged by fire or other causes during construction
- F. Services made necessary by the default of the contractor in the performance of the construction contract
- G. Services as an expert witness in connection with court proceedings
- H. Traffic Engineering if necessary
- I. Topographic Survey
- J. Preparation of Environmental Assessment documents and/or Environmental Permits
- K. If all or part of the work is to be financed by a Federal or State Grant, the Engineer shall assist the Owner in the preparation of the Grant application and with the Grant Administration, unless otherwise specifically agreed upon previously herein.

6.0 DEFECTIVE WORK

During such visits and on the basis of such observations, Engineer may disapprove of or reject Contractor's work while it is in progress if Engineer believes that such work will not produce a completed Project that conforms generally to the Contract Documents or that it will prejudice the integrity of the design concept of the Project as reflected in the Contract Documents.

7.0 NOTICE TO PROCEED

The Owner shall notify the Engineer in writing to undertake the services stated in this Agreement, and the Engineer shall commence the services within ten (10) days after receipt of such notification. The work necessary for the completion of each individual project/work task shall be completed within a time period agreed upon (in writing) between the Owner and the Engineer, following the notice to proceed.

If the Owner desires to divide the Project into various parts, a Notice to Proceed shall be issued for each part, and the Owner and the Engineer shall mutually agree upon the period of time within which services for each part of the Project shall be performed.

The Engineer will be given time extensions for delays beyond their control or for those caused by tardy approvals of work in progress by various official agencies, but no additional compensation shall be allowed for such delays.

8.0 PAYMENTS

- 8.1 For performance of Basic Engineering, the Owner shall authorize and pay the Engineer a not-to-exceed fee, based on the hourly rates in the Proposal and actual time worked and charges incurred. For the various phases the Engineer shall be paid as follows:

Montz	\$32,360
Norco	\$171,640
New Sarpy	\$163,500
Ormond	\$340,010
Destrehan Plantation	TBD*
Plantation Business Center	TBD
Destrehan West	TBD
Destrehan East	TBD
St. Rose	TBD
Dianne Place	TBD
Bar None	TBD
Turtle Pond	TBD
Almedia	TBD

* Scope and cost to be negotiated between parties and authorized by mutual written amendment to the contract.

- 8.2 Payment for basic engineering services on projects that do not require construction services, such as feasibility studies or drainage studies, shall be made based upon Engineer's estimate of the proportion of the services actually completed at the time of billing and shall be made in partial payments at monthly intervals.
- 8.3 If the Project, or any portion thereof, is not completed for any reason, the final fee for basic engineering services shall be negotiated between Owner and Engineer.
- 8.4 If authorized in writing by Owner, for the performance of, or for obtaining from others Additional Services which are not considered normal or customary Basic Engineering, the Owner shall pay Engineer based on monthly invoices submitted by the Engineer, within sixty (60) days of receipt of Engineer's invoice.
- 8.5 For Additional Authorized Services provided by the Engineer such as, but not limited to, wetlands permitting, land and right-of-way acquisition, surveying, NPDES and LADEQ permit renewal or acquisition work, etc. Owner shall pay Engineer based on an agreed upon hourly rate(s) between the Owner and Engineer. Payment shall be not-to-exceed based on hourly rates and actual hours worked.
- 8.6 The following documentation shall be required for payment to Engineer and shall be attached to the monthly invoice.
- a. A copy of the Owner's written authorization to perform the service.
 - b. Timesheets for all hours invoiced.
 - c. Invoice copies, logs or other substantiation of non-salary expenses.
- 8.7 For Additional Authorized Services that Engineer acquires from subcontractors and/or subconsultants, Owner shall pay Engineer a fixed sum previously agreed upon by Owner and Engineer, such sum to be established in each case when the scope of the work involved has been determined and before any of the Additional Services are provided. The use of subcontractors and/or subconsultants shall be subject to the provisions set forth in this Agreement. The following documentation

shall be required for payment to Engineer and shall be attached to the monthly invoice:

- a. A copy of the Owner's written consent for the subcontractor and/or subconsultant to perform the service stating the Owner's and Engineer's agreed upon fixed sum established for the service performed.
- b. Evidence that the subcontractor and/or subconsultant is insured as required by this Agreement.

8.8 For *Additional Engineering* described in Section 5, Owner shall pay Engineer for the fee negotiated at the time the work is assigned by the method stipulated in the contract amendment.

9.0 FUNDS

No work shall be authorized until funds are established for each individual task.

10.0 TERMINATION OR SUSPENSION

- 10.1 This Agreement may be terminated for any reason by either party upon thirty (30) days written notice.
- 10.2 The Engineer, upon receipt of such notice, shall immediately discontinue all services in connection with the performance of this Agreement and shall proceed to cancel promptly all existing orders and contracts insofar as such orders or contracts are chargeable to this Agreement.
- 10.3 The Engineer shall, as soon as practicable after receipt of notice of termination, submit a statement showing in detail the services performed and payments received under this Agreement to the date of termination.
- 10.4 The Owner shall then pay the Engineer promptly that portion of the prescribed fee to which both parties agree.
- 10.5 Engineer fully acknowledges that no payment will be made for any work performed or expenses incurred after receipt of the termination by either party unless mutually agreed upon in writing.
- 10.6 Failure to meet agreed delivery dates or authorized extensions are considered substantial failures and breach of this contractual agreement by Engineer.

11.0 INSURANCE

- 11.1 The Engineer shall secure and maintain at his expense such insurance that will protect him and the Owner, from claims under Workmen's Compensation Acts and from claims for bodily injury, death or property damage which may arise from performance of services under this Agreement. Insurance for bodily injury or death shall be in the unencumbered amount of \$1,000,000.00 for one person and not less than \$1,000,000.00 for all injuries and/or deaths resulting from any one occurrence. The insurance for property damage shall be in the unencumbered amount of \$1,000,000.00 for each accident and not less than \$1,000,000.00 aggregate.

- 11.2 The Engineer shall also secure and maintain at his expense professional liability insurance in the unencumbered sum of \$1,000,000.00.
- 11.3 All certificates of insurance SHALL BE FURNISHED TO THE OWNER and shall provide that insurance shall not be cancelled without ten (10) days prior written notice to the Owner. The Owner may examine the policies.
- 11.4 Engineer shall include all subcontractors and/or subconsultants as insured under its policies or shall furnish separate certificates for each. All coverages for subcontractors and/or subconsultants shall be subject to all the requirements stated herein.
- 11.5 St Charles Parish shall be named as an additional insured on general liability insurance policies.
- 11.6 For all purposes under Louisiana law, the principals of this Contract shall be recognized as the statutory employer of all contract employees as provided in LSA-R.S. 23:1061.

12.0 INDEMNIFICATION

Engineer shall indemnify and hold harmless the Owner, its employees, agents and representatives, against any and all claims, demands, suits or judgments for sums of money to any party for loss of life or injury or damages to person or property growing out of, resulting from or by any reason of any negligent act by the Engineer, its employees, agents, servants or representatives, while engaged upon or in connection with the services required or performed hereunder.

13.0 WARRANTY

- 13.1 Engineer warrants that it will perform its design services with the degree of skill and to the standard of care required of the engineering profession to meet all Federal, State and Local requirements.
- 13.2 If Engineering Services for project designed by Engineer does not meet those requirements noted herein above, then to the extent that this occurs as a direct result of Engineer's failure to meet the standard of care in its design services, Engineer will indemnify the Parish for Engineer's share of the costs incurred to bring Engineering Services for project to the limitations mandated.
- 13.3 The obligations expressed in Section 13 above in no way limit the Engineer's obligations expressed elsewhere in this Contract.

14.0 EXCLUSIVE JURISDICTION AND VENUE

For all claims arising out of or related to this agreement, ENGINEER hereby consents and yields to the exclusive jurisdiction and venue of the Twenty-Ninth Judicial District Court for the Parish of St. Charles, State of Louisiana, and expressly waives any (a) pleas of jurisdiction based upon Engineer's residence and (b) right of removal to Federal Court based upon diversity of citizenship.

15.0 OTHER

This Agreement constitutes the entire agreement between the parties. There are no understandings, agreements, or representations, oral or written, not specified within this Agreement. This Agreement may not be modified, supplemented or amended in any manner, except by written agreement signed by both parties.

IN WITNESS WHEREOF, the parties to these presents have hereunto caused these presents to be executed the day, month and year first above mentioned.

WITNESSES:

Beckell Champagne

Billy Raymond

ST. CHARLES PARISH

Math Jewell

By: Matthew Jewell
Parish President

7/7/2020
Date:

WITNESSES:

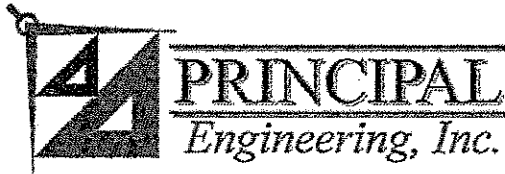
Ken Hunter

Patricia Tijan

ENGINEER

Henry Di Kraup
By:

7-15-2020
Date:



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

June 11th, 2020

Attn: Mr. Miles Bingham, Director
St. Charles Parish Government
Department of Public Works
100 River Oaks Drive
Destrehan, Louisiana 70047

RE: Proposal for Engineering Services
East Bank Master Drainage Plan

Dear Mr. Bingham,

Principal Engineering, Inc. (Principal) is pleased to submit a fee proposal to perform professional engineering services for the East Bank Master Drainage Plan. For the 13 basins defined on the East Bank, the scope of work generally includes collection of existing drainage information and study, creation and calibration of an existing condition hydrologic and hydraulic (H&H) model in EPA's SWMM for storms of varied rainfall return periods, development of drainage project alternatives to improve drainage, and the preparation of a comprehensive report with probable construction costs, and implementation recommendations. GIS and open source information will be used for model creation. If required, survey will be under separate contract. In the Montz and Ormond basins, existing models will be reviewed and adopted for project alternative modeling.

The following scopes are based on instructions issued in the meeting with St. Charles Parish Dept. of Public Works on May 21st, 2020; and on follow-up correspondence. Unless otherwise noted, the project alternatives will be devised to:

- Avoid structure flooding during the 100-yr rainfall event
- Avoid street flooding during the 25-yr rainfall event

The reduction in 100-yr frequency water stages to avoid structure flooding is primarily accomplished by improvements to major canals, major drainage culverts, detention areas, and/or pumping stations. The reduction in water stages to avoid street flooding is accomplished by lowering stages in the major drainage features to improve outfall conditions for interior drainage features, and if necessary, improvements to roadside ditches, subsurface piping, inlets, and the smaller network of pipes and ditches. Often, major features and small interior features have interdependent effects on each other.

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Montz Basin Scope

The 2019 Montz H&H model was provided by the Parish, and will be adopted for this effort. cursory review of 2019 work shows that it hydraulically represents the major drainage canals, approximates the contributing flows from the basin with hydrologic parameters, and does not include interior modeling or overbank topography. The 10-yr event was modeled. Current scope is limited to review of the 2019 model, and update to project alternatives. See also attached task and sub-task exhibit with man-hour estimates.

Deliverables include:

- Memorandum of Evaluation. Description of the 2019 model framework, capabilities, limitations, and the results of a quality review for obvious errors. Qualitative discussion of the 2019 improvement alternatives.
- Project Alternative Models. Within the existing 2019 model, alter the 2019 project alternatives or generate new alternatives in consultation with the Parish, as appropriate for the model framework. Two (2) improvement alternative schemes are included.
- Project Alternative Memorandum. Written narrative describing the project alternatives, costs, and location map identifying alternatives. Complete model outputs will be included as appendices.

Exclusions from scope are:

- Topographic Survey
- Expansion of 2019 model to add overbank topography, open space storage, or interior drainage features.
- Re-calibration of the model hydrology and hydraulics.
- Overland inundation mapping.
- Structure flooding prediction.

Norco and New Sarpy Basins

H&H models of the major drainage features will be developed from the Parish GIS, LiDAR, and other open source data sources. Review of existing information, existing condition modeling, project improvement modeling, and a comprehensive report are included; comprising a complete drainage modeling study effort. See also attached task and sub-task exhibit with man-hour estimates.

Deliverables include:

- Existing Condition Model. Model the major drainage features in the basin area to include pump stations, canals, ditches, and significant culverts. Model ~~10-yr~~ 25-yr, 50-yr, and 100-yr return period rainfall events; and calibrate to available measurements.
- Project Alternative Models. Generate project alternatives in consultation with the Parish. Two (2) improvement alternative schemes are included.

- Comprehensive Report. Written narrative describing the technical approach, data incorporated, modeling methodology, project alternatives, costs, inundation maps, and supporting graphics. Complete model outputs will be included as appendices.

Exclusions from scope are:

- Topographic Survey
- Detailed modeling of interior drainage features.

Ormond Basin

The 2019 Ormond H&H model was provided by the Parish, and will be adopted for this effort. cursory review of 2019 work shows that it included only 863 acres of the total 1440 acres in the Ormond basin, and the model hydraulically represents the major drainage canals, approximates the contributing flows from the basin with hydrologic parameters, and does not include detailed interior modeling. Topography is included with a digital terrain model surface, and the model predicts inundation depths. The 10-yr event was modeled. Current scope includes a) review of the 2019 model, modification of features identified by the Parish; and b) expansion of the model to include the entire Ormond basin, and new project alternative modeling. See also attached task and sub-task exhibit with man-hour estimates.

Deliverables include:

- Memorandum of Evaluation. Summary of 2019 model framework, capabilities, limitations, and the results of a quality review for errors. Qualitative discussion of the 2019 improvement alternatives.
- Expanded Existing Condition Model. Expand the modeled area to include the entire 1440 acre Ormond basin at the same level of detail as the 2019 model. Update hydrology to include 25-yr, 50-yr and 100-yr return period rainfall events.
- Project Alternative Models. With the expanded model, alter the 2019 project alternatives and/or generate new alternatives in consultation with the Parish. Two (2) improvement alternative schemes are included.
- Comprehensive Report. Written narrative describing the technical approach, data incorporated, modeling methodology, project alternatives, costs, inundation maps, and supporting graphics. Complete model outputs will be included as appendices.

Exclusions from scope are:

- Topographic Survey
- Detailed modeling of interior drainage features.


Fee Summary

Each of the thirteen (13) basins located in the East Bank of St. Charles Parish are shown below. Generally, the man-hours to perform modeling were estimated from the total areas and developed areas of each basin (incorporating 2019 models in Montz and Ormond). Developed area requires more intense model architecture, and therefore weights the effort more than undeveloped area. Based on the study criteria discussed with the Parish and experience with past large-scale H&H modeling efforts, we have prepared task & sub-task lists, including employee classifications anticipated to be assigned, and estimated man-hours by classification. Fees will be invoiced according to the number of hours expended by each classification of employee, according to the attached rate schedule, and direct expenses incurred.

No.	Basin	Area (AC.)	Developed Area (AC.)	Proposed Fee
1	Montz	1635	240	\$32,360.00
2	Norco	800	430	\$171,640.00
3	New Sarpy	690	430	\$163,500.00
4	Ormond	1420	1420	-
	<i>a. Evaluate/Revise Ex. Model</i>	863	863	\$110,010.00
	<i>b. Model Remaining Basin</i>	557	557	\$230,000.00
5	Destrehan Plantation	205	Sparse	To Be Determined
6	Plantation Business Ctr.	110	Sparse	To Be Determined
7	Destrehan West	220	50	To Be Determined
8	Destrehan East	310	40	To Be Determined
9	St. Rose	450	135	To Be Determined
10	Dianne Place	220	90	To Be Determined
11	Bar None	70	70	To Be Determined
12	Turtle Pond	700	200	To Be Determined
13	Almedia	475	80	To Be Determined

We look forward to discussing the scope, tasks and fees proposed and we truly appreciate the opportunity to work with St. Charles Parish on these important master drainage plan projects. If you have any questions regarding this proposal, please do not hesitate to contact our office.

Sincerely,
PRINCIPAL Engineering, Inc.


 Andre C. Monnot, P.E.
 Executive Vice President

HOURLY RATES

BILLABLE RATES PER CLASSIFICATION

CLASSIFICATION	BILLABLE RATE
Principal Engineer (Licensed PE)	\$200.00
Engineer IV (Senior - Licensed PE)	\$185.00
Engineer III (Mid - Licensed PE)	\$160.00
Engineer II (Junior - Licensed PE)	\$140.00
Engineer I (Graduate BS/MS Engineer or EI)	\$115.00
Senior Architect (Licensed Architect)	\$155.00
Project Architect (Licensed Architect)	\$140.00
Senior Engineering Tech (AS or Equiv.)	\$115.00
CAD Technician III	\$95.00
CAD Technician II	\$80.00
CAD Technician I	\$65.00
Resident Inspector	\$70.00
Office/Business Manager	\$80.00
Clerical/Administrative	\$55.00
Direct Expenses	Exact Amount
Mileage	\$0.55/mile



St. Charles Parish Government
Fee Proposal

East Bank Master Drainage Plan-Montz Basin
Submitted By: PRINCIPAL Engineering, Inc.

Expected Personnel Classification, Billable Rate & Man-Hour Estimate						
Classification:	PRINCIPAL	PROJECT MANAGER	PROJECT ENGINEER	TECHNICIAN	OFFICE MANAGER	Per Task
Rate:	\$200.00	\$160.00	\$140.00	\$95.00	\$60.00	
TASK	Man-Hours					
DESCRIPTION						
1.0 Preliminary Data Gathering and Analysis						
1.1 Assemble/Review Parish-Provided & Open Source Data	1	2	24	8	-	35
1.2 Site Visits	-	4	8	-	-	12
1.3 Analyze Existing Models for Relevance and Accuracy	1	16	32	-	-	49
Sub-Total Task 1.0	2	22	64	8	0	96
	\$400.00	\$3,520.00	\$8,960.00	\$760.00	\$0.00	\$13,640.00
2.0 Survey						
2.1 Topographic Survey and Mapping	-	-	-	-	-	0
Sub-Total Task 2.0	0	0	0	0	0	0
	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
3.0 Model Building and Reports						
3.1 Delineate Watersheds and Determine Boundary Conditions	-	-	-	-	-	0
3.2 Develop Existing Conditions Model	-	-	-	-	-	0
3.3 Develop Existing Conditions Model (Overland Inundation)	-	-	-	-	-	0
3.4 Calibrate Model	-	-	-	-	-	0
a. 10 Year Event	-	-	-	-	-	0
b. 25 Year Event	-	-	-	-	-	0
c. 50 Year Event	-	-	-	-	-	0
d. 100 Year Event	-	-	-	-	-	0
3.5 Develop Unimproved Future Conditions Model	-	-	-	-	-	0
3.6 Establish Drainage Design Criteria	-	-	-	-	-	0
3.7 Develop & Model Improvement Projects	1	12	32	-	-	45
3.8 Develop Improvement Model (Overland Inundation)	-	-	-	-	-	0
3.9 Project Preliminary Cost Estimates	0.5	8	12	4	-	24.5
3.10 Prepare Comprehensive Report	1	12	16	24	-	53
Sub-Total Task 3.0	2.5	32	60	28	0	122.5
	\$500.00	\$5,120.00	\$8,400.00	\$2,660.00	\$0.00	\$16,680.00
4.0 Project Status Reports						
4.1 Prepare Status Report with Monthly Invoices	-	4	2	-	2	8
Sub-Total Task 4.0	0	2	1	0	1	4
	\$0.00	\$320.00	\$140.00	\$0.00	\$60.00	\$520.00
5.0 Meetings						
5.1 Meetings (estimated 4)	0	6	4	-	-	10
Sub-Total Task 5.0	0	6	4	0	0	10
	\$0.00	\$960.00	\$560.00	\$0.00	\$0.00	\$1,520.00
Total Man-Hours Per Classification:	4.5	62	129	36	1	232.5
Total Fee:	\$900.00	\$9,920.00	\$18,060.00	\$3,420.00	\$60.00	\$32,360.00

St. Charles Parish Government
Fee Proposal

East Bank Master Drainage Plan- *Norco Basin*
 Submitted By: **PRINCIPAL Engineering, Inc.**

Expected Personnel Classification, Billable Rate & Man-Hour Estimate									
TASK	DESCRIPTION	PRINCIPAL	PROJECT MANAGER	PROJECT ENGINEER	TECHNICIAN	OFFICE MANAGER	Per Task	Man-Hours	
Classification:	Rate:	\$200.00	\$160.00	\$140.00	\$95.00	\$50.00			
1.0	Preliminary Data Gathering and Analysis								
1.1	Assemble/Review Parish-Provided & Open Source Data	2	4	48	20	-	-	74	
1.2	Site Visits for Orientation	-	3	12	-	-	-	15	
1.3	Analyze Data for Relevance and Accuracy	2	20	60	-	-	-	82	
	Sub-Total Task 1.0	4	27	120	20	0	0	171	
		\$800.00	\$4,320.00	\$16,800.00	\$1,900.00	\$0.00	\$0.00	\$23,820.00	
2.0	Survey								
2.1	Topographic Survey and Mapping	-	-	-	-	-	-	0	
2.2	Survey Coordination & Accuracy Verification	0	0	0	0	0	0	0	
	Sub-Total Task 2.0	0	0	0	0	0	0	0	
		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
3.0	Model Building and Reports								
3.1	Delineate Watersheds and Determine Boundary Conditions	-	4	24	40	-	-	68	
3.2	Develop Existing Conditions Model	2	30	174	-	-	-	206	
3.3	Develop Existing Conditions Model (Overland Inundation)	2	37	94	-	-	-	133	
3.4	Calibrate Model	-	4	30	-	-	-	34	
a.	10 Year Event	-	2	12	-	-	-	14	
b.	25 Year Event	-	2	12	-	-	-	14	
c.	50 Year Event	-	2	12	-	-	-	14	
d.	100 Year Event	-	2	12	-	-	-	14	
3.5	Develop Unimproved Future Conditions Model	2	30	62	-	-	-	94	
3.6	Establish Drainage Design Criteria	2	3	12	-	-	-	17	
3.7	Develop & Model Improvement Projects	2	20	118	-	-	-	140	
3.8	Develop Improvement Modal (Overland Inundation)	2	16	62	-	-	-	80	
3.9	Project Preliminary Cost Estimates	1	12	32	12	-	-	57	
3.10	Prepare Comprehensive Report	3	62	25	46	-	-	136	
	Sub-Total Task 3.0	16	224	669	98	0	0	1007	
		\$3,200.00	\$35,840.00	\$93,660.00	\$9,310.00	\$0.00	\$0.00	\$142,010.00	
4.0	Project Status Reports								
4.1	Prepare Status Report with Monthly Invoices	-	5	2	-	2	-	9	
	Sub-Total Task 4.0	0	5	2	0	2	0	9	
		\$0.00	\$800.00	\$280.00	\$0.00	\$720.00	\$0.00	\$1,200.00	
5.0	Meetings								
5.1	Meetings (estimated 8)	2	14	10	6	-	-	32	
	Sub-Total Task 5.0	2	14	10	6	0	0	32	
		\$400.00	\$2,240.00	\$1,400.00	\$570.00	\$0.00	\$0.00	\$4,610.00	
	Total Man-Hours Per Classification:	22	270	801	124	2	2	1219	
	Total Fee:	\$4,400.00	\$45,200.00	\$112,140.00	\$11,780.00	\$120.00	\$0.00	\$171,640.00	

St. Charles Parish Government

Fee Proposal

East Bank Master Drainage Plan- New Sarpy Basin

Submitted By: PRINCIPAL Engineering, Inc.

Expected Personnel Classification, Billable Rate & Man-Hour Estimate									
TASK	DESCRIPTION	PRINCIPAL	PROJECT MANAGER	PROJECT ENGINEER	TECHNICIAN	OFFICE MANAGER	Man-Hours	Per Task	
Classification:	Rate:	\$200.00	\$160.00	\$140.00	\$95.00	\$60.00			
1.0	Preliminary Data Gathering and Analysis								
1.1	Assemble/Review Parish-Provided & Open Source Data	2	4	48	20	-	74		
1.2	Site Visits for Orientation	-	3	12	-	-	15		
1.3	Analyze Data for Relevance and Accuracy	2	20	60	-	-	82		
	Sub-Total Task 1.0	4	27	120	20	0	171		
		\$800.00	\$4,320.00	\$16,800.00	\$1,900.00	\$0.00	\$23,820.00		
2.0	Survey								
2.1	Topographic Survey and Mapping	-	-	-	-	-	0		
2.2	Survey Coordination & Accuracy Verification	0	0	0	0	0	0		
	Sub-Total Task 2.0	0	0	0	0	0	0		
		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
3.0	Model Building and Reports								
3.1	Delineate Watersheds and Determine Boundary Conditions	-	4	24	40	-	68		
3.2	Develop Existing Conditions Model	2	24	160	-	-	186		
3.3	Develop Existing Conditions Model (Overland Inundation)	2	30	84	-	-	116		
3.4	Calibrate Model	-	4	28	-	-	32		
	a. 10 Year Event	-	2	12	-	-	14		
	b. 25 Year Event	-	2	12	-	-	14		
	c. 50 Year Event	-	2	12	-	-	14		
	d. 100 Year Event	-	2	12	-	-	14		
3.5	Develop Unimproved Future Conditions Model	2	24	52	-	-	78		
3.6	Establish Drainage Design Criteria	2	3	12	-	-	17		
3.7	Develop & Model Improvement Projects	2	18	100	-	-	120		
3.8	Develop Improvement Model (Overland Inundation)	2	16	60	-	-	78		
3.9	Project Preliminary Cost Estimates	1	12	30	20	-	63		
3.10	Prepare Comprehensive Report	3	60	24	78	-	165		
	Sub-Total Task 3.0	16	201	610	138	0	965		
		\$9,200.00	\$32,160.00	\$85,400.00	\$13,110.00	\$0.00	\$133,870.00		
4.0	Project Status Reports								
4.1	Prepare Status Report with Monthly Invoices	-	5	2	-	2	9		
	Sub-Total Task 4.0	0	5	2	0	2	9		
		\$0.00	\$800.00	\$280.00	\$0.00	\$120.00	\$1,200.00		
5.0	Meetings								
5.1	Meetings (estimated 8)	2	14	10	6	-	32		
	Sub-Total Task 5.0	2	14	10	6	0	32		
		\$400.00	\$2,240.00	\$1,400.00	\$570.00	\$0.00	\$4,610.00		
	Total Man-Hours Per Classification:	22	247	742	164	2	1177		
	Total Fees:	\$4,400.00	\$39,520.00	\$103,680.00	\$15,580.00	\$170.00	\$163,500.00		

St. Charles Parish Government

Fee Proposal

East Bank Master Drainage Plan- Ormond Basin

Submitted By: PRINCIPAL Engineering, Inc.

Expected Personnel Classification, Billable Rate & Man-Hour Estimate									
TASK	DESCRIPTION	PRINCIPAL	PROJECT MANAGER	PROJECT ENGINEER	TECHNICIAN	OFFICE MANAGER	Per Task	Man-Hours	
Classification:	Rate:	\$200.00	\$160.00	\$140.00	\$95.00	\$60.00			
1.0	Preliminary Data Gathering and Analysis								
1.1	Assemble/Review Parish-Provided & Open Source Data	3	18	120	100	-	241		
1.2	Site Visits for Orientation	-	14	56	-	-	70		
1.3	Analyze Existing Models for Relevance and Accuracy	3	82	270	-	-	355		
	Sub-Total Task 1.0	6	114	446	100	0	666		
		\$1,200.00	\$18,240.00	\$62,400.00	\$9,500.00	\$0.00	\$91,380.00		
2.0	Survey								
2.1	Topographic Survey and Mapping	-	-	-	-	-	0		
2.2	Survey Coordination & Accuracy Verification	-	-	-	-	-	0		
	Sub-Total Task 2.0	0	0	0	0	0	0		
		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
3.0	Model Building and Reports								
3.1	Delineate Watersheds and Determine Boundary Conditions	-	18	80	100	-	198		
3.2	Develop Existing Conditions Model	1	86	240	-	-	327		
3.3	Develop Existing Conditions Model (Overland Inundation)	1	52	100	-	-	153		
3.4	Calibrate Model	-	4	34	-	-	38		
	a. 10 Year Event	-	1	12	-	-	13		
	b. 25 Year Event	-	1	12	-	-	13		
	c. 50 Year Event	-	1	12	-	-	13		
	d. 100 Year Event	-	1	12	-	-	13		
3.5	Develop Unimproved Future Conditions Model	2	34	68	-	-	104		
3.6	Establish Drainage Design Criteria	2	4	14	-	-	20		
3.7	Develop & Model Improvement Projects	2	68	190	-	-	260		
3.8	Develop Improvement Model (Overland Inundation)	1	52	190	-	-	243		
3.9	Project Preliminary Cost Estimates	1	20	50	20	-	91		
3.10	Prepare Comprehensive Report	3	100	46	90	-	239		
	Sub-Total Task 3.0	13	441	1048	210	0	1712		
		\$2,600.00	\$70,560.00	\$146,720.00	\$19,950.00	\$0.00	\$239,830.00		
4.0	Project Status Reports								
4.1	Prepare Status Report with Monthly Invoices	-	7	4	-	4	15		
	Sub-Total Task 4.0	0	7	4	0	4	15		
		\$0.00	\$1,120.00	\$560.00	\$0.00	\$240.00	\$1,920.00		
5.0	Meetings								
5.1	Meetings (estimated 8)	2	20	18	8	-	48		
	Sub-Total Task 5.0	2	20	18	8	0	48		
		\$400.00	\$3,200.00	\$2,520.00	\$760.00	\$0.00	\$6,880.00		
	Total Man-Hours Per Classification:	21	582	1516	318	4	2441		
	Total Fee:	\$4,200.00	\$93,120.00	\$212,240.00	\$30,210.00	\$240.00	\$340,010.00		