

# TERREBONNE PARISH CONSOLIDATED GOVERNMENT

## BAYOU TERREBONNE LOCK MITER GATE REPAIRS

\*\*\*\*\*

### ADDENDUM NO. 1

Date Issued: January 11, 2023

\*\*\*\*\*

This Addendum No. 1 shall be part of the above referenced project.

Acknowledge receipt of this Addendum No. 1 by inserting its number in the space provided in the Louisiana Uniform Public Work Bid Form of the Request for Proposals. Failure to do so may subject the bidder to disqualification.



Jacob D. Donnes, P.E.

GIS Engineering, LLC.

## **TERREBONNE PARISH CONSOLIDATED GOVERNMENT**

### **BAYOU TERREBONNE LOCK MITER GATE REPAIRS**

This Addendum is issued for the purpose of modifying, clarifying, or revising, as applicable, the specified items of the original Contract Documents. It is also issued for the purpose of adding, as applicable, the attached specified items to the original Contract Documents, or deleting, as applicable, the attached specified items from the original Contract Documents. The Addendum and attachments shall be construed as much a part of the original Contract Documents as contained therein. Changes made by Addenda shall take precedence over original Contract Documents.

#### **GENERAL ANNOUNCEMENT**

#### **PART I – WRITTEN CONTRACTORS QUESTIONS**

Contractor's written Questions and Engineer's Responses

#### **PART II – MODIFICATIONS TO CONTRACT DOCUMENTS, TECHNICAL SPECIFICATION, PLANS, AND OTHER DOCUMENTS**

Modifications to Contract Documents, Technical Specifications and Drawings.

#### **PART III – ATTACHMENTS**

1. Pre-Bid Meeting Minutes
2. Pre-Bid Meeting Sign-In Sheet
3. Soil Borings

## **PART I – Written Contractor’s Questions**

*NOTE – The responses presented in PART I may differ from those presented in the Pre-Bid Conference. The responses in PART I are current as of the date of this Addendum and if different supersede those provided at the Pre-Bid Conference or any previous addenda.*

### **Contractors’ General Questions Received**

1. What was the quantity of epoxy grout repair material used in determining the Engineer’s Estimate?

**Response: 150 cu. Ft.**

2. Are the miter gates going to be closed?

**Response: The miter gates will remain in the open position.**

3. Is there any exposed rebar to drill and tie-into?

**Response: No.**

4. Is the Contractor bound by the working hours/days listed in the contract documents?

**Response: No. The successful bidder shall submit their proposed work schedule to the Engineer.**

5. How much water does the miter gate chamber hold?

**Response: Approximately 216,486 gallons.**

6. Is builder’s risk insurance required?

**Response: Yes.**

7. Are there any soil boring data for the location and can they be provided?

**Response: Yes, please reference Part III of this Addendum. Contractor is to be made aware that the soil borings attached are from a previous project and are provided for reference purposes only. This information will not relieve the Contractor from the contractual obligations set forth in the plans and specifications.**

8. Do modifications to the existing needle girders and sheets need to be removed; thereby, returning modified item(s) back to original condition or configuration.

**Response: Contractor is required to return the needle girders and sheets back to the specified location in both the original condition and configuration. Any damage to the needle girders and sheets must be repaired at the Contractor’s expense.**

## **PART II – Modifications to Contract Documents, Technical Specifications, Plans, and Other Documents**

Contract Documents:

NONE

Tech Specs:

NONE

Plans:

NONE



---

## **PART III - ATTACHMENTS**

### **Pre-Bid Meeting Minutes & Sign-In Sheet**

---



Date: Thursday January 5, 2023 10:00 A.M.

Project: Bayou Terrebonne Lock Miter Gate Repairs  
GIS Project No. 39130-1379  
TPCG Project No. 22-LOCK-49

Location: GIS Engineering, LLC  
197 Elysian Drive, Houma, LA

### PRE-BID CONFERENCE MINUTES

*Meeting Led By: Trey Middleton  
Minutes Prepared By: Trey Middleton  
Reviewed By: Austin Hebert*

1. **Safety Topic** *(Provided by Trey Middleton)*  
*Today's safety topic was on general site safety; this project will involve working on/around water, so wear your PFDs. Also, good communication and JSA's are important in order to maintain a safe work site.*
2. **Sign-In and Introductions**
  - a. Owner – Terrebonne Parish Consolidated Government (TPCG)
  - b. Co-Owner/Operator – Terrebonne Levee & Conservation District (TLCD)
    - i. *TLCD operates the lock system and sector gate, so there will be communication with them on daily operations and schedules. Reggie Dupre (Executive Director) stated that they will be closing the Sector Gate for the duration of the miter gate repairs to keep boat traffic away and prevent any high tides from entering the lock chamber. It can be opened if needed to drain any interior high water.*
  - c. Engineer – GIS Engineering, LLC (GIS)  
*Austin Hebert – Project Manager  
Trey Middleton – Construction Manager  
Brian Brunet – Resident Project Representative  
Ann Hebert – Project Administration*
3. **Delivery of Bids**  
Bids will be received on Tuesday, January 17, 2023 at 2:00 p.m. by the Terrebonne Parish Consolidated Government (TPCG) Purchasing Division, at the City of Houma Service Complex, 301 Plant Road, in Houma, Louisiana until 2:00 p.m. as shown on the Purchasing Division Conference Room Clock, at which time bids will be retrieved from Central Auction House (CAH) website <http://www.centralauctionhouse.com/rfp.php?cid=65>, opened if hand delivered or mailed, and read aloud.
4. **Project Addenda:**
  - a. Clarifications in response to questions concerning Contract Documents will be issued in an Addendum.
  - b. Send all questions to [BidQuestions@gisy.com](mailto:BidQuestions@gisy.com), including questions from this Pre-Bid Meeting. Questions are to be submitted by close of business on Tuesday, January 10, 2023. Any questions submitted outside of this provided email address will not be considered. Please make sure to put the project title in the email subject line.
  - c. Addenda will be issued as soon as possible, but no later than Thursday, January 12, 2022 at 2:00 p.m. Addenda will be uploaded to Central Auction House.

5. **Proper Preparation and Submission of Bids** (*Section 10.0 of Section B – Instruction to Bidders*)

- a. Bids shall be either hand delivered by the bidder or his agent, or such bid shall be sent by United States Postal Service registered or certified mail with a return receipt requested, or shall be submitted electronically with Central Auction House (CAH). Bids shall not be accepted or taken, including receiving any hand delivered bids, on days which are recognized as holidays by the United States Postal Service.
- b. Each Bid packet shall include:
  - i. Completed Uniform Public Work Bid Form
    - Complete bidder information as requested.
    - Acknowledgement and date of Addenda on Bid.
    - Properly fill in unit price of each item included in the Bid Form.
    - Sign and Attest the Bid.
  - ii. Signature Authorization with written evidence of authority (LA R.S. 38:2212(B)(5))
  - iii. Bid Bond with Power of Attorney, or Certified Check or Cashier's Check, all in the amount of 5% of the total amount of the bid.

6. **Contract Documents and Requirements:**

- a. Listed in Section F – Standard Form of Agreement Between Owner and Contractor – ARTICLE 8 CONTRACT DOCUMENTS.

7. **General Project Information:**

- a. Contract Time – 21 Calendar Days from Notice to Proceed
  - Partial NTP for material procurement and mobilization
  - Channel closure allowed for (21) days
  - *(21) days is the duration for which the channel can be closed, so NTP will be issued and time will start when the Contractor starts closing-off the channel.*
  - *Substantial Completion will be granted when the miter gate concrete repairs are completed, painted, and the channel is reopened to marine traffic. Handrail and other work can be done after the channel is opened-up.*
- b. Required Contractor's License – Type III – Heavy Construction
- c. Liquidated Damages - \$1,500.00 per day. Refer to Section F - Standard Form of Agreement Between Owner and Contractor – ARTICLE 3, Paragraph 3.2 for specifics.
- d. Contractor's Liability Insurance – Please refer to Section I – General Conditions Paragraph 5.4 for requirements.
- e. Construction Submittal Process – Email
  - *Currently anticipated to be via email due to the short duration of the project, but may be through a SharePoint Portal site. This will be determined at a later date.*
- f. There will not be mandatory monthly progress meetings, but there will be required meetings and/or conference calls with Engineer and Owner personnel during construction.
- g. Engineer's Estimate: \$836,000

8. **Scope of Work**

- a. Transportation, Installation, and Removal of Owner Provided Needle Girder on North side of Miter Gate
  - Includes plastic lining for sealing
  - *Needle girder sheets are at Boudreaux Canal Lock and Contractor is responsible to pick them up, clean them after use, and bring them back to location. Contractor can pick-up more than needed to have just in case.*
- b. Installation and Removal of Cofferdam Dam on South side of Miter Gate and Structural Bracing
  - Includes temporary relocation and reinstallation of channel rip rap for sheet pile installation/removal
  - Includes sealing to west chamber sheet pile wall and east side concrete bay wall *(Contractor's means and methods, but a submittal is required to be provided)*
  - *Contractor is responsible to provide temporary sheet piles for cofferdam.*
- c. Dewatering, Maintenance Pumping, and Filling of the Miter Gate Chamber
- d. Concrete Surface Preparation, Pressure Washing, Formwork, and Epoxy Grout Repairs
  - Includes facilitating Engineer inspection once pressure washing is complete

- *We only know the extent of the damage located below the water line from what was provided to us by divers. The inspection will reveal any additional damages and the full extent of repairs.*
- *There will be some chipping required in order to remove any loose/cracked concrete for surface prep.*
- e. Painting Handrails and Concrete Wall Repair/Damage Areas
  - Includes any areas affected by the work
  - *Paint products/colors listed in specifications.*
- f. Steel Handrail & Timber Fender Repairs

## 9. Bid Form & IFB Drawings

- a. Review and Discussion of Items

## 10. Construction Sequence and Means & Methods

- a. Both are the responsibility of the Contractor.
- b. Contractor to submit project schedule within ten (7) days of the Effective Date of the Agreement for Approval.

## 11. Special Provisions

- |  |  |
|--|--|
| a. 1.14 Tax Exemption  | g. 1.35 Channel Rip Rap Relocation/Replacement   |
| b. 1.24 Substantial Completion   | h. 1.36 Post Dewatering Inspection <i>Contractor to provide ingress and egress to miter gate chamber</i> |
| c. 1.26 Hurricane Preparedness Plan  | i. 1.37 Grout Manufacturer Rep <i>needs to sign-off on prep/installation plan or provide plan</i>        |
| d. 1.29 Work Plan <i>needs to include emergency escape plan</i>                      | j. 1.38 Needle Girders for Miter Gate  |
| e. 1.33 Installation Plan  |  |
| f. 1.34 Or-Equals <i>several products listed; submit which one that will be used</i> |  |

## 12. Agency/Owner Comments

- a. *Reggie Dupre asked who is responsible to notify the USCG for a Notice to Mariners. This will be the responsibility of the Contractor, but TPCG and TLCD will likely post a notice on their social media/websites as well.*
- b. *Greg Gautreaux asked if the miter gate would need to be cribbed/blocked after dewatering. Yes, immediately following dewatering both miter gates need to be blocked on the end for support.*
- c. *Reggie Dupre asked about the timeframe of the project. Austin Hebert (GIS PM) stated that we will award, process/execute contracts, and issue the partial NTP as quickly as possible.*

## 13. Site Familiarity

- a. A site visit is scheduled immediately following this meeting for those who wish to attend.
- b. *Anyone wanting to see the site can coordinate with GIS to setup a date/time.*

## 14. Adjourn

### Contractor Questions Received during the Pre-Bid Meeting; to be included in Addendum #1:

*Q: What was the quantity of epoxy grout repair material used in determining the Engineer's Estimate?*

*Q: Are the miter gates going to be closed?*

*Q: Is there any exposed rebar to drill and tie-into?*

*Q: Is the Contractor bound by the working hours/days listed in the contract documents?*

*Q: How much water does the miter gate chamber hold?*

*Q: Is builder's risk insurance required?*





Terrebonne Parish Consolidated Government  
Bayou Terrebonne Lock Miter Gate Repairs  
GIS Project No. 39130-1379  
TPCG Project No. 22-LOCK-49  
Pre-Bid Sign-In Sheet  
Thursday, January 5, 2023  
10:00 A.M.



ATTENDANCE REGISTER				
NAME	COMPANY NAME	PHYSICAL ADDRESS	TELEPHONE NUMBER	EMAIL ADDRESS
1 Greg Gautreaux	TLD	220 - Clendinning Rd.	985-709-1090	greg@tld.org
2 Reggie Dupre	TLD		985-790-9902	rdupre@tld.org
3 Bennett Frisella	LLTG / Frisco Co	128 West Woodlawn Ranch Rd	985876 3807	BennettFrisella@FriscoConstructionCo.com
4 Ricky L. Thibodeaux	Berry Bros. Gen. Contractors	1414 River Road Berwick, La 70342	(985) 384-8770 (985) 637-8776 cell	ricky@bbgci.com
5 BRIAN A. BRUNET	G.I.S.	9307 PETROLEUM DR. HOUMA, LA 70363	(985) 791-6552	bbrunet@gisy.com
6 CURTIS "TREY" MIDDLETON	G.I.S.	9307 PETROLEUM DR. HOUMA, LA 70363	(985) 219-1000	tmiddleton@gisy.com
7 Matt Daigle	Sealevel	1069 Hwy 3185 Thibodaux, LA 70301	(985) 413-9505	mdaigle@sealevelinc.com
8 Ben Elliott	Delta Coast Consultants, LLC	631 South Hollywood Road Houma, LA 70360	985-414-5666	ben.elliott@deltaeastllc.com
9 Cann Hebert	GIS Engineering, LLC	197 Elysian Drive Houma, LA 70363	985219-1001	chebert@gisy.com
10				

---

## **PART III – ATTACHMENTS**

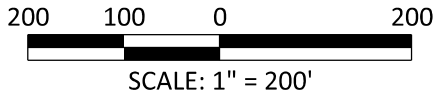
### **Soil Borings**

---





SATELLITE IMAGERY DATED: 25 JANUARY 2015



⊗ DENOTES APPROXIMATE LOCATIONS OF UNDISTURBED SOIL BORINGS DRILLED BETWEEN 17 SEPTEMBER AND 9 OCTOBER 2018

NOTE: REFER TO APPENDIX I, SHEET 4, FOR THE LOCATION OF THE PROPOSED PROJECT FEATURES.

BORING LOCATION PLAN

TERREBONNE PARISH CONSOLIDATED GOVERNMENT  
BAYOU TERREBONNE LEVEE FLOODGATE SYSTEM  
TERREBONNE PARISH, LOUISIANA  
TPCG PROJECT NO. 18-LOCK-46  
GIS PURCHASE ORDER NO. GEL000953



DRAWN BY: J.L.S.	JOB NO.: 23919
CHECKED BY: S.G.W.	DATE: 21 DEC 2018
CADD FILE: SITE PLAN.DGN	FIGURE 1



# LOG OF BORING AND TEST RESULTS

**Boring: B-1U**

Project No: 23919

Date: 10/02/2018 - 10/05/2018

Latitude: 29.38888°

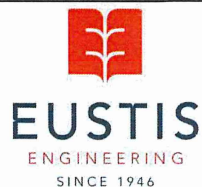
Longitude: -90.58777°

Water Depth: See Text  
Total Depth: 187.5 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
0					12' Water		NS	0										
5																		
10																		
15																		
20		0.25			Very soft dark gray organic clay	OH	PB-1	12	147						136	30	106	
25					Very soft dark gray clay	CH	PB-2	14.5	126									
30					Soft gray & dark gray silty clay w/decayed wood	CL	3A	16	84									
35					Very soft gray silty clay w/trace of organic matter	CL	3B	17	45	76	110	UU	0	168				
40					Soft gray clay w/few silt pockets	CH	3C	18	43									
45					Soft gray silty clay w/few silt lenses, & trace of clay & silt lenses	CL	3D	19	75									
50					Soft gray silty clay w/few silt lenses, & w/some fine sand lenses & layers	CL	4A	20	61									
55					Soft gray silty clay w/few silt lenses, & w/some fine sand lenses & layers	CL	4B	21	49	71	106	UU	0	256				
60					Very soft gray clay w/some fine sand pockets	CH	4C	22	52									
65					Medium dense gray & tan silty sand	SM	4D	23	51									
70					w/trace of organic matter		5A	24	58									
75							5B	25	78									
80							PB-6	26	26									-#200 = 17.5%
85																		-#200 = 23.2% SV
90							PB-7	28.5	27									
95																		
100							PB-8	31	85									
105							9A	32.5	75									
110							9B	33	64									
115							9C	34	68	59	99	UU	0	417	121	32	89	
120							9D	35	71									
125							10A	36	101									
130							10B	37	85	50	92	UU	0	243				
135							10C	38	91									
140							NR	39	97									
145							11A	40	97									
150							11B	41	87	48	90	OB	0	466				
155																		
160							12A	44	94									
165							12B	45	99									
170							12C	46	69	59	99	UU	0	593				
175							NR	47										
180							13A	48	82									
185							13B	49	99	45	89	OB	0	463				

NOTES:





Terrebonne Parish Consolidated  
Government  
Bayou Terrebonne Levee Floodgate  
System

Terrebonne Parish, Louisiana

## LOG OF BORING AND TEST RESULTS

Boring: B-1U

Project No: 23919

Date: 10/02/2018 - 10/05/2018

Latitude: 29.38888°

Longitude: -90.58777°

Water Depth: See Text

Total Depth: 187.5 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
50	0.75				No recovery	CH	13C	50	71									
					Soft to medium stiff gray clay w/few silt pockets & decayed wood (floculated)	CH	NR	51.17										
							14A	52	78									
	1.25				Stiff gray clay w/silt pockets & lenses, & decayed wood		14B	53	77	54	95	UU	0	621				
55							14C	54	84									
	0.75				No recovery		NR	55.42										
					Medium stiff to stiff gray clay w/few silt pockets & decayed wood w/some decayed wood & few silt pockets	CL	15A	56	88									
60		5			No recovery		PB-16	58.5	89									
					Medium stiff gray silty clay w/decayed wood	CL	17A	60	58									
							17B	61	35	83	113	UU	0	652				
	0.50				Medium stiff gray clay w/silt pockets, decayed wood, & trace of organic matter		17C	62	37									
							17D	63	36									
65					Medium stiff gray silty clay w/trace of roots		18A	64	38	90	118	UU	0	703				
	0.50				w/trace of decayed wood		18B	65	32									
					w/some decayed wood		18C	66	34									
					w/trace of clayey silt pockets	CL	18D	67	35									
70					w/some decayed wood		19A	68	45									
	0.75				Soft gray silty clay w/few concretions	CH	19B	69	38	83	114	UU	0	357				
					Soft gray clay w/silty sand pockets & lenses	CL	19C	70	40									
							19D	71	39									
					Soft gray silty clay w/few concretions	CH	20A	72	54									
75	0.75				Medium stiff gray clay w/few silt pockets & trace of roots		20B	73	58	67	104	OB	0	538				
	0.75				(floculated)		20C	74	54									
					w/trace of silt pockets (fissured)	CH	20D	75	54									
					w/few silt pockets & trace of roots (floculated)		21A	76	83									
80					Medium stiff to stiff gray clay w/few silt lenses (floculated)		PB-22	78	69									
					w/trace of silt pockets		23A	80	84									
	0.75				w/some decayed wood, few silty sand pockets, & trace of organic matter	OH	23B	81	106	41	83	UU	0	672				
						CH	23C	82	83									
85					Medium stiff dark gray & gray organic clay w/few silt pockets, decayed wood, & trace of clay lenses (floculated)	CL	NR	83.17	29									
							24A	84	33	84	112	OB	0	669				
	0.75				Stiff gray clay w/some decayed wood, few silty sand pockets, & trace of organic matter	CH	24B	85	46									
							24C	86	44									
							24D	87	44									
90					No recovery	CH	25A	88	58									
					Soft gray silty clay w/few concretions		25B	89	58									
	0.75				Medium stiff gray clay w/silt pockets & layers	CH	25C	90	43	73	105	UU	0	209				
							25D	91	47									
					Stiff gray clay w/silt pockets & lenses, & trace of concretions		26A	92	50									
							26B	93	45									
95	1.25				Very soft gray clay w/silty sand pockets & some concretions	CL	26C	94	45	73	106	OB	0	139				
							26D	95	44									
					Very soft to medium stiff gray clay w/silt pockets & lenses, & trace of shell fragments	CH	27A	96	51									
	1.25						27B	97	49	69	103	UU	0	812				
100					w/silt pockets & lenses w/few silt pockets & trace of shell		27C	98	59									

NOTES:

## LOG OF BORING AND TEST RESULTS

**Boring: B-1U**

Project No: 23919  
Date: 10/02/2018 - 10/05/2018  
Latitude: 29.38888°  
Longitude: -90.58777°

Water Depth: See Text  
Total Depth: 187.5 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
100					fragments	CL	28A	100	48									
					Soft gray silty clay w/trace of decayed wood		28B	101	47									
1.25					Medium stiff to stiff gray clay w/trace of silt pockets & lenses, & trace of concretions	CH	28C	103	44						43	23	20	CONS
105					w/few silt pockets & trace of decayed wood		29A	104	54									
1.00					Soft gray silty clay		29B	105	58	62	98	UU	0	853				
					No recovery		29C	106	46									
110					Medium stiff to stiff gray clay w/silt pockets & lenses	CH	29D	107	46									
1.25					w/trace of silt pockets	CH	30A	108	79									
					w/few silt pockets		30B	109	59	63	100	OB	0	264				
115					Soft gray clay w/few silt pockets	CH	30C	110	57									
					Medium stiff gray clay w/few silt pockets & trace of concretions	CH	30D	111	57									
					Stiff gray clay w/few silt pockets & trace of decayed wood	ML	31A	112	71									
		25			Medium stiff gray clay w/few silt pockets & trace of organic matter (floculated)	CH	31B	113	71									
					Medium compact gray clayey silt w/trace of organic matter	CL	31C	114	38	78	107	UU	0	778				
120		18			Soft gray sandy clay		PB-32	115	30									
					Soft to stiff gray clay w/few silty sand pockets	CH	PB-33	118	45									
1.50					w/trace of silt pockets & concretions		34A	119.5	53									
125					w/few silty sand pockets		34B	120.5	50	70	104	UU	0	1103				
					w/few silt pockets & lenses		34C	121.5	51									
1.25					Stiff gray silty clay w/trace of silt pockets & lenses (brittle)	CL	34D	122.5	53									
					Very soft to soft gray silty clay	CL	35A	123.5	58	79	106	OB	0	1894				
130							35B	124.5	50									
1.25							35C	125.5	34									
							35D	126.5	40									
135							36A	127.5	44									
							36B	128.5	44									
1.50							36C	129.5	47									
							36D	130.5	42									
140					Stiff gray clay w/few silt pockets & lenses	CH	37A	131.5	45									
							37B	132.5	42	73	104	OB	0	1554				
1.25							37C	133.5	47									
							37D	134.5	53									
145					Soft gray silty clay	CL	38A	135.5	41									
					Medium stiff gray clay w/trace of silt pockets (fissured, floculated)	CH	38B	136.5	51	67	102	UU	0	861				
1.50					Stiff to very stiff gray clay w/few silt pockets	CH	38C	137.5	61									
							38D	138.5	62									
1.25							39A	139.5	73									
							39B	140.5	56									
150							39C	141.5	60	61	98	OB	0	2047				
							39D	142.5	53									
					w/trace of silt pockets & concretions (floculated)		40A	143.5	62									
					w/few silt pockets (floculated)		40B	144.5	58	61	97	UU	0	1115				
							40C	145.5	61									
							40D	146.5	67									
							41A	147.5	84									
						OH	41B	148.5	98	42	84	OB	0	1998				

NOTES:

## LOG OF BORING AND TEST RESULTS

**Boring: B-1U**

Project No: 23919  
Date: 10/02/2018 - 10/05/2018  
Latitude: 29.38888°  
Longitude: -90.58777°

Water Depth: See Text  
Total Depth: 187.5 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
150	3.50				Stiff to very stiff brown, dark gray, & gray organic clay w/trace of silt pockets & organic matter	OH	41C	149.5	112						203	98	105	CONS
					Stiff gray clay w/few silt pockets	CH	41D	150.5	133									
					Soft gray silty clay	CL	42A	151.5	46									
					Soft gray silty clay	CL	42B	152.5	30									
					Soft gray & tan silty clay w/clayey silt	CL	42C	153.5	28									
155		26			Medium compact gray clayey silt	ML	PB-43	154.5	28									
		24			w/fine sand, trace of organic matter, & concretions		PB-44	157	27									-#200 = 82.2%
160		26			Soft gray silty clay	CL	PB-45	159.5	31									
		29					PB-46	162	35									
165		23			Soft gray sandy clay	CL	PB-47	164.5	31						35	14	21	
		19			Soft gray clay w/silty sand pockets	CH	PB-48	167	38									
170	1.75				Stiff gray silty clay	CL	49A	168.5	29									
					Medium stiff gray silty clay w/trace of clay pockets & lenses, & silt pockets	CL	49B	169.5	31									
					Very soft gray silty clay	CL	49C	170.5	30	87	113	UU	0	906				
175					Medium stiff gray silty clay w/silty sand pockets & lenses	CL	50A	172.5	45									
					Medium dense gray fine sand w/clay pockets & lenses	SP	50B	173.5	40									
					Medium stiff gray silty clay w/fine sand vertical lenses & layers, & trace of clay pockets & lenses	CL	50C	174.5	24	92	114	UU	0	518				-#200 = 85.8%
	1.50				Medium stiff gray silty clay w/fine sand vertical lenses & layers, & trace of clay pockets & lenses	CL	51A	175.5	19									
					Soft to stiff gray sandy clay	CL	51B	176.5	18									
180	1.25				Medium stiff gray silty clay w/fine sand vertical lenses & layers, & trace of clay pockets & lenses	CL	51C	177.5	19									
					Medium dense brown & gray silty sand w/few clay pockets	SM	51D	178.5	20									
		62			w/few clay pockets, trace of organic matter, & fine gravel		52A	179.5	21									
		67			w/few clay pockets		52B	180.5	21	107	129	OB	0	1222				-#200 = 13.9%
		43					PB-53	182.5	13									
							PB-54	184	13									
							PB-55	186	14									
190																		
195																		
200																		

NOTES:



## LOG OF BORING AND TEST RESULTS

**Boring: B-2**

Project No: 23919  
Date: 09/17/2018 - 09/18/2018  
Latitude: 29.38863°  
Longitude: -90.58720°

Water Depth: See Text  
Total Depth: 120.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
0					Soft gray & tan clay w/few silt pockets, roots, & trace of shell fragments	CH	PB1	0	49						90	25	65	
1.50					Medium stiff gray & brown clay w/trace of silt pockets, roots, & shell fragments	CH	2	2	43	74	106	OB	0	732				
5					Medium stiff gray & tan silty clay w/trace of silt pockets	CL	3	5	27									
1.75					Medium stiff gray silty clay w/trace of clay pockets & organic matter	CL	4	8	30	90	117	OB	0	561				
0.25							5	11	30									
0.50					Very soft gray & tan silty clay w/trace of concretions	CL	6	14	38	80	110	OB	0	234				
15					Soft gray silty clay	CL	7	18	37						35	20	15	
20					w/trace of clay pockets & shell fragments		8	23	44	77	111	OB	0	290				
25																		
0.25					Soft gray clay w/few fine sand pockets & lenses, & trace of silt lenses	CH	9	28	62	62	100	OB	0	250				
0.50					w/some silt pockets & lenses		10	33	46									
35					w/silt pockets & lenses		11	38	48	72	107	OB	0	480				
40																		
0.50					Medium stiff gray organic clay w/trace of decayed wood	OH	12	43	98	43	85	OB	0	824				
45																		
1.00					Medium stiff gray & dark gray clay w/few silt pockets, decayed wood, & trace of organic clay lenses	CH	13	48	76	54	95	OB	0	515				
50																		

NOTES:

## LOG OF BORING AND TEST RESULTS

**Boring: B-2**

Project No: 23919

Date: 09/17/2018 - 09/18/2018

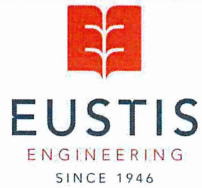
Latitude: 29.38863°

Longitude: -90.58720°

Water Depth: See Text  
Total Depth: 120.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
50					Medium stiff gray & dark gray clay w/few silt pockets, decayed wood, & trace of organic clay lenses	CH												
55	0.75				Medium stiff dark gray organic clay w/decayed wood	OH	14	53	136						279	140	139	
60	0.50				Medium stiff gray clay w/few fine sand pockets & decayed wood	CH	15	58	73	55	96	OB	0	896				
65	0.50				Stiff gray clay w/few silt pockets, decayed wood, & organic matter	CH	16	63	86	49	91	OB	0	1023	144	42	102	
70	0.50				Stiff brown & dark gray organic clay w/trace of decayed wood & lenses	OH	17	68	159	30	78	OB	0	1426				
75	0.25				Medium stiff gray silty clay w/trace of silt lenses & roots	C:L	18	73	36	83	113	OB	0	623				
80	0.50				Medium stiff gray clay w/some silt pockets & lenses, trace of roots, & organic matter	CH	19	78	36	80	109	OB	0	651				
85	0.50				w/few silt pockets & lenses		20	83	48						53	23	30	CONS
90	0.50				w/trace of silt pockets, wood, & concretions		21	88	56	64	100	OB	0	642				
95	0.50				Medium stiff gray & tan clay w/trace of silt pockets & concretions	CH	22	93	47	74	109	OB	0	599				
100	0.50				Stiff gray clay w/trace of silt lenses & pockets, & trace of shell fragments	CH	23	98	43	78	111	OB	0	1191				

NOTES:



Terrebonne Parish Consolidated  
Government  
Bayou Terrebonne Levee Floodgate  
System  
Terrebonne Parish, Louisiana

## LOG OF BORING AND TEST RESULTS

**Boring: B-2**

Project No: 23919  
Date: 09/17/2018 - 09/18/2018  
Latitude: 29.38863°  
Longitude: -90.58720°

Water Depth: See Text  
Total Depth: 120.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C pcf	LL	PL	PI	
100					Stiff gray clay w/trace of silt lenses & pockets, & trace of shell fragments	CH												
105	0.50				Medium stiff gray clay w/silt lenses, trace of silty clay lenses, & concretions	CH	24	103	44	74	106	OB	0	754				
110	0.50				w/silt pockets		25	108	44									
115		8			Soft dark brown humus w/trace of silt & roots	Pt	26	113	140						230	111	119	
120	1.50				Very stiff dark brown & dark gray humus	Pt	27	118	152	31	77	OB	0	3729	259	122	137	
125																		
130																		
135																		
140																		
145																		
150																		

NOTES:

## LOG OF BORING AND TEST RESULTS

**Boring: B-3**

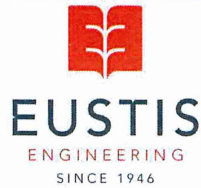
Project No: 23919  
Date: 10/08/2018 - 10/09/2018  
Latitude: 29.38920°  
Longitude: -90.58840°

Water Depth: See Text  
Total Depth: 120.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
0					Medium stiff gray silty clay w/few roots	CL	PB-1	0	23									
					Compact gray & tan clayey silt w/silty clay lenses	ML	2	2	24	98	122	OB	0	1019	32	24	8	
5	1.00				Soft gray & tan clay	CH	3	5	36	81	110	OB	0	436				
					Medium stiff gray & tan silty clay	CL	4	8	35									
10	0.25				Soft gray & tan silty clay w/trace of silt lenses	CL	5	11	37	82	112	OB	0	360	42	24	18	
					Medium stiff gray silty clay w/few silt pockets	CL	6	14	35	87	117	OB	0	507				
15					Soft gray clay w/few silt pockets & trace of decayed wood	CH	7	18	48	70	104	OB	0	303				
20	0.25				Medium stiff gray silty clay w/trace of organic matter	CL	8	23	37	82	112	OB	0	551				
25	0.25				Very soft gray silty clay w/clayey silt	CL	9	28	34	83	111	OB	0	195				
30	0.25				Medium stiff gray clay w/few silt pockets, trace of concretions, & decayed wood	CH	10	33	47	70	103	OB	0	648				
35	0.25				Loose gray silty sand w/few clay pockets	SM	11	38	23									
40					Medium stiff gray silty clay w/silt lenses	CL	12	43	33									
45					Medium stiff dark gray & gray organic clay w/trace of decayed wood	OH	13	48	95	43	85	OB	0	959	145	43	102	
50	1.25																	-#200 = 44.9%

NOTES:





Terrebonne Parish Consolidated  
Government  
Bayou Terrebonne Levee Floodgate  
System  
Terrebonne Parish, Louisiana

## LOG OF BORING AND TEST RESULTS

**Boring: B-3**

Project No: 23919

Date: 10/08/2018 - 10/09/2018

Latitude: 29.38920°

Longitude: -90.58840°

Water Depth: See Text  
Total Depth: 120.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C psf	LL	PL	PI	
50					Medium stiff dark gray & gray organic clay w/trace of decayed wood	OH												
55	1.75				Very stiff dark brown humus w/trace of decayed wood	Pt	14	53	167	29	76	OB	0	2352	275	118	157	
60	0.75				Medium stiff gray clay w/few silt pockets & trace of organic matter	CH	15	58	65	60	99	OB	0	946				
65	0.50				w/few silt pockets & decayed wood		16	63	78									
70	0.50				w/few silt pockets & trace of organic matter		17	68	47	72	106	OB	0	814				
75	0.25				w/few silt pockets & organic matter		18	73	52									
80	0.50				w/trace of silt pockets & organic matter		19	78	53	69	106	OB	0	772				
85	0.50				w/few silt pockets		20	83	55						102	26	76	
90	0.50				w/trace of silt pockets & lenses		21	88	48	72	107	OB	0	707				
95	0.25				w/some silt pockets		22	93	36									
100	0.50				w/trace of silt pockets		23	98	63	62	100	OB	0	660				

NOTES:





Terrebonne Parish Consolidated  
Government  
Bayou Terrebonne Levee Floodgate  
System  
Terrebonne Parish, Louisiana

## LOG OF BORING AND TEST RESULTS

**Boring: B-3**

Project No: 23919  
Date: 10/08/2018 - 10/09/2018  
Latitude: 29.38920°  
Longitude: -90.58840°

Water Depth: See Text  
Total Depth: 120.0 ft

Scale in Feet	PP	SPT	S P L R	Symbol	Visual Classification	USC	Sample Number	Depth in Feet	Water Content %	Density		Shear Tests			Atterberg Limits			Other Tests
										Dry pcf	Wet pcf	Type	φ	C pcf	LL	PL	PI	
100					Medium stiff gray clay w/trace of silt pockets & decayed wood	CH												
105	0.50						24	103	69	57	96	OB	0	776				
110	0.50				Stiff gray clay w/trace of silt pockets & roots	CH	25	108	53	68	104	OB	0	1133				
115	0.50				Medium stiff gray clay w/few silt pockets	CH	26	113	50						77	24	53	
120	0.50				Stiff gray clay w/silt pockets & lenses	CH	27	118	50	66	99	OB	0	1353				
125																		
130																		
135																		
140																		
145																		
150																		

NOTES: