

# JOINT PUBLIC NOTICE

July 23, 2018

United States Army Corps of Engineers  
New Orleans District  
Regulatory Branch  
7400 Leake Avenue  
New Orleans, Louisiana 70118

State of Louisiana  
Department of Environmental Quality  
Water Permits Division  
Post Office Box 4313  
Baton Rouge, Louisiana 70821-4313

(504) 862-2675  
Project Manager  
Jamie Crowe  
Jamie.M.Crowe@usace.army.mil  
Permit Application Number  
MVN 2015-01590 CO

(225) 219-3225  
Project Manager  
Elizabeth Hill  
WQC Application Number  
WQC 170719-01

Interested parties are hereby notified that a permit application has been received by the New Orleans District of the U.S. Army Corps of Engineers pursuant to:  
[ X ] Section 10 of the Rivers and Harbors Act of March 3, 1899 (30 Stat. 1151; 33 USC 403); and/or [X] Section 404 of the Clean Water Act (86 Stat. 816; 33 USC 1344).

Application has also been made to the Louisiana Department of Environmental Quality, Office of Environmental Services, for a Water Quality Certification (WQC) in accordance with statutory authority contained in LRS30:2047 A(3), and provisions of Section 401 of the Clean Water Act (P.L.95-17).

## **LOCK AND FLOODWALL STRUCTURE IN THE HOUMA NAVIGATION CANAL IN LAFOURCHE PARISH**

**NAME OF APPLICANT:** Terrebonne Levee and Conservation District; c/o APTIM, 2503 Petroleum Drive, Houma, Louisiana 70363.

**LOCATION OF WORK:** Within the Terrebonne Basin, in the West- Central Louisiana Coastal hydrologic unit (HUC 08090302), located in the Houma Navigation Canal (HNC), approximately 4 miles southwest of Dulac, Louisiana, in Lafourche Parish.

**CHARACTER OF WORK:** The applicant proposes to dredge an area, construct an aggregate road for access, and construct a lock structure that provides 110 of clear width and an 800 foot long lock chamber, floodgate with integral sluice gates, a closure wall that consists of a pile-supported T-wall floodwall to connect this project to existing adjacent levees, an operations area, maintenance building, boat ramp, boat shed, and other appurtenant facilities to maintain and operate the structures. The existing floodgate and floodwalls will be removed or incorporated into the proposed flood gate and lock complex. A total of 21.4 acres of brackish marsh will be impacted by construction of the lock structure. Approximately 1,383,000 cubic yards of material will

be dredged from the HNC and the proposed marina canal. All dredged material will be deposited beneficially in 245 acres of open water in the nearby area, as shown in the enclosed disposal plan. Approximately, 37,600 cubic yards of hauled-in dirt will be used for the levee tie-in and as backfill for utilities, while approximately 236,000 cubic yards of rip-rap and 2,400 cubic yards of concrete will be used for the levee tie-in and bank line stabilization/scour protection. Approximately 19,500 cubic yards of limestone and 6,000 cubic yards of asphalt will be used for the access road.

According to the applicant, the project footprint has been minimized to the maximum extent practicable. The alignment and design have been altered such that wetland impacts were reduced from 130 acres to 21.4 acres. Other alignments evaluated resulted in additional wetland impacts.

The comment period for the Department of the Army Permit and the Louisiana Department of Environmental Quality WQC will close **20 days** from the date of this joint public notice. Written comments, including suggestions for modifications or objections to the proposed work, stating reasons thereof, are being solicited from anyone having interest in this permit and/or this WQC request and must be mailed, so as to be received before or by the last day of the comment period. Letters concerning the Corps of Engineers permit application must reference the applicant's name and the Permit Application Number, and be mailed to the Corps of Engineers at the address above, **ATTENTION: REGULATORY BRANCH**. The application for this proposed project is on file with the Louisiana Department of Environmental Quality and may be examined weekdays between 8:00 a.m. and 4:30 p.m. Copies may be obtained upon payment of costs of reproduction. Individuals or parties may request an extension of time in which to comment on the proposed work by writing or e-mailing the Corps of Engineers Project Manager listed above. Any request must be specific and substantively supportive of the requested extension, and received by this office prior to the end of the initial comment period. The Section Chief will review the request and the requestor will be promptly notified of the decision to grant or deny the request. If granted, the time extension will be continuous to the initial comment period and, inclusive of the initial comment period, will not exceed a total of 30 calendar days. Letters concerning the Water Quality Certification must reference the applicant's name and the WQC Application number and be mailed to the Louisiana Department of Environmental Quality at the address above.

### **Corps of Engineers Permit Criteria**

The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values,

flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

The U.S. Army Corps of Engineers is soliciting comments from the public, federal, state, and local agencies and officials, Indian Tribes, and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the U.S. Army Corps of Engineers to determine whether to make, modify, condition, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

The New Orleans District is unaware of properties listed on the National Register of Historic Places near the proposed work. The possibility exists that the proposed work may damage or destroy presently unknown archeological, scientific, prehistorical, historical sites, or data. Copies of this notice are being sent to the State Archeologist and State Historic Preservation Officer.

Our initial finding is that the proposed work would not affect any species, nor affect any habitat designated as critical to the survival and recovery of such species, listed as endangered by the U.S. Department of Commerce.

The New Orleans District has determined that the proposed project is located in waters known to be utilized by the west Indian manatee (*Trichechus manatus*) and determined that the proposed activity is not likely to adversely affect the species, provided the *Standard Manatee Conditions for In-Water Activities* are included in any authorization from this office. This determination is based on the Standard Local Operating Procedure for Endangered Species of Louisiana (SLOPES), dated October 22, 2014, between the U.S. Army Corps of Engineers and U.S. Fish and Wildlife Service, Ecological Services Office.

This notice initiates the Essential Fish Habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. The applicant's proposal would result in the destruction or alteration of **21.4 acres** of EFH utilized by various life stages of red drum and penaeid shrimp. Our initial determination is that the proposed action would not have a substantial adverse impact on EFH or federally managed fisheries in the Gulf of Mexico. Our final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the National Marine Fisheries Service.

If the proposed work involves deposits of dredged or fill material into navigable

waters, the evaluation of the probable impacts will include the application of guidelines established by the Administrator of the Environmental Protection Agency. Also, a certification that the proposed activity will not violate applicable water quality standards will be required from the Department of Environmental Quality, Office of Environmental Services, before a permit is issued.

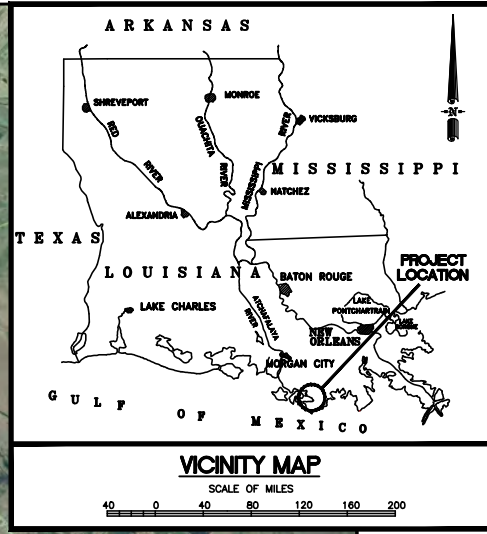
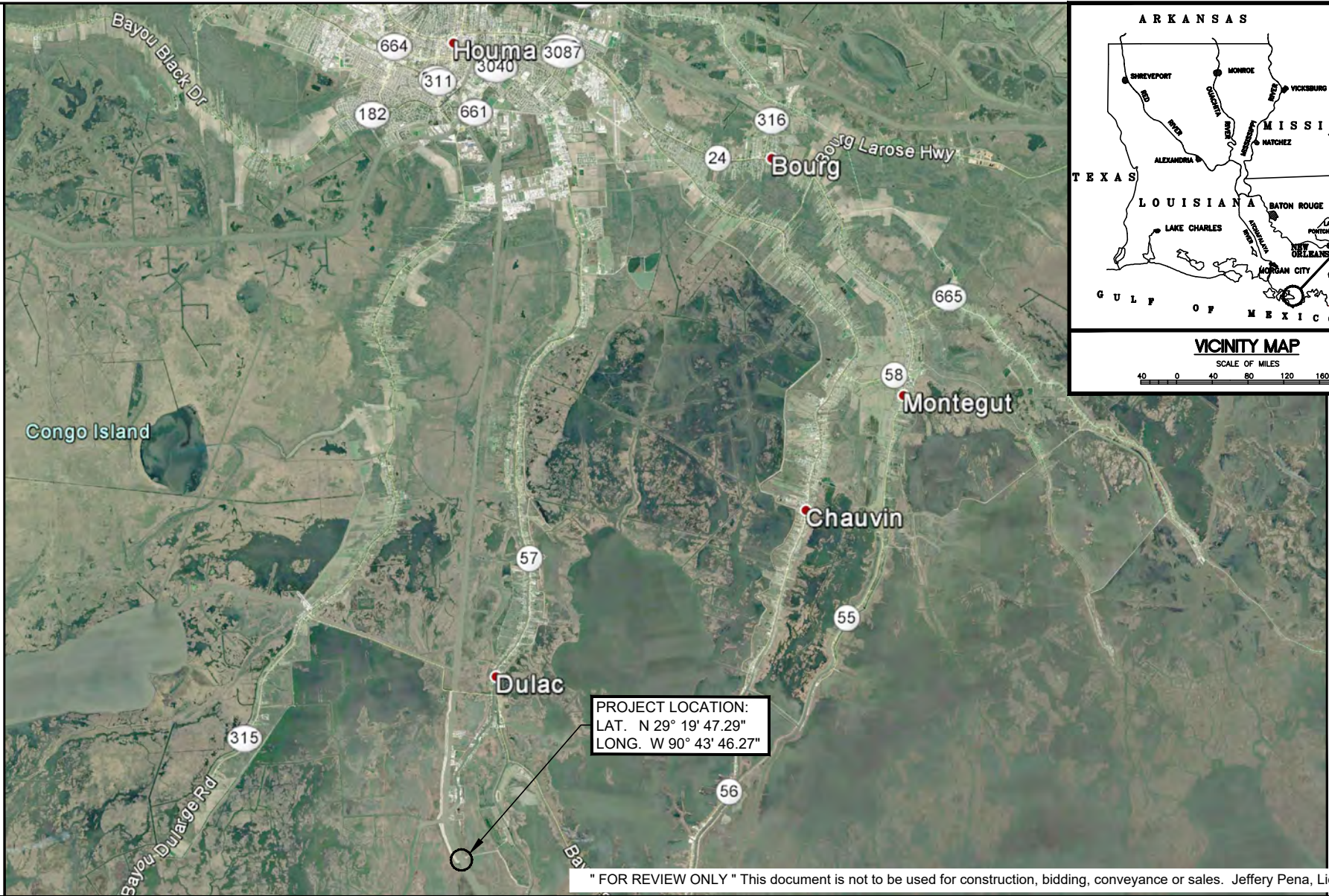
Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. You are requested to communicate the information contained in this notice to any other parties whom you deem likely to have interest in the matter.

The applicant has certified that the proposed activity described in the application complies with and will be conducted in a manner that is consistent with the Louisiana Coastal Resources Program. The Department of the Army permit will not be issued unless the applicant received approval or a waiver of the Coastal Use Permit by the Department of Natural Resources.

You are requested to communicate the information contained in this notice to any other parties whom you deem likely to have interest in the matter.

John M. Herman  
Chief, Central Evaluation Section  
Regulatory Branch

Enclosure



" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

VICINITY MAP

TERREBONNE LEVEE & CONSERVATION DISTRICT  
 HOUMA NAVIGATION CANAL LOCK COMPLEX  
 TERREBONNE PARISH, LA.  
 T20S, R17E, SECTS 16 & 21

Date: June 2017	Drawn By: PMC	Sheet No.: 01
Scale: 1"=32,000'	Approved By: CDL	File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Reqstd Info
4	01/30/2018	Disposal Areas



SHEET #	SHEET TITLE
01	VICINITY MAP
02	INDEX SHEET
03	OVERALL PLAN
04	LOCK COMPLEX SITE PLAN
04 A	EXISTING SITE PLAN
05	LOCK COMPLEX PROFILE
06	LEVEE TIE-IN PLAN VIEW
07	LEVEE TIE-IN TYPICAL TIE-IN PLAN AND PROFILE
08	LEVEE TIE-IN TYPICAL LEVEE CROSS SECTION
09	OPERATIONS CENTER PLAN VIEW
10	OPERATIONS CENTER TYPICAL EMBANKMENT CROSS SECTION
11	OPERATIONS CENTER BOAT LIFT PLAN AND PROFILE
12	OPERATIONS CENTER MAINTENANCE BUILDING ELEVATIONS
13	OPERATIONS CENTER BOAT LAUNCH PLAN AND PROFILE
14	OPERATIONS CENTER BOAT LAUNCH DETAILS
15	DREDGE PLAN PHASE 1
16	DREDGE PLAN PHASE 2
17	DREDGE PLAN CROSS-SECTIONS
18	DREDGE PLAN CROSS-SECTIONS
19	DREDGE PLAN CROSS-SECTIONS
20	DREDGE PLAN CROSS-SECTIONS
21	FOUR POINT ROAD OVERALL PLAN
22	FOUR POINT ROAD TYPICAL SECTIONS
23	G-1 ACCESS ROAD OVERALL PLAN
24	G-1 ACCESS ROAD DETAILS

SHEET #	SHEET TITLE
25	UTILITIES POTABLE WATER AND SEWER SERVICE PLAN
26	UTILITIES POTABLE WATER PLAN VIEW
27	UTILITIES POTABLE WATER PLAN VIEW
28	UTILITIES POTABLE WATER PLAN VIEW
29	UTILITIES POTABLE WATER PLAN VIEW
30	UTILITIES POTABLE WATER AND SEWER SERVICE DETAILS
31	SCOUR PROTECTION PLAN VIEW
32	SCOUR PROTECTION CROSS SECTIONS
33	SCOUR PROTECTION CROSS SECTIONS
34	TYPICAL LOCK CHAMBER BRACED WALL PLAN LAYOUT
35	TYPICAL LOCK CHAMBER BRACED WALL SECTION
36	GUIDE WALL DETAILS
37	FLOODGATE JACKET PLAN AND SECTION
38	FLOODGATE JACKET CHANNEL SIDE ELEVATION
39	GUIDE WALL OVERALL PLAN
40	NOSE PIER DETAILS
41	DOLPHIN PLAN AND ELEVATION FLOOD SIDE
42	DOLPHIN PLAN AND ELEVATION PROTECTED SIDE
43	MARINA ACCESS CANAL
44	DREDGE DISPOSAL AREA PLAN
45	DREDGE DISPOSAL AREA SECTIONS
46	FLOODGATE PLAN @ EL. 5.0
47	FLOODGATE ELEVATION VIEW
48	GENERAL NOTES
49	OPERATION PLAN

" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

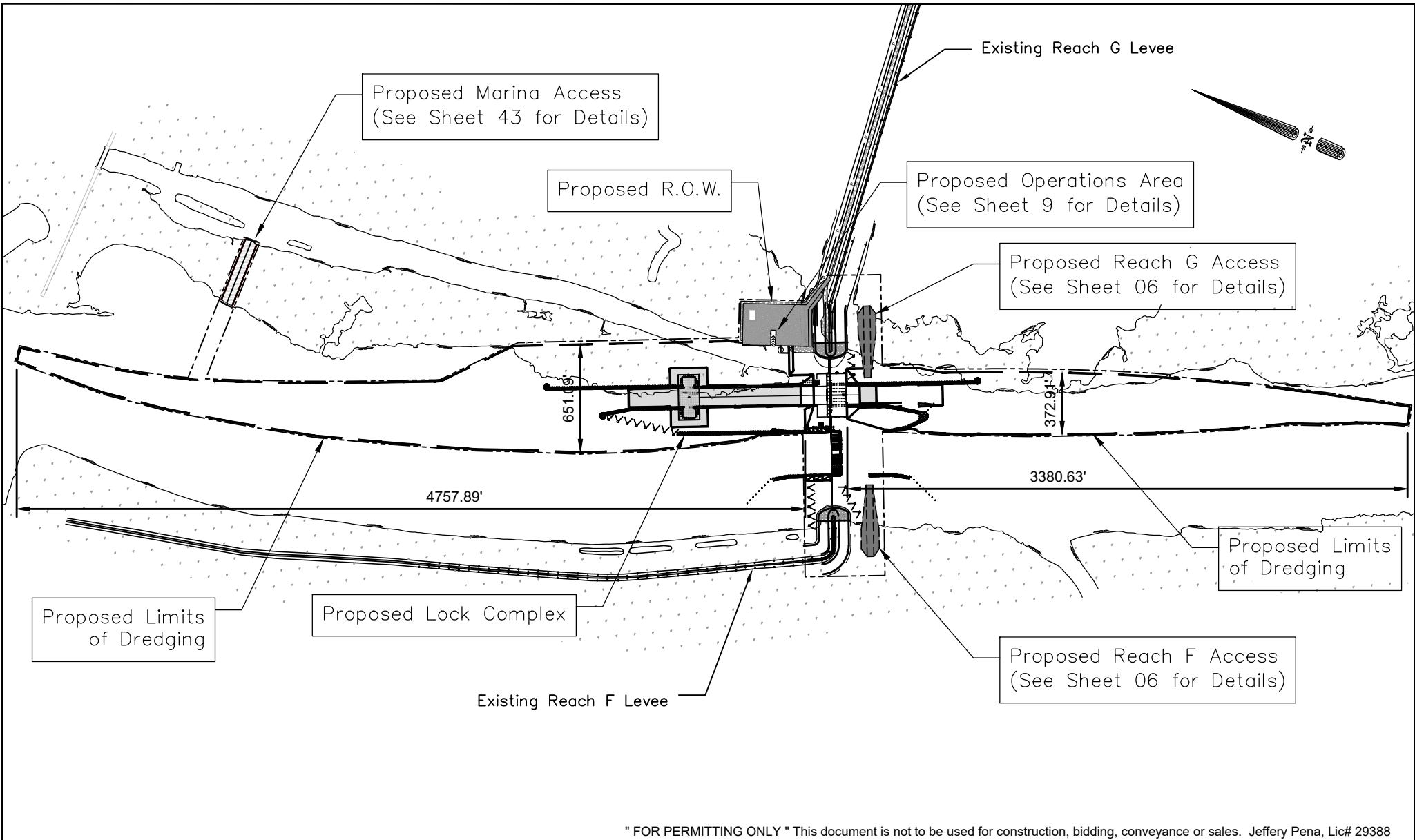
INDEX SHEET

TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21

Date: June 2017	Drawn By: PMC	Sheet No.: 02
Scale: N.T.S.	Approved By: CDL	File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Reqstd Info
4	01/30/2018	Disposal Areas





" FOR PERMITTING ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

**OVERALL PLAN**

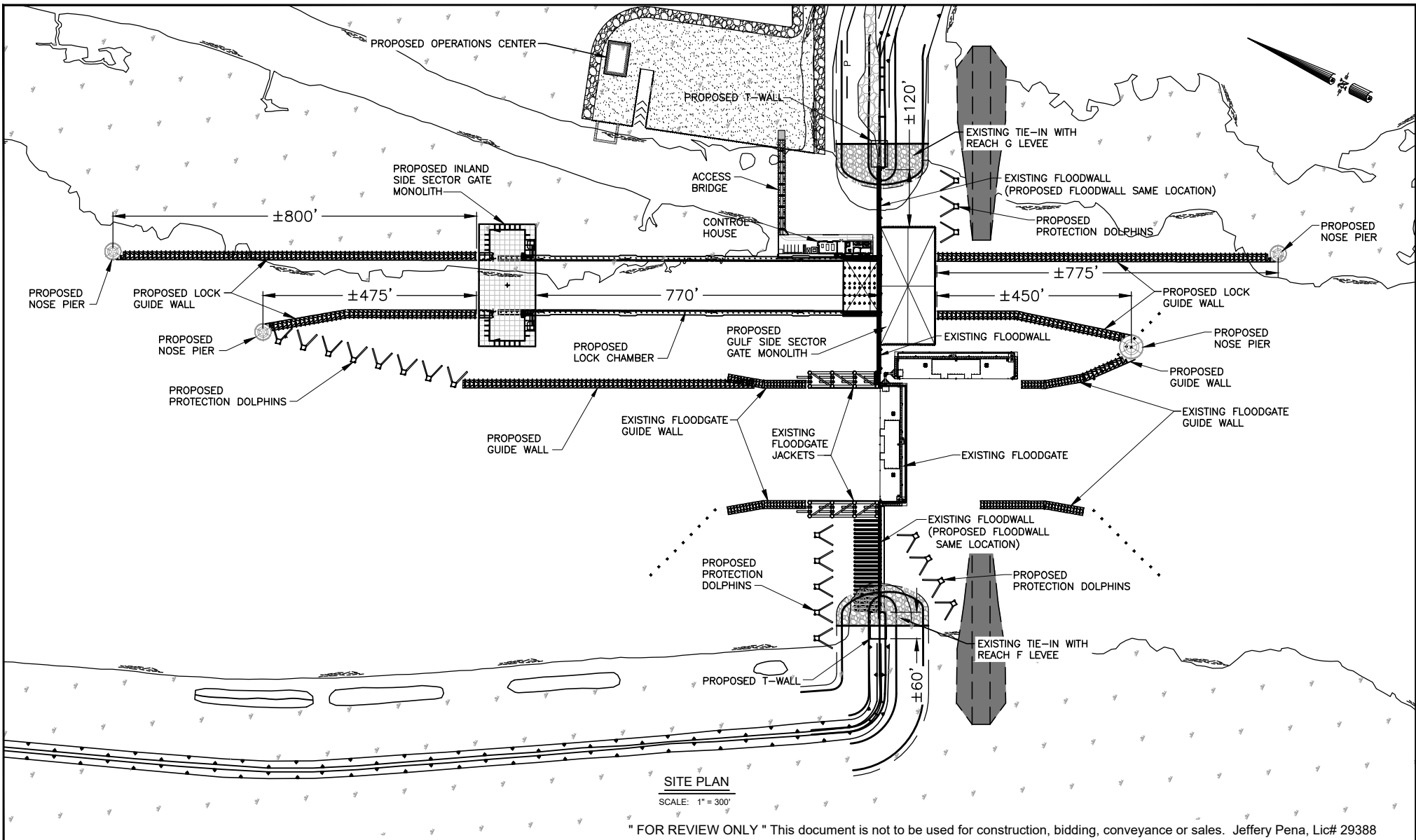
**TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21**

Date: June 2017	Drawn By: LDE	Sheet No.: 3
Scale: 1"=800'	Approved By: CDL	File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE and DNR Rastd Info.
4	01/30/2018	Disposal Areas



**APTIM Environmental & Infrastructure, Inc.**



**LOCK COMPLEX  
SITE PLAN**

**TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21**

Date: June 2017  
Scale: 1" = 300'

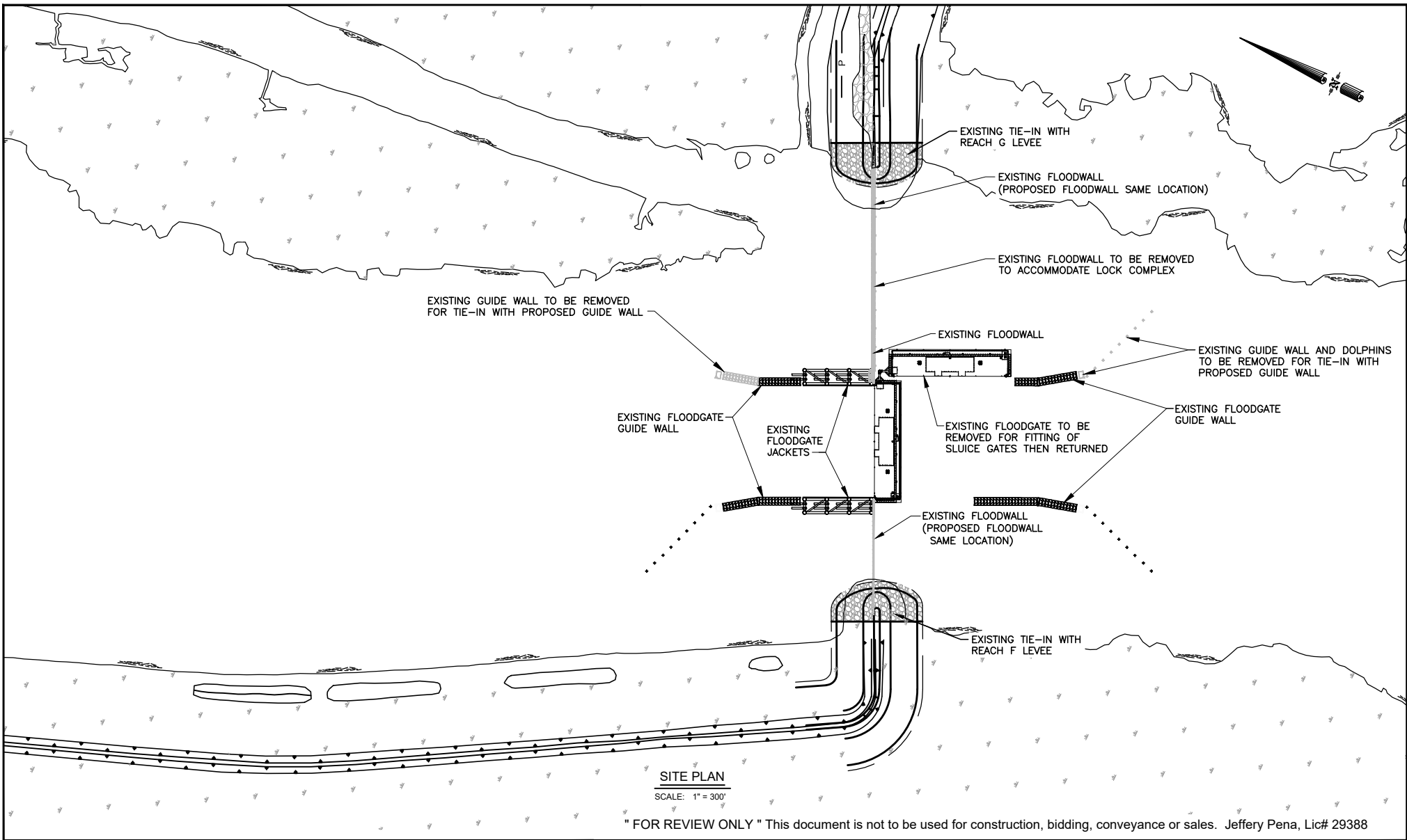
Drawn By: PMC  
Approved By: CDL

Sheet No.: 04  
File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Reastd Info
4	01/30/2018	Disposal Areas







" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

EXISTING SITE PLAN

TERREBONNE LEVEE & CONSERVATION DISTRICT  
 HOUMA NAVIGATION CANAL LOCK COMPLEX  
 TERREBONNE PARISH, LA.  
 T20S, R17E, SECTS 16 & 21

Date: June 2017

Drawn By: PMC

Sheet No.: 04 A

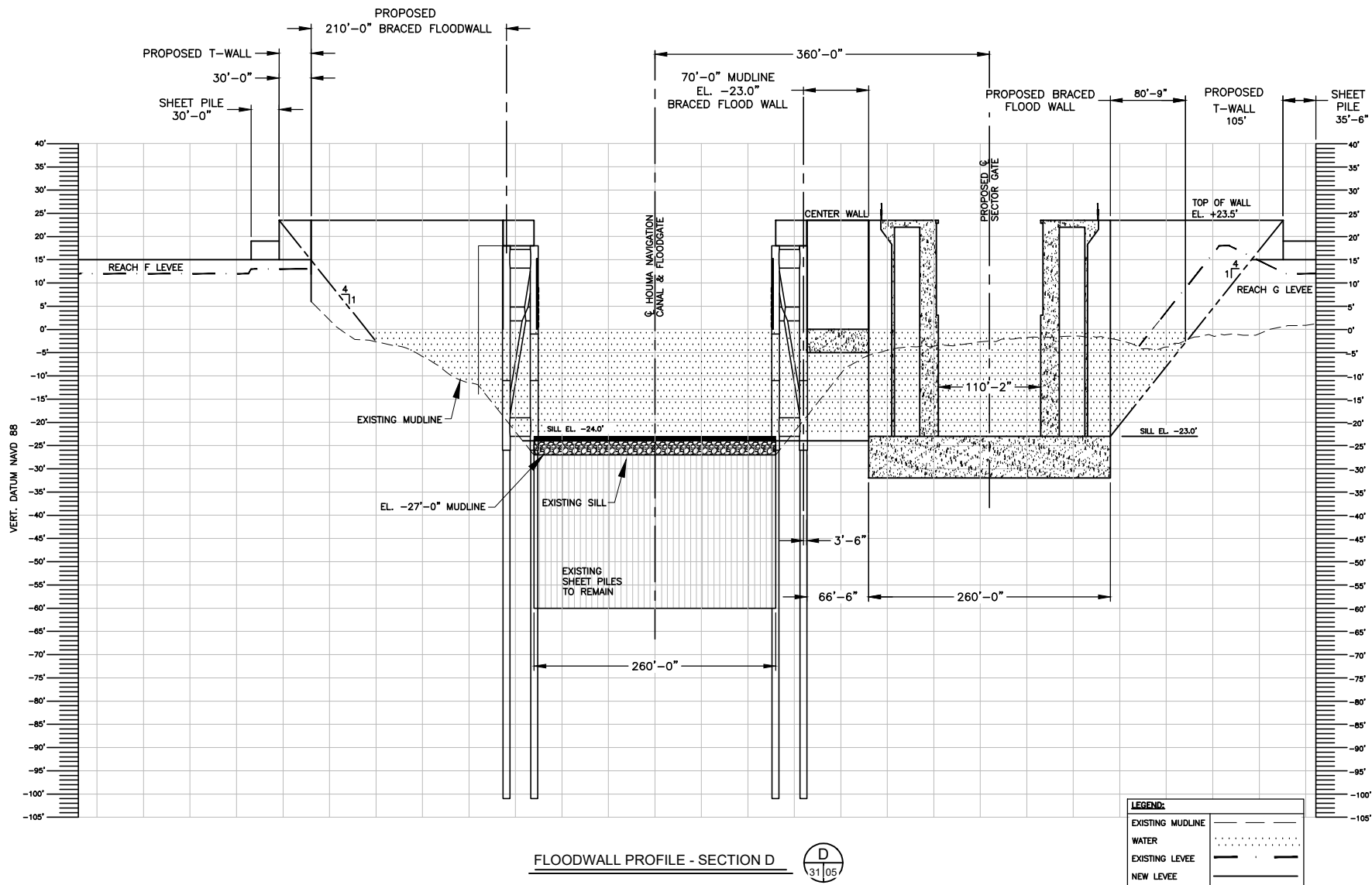
Scale: 1" = 300'

Approved By: CDL

File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Reqstd Info
4	01/30/2018	Disposal Areas





FLOODWALL PROFILE - SECTION D



" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

LOCK COMPLEX PROFILE

TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21

Date:  
June 2017

Drawn By:  
PMC

Sheet No.:  
05

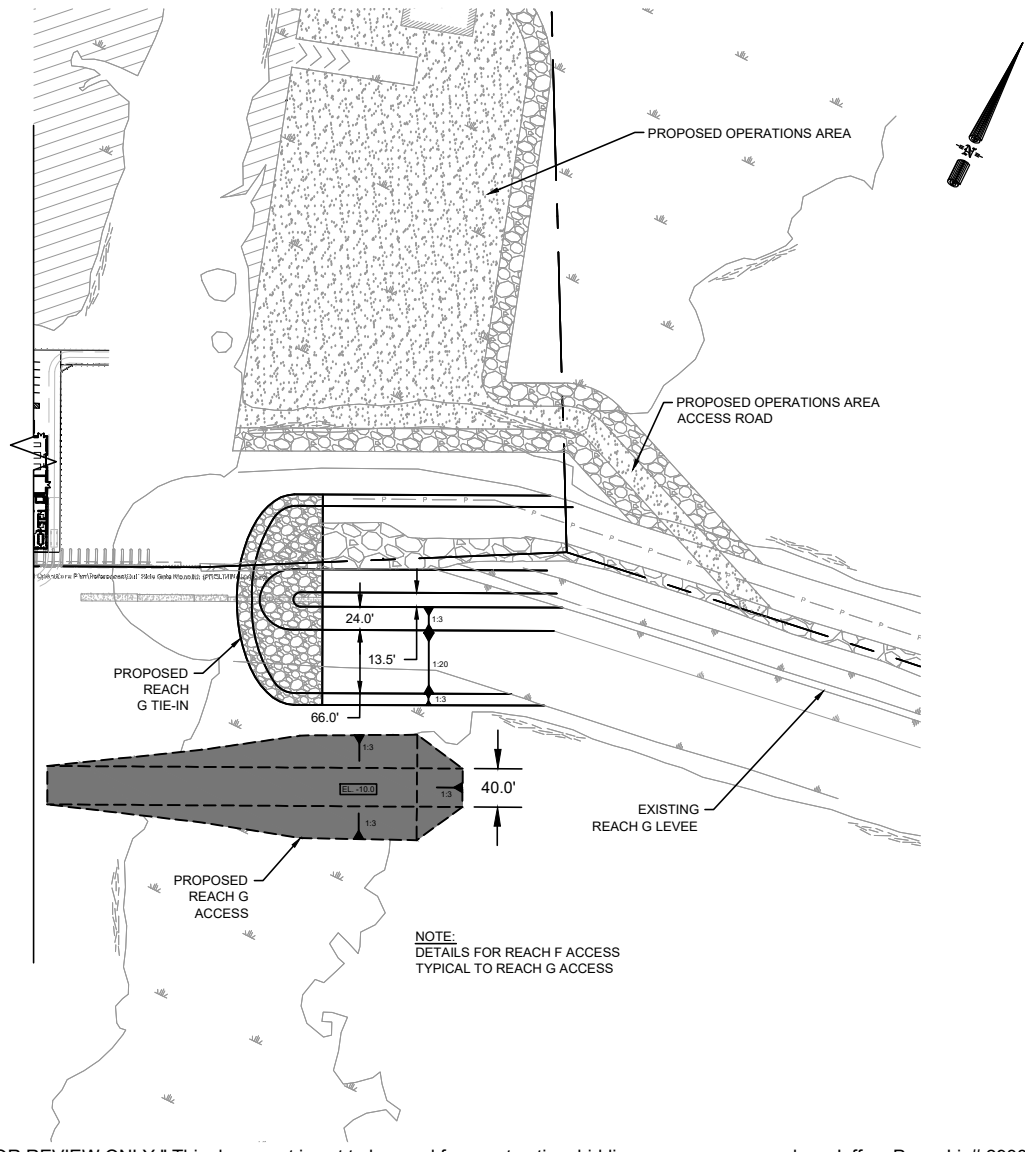
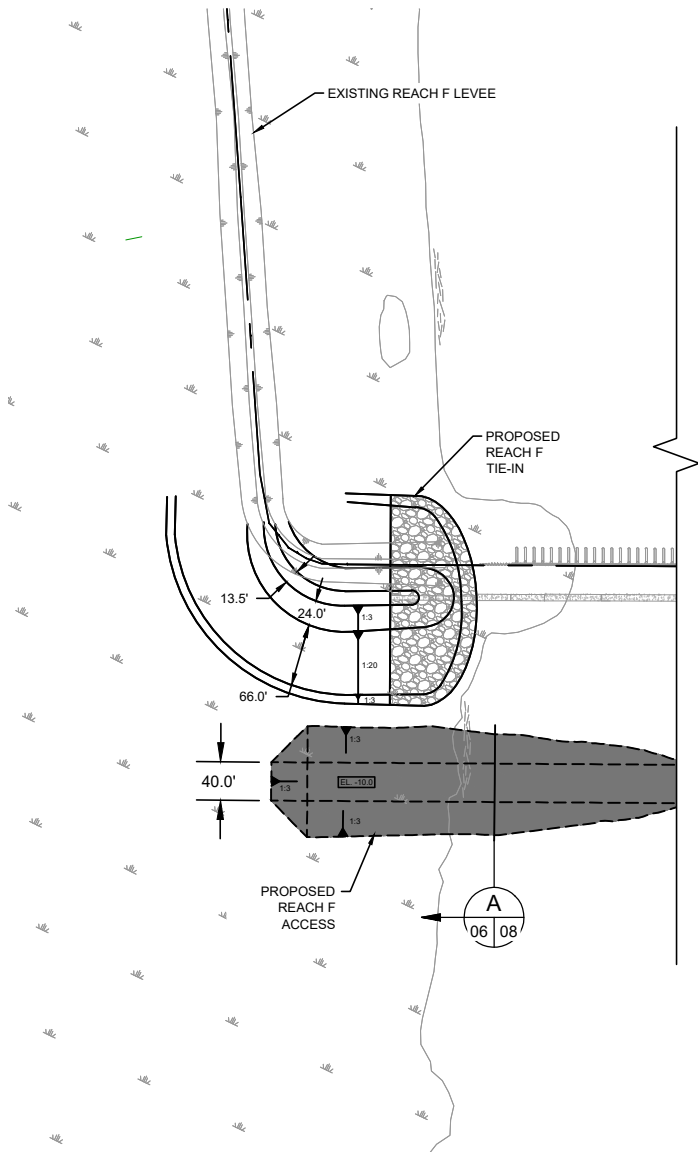
Scale:  
(H) 1"=160'  
(V) 1"=32'

Approved By:  
CDL

File No.:  
154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Reqstd Info
4	01/30/2018	Disposal Areas





NOTE:  
DETAILS FOR REACH F ACCESS  
TYPICAL TO REACH G ACCESS

" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

LEVEE TIE-IN  
PLAN VIEW

TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21

Date:  
June 2017

Scale:  
1"=200'

Drawn By:  
PMC

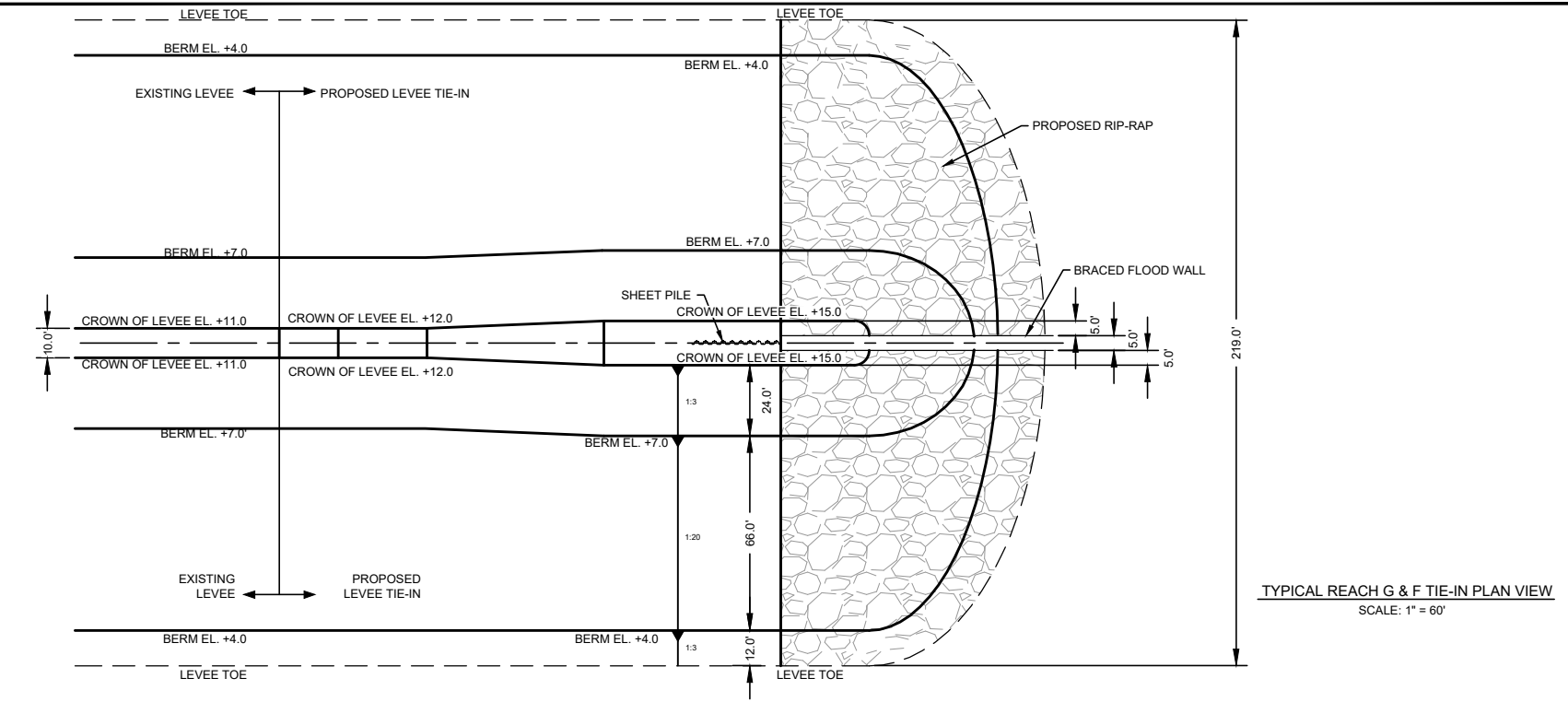
Approved By:  
CDL

Sheet No.:  
06

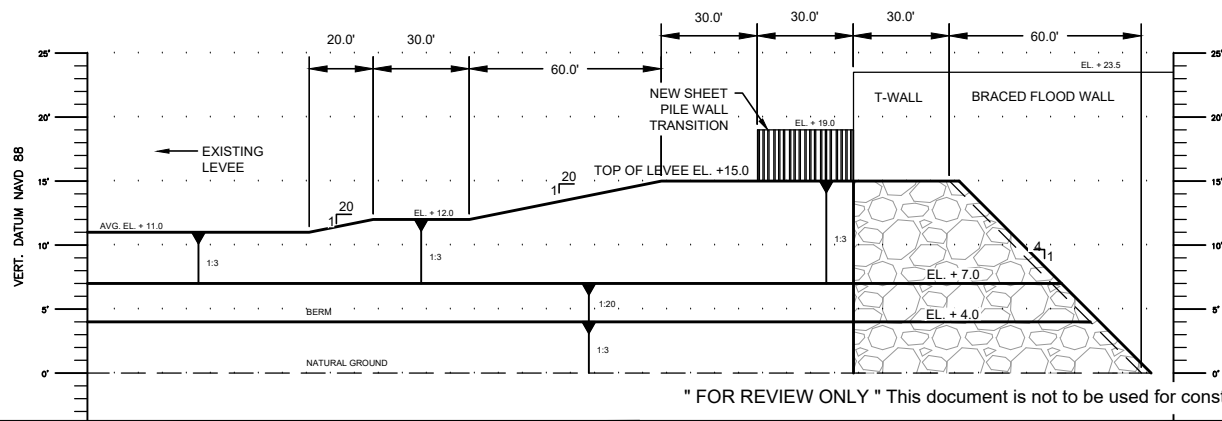
File No.:  
154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE and DNR Rstdt Info.
4	01/30/2018	Disposal Areas





TYPICAL REACH G & F TIE-IN PLAN VIEW  
SCALE: 1" = 60'



TYPICAL REACH G & F TIE-IN PROFILE VIEW  
SCALE: HORIZ. 1" = 60'  
VERT. 1" = 15'

" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

LEVEE TIE-IN  
TYPICAL PLAN & PROFILE

TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21

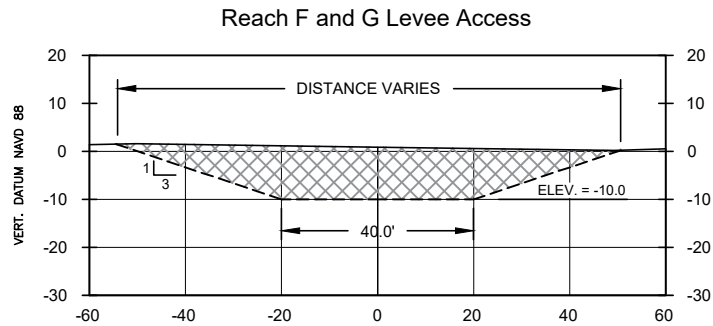
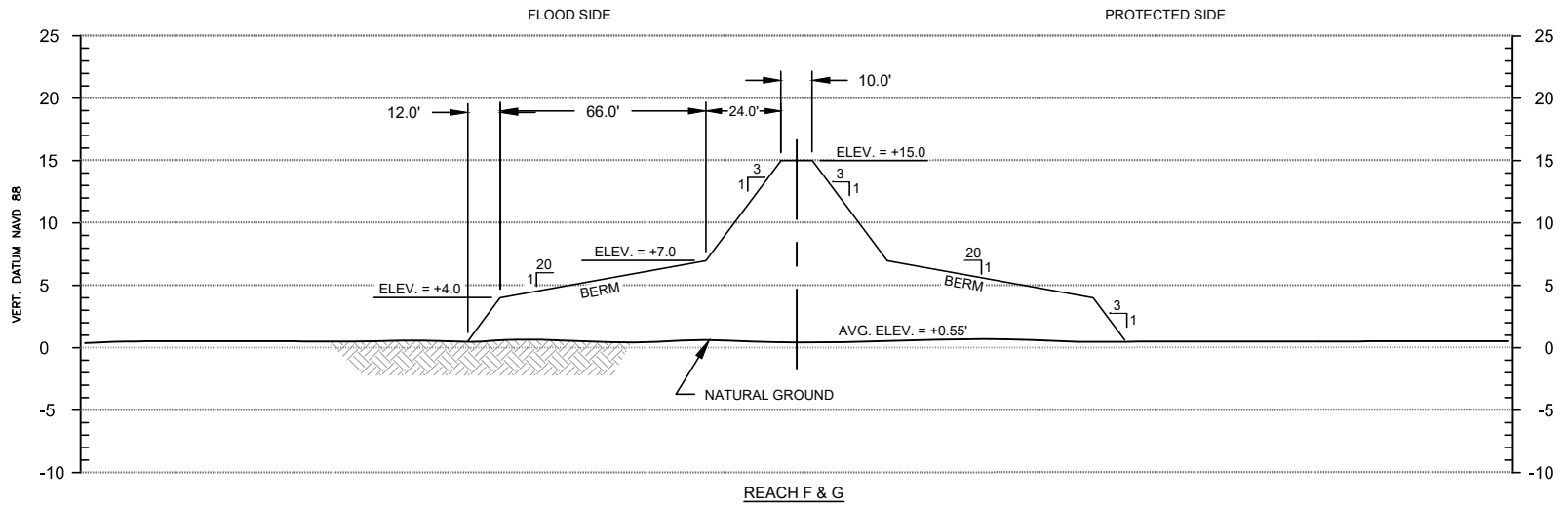
Date: June 2017  
Scale: VARIES

Drawn By: PMC  
Approved By: CDL

Sheet No.: 07  
File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE and DNR Rqstd Info.
4	01/30/2018	Disposal Areas





SECTION A  
 SCALE: 1" = 40'-0"

" FOR PERMITTING ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

LEVEE TIE-IN  
 TYPICAL CROSS-SECTION

TERREBONNE LEVEE & CONSERVATION DISTRICT  
 HOUMA NAVIGATION CANAL LOCK COMPLEX  
 TERREBONNE PARISH, LA.  
 T20S, R17E, SECTS 16 & 21

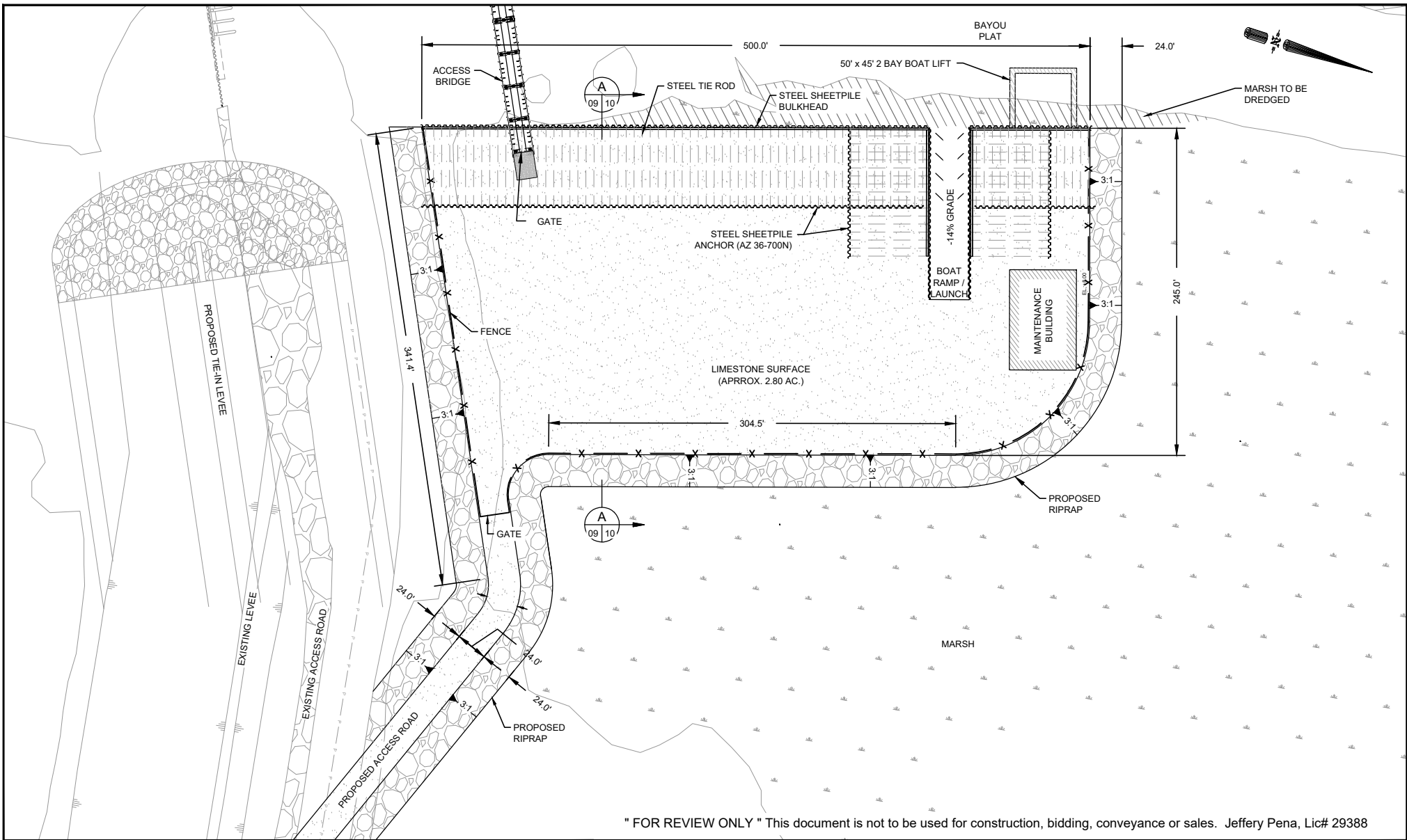
Date: June 2017  
 Scale: Horiz. 1" = 60'  
 Vert. 1" = 15'

Drawn By: PMC  
 Approved By: CDL

Sheet No.: 08  
 File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE and DNR Rstd Info.
4	01/30/2018	Disposal Areas





" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

### OPERATIONS CENTER PLAN VIEW

### TERREBONNE LEVEE & CONSERVATION DISTRICT HOUMA NAVIGATION CANAL LOCK COMPLEX TERREBONNE PARISH, LA. T20S, R17E, SECTS 16 & 21

Date:  
June 2017

Scale:  
1"=100'

Drawn By:  
PMC

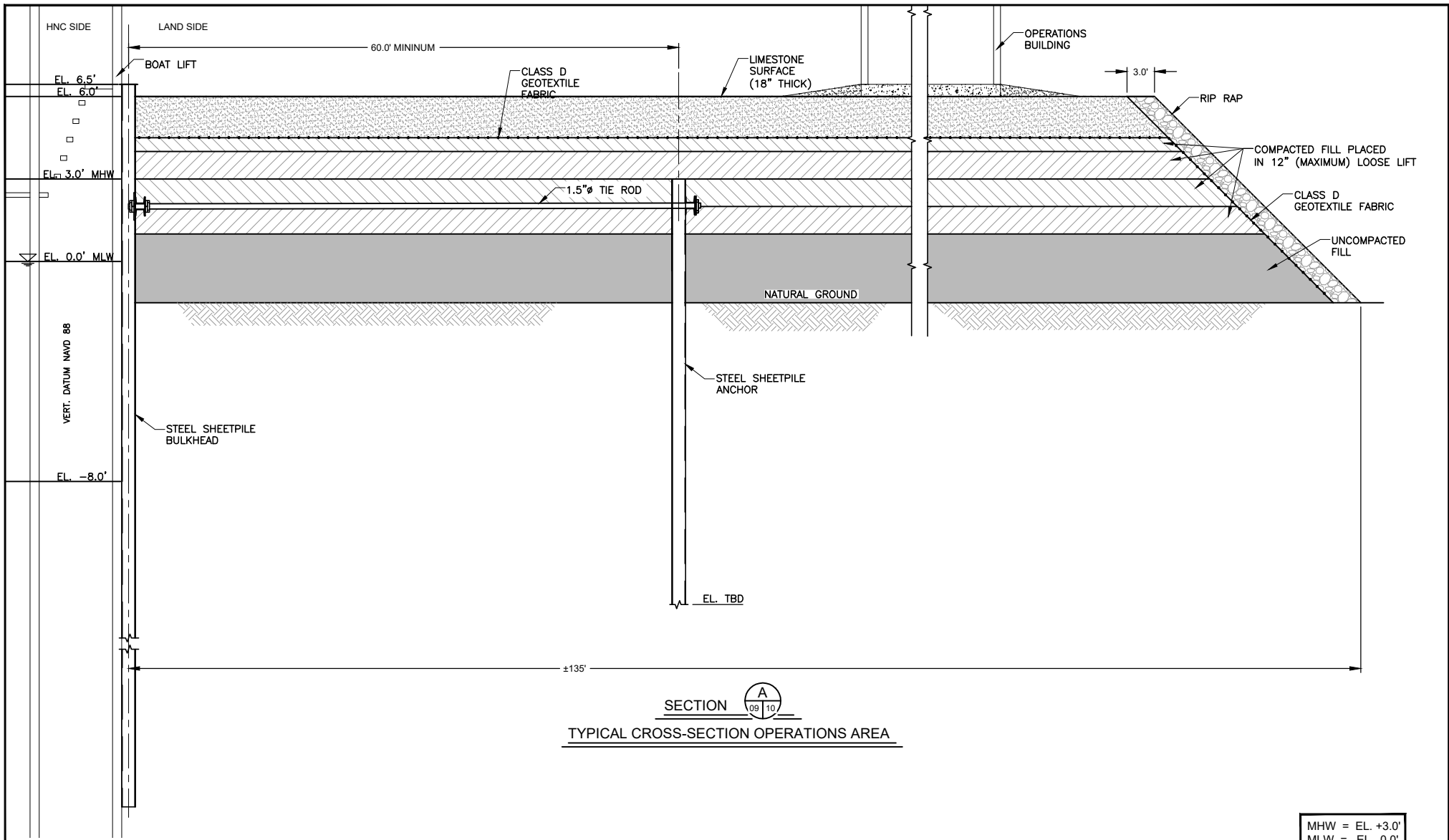
Approved By:  
CDL

Sheet No.:  
09

File No.:  
154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE and DNR Rqstd Info
4	01/30/2018	Disposal Areas





SECTION A  
 09 | 10  
TYPICAL CROSS-SECTION OPERATIONS AREA

MHW = EL. +3.0'  
 MLW = EL. 0.0'

" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

**OPERATIONS CENTER TYPICAL  
 EMBANKMENT & BULKHEAD  
 CROSS SECTION**

**TERREBONNE LEVEE & CONSERVATION DISTRICT  
 HOUMA NAVIGATION CANAL LOCK COMPLEX  
 TERREBONNE PARISH, LA.  
 T20S, R17E, SECTS 16 & 21**

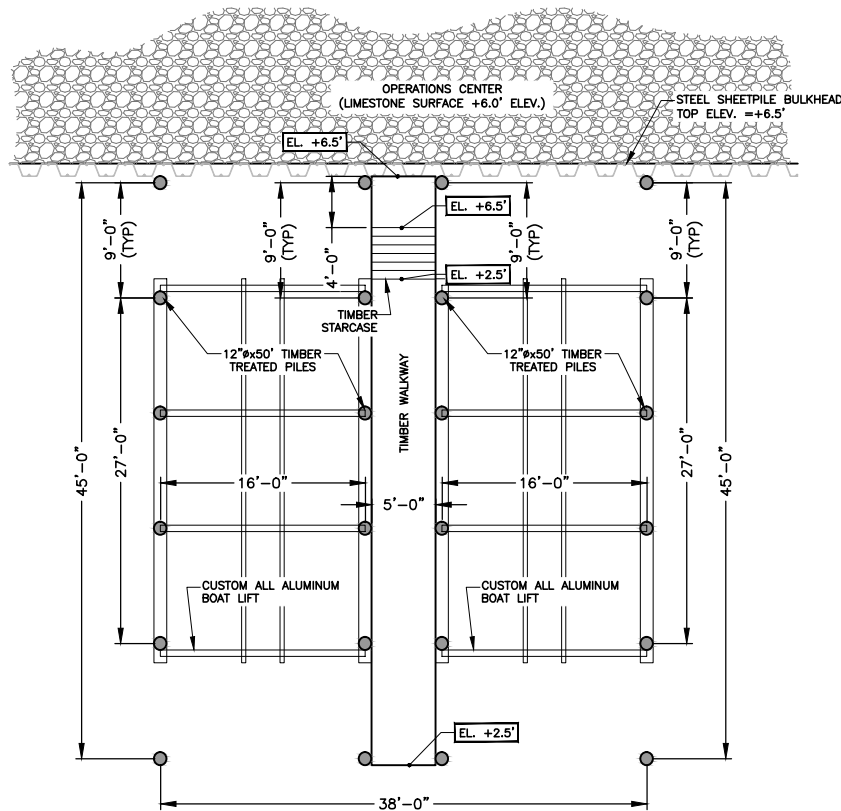
Date: June 2017  
 Scale: (H) 1" = 15'-0"  
 (V) 1" = 2'-9"

Drawn By: PMC  
 Approved By: CDL

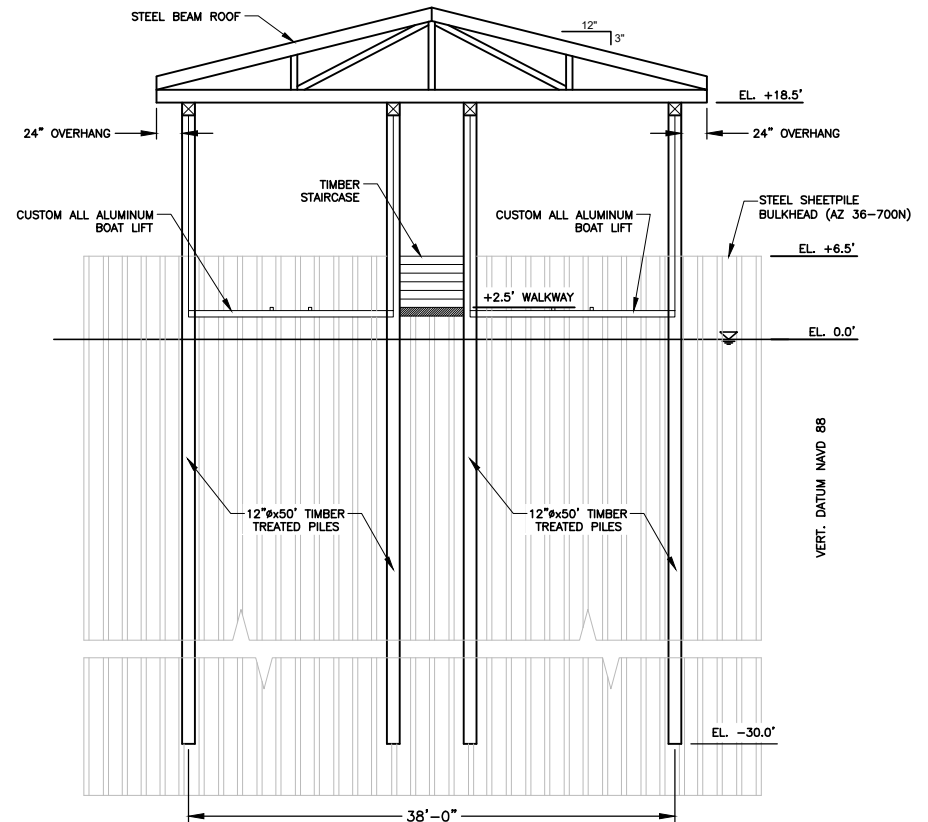
Sheet No.: 10  
 File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Reqstd Info
4	01/30/2018	Disposal Areas





**PLAN VIEW**  
SCALE: 1" = 15'



**PROFILE VIEW**  
SCALE: 1" = 15'

" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

**OPERATIONS CENTER BOAT LIFT  
PLAN AND PROFILE**

**TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21**

Date: June 2017

Drawn By: PMC

Sheet No.: 11

Scale: 1" = 15'

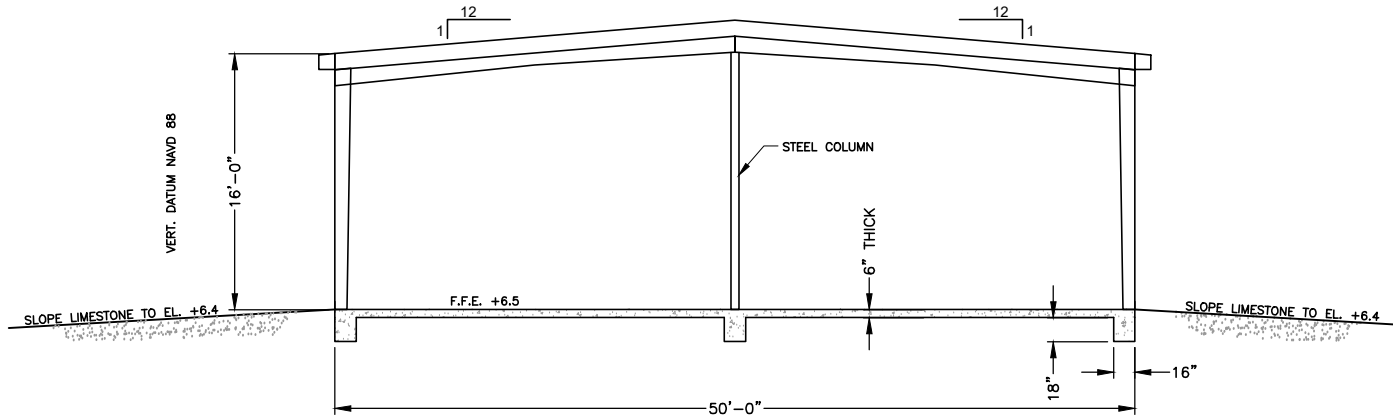
Approved By: CDL

File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Reqstd Info
4	01/30/2018	Disposal Areas

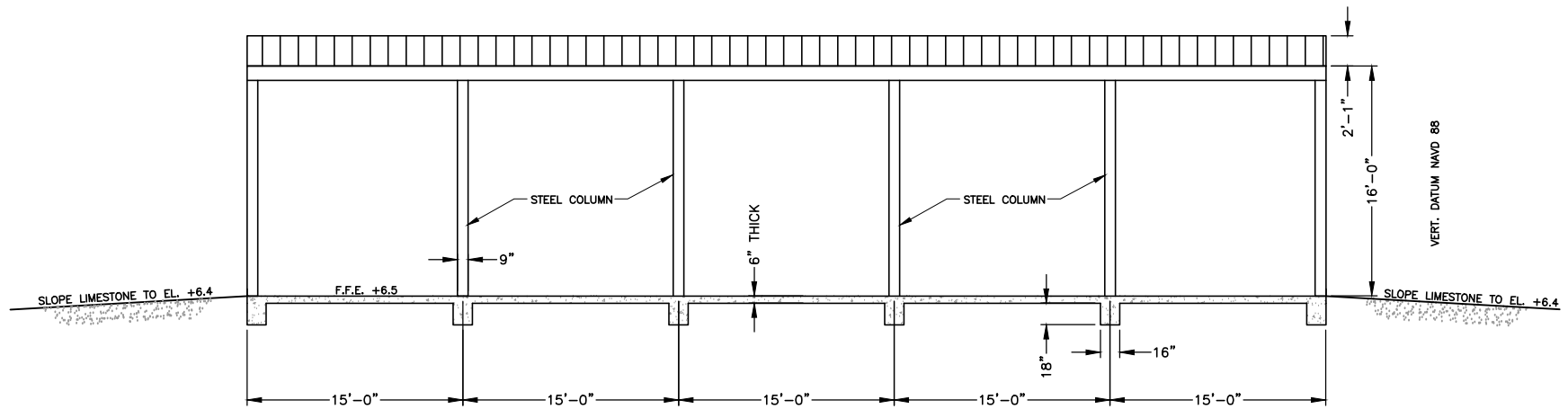






**SIDE ELEVATION**

SCALE: 1" = 12'



**FRONT ELEVATION**

SCALE: 1" = 12'

" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

**OPERATIONS CENTER MAINTENANCE  
BUILDING ELEVATIONS**

**TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21**

Date:  
June 2017

Drawn By:  
PMC

Sheet No.:  
12

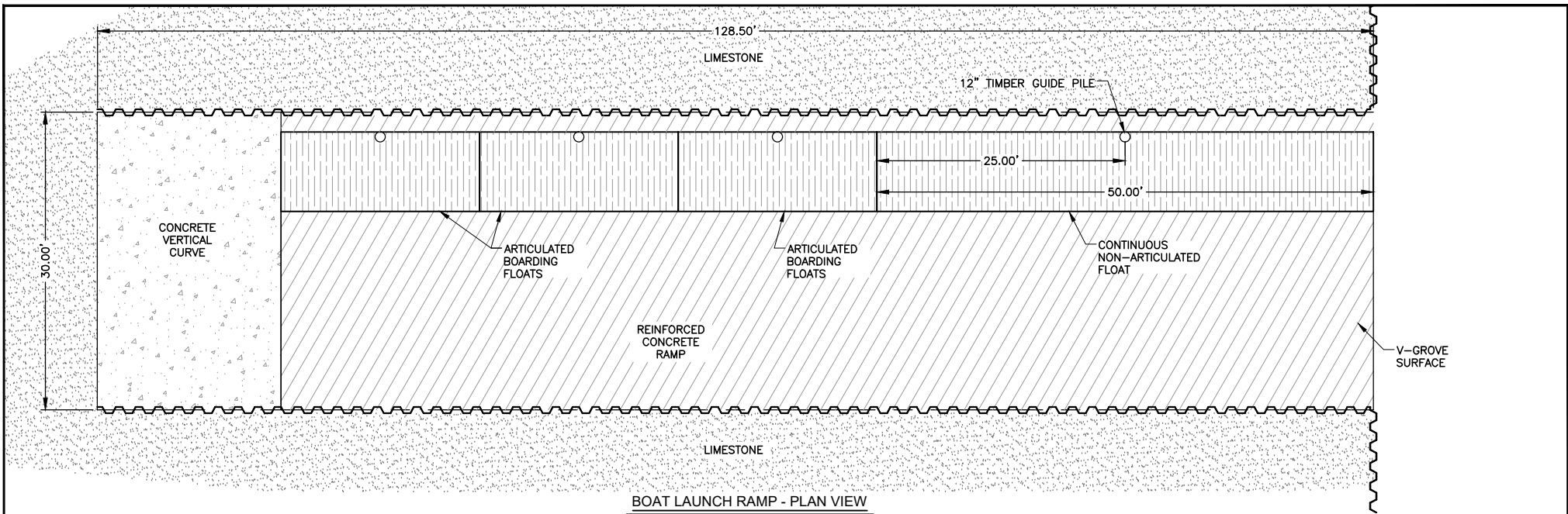
Scale:  
1" = 12'

Approved By:  
CDL

File No.:  
154607

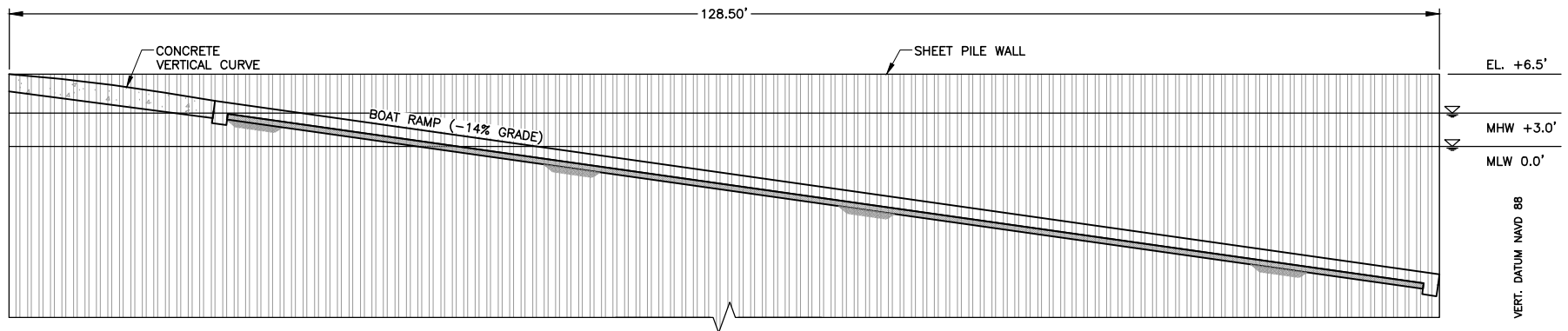
Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Reqstd Info
4	01/30/2018	Disposal Areas





**BOAT LAUNCH RAMP - PLAN VIEW**

SCALE: 1" = 15'



**BOAT LAUNCH RAMP - PROFILE VIEW**

SCALE: 1" = 15'

" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

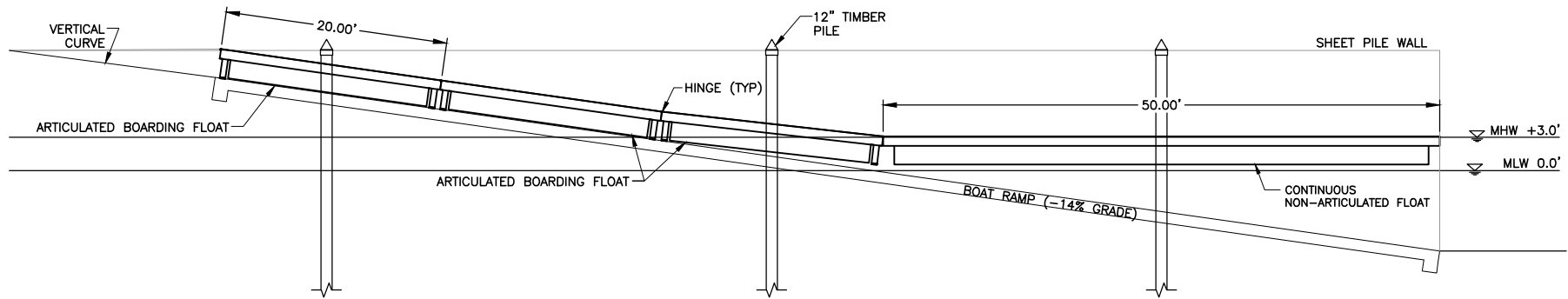
**OPERATIONS CENTER BOAT LAUNCH  
PLAN AND PROFILE**

**TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21**

Date: June 2017	Drawn By: PMC	Sheet No.: 13
Scale: 1" = 15'	Approved By: CDL	File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Reqstd Info
4	01/30/2018	Disposal Areas

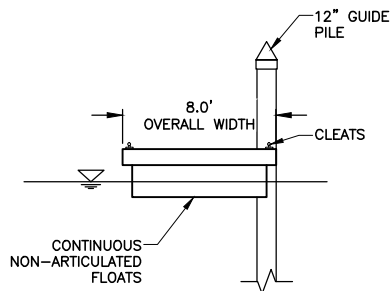




**FLOATING PIER - ELEVATION**

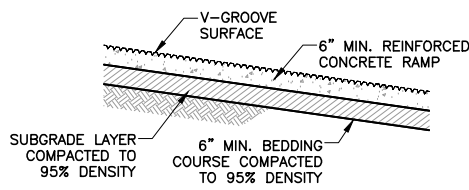
SCALE: 1" = 15'

VERT. DATUM NAVD 88



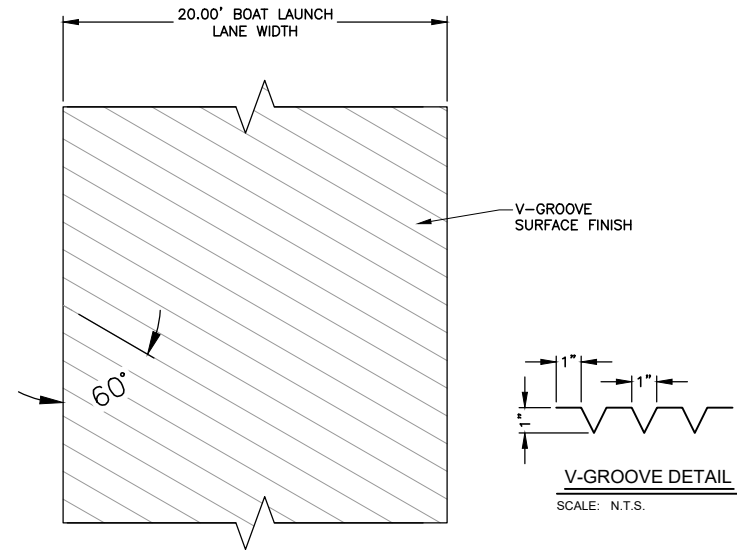
**BOARDING FLOATING SYSTEM**

SCALE: 1" = 10'



**TYPICAL RAMP SECTION**

SCALE: 1" = 5'



**TYPICAL RAMP SURFACE DETAILS**

SCALE: 1" = 10'

" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

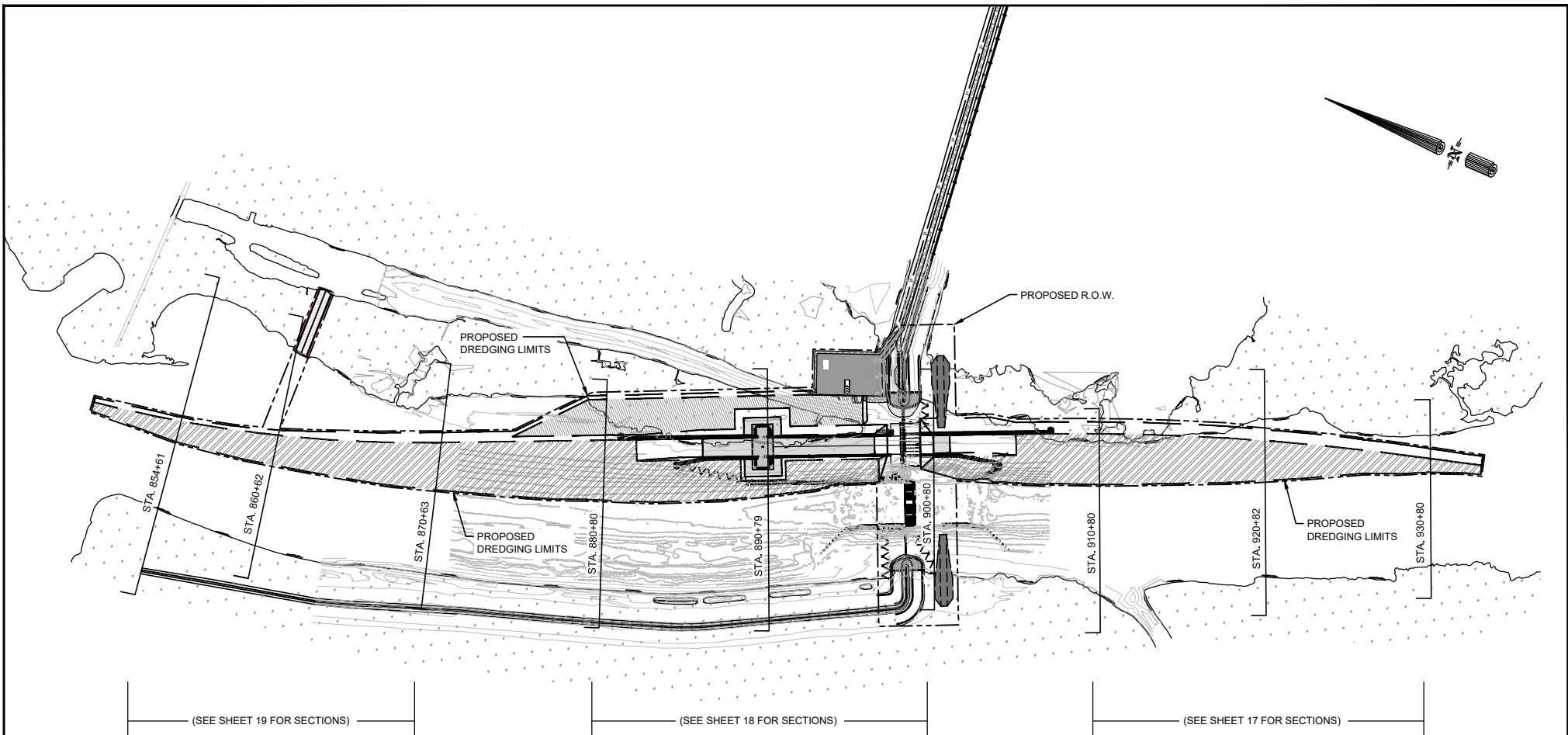
**OPERATIONS CENTER  
BOAT LAUNCH DETAILS**

**TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21**

Date: June 2017	Drawn By: PMC	Sheet No.: 14
Scale: VARIES	Approved By: CDL	File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Reqstd Info
4	01/30/2018	Disposal Areas





**LEGEND:**

	EL. -8.0
	EL. -18.0
	EL. -26.0

" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

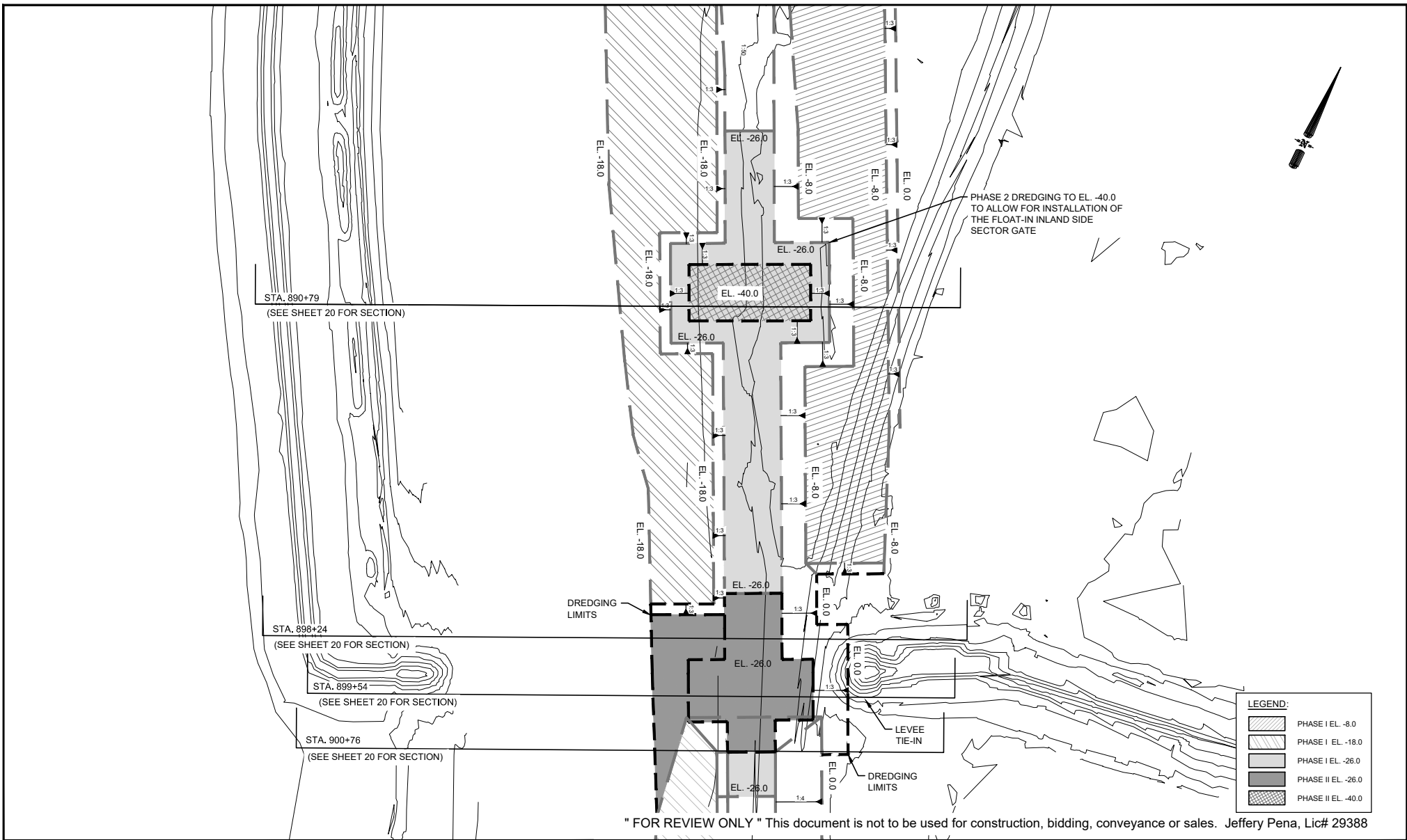
**DREDGE PLAN  
OVERALL PLAN**

**TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21**

<b>Date:</b> June 2017	<b>Drawn By:</b> LDE	<b>Sheet No.:</b> 15
<b>Scale:</b> 1"=900'	<b>Approved By:</b> CDL	<b>File No.:</b> 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Rgstd Info.
4	01/30/2018	Disposal Areas





**PROPOSED LOCK CHAMBER  
DREDGE PLAN**

**TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21**

Date:  
June 2017

Drawn By:  
LDE

Sheet No.:  
16

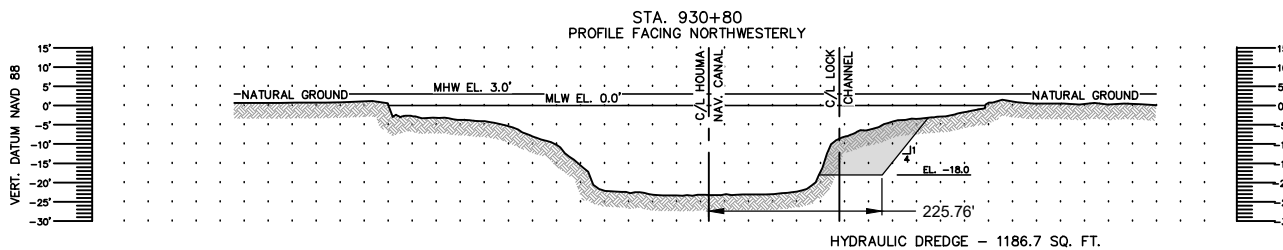
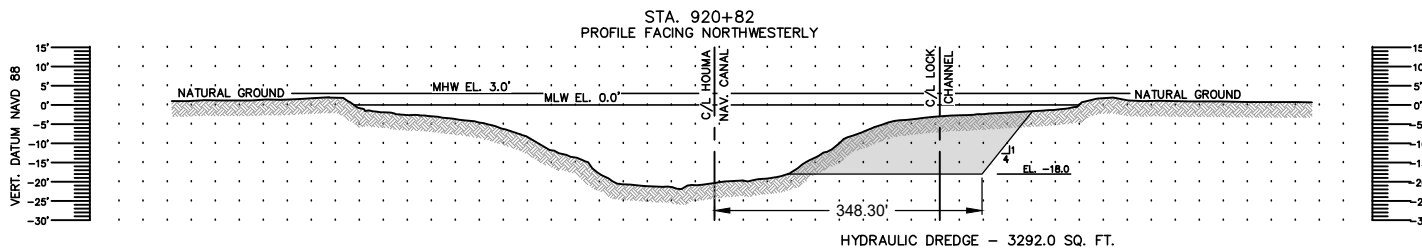
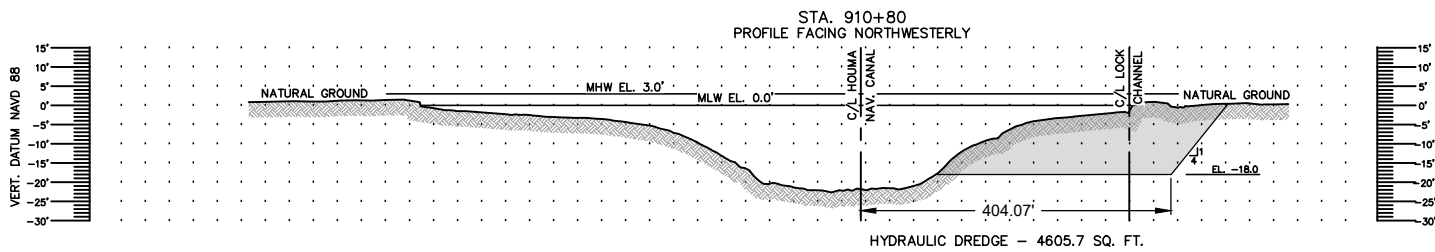
Scale:  
1"=300'

Approved By:  
CDL

File No.:  
154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Rgstd Info.
4	01/30/2018	Disposal Areas





MHW = EL. +3.0'  
MLW = EL. 0.0'

" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

DREDGE PLAN  
CROSS SECTIONS

TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21

Date: June 2017

Drawn By: LDE

Sheet No.: 17

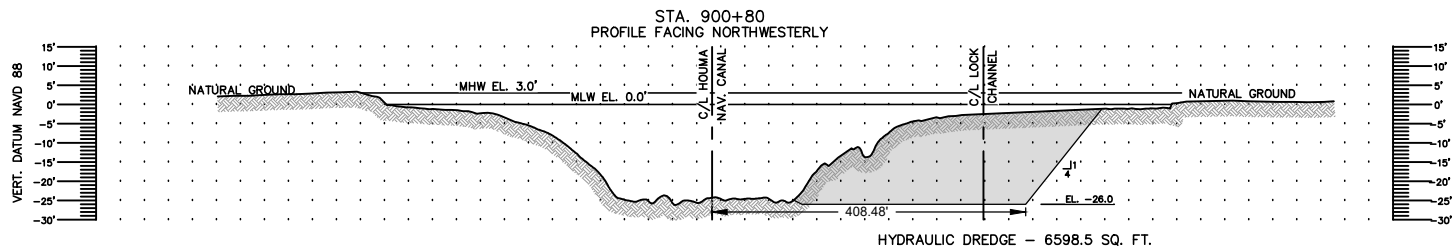
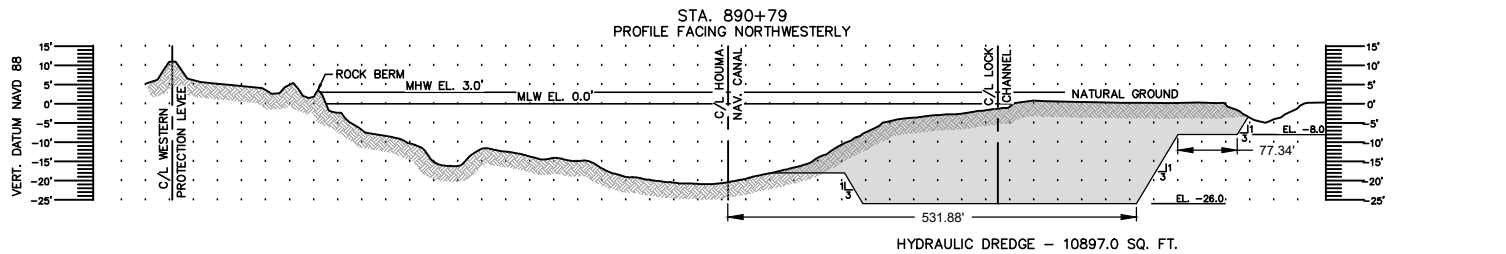
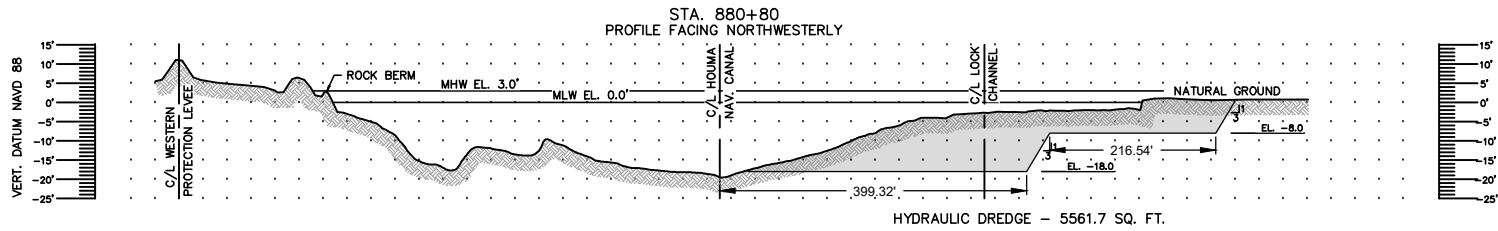
Scale: (H) 1"=250'  
(V) 1"=50'

Approved By: CDL

File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Rgstd Info.
4	01/30/2018	Disposal Areas





MHW = EL. +3.0'  
MLW = EL. 0.0'

" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

DREDGE PLAN  
CROSS SECTIONS

TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21

Date:  
June 2017

Drawn By:  
LDE

Sheet No.:  
18

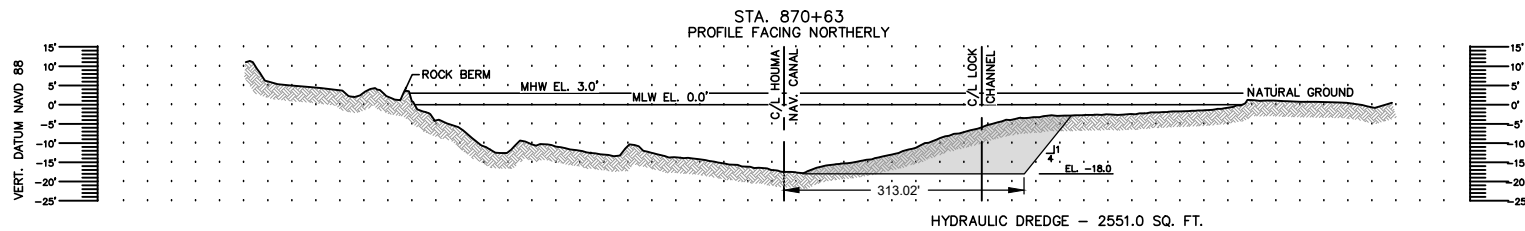
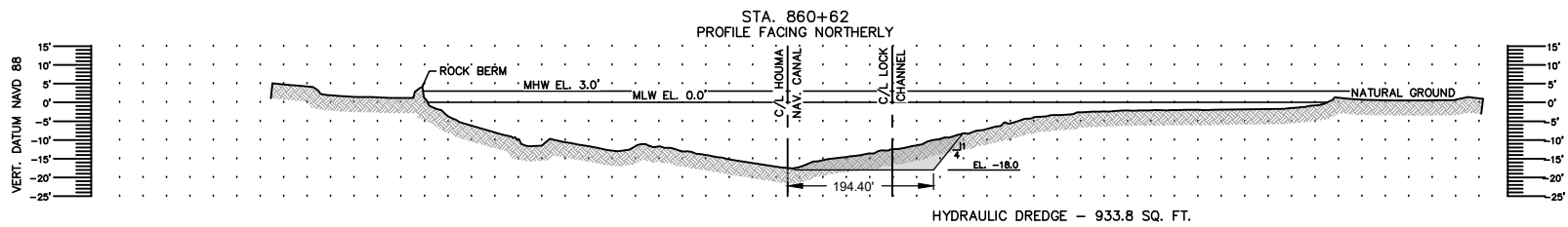
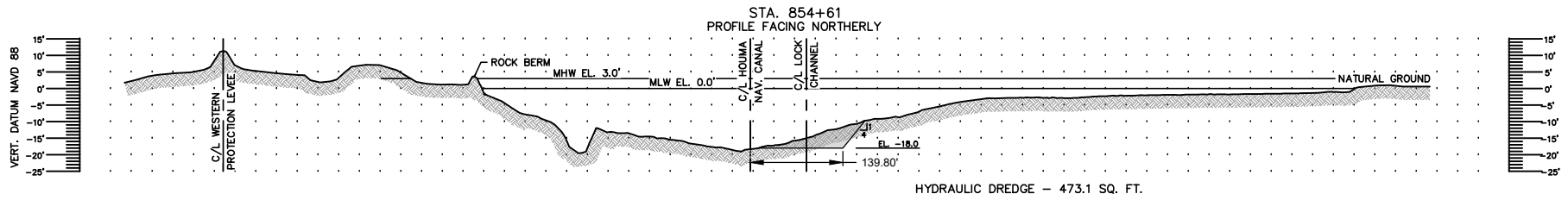
Scale:  
(H) 1"=250'  
(V) 1"=50'

Approved By:  
CDL

File No.:  
154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Rqstd Info.
4	01/30/2018	Disposal Areas





MHW = EL. +3.0'  
MLW = EL. 0.0'

" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

DREDGE PLAN  
CROSS SECTIONS

TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21

Date: June 2017

Drawn By: LDE

Sheet No.: 19

Scale: (H) 1"=250'  
(V) 1"=50'

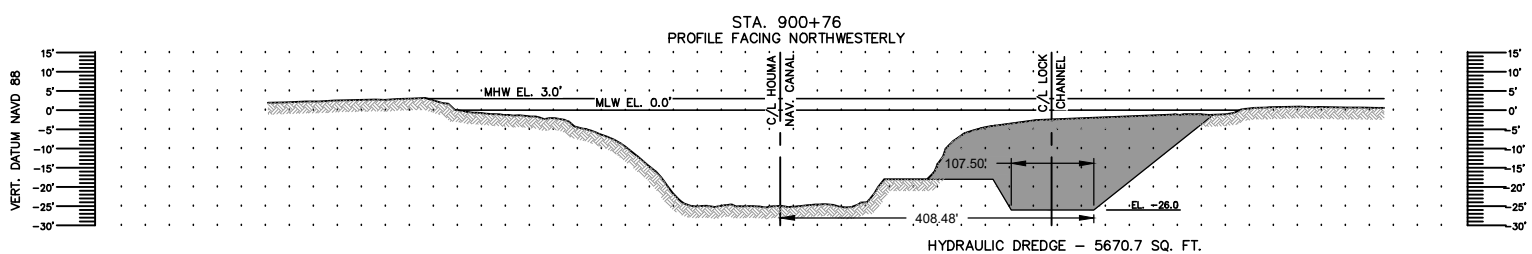
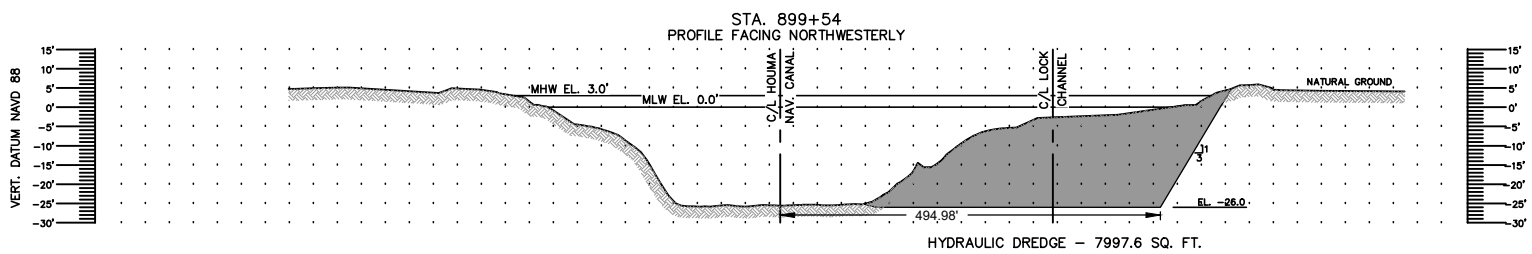
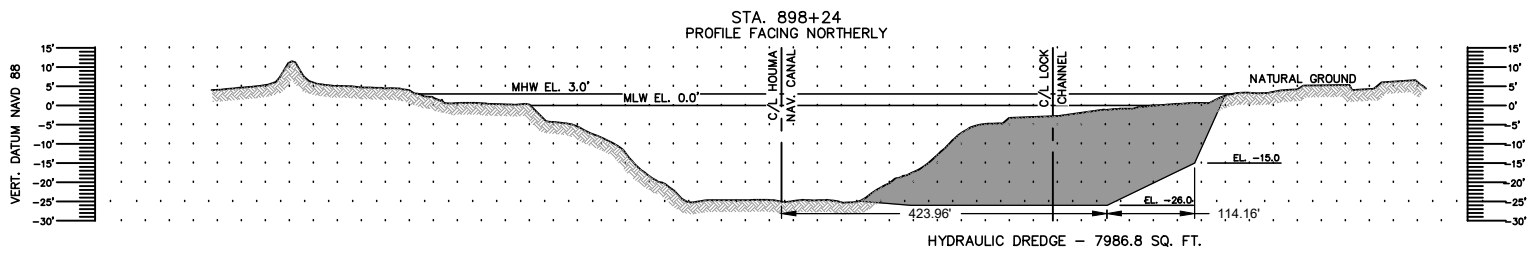
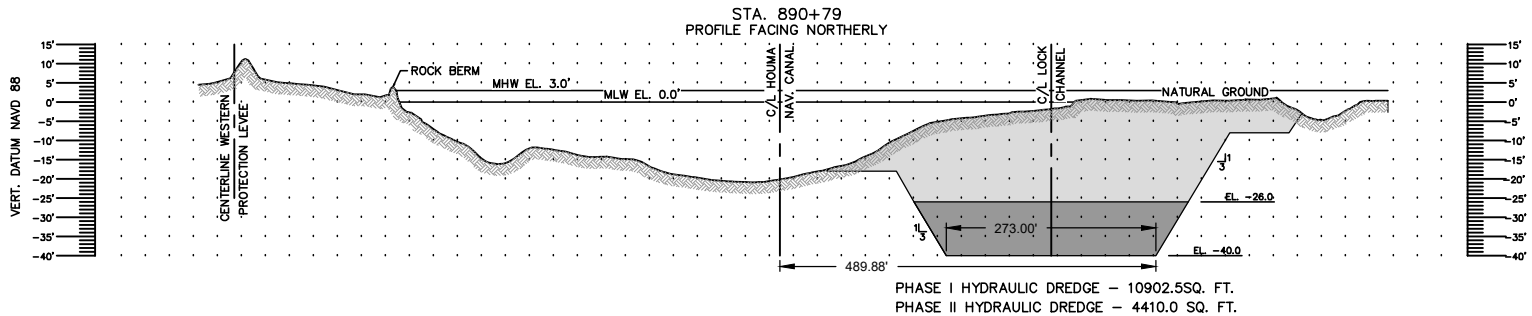
Approved By: CDL

File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Rgstd Info.
4	01/30/2018	Disposal Areas







HYDRAULIC DREDGE (PHASE I)  
 HYDRAULIC DREDGE (PHASE II)

MHW = EL. +3.0'  
 MLW = EL. 0.0'

" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

DREDGE PLAN  
CROSS SECTIONS

TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21

Date: June 2017	Drawn By: LDE	Sheet No.: 20
Scale: (H) 1"=250' (V) 1"=50'	Approved By: CDL	File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Rgstd Info.
4	01/30/2018	Disposal Areas





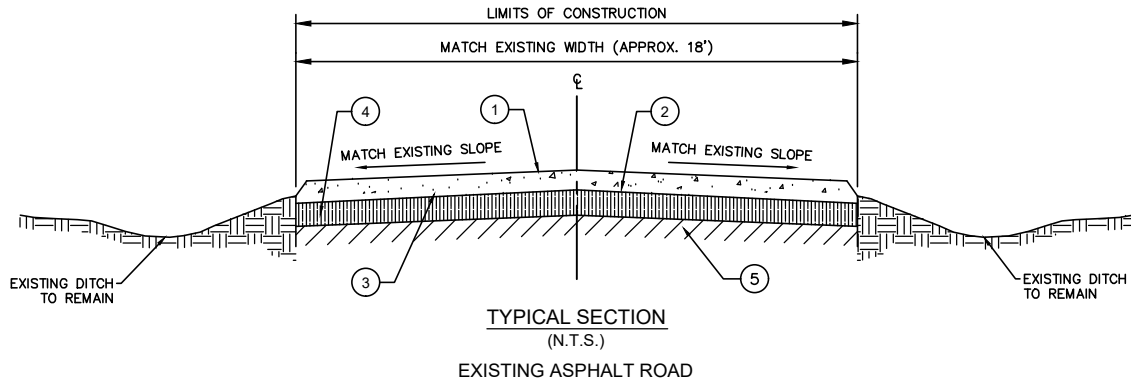
**FOUR POINT ROAD  
OVERALL PLAN**

**TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21**

Date: June 2017	Drawn By: PMC	Sheet No.: 21
Scale: 1"=1,200'	Approved By: CDL	File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Rqstd Info.
4	01/30/2018	Disposal Areas



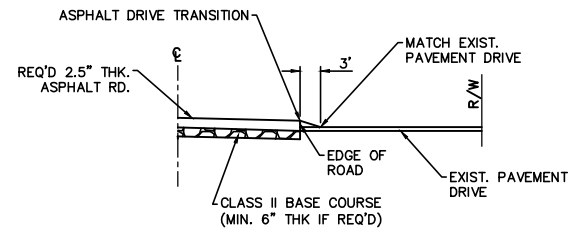


**NOTE:**

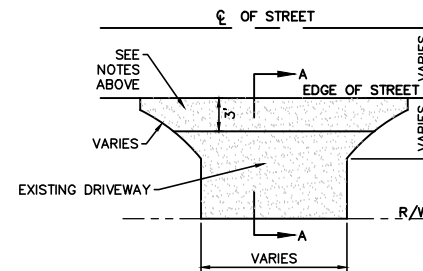
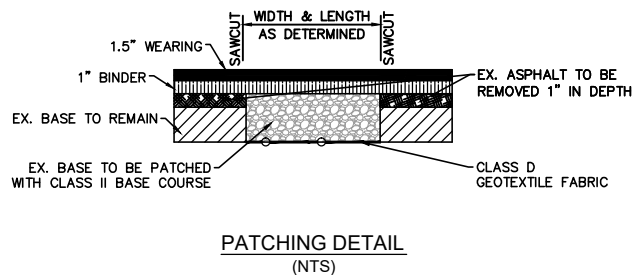
EXISTING FOUR POINT ROAD TO BE OVERLAID WITH 2.5\"/>

**LEGEND**

- ① 1.5\"/>
- ② 1\"/>
- ③ COLD PLANE REMOVAL OF EXISTING ASPHALT PAVEMENT 1\"/>
- ④ EXISTING ASPHALTIC CONCRETE SURFACE TO REMAIN
- ⑤ EXISTING BASE COURSE TO REMAIN & PATCH AS DIRECTED BY ENGINEER (SEE DETAIL THIS SHEET)



**SECTION A-A**



**TYPICAL DRIVE TURNOUT (EXISTING)**

" FOR PERMITTING ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

**FOUR POINT ROAD  
TYPICAL SECTIONS**

**TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21**

Date:	June 2017
Scale:	N.T.S.

Drawn By:	PMC
Approved By:	CDL

Sheet No.:	22
File No.:	154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Rgstd Info.
4	01/30/2018	Disposal Areas





G-1 ACCESS ROAD  
OVERALL PLAN

TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21

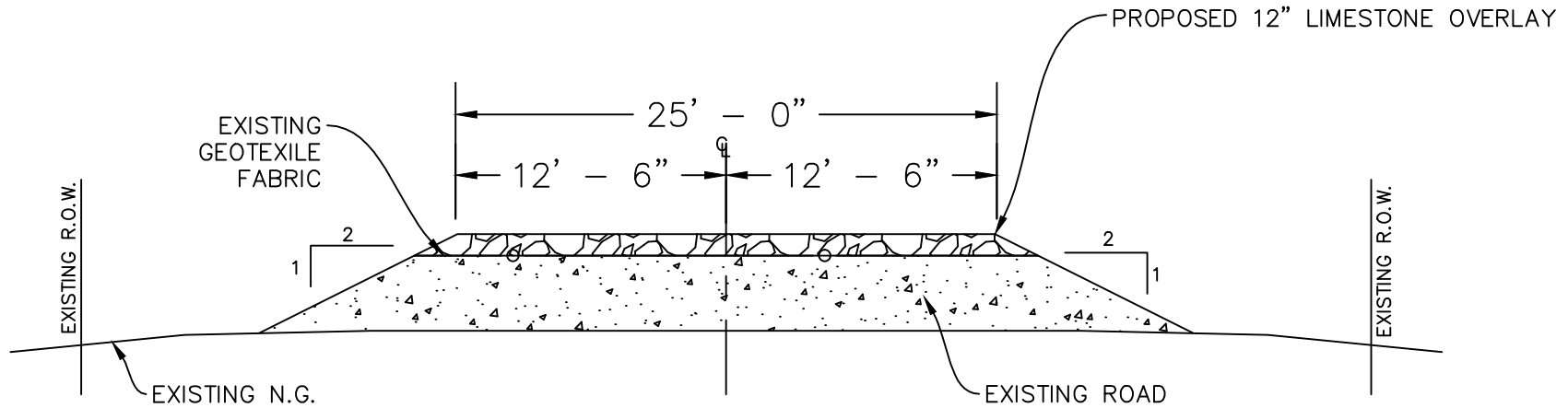
Date: June 2017  
Scale: 1"=600'

Drawn By: PMC  
Approved By: CDL

Sheet No.: 23  
File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Rstd Info.
4	01/30/2018	Disposal Areas





**TYPICAL SECTION**  
**EXISTING G-1 ACCESS ROAD WITH PROPOSED 12" LIMESTONE OVERLAY**  
 (N.T.S.)

" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

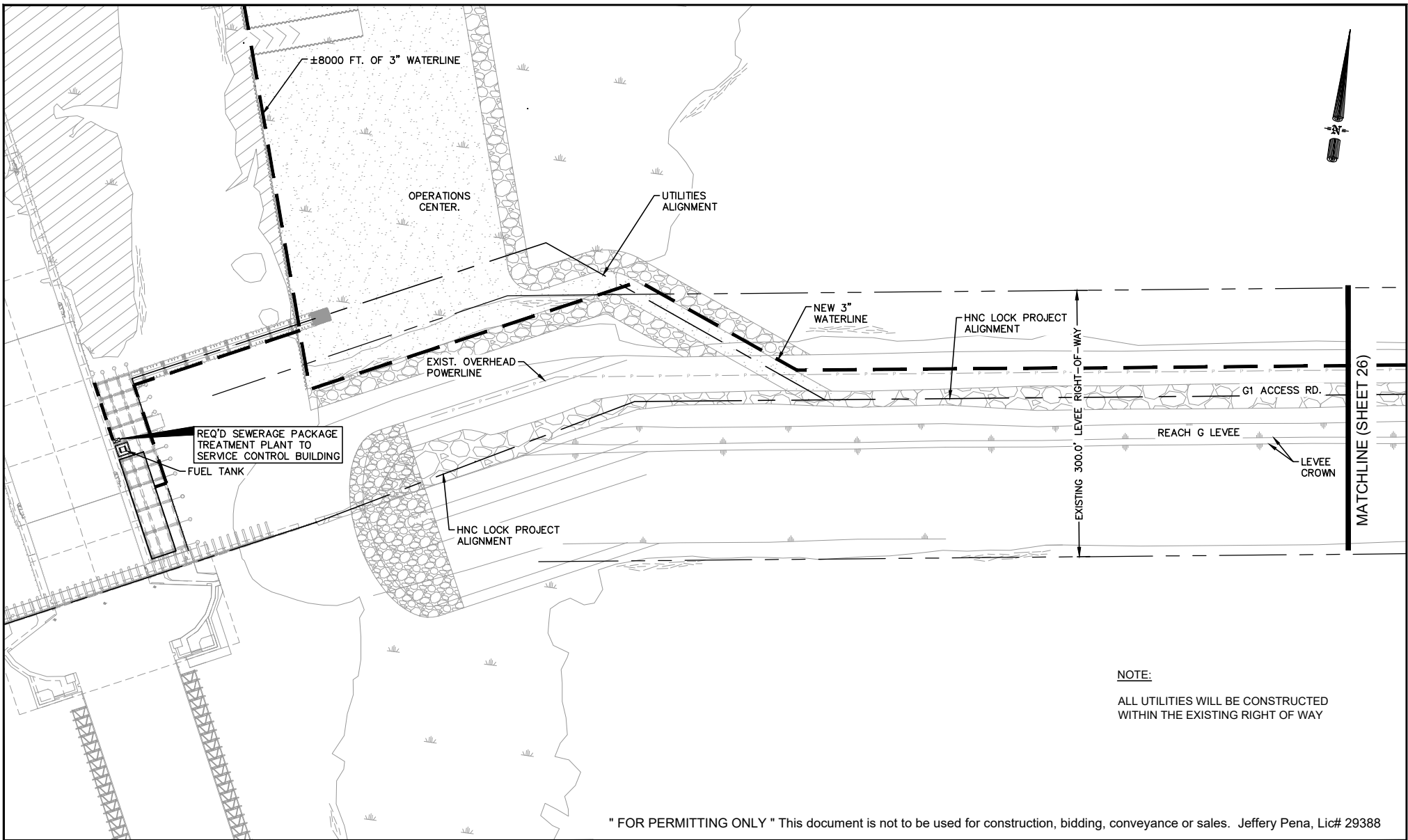
**G-1 ACCESS ROAD  
 DETAILS**

**TERREBONNE LEVEE & CONSERVATION DISTRICT  
 HOUMA NAVIGATION CANAL LOCK COMPLEX  
 TERREBONNE PARISH, LA.  
 T20S, R17E, SECTS 16 & 21**

Date:	June 2017	Drawn By:	PMC	Sheet No.:	24
Scale:	N.T.S.	Approved By:	CDL	File No.:	154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Rastd Info.
4	01/30/2018	Disposal Areas





**NOTE:**  
 ALL UTILITIES WILL BE CONSTRUCTED  
 WITHIN THE EXISTING RIGHT OF WAY

" FOR PERMITTING ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

**UTILITIES  
 POTABLE WATER AND  
 SEWER SERVICE PLAN**

**TERREBONNE LEVEE & CONSERVATION DISTRICT  
 HOUMA NAVIGATION CANAL LOCK COMPLEX  
 TERREBONNE PARISH, LA.  
 T20S, R17E, SECTS 16 & 21**

Date: June 2017

Drawn By: PMC

Sheet No.: 25

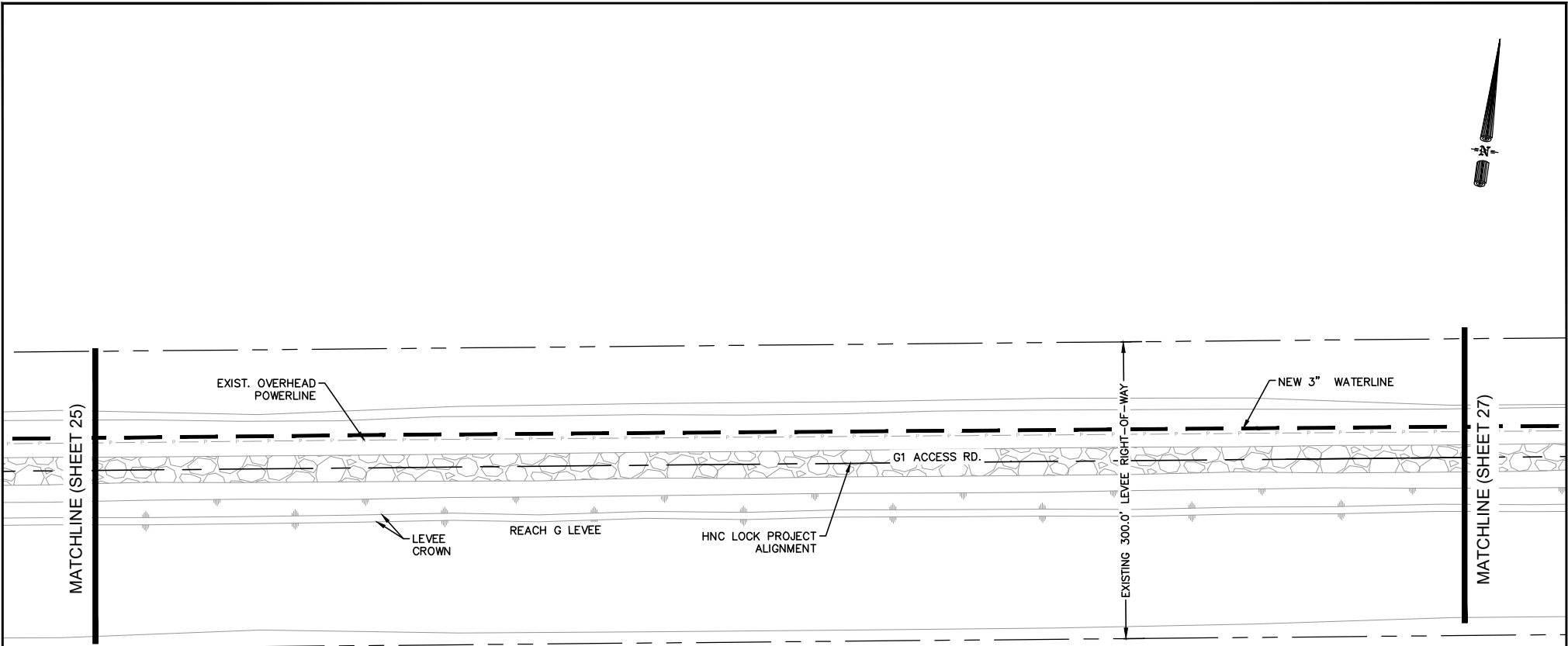
Scale: 1"=150'

Approved By: CDL

File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Rastd Info.
4	01/30/2018	Disposal Areas





**NOTE:**  
ALL UTILITIES WILL BE CONSTRUCTED  
WITHIN THE EXISTING RIGHT OF WAY

" FOR PERMITTING ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

**UTILITIES  
POTABLE WATER PLAN VIEW**

**TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21**

Date: June 2017

Drawn By: PMC

Sheet No.: 26

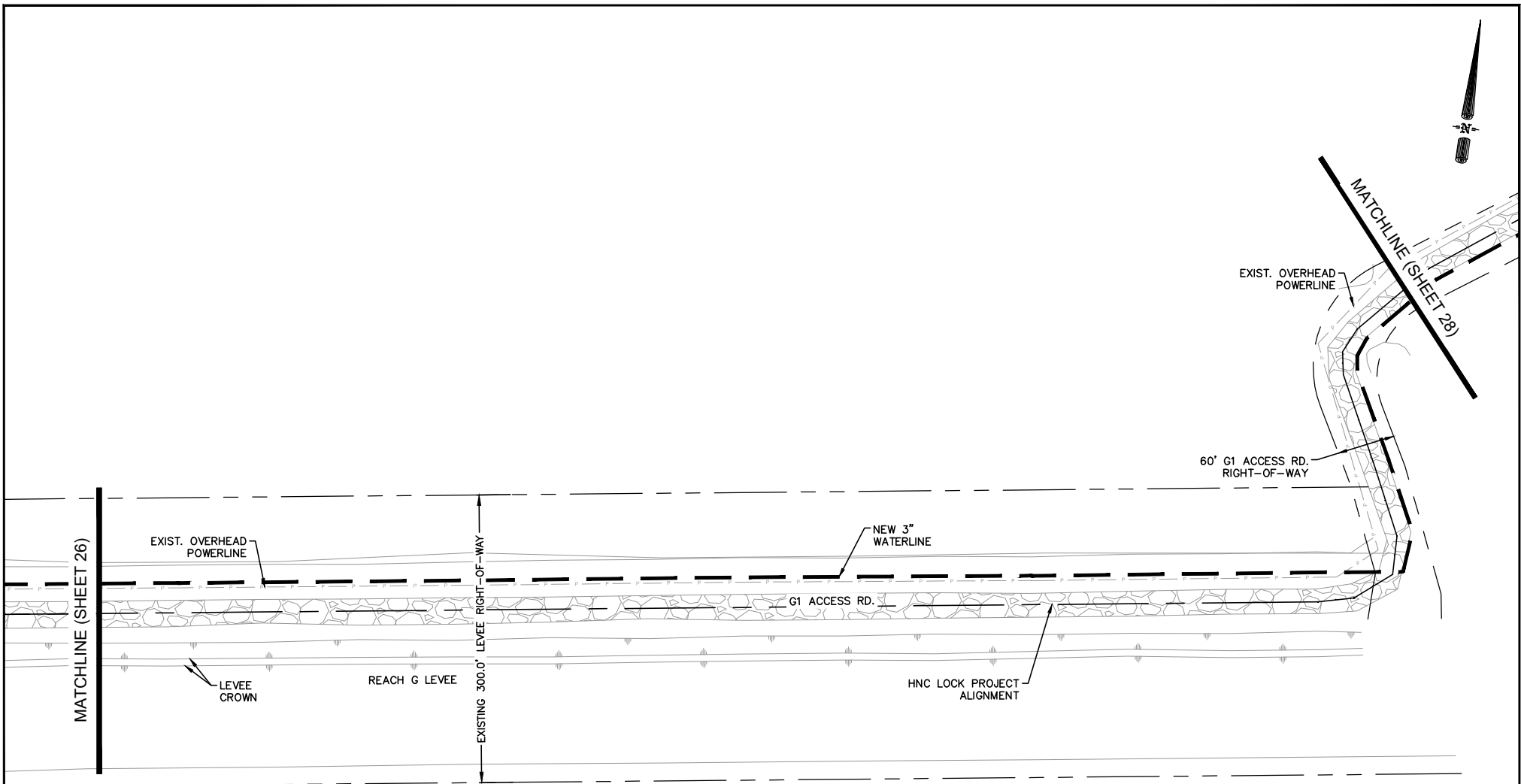
Scale: 1"=150'

Approved By: CDL

File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Rqstd Info.
4	01/30/2018	Disposal Areas





**NOTE:**  
ALL UTILITIES WILL BE CONSTRUCTED WITHIN THE EXISTING RIGHT OF WAY

" FOR PERMITTING ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

**UTILITIES  
POTABLE WATER PLAN VIEW**

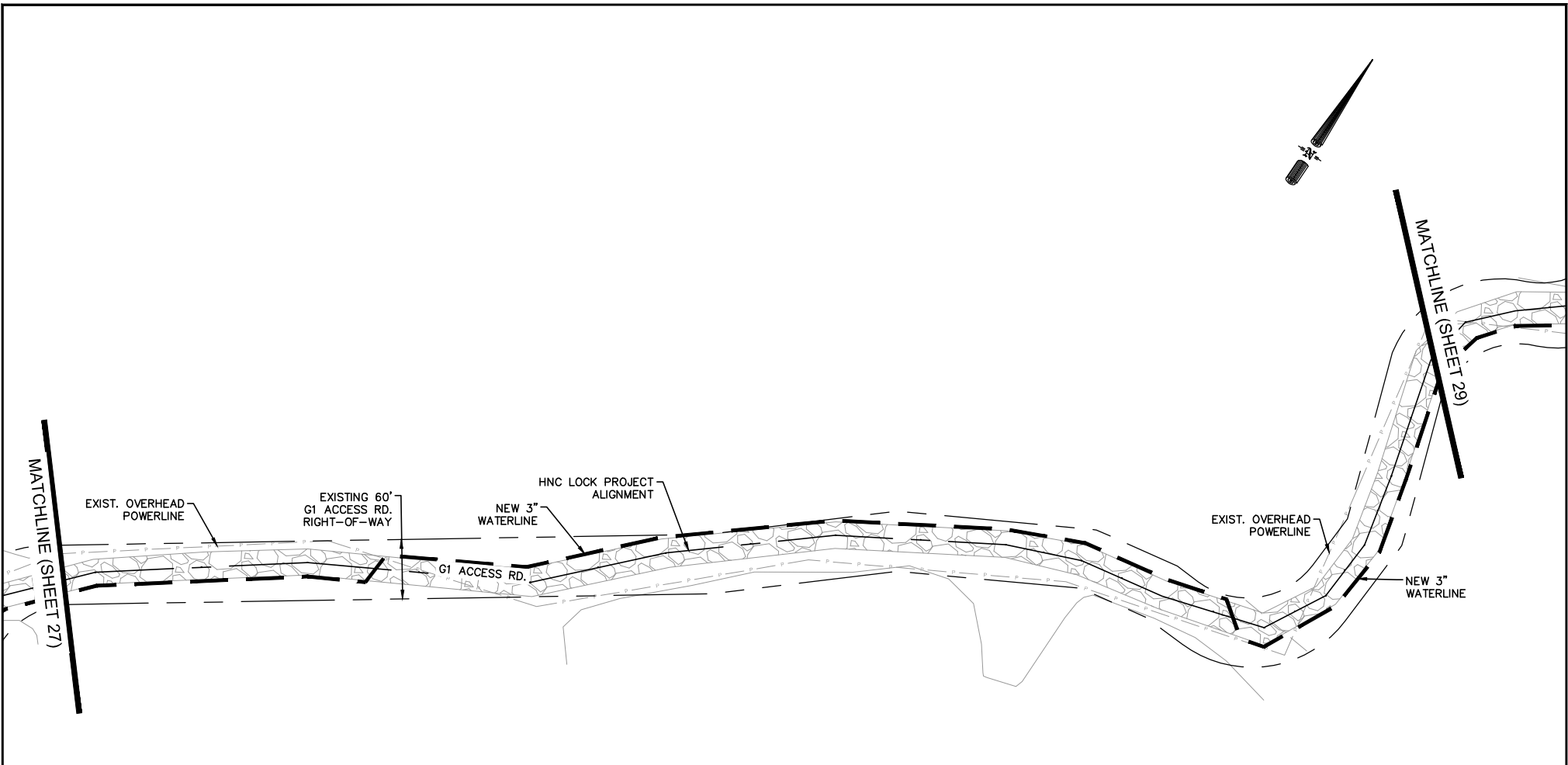
**TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21**

Date: June 2017	Drawn By: PMC	Sheet No.: 27
Scale: 1"=150'	Approved By: CDL	File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Rastd Info.
4	01/30/2018	Disposal Areas







**NOTE:**  
ALL UTILITIES WILL BE CONSTRUCTED  
WITHIN THE EXISTING RIGHT OF WAY

" FOR PERMITTING ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

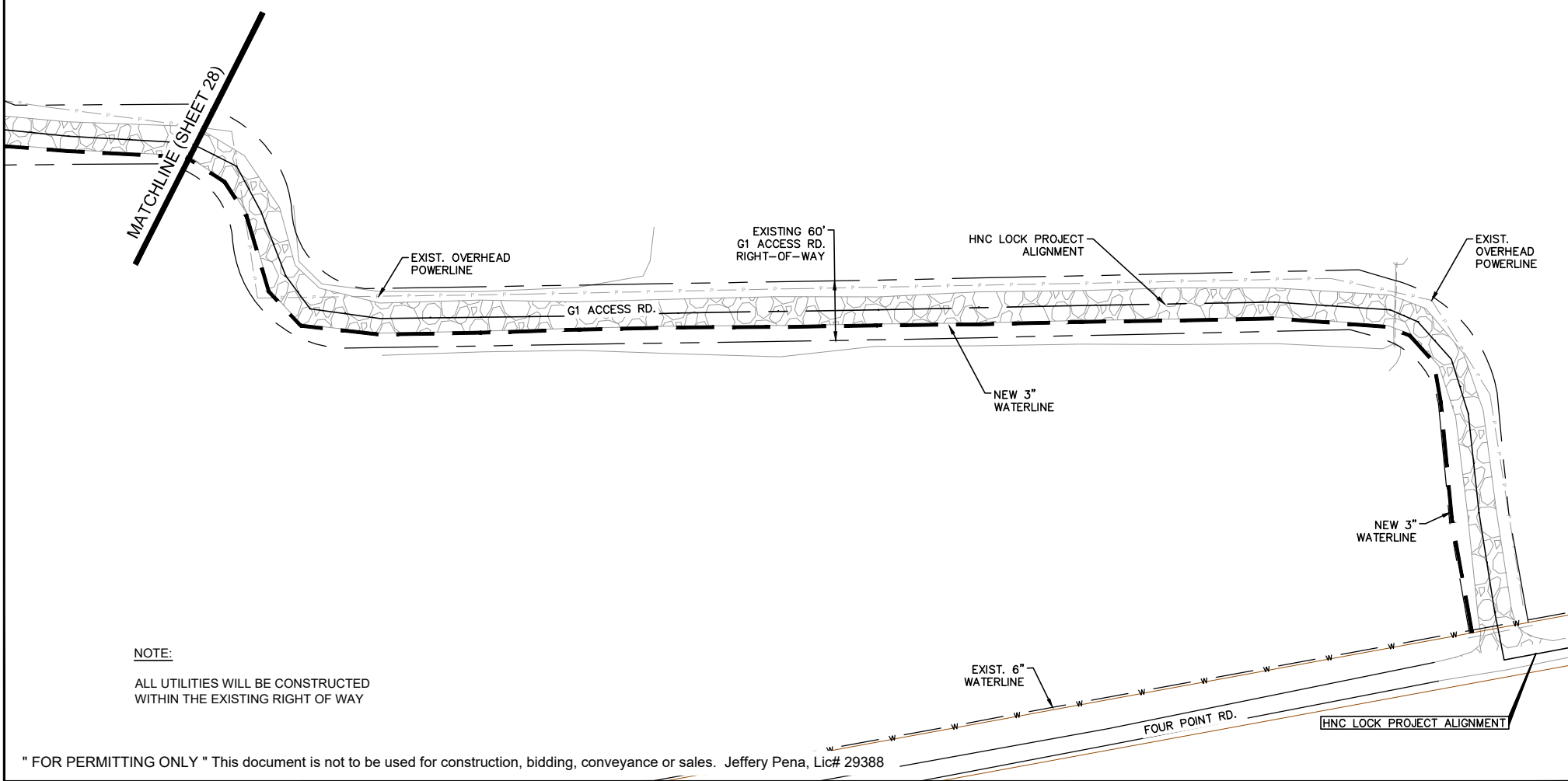
**UTILITIES  
POTABLE WATER PLAN VIEW**

**TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21**

Date: June 2017	Drawn By: PMC	Sheet No.: 28
Scale: 1"=150'	Approved By: CDL	File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Rastd Info.
4	01/30/2018	Disposal Areas





**NOTE:**  
ALL UTILITIES WILL BE CONSTRUCTED WITHIN THE EXISTING RIGHT OF WAY

" FOR PERMITTING ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

**UTILITIES  
POTABLE WATER PLAN VIEW**

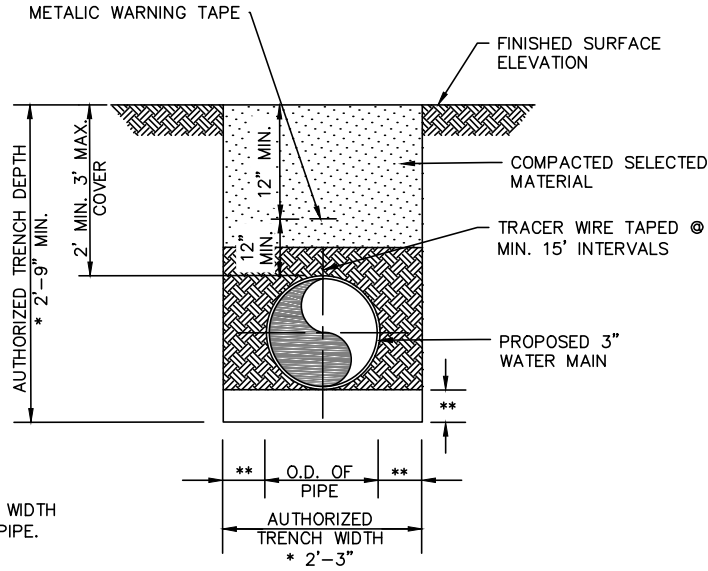
**TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21**

<b>Date:</b> June 2017	<b>Drawn By:</b> PMC	<b>Sheet No.:</b> 29
<b>Scale:</b> 1"=150'	<b>Approved By:</b> CDL	<b>File No.:</b> 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Rqstd Info.
4	01/30/2018	Disposal Areas



V:\CAD\154607\_HNC\_Lock\Permit\Set\_Final\HNC Permit - SHEET 25 THRU 30 - UTILITIES PLAN AND DETAILS.dwg



\* OVERALL TRENCH DEPTH AND WIDTH DIMENSIONS BASED ON 3" Ø PIPE.

\*\*NOTE: AGGREGATE FOUNDATION & ADDED TRENCH WIDTH MAY BE REQUIRED BELOW AND / OR AROUND WATERLINE IN SPECIAL CIRCUMSTANCES OR UNSTABLE SOIL CONDITIONS AS DIRECTED BY ENGINEER

RIVERSAND OR AGGREGATE REQUIRED UNDER IMPROVED OR HARD SURFACE.

TYPICAL WATERLINE TRENCH SECTION  
N.T.S.

NOTE:  
ALL UTILITIES WILL BE CONSTRUCTED WITHIN THE EXISTING RIGHT OF WAY

" FOR PERMITTING ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

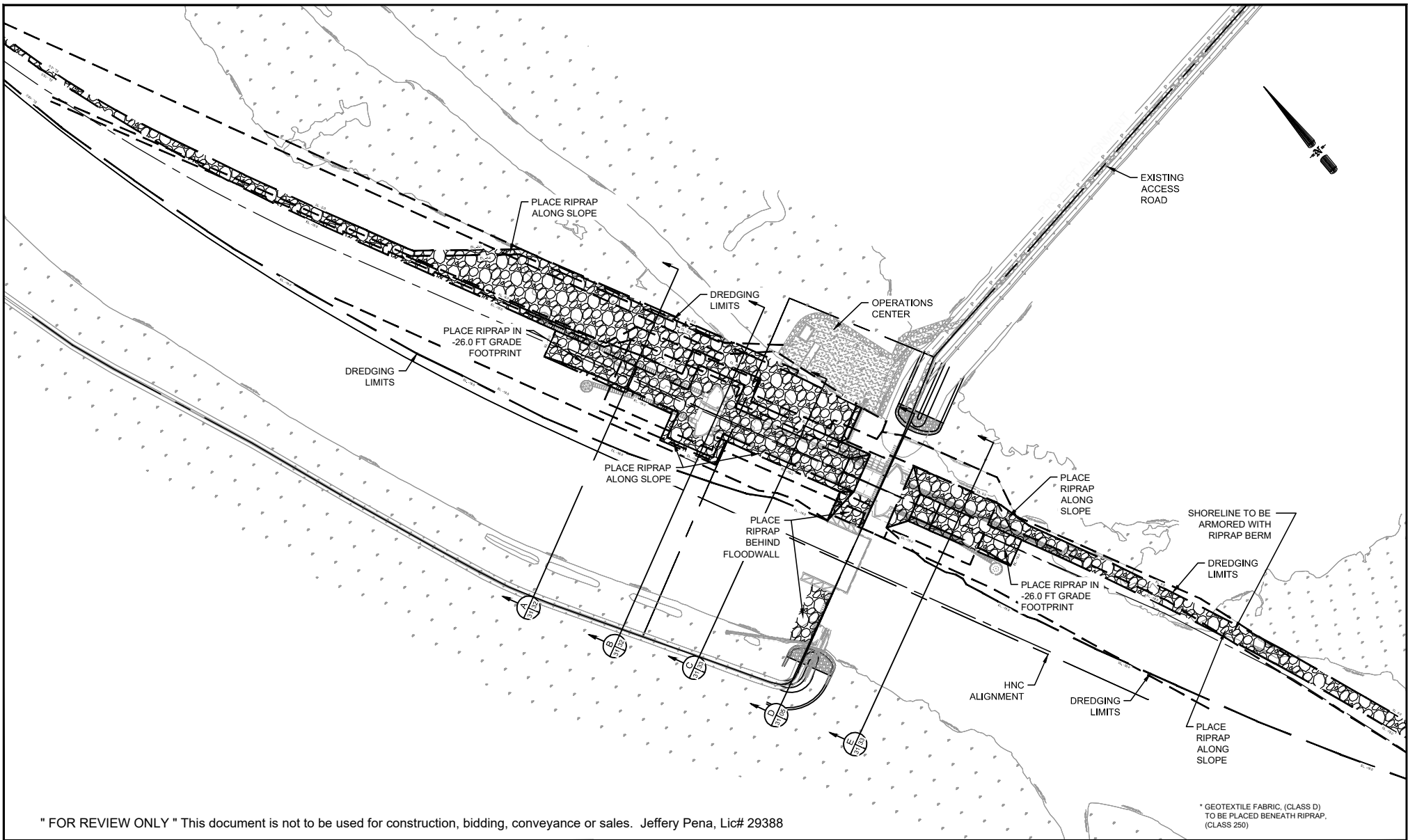
UTILITIES  
POTABLE WATER AND  
SEWER SERVICE DETAILS

TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21

Date: June 2017	Drawn By: PMC	Sheet No.: 30
Scale: N.T.S.	Approved By: CDL	File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Rgstd Info.
4	01/30/2018	Disposal Areas





" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

\* GEOTEXTILE FABRIC, (CLASS D) TO BE PLACED BENEATH RIPRAP. (CLASS 250)

SCOUR PROTECTION  
PLAN VIEW

TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21

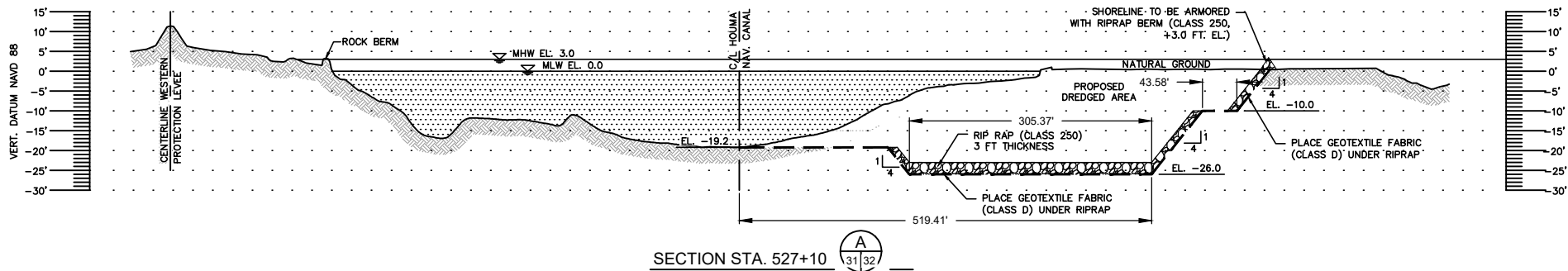
Date: June 2017	Drawn By: PMC	Sheet No.: 31
Scale: 1" = 600'	Approved By: CDL	File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Rqstd Info.
4	01/30/2018	Disposal Areas



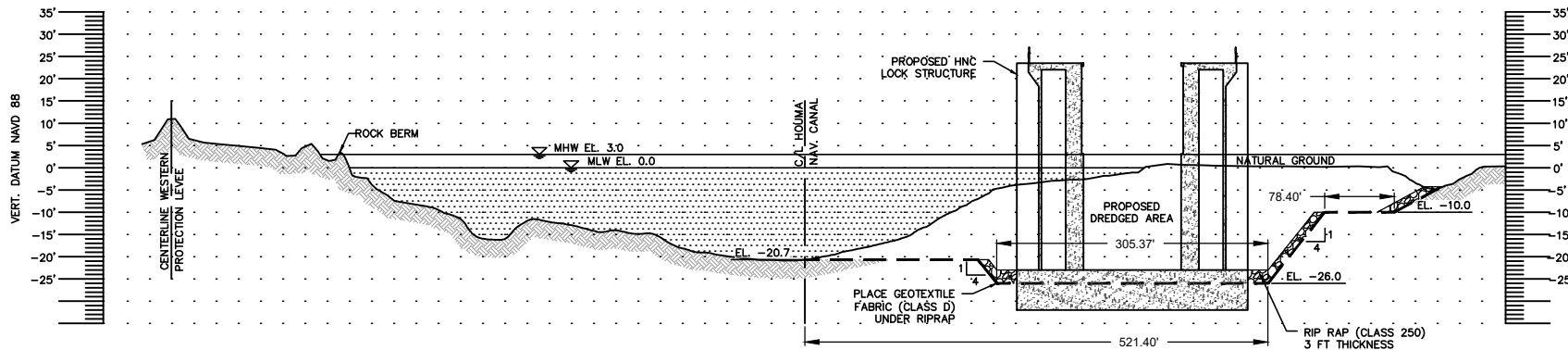
V:\CAD\154607\_HNC\_Lock\Permit\Set\_Final\HNC Permit - SHEET 31 THRU 33 - SCOUR PROTECTION PLAN AND CROSS SECTIONS.dwg

PROFILE FACING NORTHWESTERLY



SECTION STA. 527+10 A  
31/32

PROFILE FACING NORTHWESTERLY



SECTION STA. 523+12 B  
31/32

" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

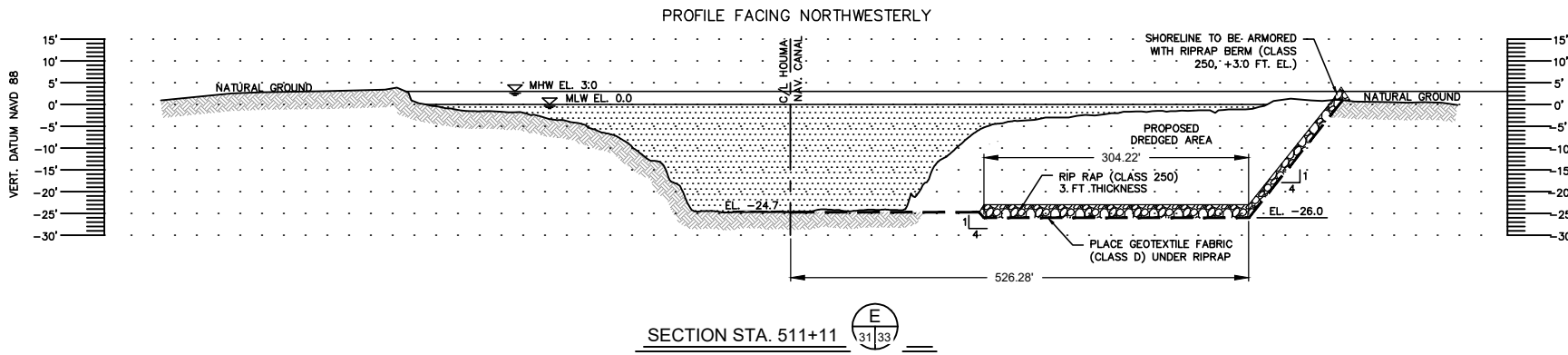
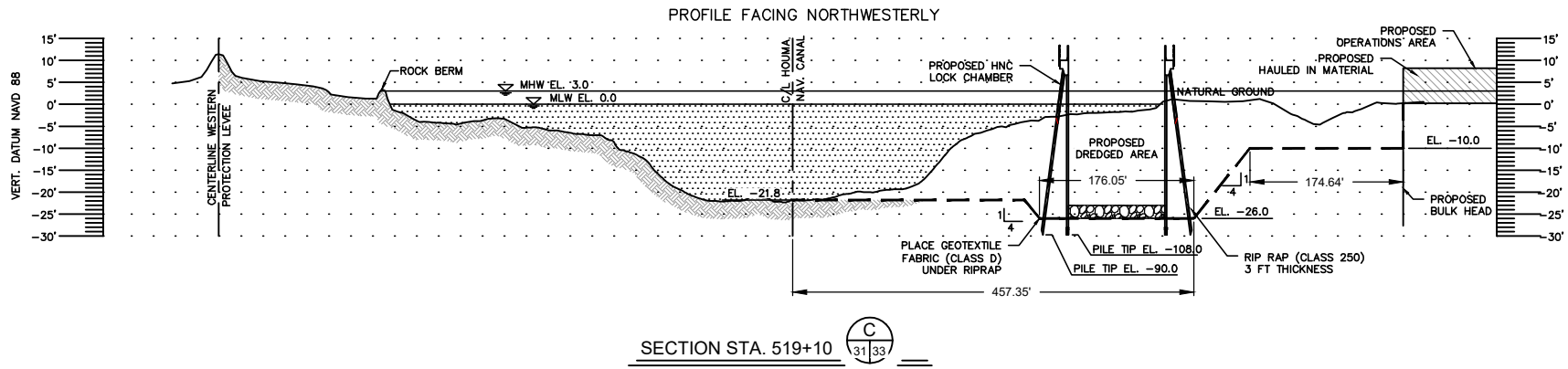
SCOUR PROTECTION  
CROSS SECTIONS

TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.

Date: June 2017	Drawn By: PMC	Sheet No.: 32
Scale: Horiz. 1" = 200' Vert. 1" = 40'	Approved By: CDL	File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Rgstd Info.
4	01/30/2018	Disposal Areas





" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

**SCOUR PROTECTION  
CROSS SECTIONS**

**TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.**

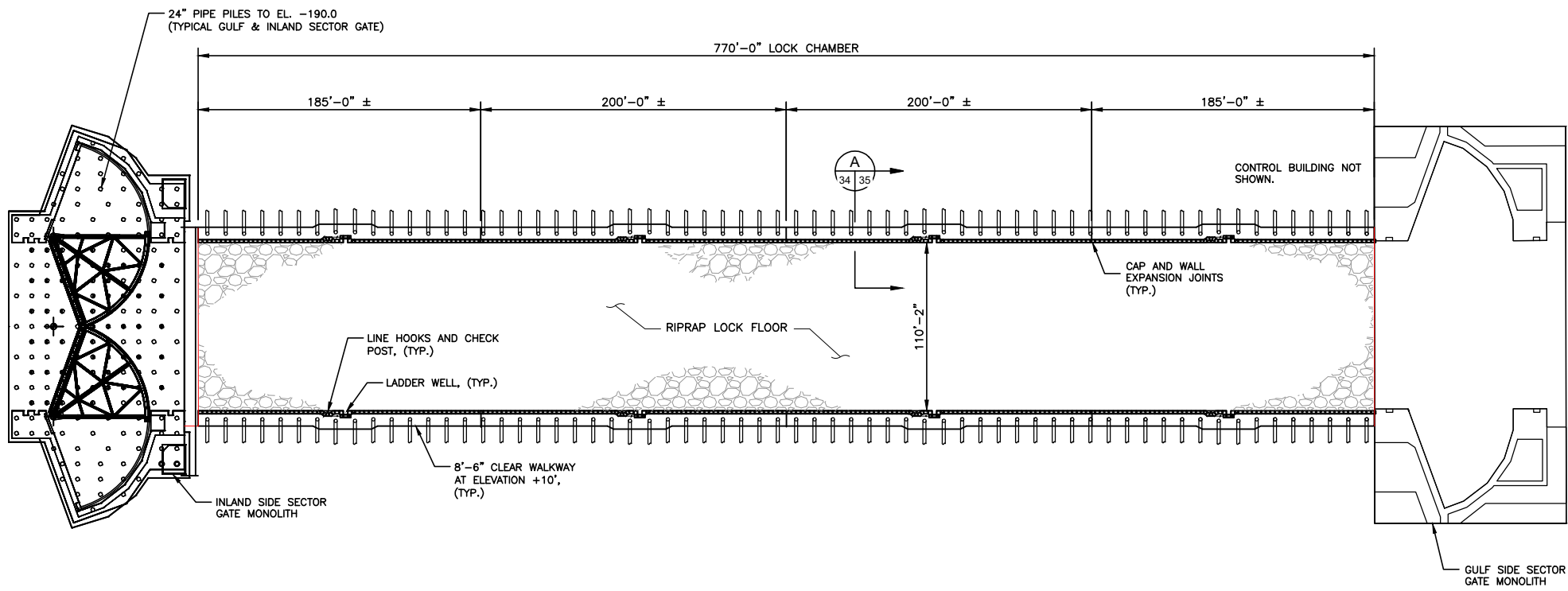
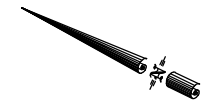
Date: June 2017  
Scale: Horiz. 1" = 200'  
Vert. 1" = 40'

Drawn By: PMC  
Approved By: CDL

Sheet No.: 33  
File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Rastd Info.
4	01/30/2018	Disposal Areas





PLAN LAYOUT  
SCALE: 1" = 100'

" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

TYPICAL LOCK CHAMBER  
BRACED WALL PLAN LAYOUT

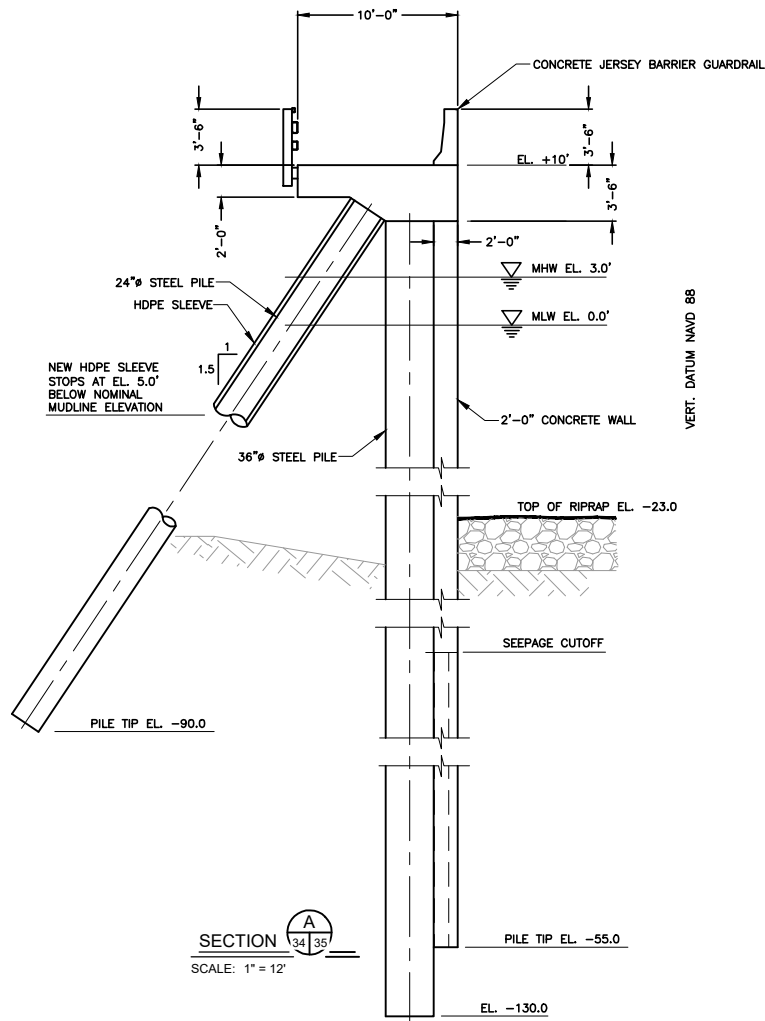
TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21

Date: June 2017	Drawn By: PMC	Sheet No.: 34
Scale: 1" = 100'	Approved By: CDL	File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Reqstd Info
4	01/30/2018	Disposal Areas



V:\CAD\154607\_HNC\_Lock\Permit\Set\_Final\HNC\_PERMIT - SHEET 34 - TYPICAL LOCK CHAMBER BRACED WALL PLAN LAYOUT.dwg



SECTION A  
34 35  
SCALE: 1" = 12'

" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

TYPICAL LOCK CHAMBER  
BRACED WALL SECTION

TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21

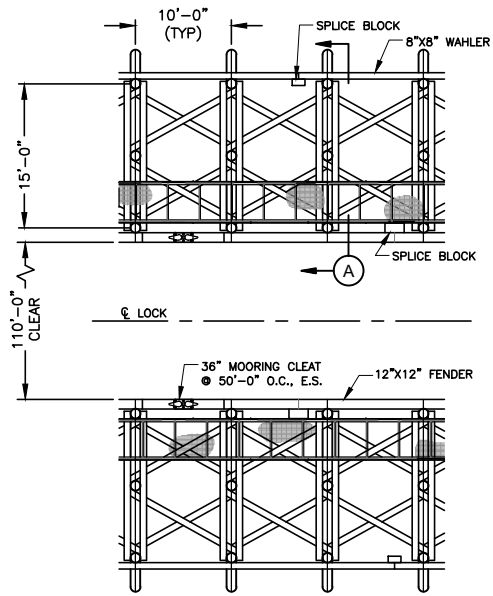
Date: June 2017	Drawn By: PMC	Sheet No.: 35
Scale: 1" = 12'	Approved By: CDL	File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Reqstd Info
4	01/30/2018	Disposal Areas



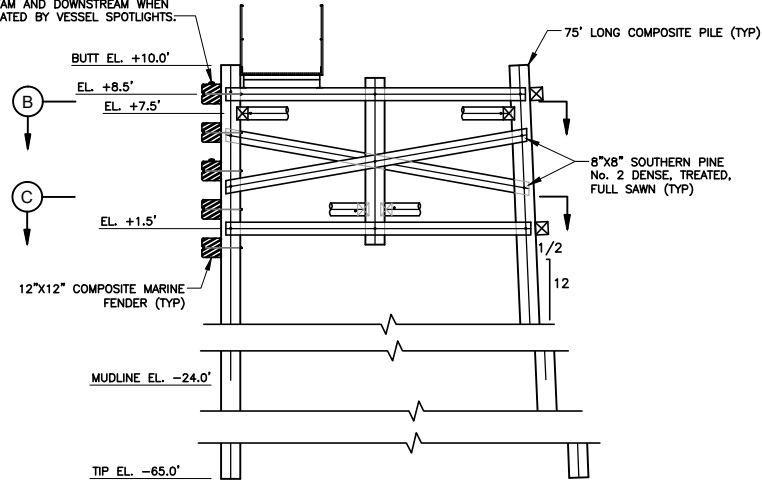


ALL GUIDE WALL REFLECTORS TO BE AMBER EXCEPT THOSE CLOSEST TO A MOORING CLEAT, WHICH SHALL BE RED FOR IDENTIFICATION OF CLEATS AT NIGHT. ALL REFLECTORS SHALL BE EVENLY SPACED AT 5' O.C. REFLECTORS TO BE ARRANGED TO DIRECTLY REFLECT UPSTREAM AND DOWNSTREAM WHEN ILLUMINATED BY VESSEL SPOTLIGHTS.



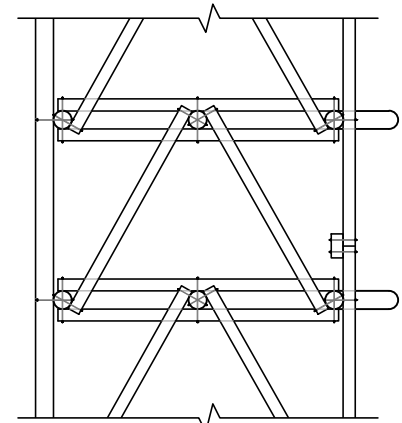
PLAN - LOCK CHAMBER GUIDE WALLS

SCALE: 1" = 20"



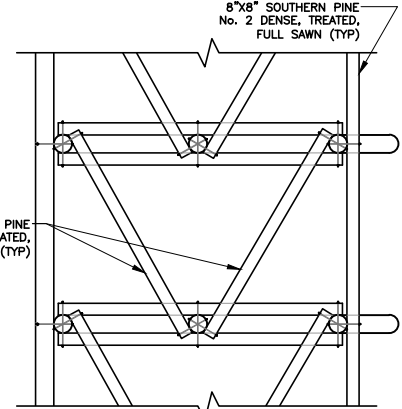
SECTION A

SCALE: 1" = 10"



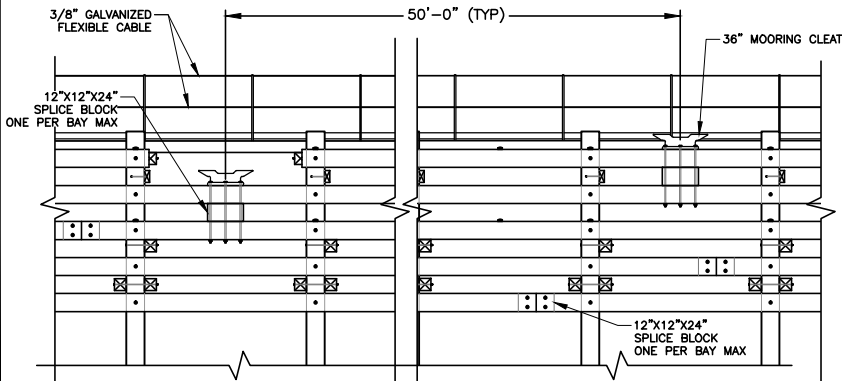
SECTION B

SCALE: 3/32" = 1'-0"



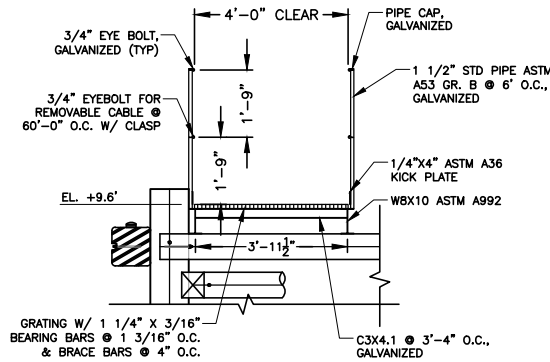
SECTION C

SCALE: 3/32" = 1'-0"



CHANNEL SIDE ELEVATION

SCALE: 3/32" = 1'-0"



WALKWAY SECTION

SCALE: 1" = 5"

NOTE:

1. ALL PILES & BRACING WILL BE COMPOSITE.

" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

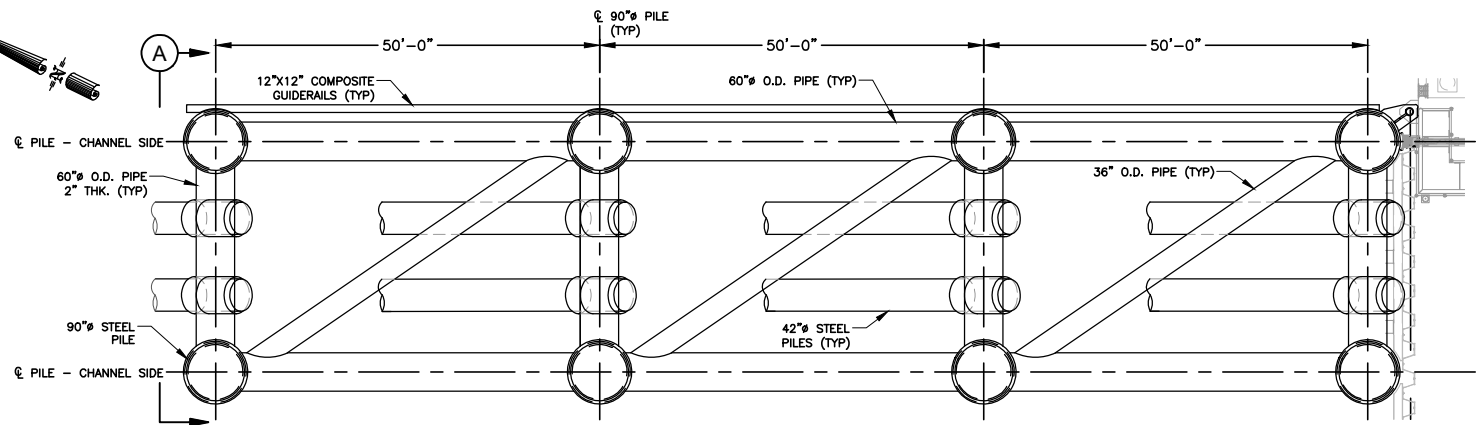
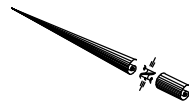
TYPICAL GUIDE WALL DETAILS

TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21

Date: June 2017	Drawn By: PMC	Sheet No.: 36
Scale: VARIES	Approved By: CDL	File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Reqstd Info
4	01/30/2018	Disposal Areas

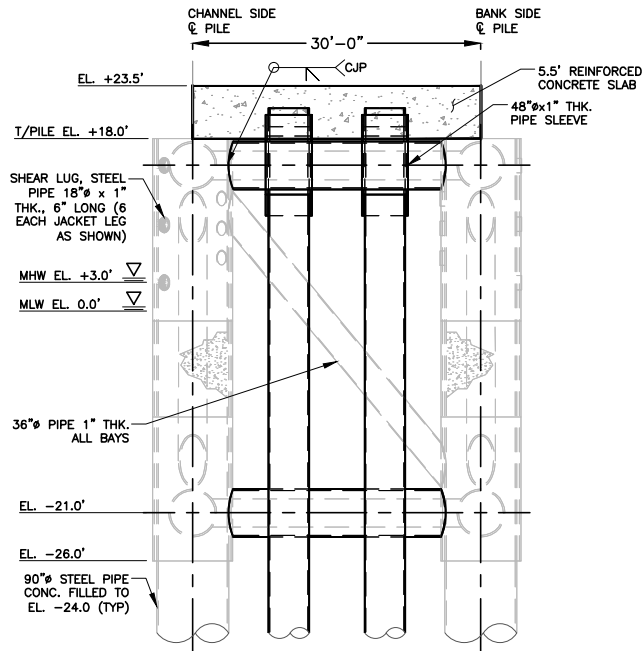




**PLAN VIEW**

SCALE: 1" = 25'

(WEST SIDE SHOWN EAST SIDE SYMMETRICAL)



**SECTION A**  
SCALE: 1" = 20'  
(LOOKING SOUTH)

**NOTE:**

EXISTING FLOODGATE JACKET TO BE MODIFIED. MODIFICATIONS INCLUDE THE INSTALLATION OF 42"Ø BATTER PILES TO EL. -215.0 (SEE SHEET 4 FOR JACKET PLAN LOCATIONS)

" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

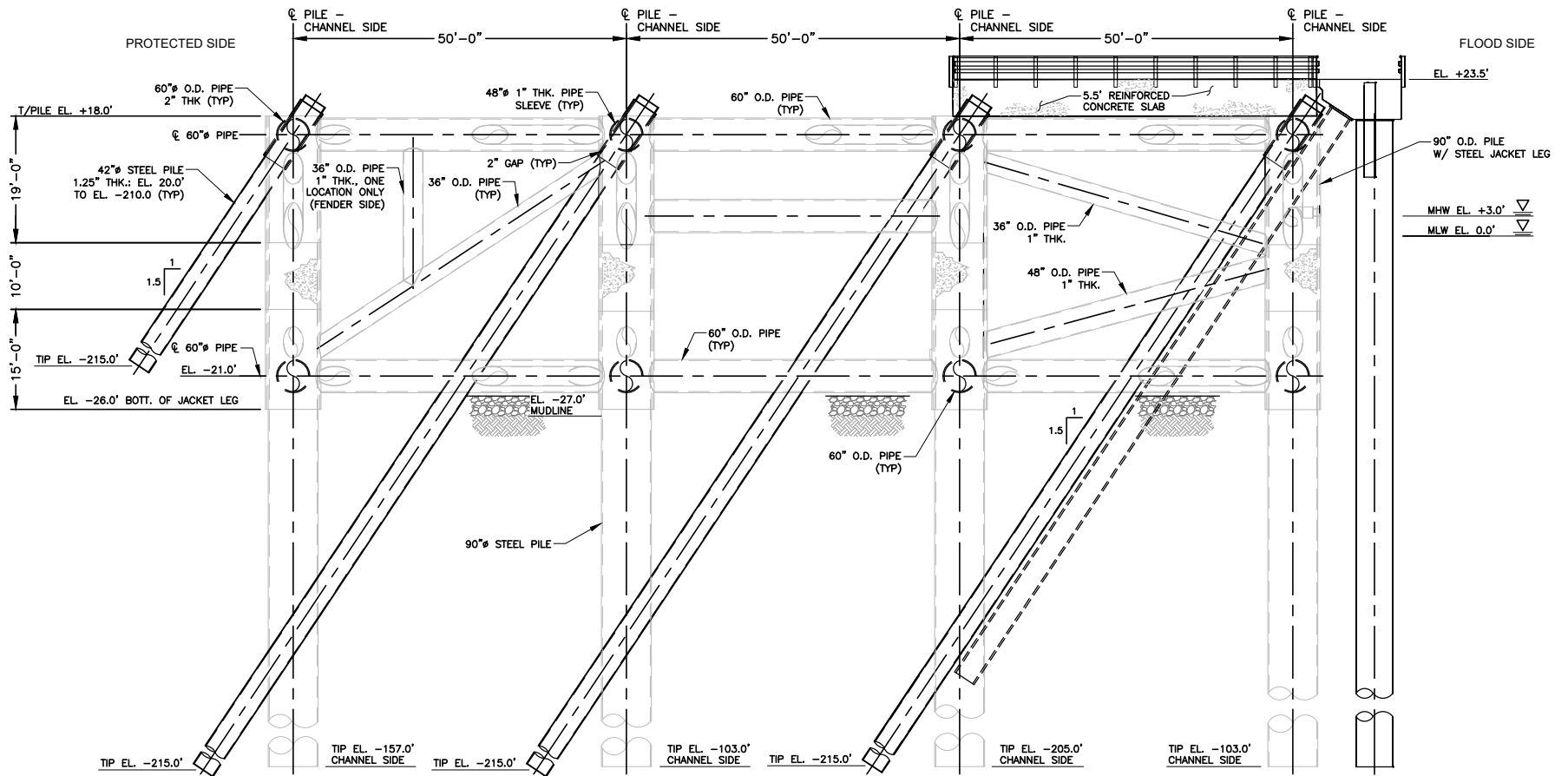
**FLOODGATE JACKET  
PLAN AND SECTION**

**TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21**

Date: June 2017	Drawn By: PMC	Sheet No.: 37
Scale: VARIES	Approved By: CDL	File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Reqstd Info
4	01/30/2018	Disposal Areas





ELEVATION (CHANNEL SIDE)

SCALE: 1" = 25'

" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

FLOODGATE JACKET  
CHANNEL SIDE ELEVATION

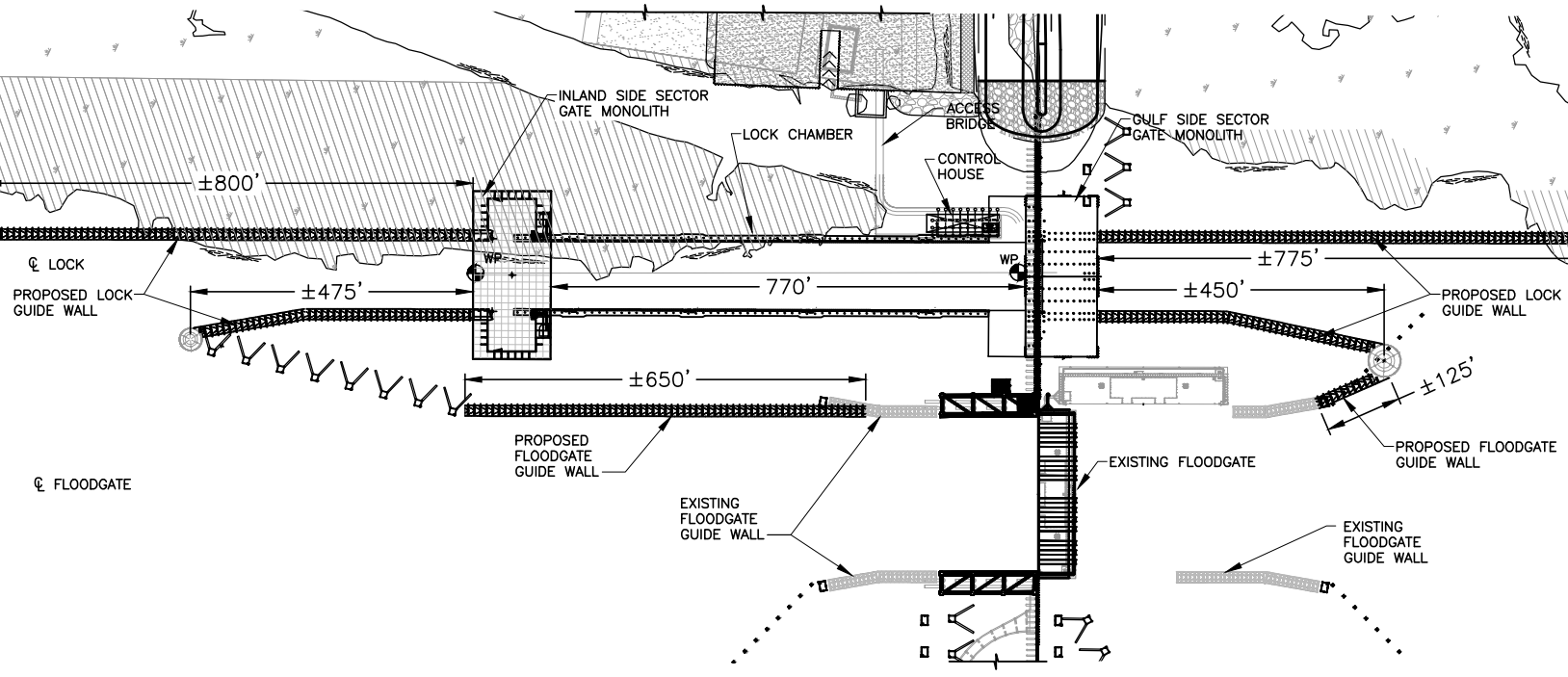
TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21

Date: June 2017	Drawn By: PMC	Sheet No.: 38
Scale: 1" = 25'	Approved By: CDL	File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Reqstd Info
4	01/30/2018	Disposal Areas



V:\CAD\154607\_HNC\_Lock\Permit\Set\_Final\HNC PERMIT - SHEET 38 - FLOODGATE JACKET CHANNEL SIDE ELEVATION.dwg



**LOCK GUIDE WALL PLAN**  
SCALE: 1" = 300'

" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

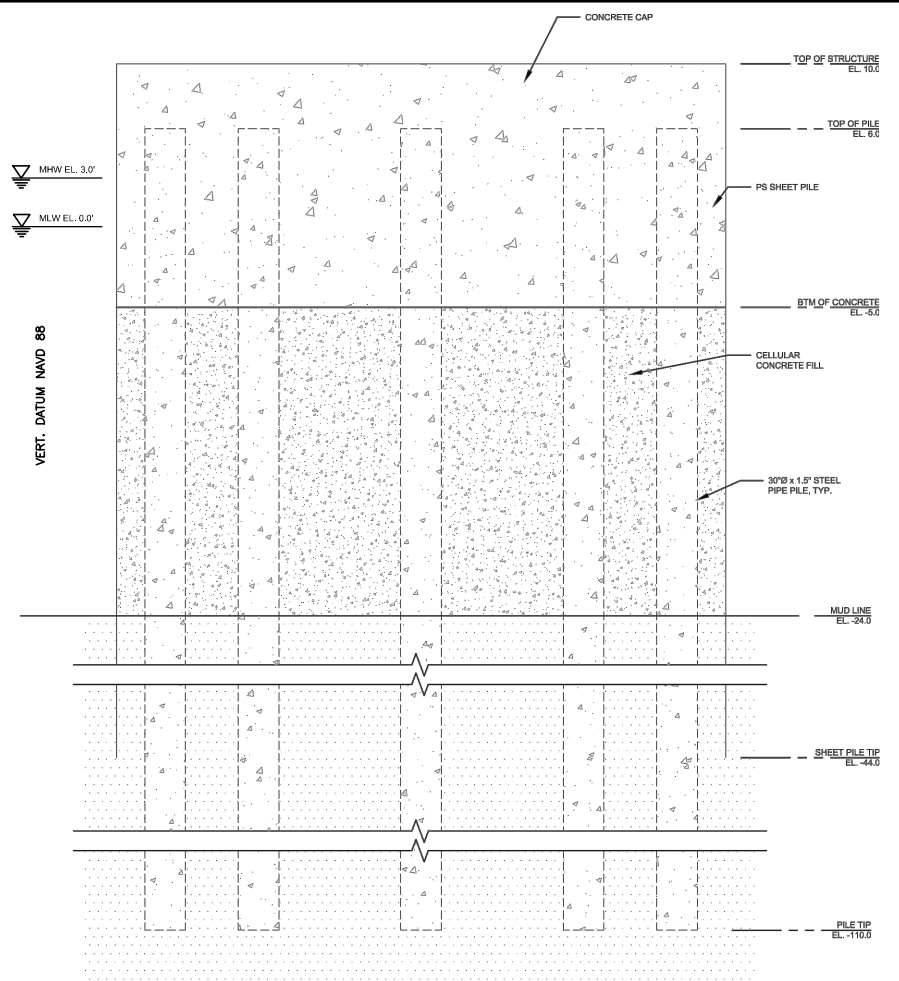
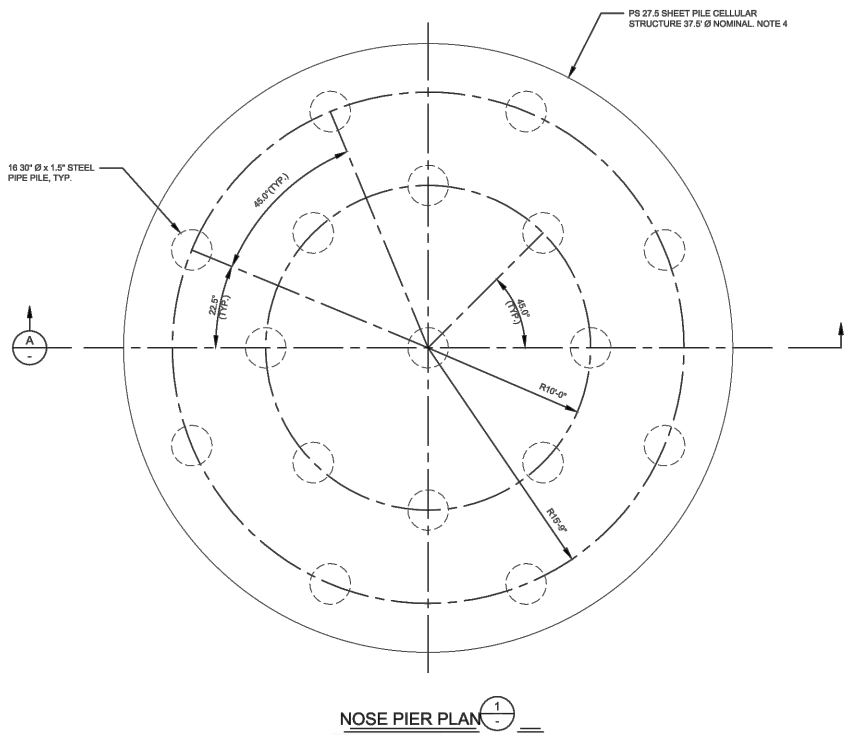
**GUIDE WALL OVERALL PLAN**

**TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21**

Date: June 2017	Drawn By: PMC	Sheet No.: 39
Scale: 1" = 300'	Approved By: CDL	File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Reqstd Info
4	01/30/2018	Disposal Areas





- NOTES:
1. PIPE PILES MEET THE REQUIREMENTS OF ASTM A252 (Py = 45 KSI).
  2. UNLESS NOTED OTHERWISE, ALL PILES SHALL HAVE TENSION CONNECTORS.
  3. PILE CAPACITIES ARE BASED ON A F.S. OF 2.0 AND SHALL BE VERIFIED BY A STATIC LOAD TEST.
  4. EXISTING SHEETS FROM THE REMOVAL OF THE BURBA DOVE STRUCTURE MAY BE USED IF SHOWN TO BE STRUCTURALLY ADEQUATE.

" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

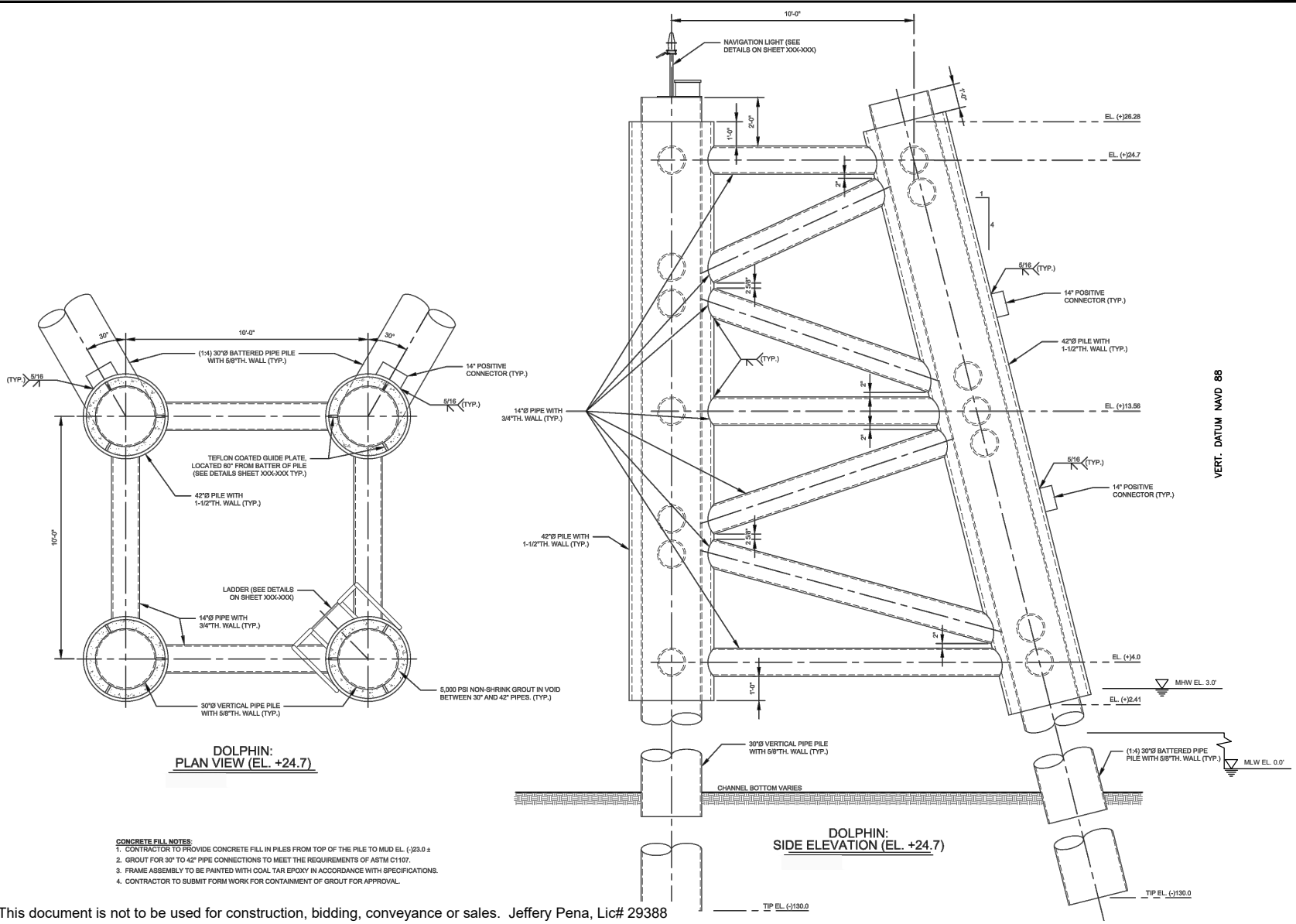
NOSE PIER DETAILS

TERREBONNE LEVEE & CONSERVATION DISTRICT  
 HOUMA NAVIGATION CANAL LOCK COMPLEX  
 TERREBONNE PARISH, LA.  
 T20S, R17E, SECTS 16 & 21

Date: June 2017	Drawn By: PMC	Sheet No.: 40
Scale: N.T.S.	Approved By: CDL	File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Reqstd Info
4	01/30/2018	Disposal Areas





- CONCRETE FILL NOTES:**
1. CONTRACTOR TO PROVIDE CONCRETE FILL IN PILES FROM TOP OF THE PILE TO MID EL. (+23.0 ±)
  2. GROUT FOR 30" TO 42" PIPE CONNECTIONS TO MEET THE REQUIREMENTS OF ASTM C1107.
  3. FRAME ASSEMBLY TO BE PAINTED WITH COAL TAR EPOXY IN ACCORDANCE WITH SPECIFICATIONS.
  4. CONTRACTOR TO SUBMIT FORM WORK FOR CONTAINMENT OF GROUT FOR APPROVAL.

" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

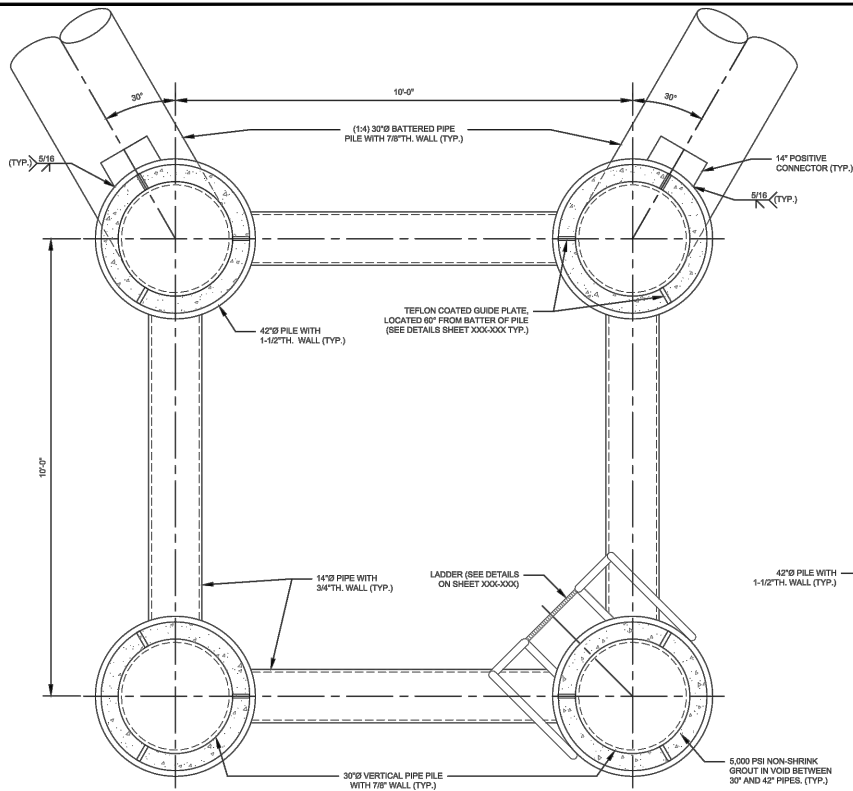
### DOLPHIN PLAN AND ELEVATION FLOOD SIDE +24.7

### TERREBONNE LEVEE & CONSERVATION DISTRICT HOUMA NAVIGATION CANAL LOCK COMPLEX TERREBONNE PARISH, LA. T20S, R17E, SECTS 16 & 21

Date:	June 2017	Drawn By:	PMC	Sheet No.:	41
Scale:	N.T.S	Approved By:	CDL	File No.:	154607

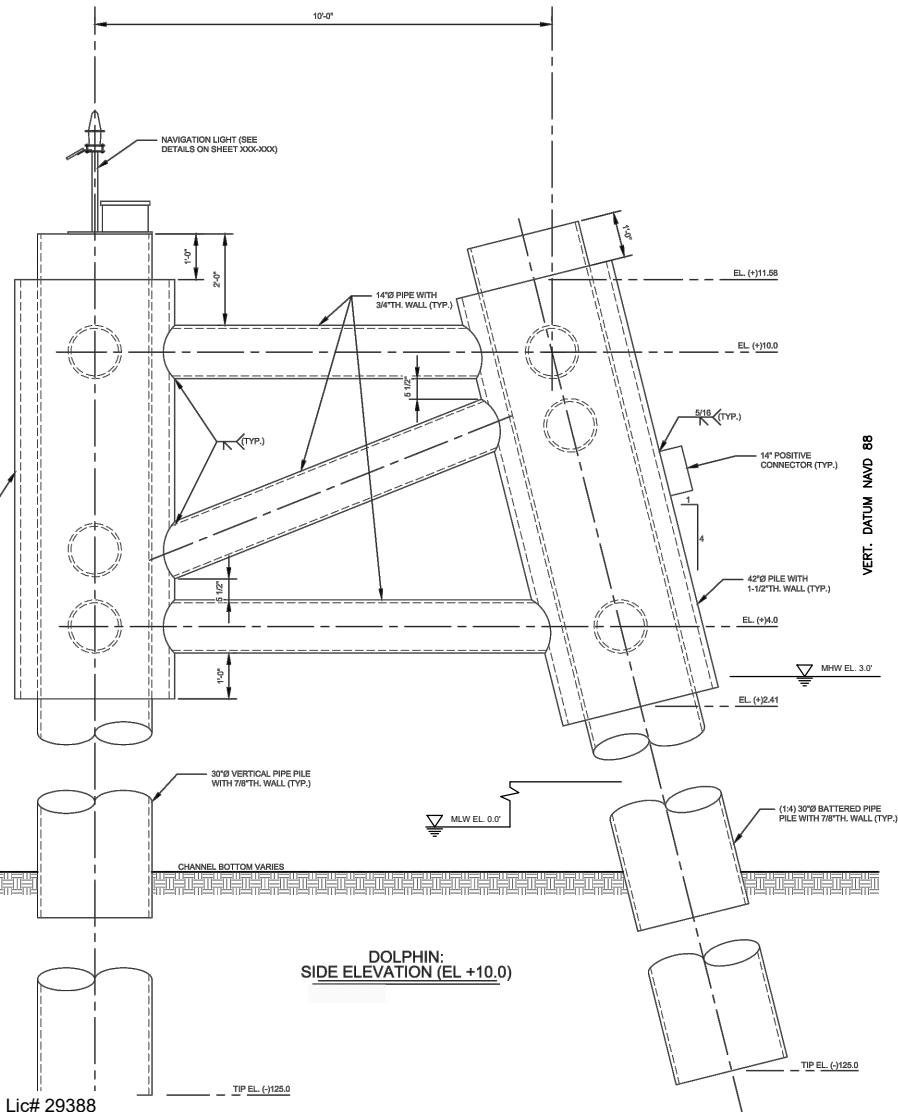
Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Reastd Info
4	01/30/2018	Disposal Areas





**DOLPHIN:  
PLAN VIEW (EL. +10.0)**

- CONCRETE FILL NOTES**
1. CONTRACTOR TO PROVIDE CONCRETE FILL IN PILES FROM TOP OF THE PILE TO MUD EL. (-)23.0 ±
  2. GROUT FOR 30" TO 42" PIPE CONNECTIONS TO MEET THE REQUIREMENTS OF ASTM C1107.
  3. FRAME ASSEMBLY TO BE PAINTED WITH COAL TAR EPOXY IN ACCORDANCE WITH SPECIFICATIONS.
  4. CONTRACTOR TO SUBMIT FORM WORK FOR CONTAINMENT OF GROUT FOR APPROVAL.



**DOLPHIN:  
SIDE ELEVATION (EL. +10.0)**

" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

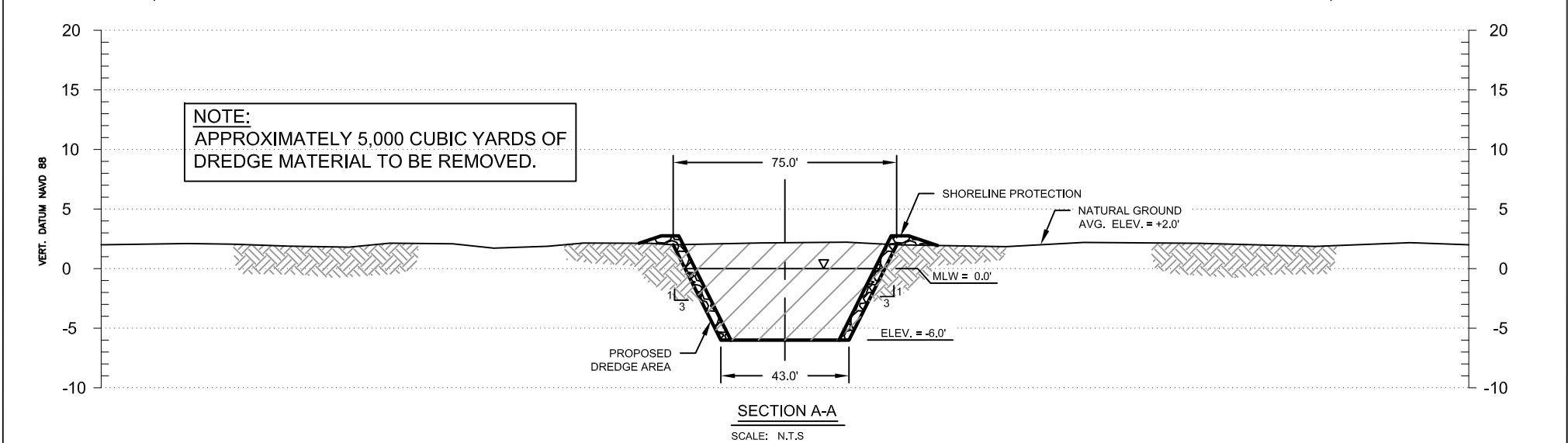
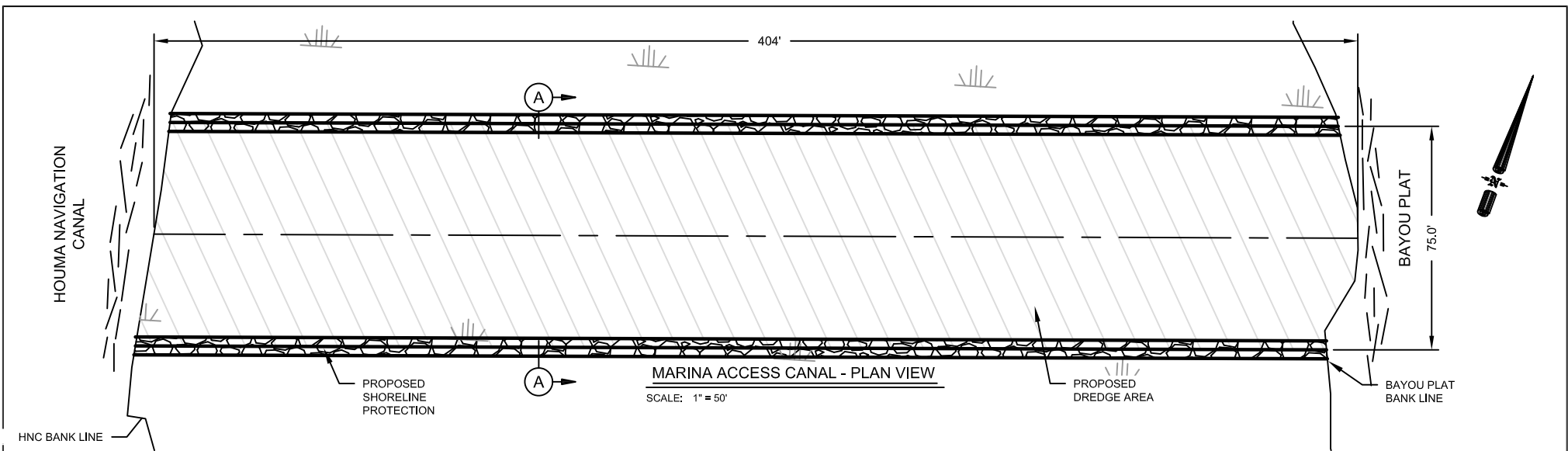
**DOLPHIN PLAN AND ELEVATION  
PROTECTED SIDE +10.0'**

**TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21**

Date: June 2017	Drawn By: PMC	Sheet No.: 42
Scale: N.T.S.	Approved By: CDL	File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Reaqst Info
4	01/30/2018	Disposal Areas





" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

**MARINA ACCESS CANAL  
PLAN VIEW & CROSS SECTION**

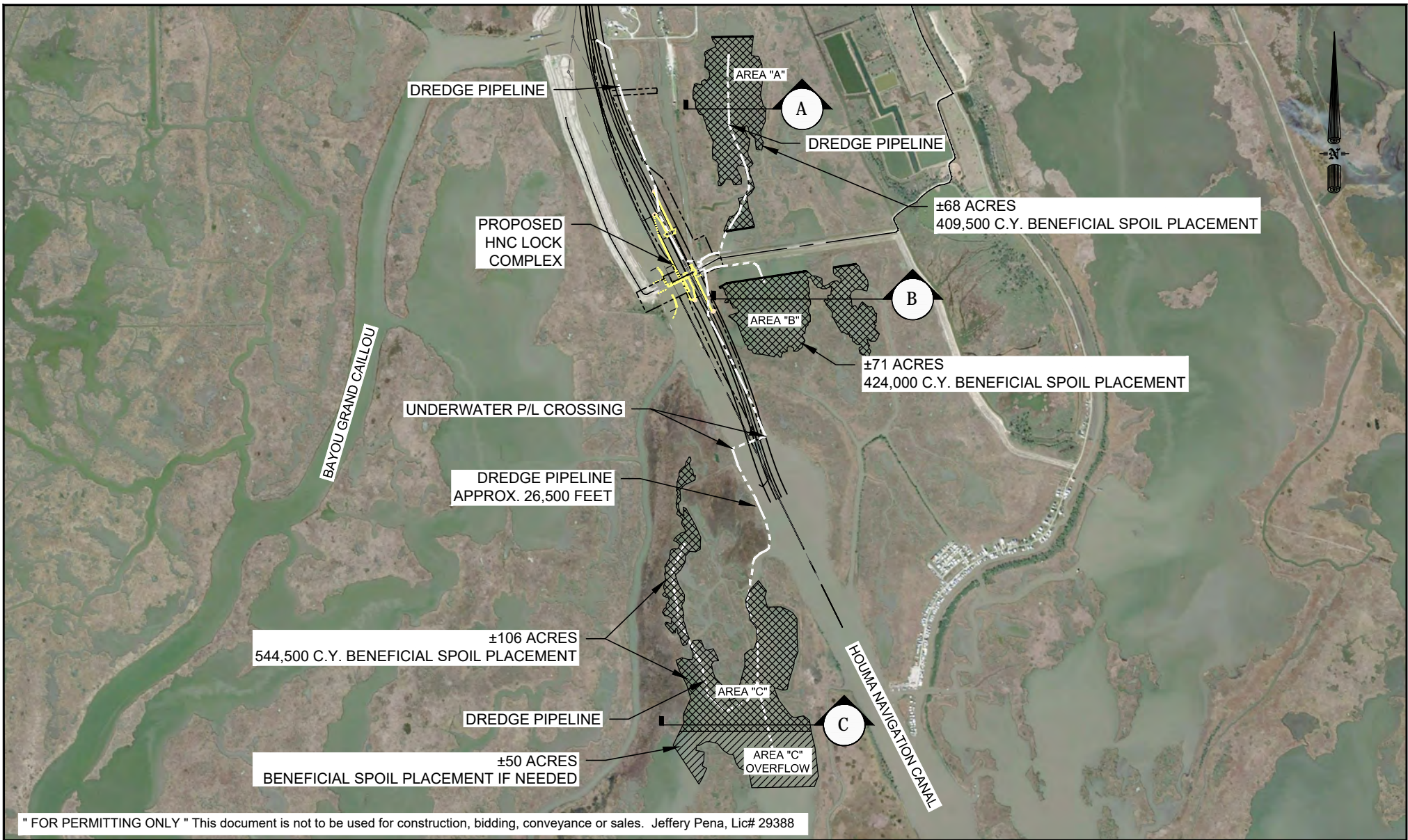
**TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21**

Date: June 2017	Drawn By: PMC	Sheet No.: 43
Scale: VARIES	Approved By: CDL	File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Reqstd Info
4	01/30/2018	Disposal Areas







" FOR PERMITTING ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

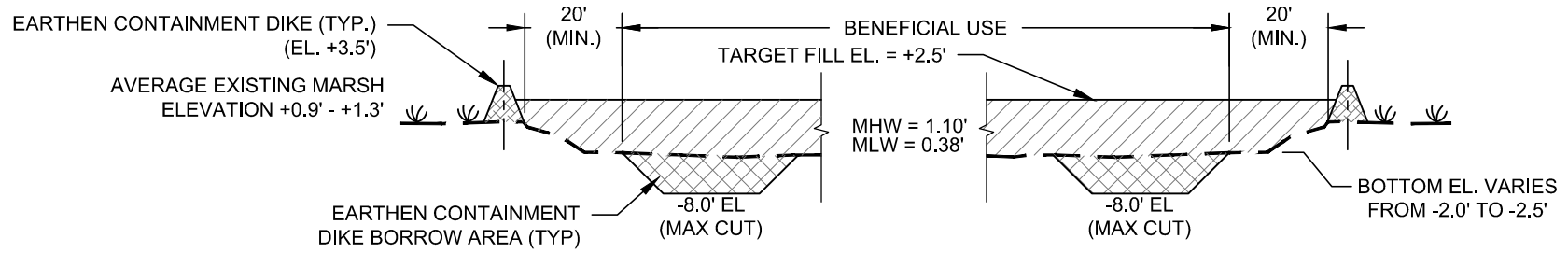
**DREDGE DISPOSAL AREA  
PLAN**

**TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21**

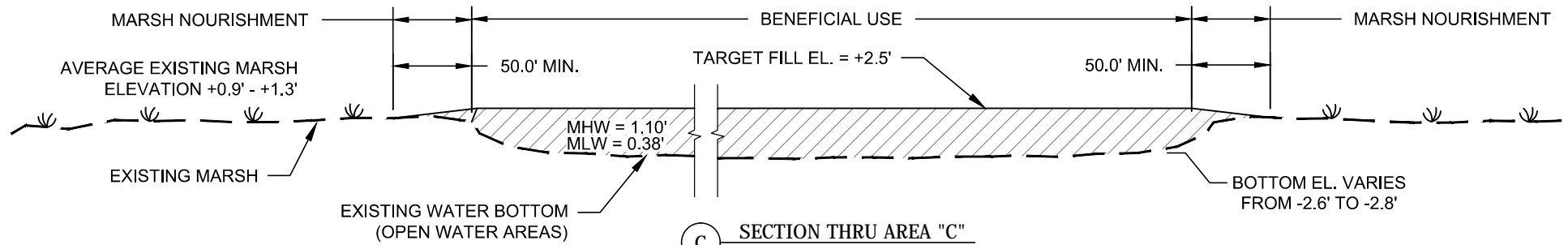
Date: June 2017	Drawn By: LDE	Sheet No.: 44
Scale: 1"=2,600'	Approved By: CDL	File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	DNR Requested Info.
4	01/30/2018	Disposal Areas

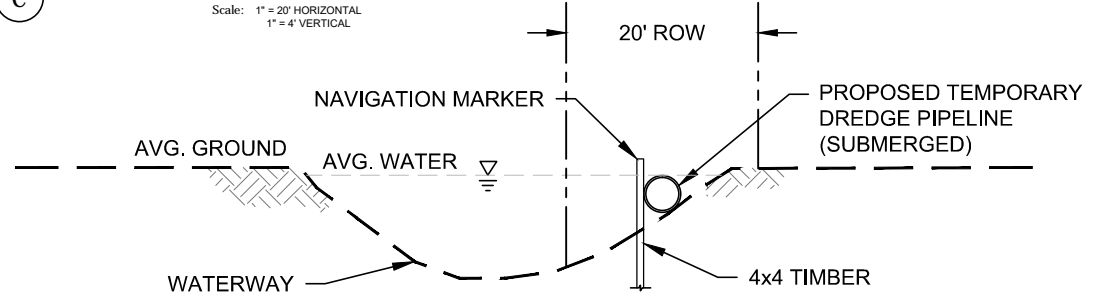




**SECTION THRU AREAS "A" & "B"**  
 Scale: 1" = 20' HORIZONTAL  
 1" = 4' VERTICAL



**SECTION THRU AREA "C"**  
 Scale: 1" = 20' HORIZONTAL  
 1" = 4' VERTICAL



**TEMPORARY PIPELINE INSTALLATION DETAIL**  
 SCALE: N.T.S.

**LEGEND**

	EXISTING GROUND
	MARSH FILL AREA
	CONTAINMENT DIKE
	CONTAINMENT DIKE BORROW AREA

**NOTE:**  
 TARGET MARSH ELEVATION WILL BE CONSISTENT WITH THE EXISTING MARSH ELEVATION.

" FOR PERMITTING ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

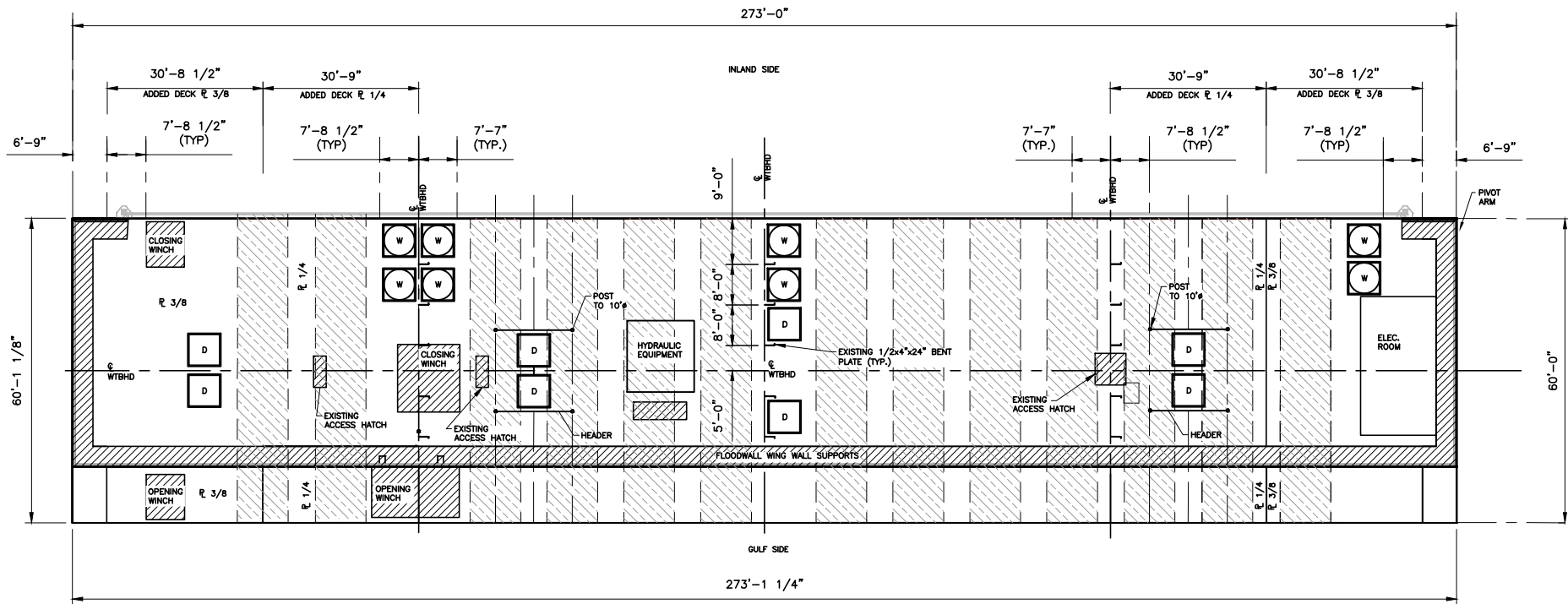
**DREDGE DISPOSAL AREA SECTIONS**

**TERREBONNE LEVEE & CONSERVATION DISTRICT  
 HOUMA NAVIGATION CANAL LOCK COMPLEX  
 TERREBONNE PARISH, LA.  
 T20S, R17E, SECTS 16 & 21**

Date: June 2017	Drawn By: LDE	Sheet No.: 45
Scale: 1"=20'	Approved By: CDL	File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Req Info.
4	01/30/2018	Disposal Areas





BUBBA DOVE FLOODGATE - PLAN VIEW @ EL. 5.0  
SCALE: 1/32" = 1'-0"

- LEGEND:
- DE-WATERING PUMP
  - WET WELL AND HATCH
  - EXISTING STRUCTURAL COMPONENTS
  - FLOW THRU TUBES

" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

FLOODGATE PLAN  
@ EL. 5.0

TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21

Date:  
January 30, 2018

Drawn By:  
PMC

Sheet No.:  
46

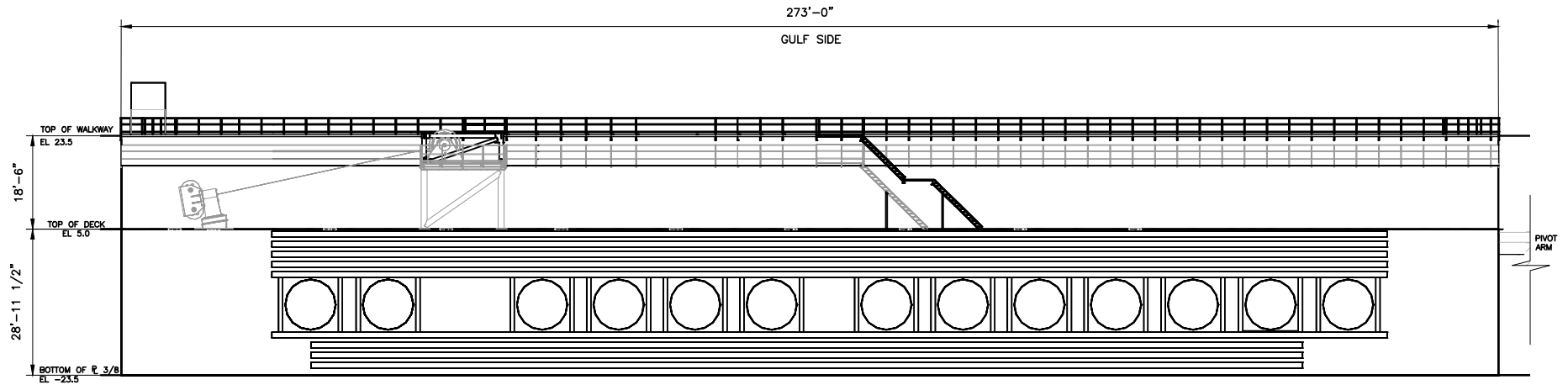
Scale:  
AS SHOWN

Approved By:  
CDL

File No.:  
154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Reqstd Info
4	01/30/2018	Disposal Areas





BUBBA DOVE FLOODGATE - ELEVATION VIEW  
SCALE: 1/32" = 1'-0"

" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

FLOODGATE ELEVATION VIEW

TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21

Date:  
January 30, 2018

Drawn By:  
PMC

Sheet No.:  
47

Scale:  
1"=40,000'

Approved By:  
CDL

File No.:  
154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Reqstd Info
4	01/30/2018	Disposal Areas



GENERAL NOTES:

Approximately 1,378,000 cubic yards of material will be dredged from the HNC and used to create a marsh platform, shown on Sheet 44.

Approximately 28,500 cubic yards of hauled in material will be used for the levee tie-in along with approximately 16,000 cubic yards of rip rap.

Approximately 220,000 cubic yards of rip rap and 2,400 cubic yards of concrete will be used for bankline stabilization and scour protection.

Approximately 500 cubic yards of hauled in material, 19,500 cubic yards of limestone, and 6,000 cubic yards of asphalt will be used for the access roads.

Approximately 8,600 cubic yards of hauled in material will be used to backfill the utility locations.

Approximately 5,000 cubic yards of dredged material from marina access canal.

Approximately 19.2 acres of wetlands will be impacted by this activity.

The existing 250' floodgate and floodwalls constructed under permit # MVN 2009-00559-WJJ and P 2009 0205 will be removed or incorporated into the proposed floodgate and lock complex.

The Dredge Material will be used beneficially to create approximately 245 Acres of Marsh Habitat with a 50 acre overflow area if needed Areas A and B will have partial containment.

" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

GENERAL NOTES

TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21

Date: June 2017	Drawn By: PMC	Sheet No.: 48
Scale: N.T.S.	Approved By: CDL	File No.: 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Reqstd Info
4	01/30/2018	Disposal Areas



**FLOOD CONTROL:**

Based on the Flood Closure Criteria from the Final RPEIS dated May 2013, the HNC Lock and Floodgate will be closed once a watch has been issued by the National Hurricane Center AND the stage measured at the gate location reaches +2.5 ft NAVD88. The gates can only be reopened once the watch has been discontinued AND the stages on the differential between the interior water level and exterior water level is equal to or less than the +1.0 feet as measured on the upstream and downstream staff gage AND the channel has been cleared of obstructions.

**SALINITY CONTROL:**

The HNC Lock and floodgate would be closed for salinity only if:

1. Flows in the Atchafalaya River are below 100,000 cfs as measured at Simmesport gage (USGS 07381490) or
2. If a gage on the outside of the Lock Complex exceeds a salinity value that has been correlated with preventing exceedance of the maximum allowable chloride level of 250 ppm. The structure should be closed for at least 12 hours and fluctuations in chloride levels should be monitored and recorded hourly.

The HNC Lock complex may be opened when all of the following criteria have been met:

1. After monitoring chloride levels over the 12 hour period at the new gage on the outside of the Lock complex drops below the salinity closure trigger.

" FOR REVIEW ONLY " This document is not to be used for construction, bidding, conveyance or sales. Jeffery Pena, Lic# 29388

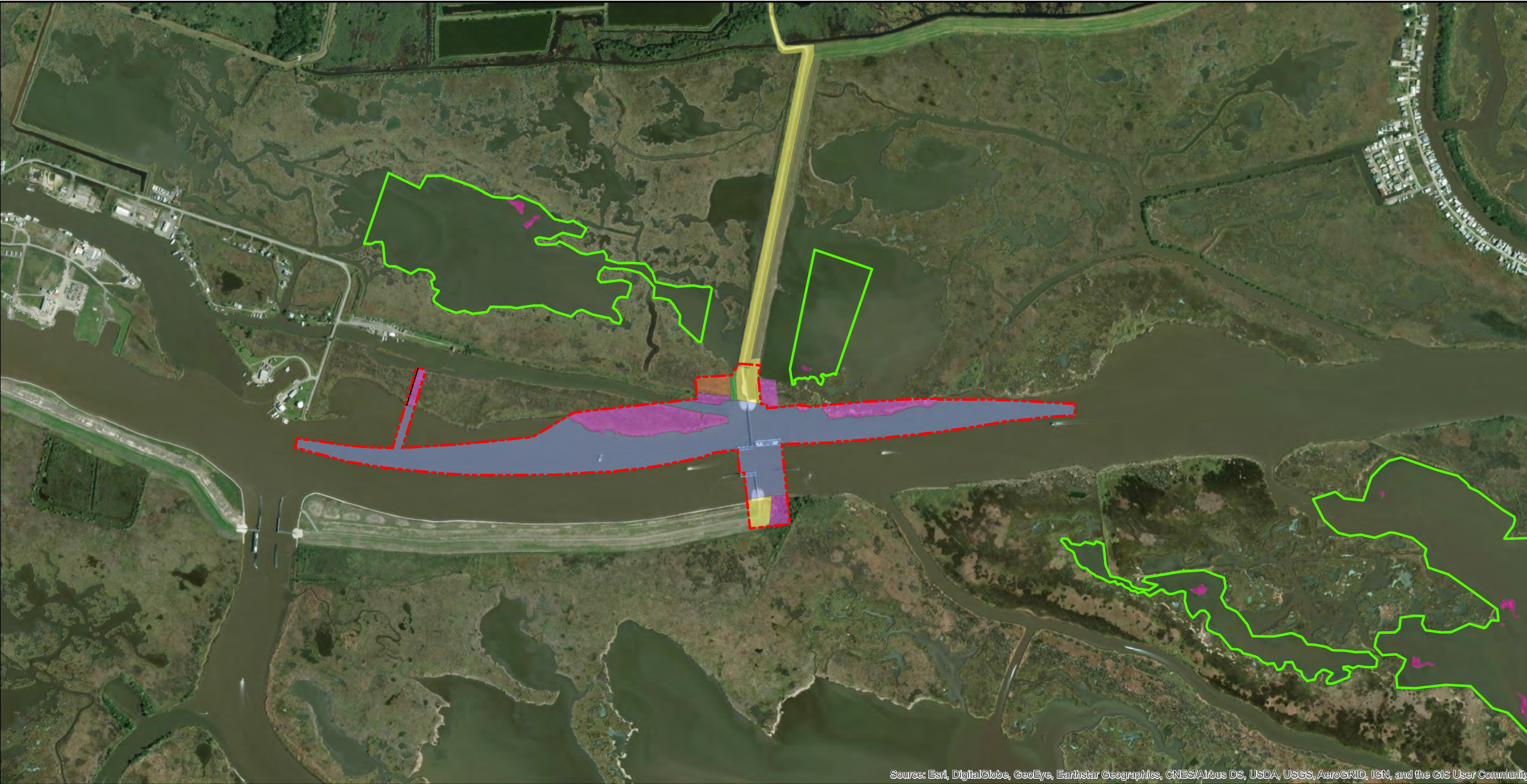
**OPERATION PLAN**

**TERREBONNE LEVEE & CONSERVATION DISTRICT  
HOUMA NAVIGATION CANAL LOCK COMPLEX  
TERREBONNE PARISH, LA.  
T20S, R17E, SECTS 16 & 21**

<b>Date:</b> June 2017	<b>Drawn By:</b> PMC	<b>Sheet No.:</b> 49
<b>Scale:</b> N.T.S.	<b>Approved By:</b> CDL	<b>File No.:</b> 154607

Revisions:		
Revision No.:	Date:	Notes:
1	08/01/2017	DNR Appl. Checklist Revs.
2	10/04/2017	DNR Requested Info.
3	10/26/2017	USACE & DNR Reqstd Info
4	01/30/2018	Disposal Areas

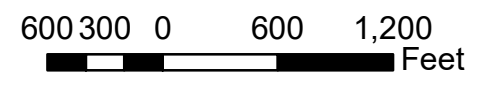
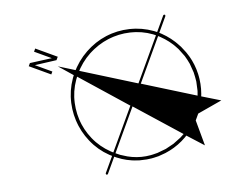




Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**Legend**

- Marsh Creation Areas
- ROW
- Brackish Marsh - Dredge Area (17.6)
- Brackish Marsh - Fill Area (1.6)
- Brackish Marsh - Marsh Creation Area (2.2)
- Non-Wetland - Fill (19)
- Water - Dredge Area (68.8)
- Water - Fill (0.5)



REFERENCE:

TERREBONNE LEVEE AND CONSERVATION DISTRICT	
HNC LOCK COMPLEX	
FIGURE NUMBER	<b>HABITAT IMPACT MAP</b>
<b>1</b>	
<span style="font-weight: bold; font-size: 18pt;">APTIM</span>	
2509 PETROLEUM DRIVE HOUMA, LA 70363 <a href="http://www.APTIM.com">www.APTIM.com</a>	