JOINT PUBLIC NOTICE

August 20, 2018

United States Army
Corps of Engineers
New Orleans District
Regulatory Branch
7400 Leake Avenue
New Orleans, La. 70118-3651
(504) 862-1280/ FAX (504) 862-2289
Brandon.D.Gaspard@usace.army.mil

State of Louisiana
Department of Environmental Quality
Post Office Box 4313
Baton Rouge, La. 70821-4313
Attn: Water Quality Certifications
(225) 219-3225/FAX (225) 325-8250
Elizabeth.Hill@la.gov

Project Manager
Brandon Gaspard
Permit Application Number
MVN-2017-00570-MG

Project Manager
Elizabeth Hill
WQC Application Number
WQC # 180817-01

Interested parties are hereby notified that a prospectus and 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, for a Water Quality Certification (WQC) in accordance with statutory authority contained in Louisiana Revised Statutes of 1950, Title 30, Chapter 11, Part IV, Section 2074 A(3) and provisions of Section 401 of the Clean Water Act (P.L.95-17).

PORT FOURCHON SINGLE USER MITIGATION BANK IN LAFOURCHE PARISH

NAME OF APPLICANT: Greater Lafourche Port Commission, Post Office Box 490, Cut Off, Louisiana, 70345.

LOCATION OF WORK: The project area is located in Lafourche Parish within Sections 22 and 23, Township 22 South, Range 22 East, near Port Fourchon, Louisiana. The approximate site center is Latitude 29.1650446 N, 90.2078125 W. The project is located within the Deltaic Plain of the Louisiana Coastal Zone.

CHARACTER OF WORK: The Greater Lafourche Port Commission proposes to build containment dikes and use a dredge discharge pipe to deposit dredge material into open waters adjacent to Bayou Lafourche. These activities are to be conducted for the purpose of constructing 36 acres of brackish marsh in the establishment of a single user mitigation bank.

The comment period for the Department of the Army Permit and the Louisiana Department of Environmental Quality WQC will close **30 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**. **Similar 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.

The application for this proposed project is on file with the Louisiana Department of Environmental Quality and may be examined during weekdays between 8:00 a.m. and 4:30 p.m. Copies may be obtained upon payment of costs of reproduction.

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. Issuance of this public notice solicits input from the State Archeologist and State Historic Preservation Officer regarding potential impacts to cultural resources.

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). Utilizing Standard Local Operating Procedure for Endangered Species in Louisiana (SLOPES), dated October 22, 2014, between the U.S. Army Corps of Engineers, New Orleans and U.S. Fish and Wildlife Service, Ecological Services Office, the Corps has determined that with the inclusion of the Standard Manatee Conditions for In-Water Activities, proposed work is not likely to adversely affect the West Indian Manatee.

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 36 acre(s) 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, 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 interested in the matter.

Martin S. Mayer
Chief, Regulatory Branch

Enclosure

Prospectus for the Proposed

Port Fourchon Single User Mitigation Bank

Lafourche Parish, Louisiana

MVN-2017-00570-MG

July 6, 2018

Sponsor
Name: Greater Lafourche Port Commission
Address: P.O. Box 490
Cut Off, LA 70345

List of Figures

1.0 INTRODUCTION

The Greater Lafourche Port Commission ("Port" or "GLPC") is a political subdivision of the State of Louisiana. Since 2000, the Port has beneficially used millions of cubic yards of native dredge material in converting over 800 acres of open water into lush, saline marsh in its Harrison J. Cheramie Wildlife Sanctuary (the "Sanctuary") located north of Port Fourchon. Hunting, trapping and fishing are prohibited in the Sanctuary, which was dedicated by the Port in 2001. The Sanctuary is routinely patrolled by the Port's Harbor Police force to prevent consumptive use of this pristine wetland complex, and trespassers are prosecuted.

The Port furthered its environmental stewardship with the establishment of its 6,000' Maritime Forest Ridge situated in the Sanctuary and constructed atop the footprint of the former Bayou Cochon ridge. The Ridge has served as a test site for woody and grass species and is also a haven to fur-bearing animals and neo-tropical birds alike for over 10 years.

The Port seeks to establish a single-user mitigation bank upon 36 acres of open water in the Sanctuary. The acreage would be converted from open water to intertidal saline marsh consistent with the Port's previous beneficial use work in the area. The Bank would be for the sole use of Caillouet Land, LLC ("Caillouet") as compensation for unavoidable impacts to aquatic resources associated with Caillouet development or operations.

1.1 Site Location

The bank will be located just north of Port Fourchon in Lafourche Parish, Louisiana in Sections 22 and 23, T-22-S, R-22-E. The approximate center of the bank is located at 29º09'53.80" N, 90º12'28.80" W. The property surrounding the site of the bank is predominantly non vegetated open water with broken, native marsh to the north and marsh established by the Port to the south. See the Local Vicinity Map attached hereto as Figure 1.

2.0 PROJECT GOALS AND OBJECTIVES

The project goal is to increase the ecological benefit of the site by converting the area from non-vegetated open water to vegetated, intertidal marsh. Accordingly, the habitat created will be 36 acres of saline marsh. This project will be a re-establishment of brackish marsh which has eroded and subsided over the years. Aquatic functions that will be re-established by this project include wildlife and fisheries habitat, wave energy dissipation and carbon sequestration.

The primary project objective is to increase composition and productivity of the animal community by re-establishing brackish marsh habitat. The creation of a vegetated marsh platform provides important habitat for aquatic species (Rakocinski et al.1992, Rozas 1992). Increased productivity of juvenile fish species is believed to occur when

ample food sources are easily accessible (Boesch and Turner 1984, Zimmerman and Minello 1984). Shallow water along the marsh edge provides food and protection for young speckled trout, redfish, shrimp, and blue crabs (Barataria-Terrebonne Estuarine Basins Map 1996). The proposed marsh platform will also provide habitat and forage for wading and migratory waterfowl, and to a lesser degree, furbearing animals.

Secondary project objectives include increasing the footprint of vegetation and soil organic matter in the area.

A 2011 study performed in nearby Terrebonne Bay confirmed the generally accepted principle that waves approaching vegetated shores lose energy due to obstructing vegetation. This reduces shore erosion and is of engineering significance for shoreline protection.[1] Dense emergent vegetation has proven to significantly reduce wave energy.[2] Waves propagating over salt marsh vegetation dissipate energy due to drag induced by the stems.[3]

Wetlands have the potential to remove large quantities of carbon from the atmosphere. [4]Soil organic matter in wetlands have been estimated to accrete at a rate between 2,926 and 5,175 pounds of carbon per acre per year.[5] Further, plants capture carbon dioxide from the air and convert it to plant parts such as leaves, stems, or roots through a process called "fixation" or "uptake" of carbon dioxide.[6]

3.0 ECOLOGICAL SUITABILITY OF THE SITE

3.1 Historical Ecological Characteristics of the Site

Historically, the site has consisted of brackish marsh interspersed with ponds and trenasses subject to tidal influence primarily fed from the waters of nearby Bayou Lafourche. Aerial imagery from 1989 shows roughly 1/6th of the site consisted of broken marsh (see Historical Conditions Map attached hereto as Figure 9).

Prior to the establishment of the Sanctuary, the site and adjacent properties were previously used recreational hunting, fishing and trapping.

3.2 Current Ecological Characteristics of the Site

The site is surrounded by (and has historically supported) the brackish marsh sought to be established. The existing, protected population of both flora and fauna in

[1] http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1198&context=usarmyresearch
[2] Smith, J., & Anderson, M. (2014). LIMITS OF WETLAND WAVE DISSIPATION. *Coastal Engineering Proceedings, 1*(34), waves.18.
[3] http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1198&context=usarmyresearch
[4] http://www.lsuagcenter.com/portals/communications/publications/agmag/archive/2013/spring/wetland-soil-carbon-sequestration
[5] http://www.lsuagcenter.com/portals/communications/publications/agmag/archive/2013/spring/wetland-soil-carbon-sequestration
[6] http://www.habitat.noaa.gov/coastalcarbonsequestration.html

adjacent marsh makes the site ecologically ideal for increasing the composition and productivity of the plant and animal community.

Currently, the site is located in the Sanctuary, where consumptive use including fishing, hunting and trapping are prohibited by the Port. The site consists of shallow, non-vegetated open water ranging in depth from 2 to 2.5 feet (see Typical Mitigation Bank Section attached hereto as Figure 10) and is subject to the ebb and flow of the tide - fed primarily from Bayou Lafourche and Bayou Moreau. Based on nearby readings, the salinity levels are likely in excess of 5 ppt.

The USDA Web Soil Survey (2016) indicates the mapped soils for the site as open water and those of adjacent marsh to be Belle Pass-Scatlake Association and Scatlake Muck (see USDA Web Survey attached as Figure 11). These soils are found on the federal and local hydric soils lists.

The site is permanently open water. Water depth is dictated by tidal range.

The site was previously accepted and approved by the Corps as a component of a larger mitigation plan (MVN 2008-37-CZ, the "Slip C Mitigation Plan"). Recently, it was removed from the Slip C Mitigation Plan. Accordingly, the Port respectfully requests that the Corps take cognizance of the site being non vegetated open water and forego the formal process of conducting a field Jurisdictional Determination.

3.3 General Need for the Project in this Area

Commercial fishing and eco-tourism are both significant sources of local and regional income. Recreational fishing and hunting are not only a staple of our local heritage, but remain a significant source of food for the community. Though the site is a protected Sanctuary, increasing the composition and productivity of the animal community will have far-reaching beneficial impacts on local commercial and recreational fisheries and hunting grounds outside of the Sanctuary by enhancing opportunities for these species to forage, feed, shelter and reproduce.

Re-creating 36 acres of marsh will enhance a rapidly deteriorating coastal buffer system to protect against tropical weather systems. The increased protection will not only assist the local community of Leeville, but will also assist in fortifying the "first line of defense" for the Larose to Golden Meadow Hurricane Protection Levee System.

3.4 Technical Feasibility

Over the past 15 years, the Port has successfully created over 800 acres of saline marsh from open water in the immediate vicinity of the proposed site. The Port will employ the same construction methods (ie. hydraulically dredging Port waterways and pumping the resultant spoil material for free-flow displacement at the site) in constructing the mitigation bank. The overall dredging projects are financially efficient, yielding not only newly-created marsh, but also maintenance of our navigation channels.

4.0 ESTABLISHMENT OF THE MITIGATION BANK

4.1 Site Restoration Plan

Containment dikes will be constructed by the Port prior to beginning mitigation fill by using our pontoon excavators to excavate material from the waterbottom of the mitigation bank site. Actual material required for creation of the mitigation bank will be hydraulically dredged from Bayou Lafourche and pumped through a disposal pipe floated in open water to the mitigation bank site. The site will be filled to a final (post-compaction and consolidation) elevation ranging between +1.5 and +2.0 ft. NGVD – an elevation range which has proven as optimal for the development and nourishment of intertidal marsh habitat.

The Port will take the necessary steps to ensure that no more than 15% of the final elevation exceeds +2.0 ft. NGVD and no more than 15% falls below +1.25 ft. NGVD (collectively referred to as the "15% Restriction Criteria"). Additionally, the Port will ensure that none of the final elevations exceed +2.5 ft. NGVD. For purposes of the 15% Restriction Criteria, elevations will be considered "final" as measured one (1) year following completion of fill activities in the area measured. Should the 15% Restriction Criteria not be met, the Port will take the necessary steps, including but not limited to shaping or grading of material, to bring the site in compliance with the 15% Restriction Criteria.

The proposed site is partially bordered by healthy marsh, vegetation from which will only accelerate the process of vegetative propagation throughout the site. The Port will retain the Barataria-Terrebonne National Estuary Program ("BTNEP") or another Louisiana licensed grower to purchase and/or grow out *spartina patens* suitable for planting in the mitigation bank. 17,000 *Patens* will be grown out in 3.5" x 3.5" square plastic pots for the bank. Plants will be grown out in a peat-based potting mix with perlite and mycorrhizae (which enhances the plants ability to take up nutrients and water). The plants will be installed on 15 ft. triangular centers throughout the 36-acre mitigation bank site.

Should natural vegetative coverage of the site be less than 80% through the third growing season following completion of fill operations, the Port will implement those measures proven to be effective on nearby mitigation projects: plugs of *Spartina alterniflora cv. Vermilion* (cultivated variety of smooth cordgrass released by Natural Resources Conservation Service (NRCS) in Louisiana) will be planted on 20-foot centers within the non-vegetated areas.

Aside from containment dikes which will be degraded to marsh elevation following completion of fill operations, no temporary or long-term structural management components will be necessary for the success of the project.

4.2 Current Site Risks

By virtue of its situation in coastal Louisiana, the mitigation bank site is subject to natural threats of subsidence, coastal erosion and tropical weather systems. Aside from these unavoidable circumstances, there are no other existing hydrologic disturbances on or adjacent to the site over which the Port has no control.

There are no known or recorded encumberances, zoning regulations or adjacent development (existing or proposed) affecting the mitigation bank site.

4.3 Long-Term Sustainability of the Site

Despite the natural threats identified above, the Port is committed to the long-term sustainability of the mitigation bank site.

The mitigation site is somewhat isolated from the erosive impacts of the Gulf of Mexico by Port Fourchon, hundreds of acres of constructed marsh and the Port's Maritime Forest Ridge. Port Fourchon remains the premier intermodal hub for oil and gas exploration and production in the Gulf of Mexico. Port Fourchon's industrial sites (generally developed to a +8.0' NGVD ground elevation), along with LA 3090 (with a centerline elevation of +5.0' NGVD), serve to divert storm surge and high tide events away from the mitigation bank site. Not only is the Port committed to maintaining the surrounding, constructed marsh as part of its environmental stewardship initiative, it's also required to do so under various mitigation plans approved by DNR and the Corps. These geographical features protect the mitigation bank site from natural threats.

There are no long-term structural management features of the mitigation bank site.

5.0 PROPOSED SERVICE AREA

The proposed service area consists of the Louisiana Deltaic Plain (USGS Hydrologic Cataloging Units 08090301, 08090302, 08090100, 08090201, 08090202, 08090203, 08070204, 08070205, 08080101, 08080102 and 08080103).

As covered above, this mitigation bank is being sought as a single-user mitigation bank for use by Caillouet Land, LLC. It is anticipated that any impacts being offset by this mitigation bank will be located within the Deltaic Plain.

6.0 OPERATION OF THE MITIGATION BANK

6.1 Project Representatives

Sponsor/Landowner: Greater Lafourche Port Commission
c/o Bryce Autin, General Counsel
16829 East Main Street
Cut Off, LA 70345
brycea@portfourchon.com
985-632-6701

6.2 Qualifications of the Sponsor

Over the past decade, the Port has successfully constructed and maintained over 800 acres of mitigation in the immediate vicinity of the proposed mitigation bank site utilizing methods of construction identical to those proposed herein.

Under EG-19-980-1340-01 (P981007), the Port constructed roughly 710 acres of saline marsh between the Maritime Forest Ridge and Flotation Canal. The project served as mitigation for the impacts sustained by development of Slips A and B in the Port's Northern Expansion. The mitigation was performed and monitored in compliance with permit conditions instituted by the Corps and Louisiana Department of Natural Resources ("DNR"). The Port utilized spoil from dredging operations in its Northern Expansion development to fill open water and establish the mitigation area.

Under MVN-2008-00037-WW (P20071098), the Port has embarked on the construction of roughly 213 acres of marsh north of the Maritime Forest Ridge and an additional 35 acres along the northern bank of Flotation Canal. To date, 75 acres of marsh north of the Maritime Forest Ridge have been established. Again, marsh creation was the product of spoil hydraulically dredged from the Port's Northern Expansion development and piped to mitigation fill sites previously consisting of open water. This mitigation project has also been coordinated with the Corps and DNR.

The Port has historically proven itself as qualified to perform work identical to that being proposed in this prospectus in areas essentially identical to that being proposed as the mitigation bank site; all in coordination with the Corps and DNR.

6.3 Proposed Long-Term Ownership and Management Representatives

The Port holds 100% fee title ownership to the land upon which the mitigation bank site will be located and is the party solely responsible for long term management of the project.

6.4 Site Protection

The Port shall burden the bank site with a perpetual conservation servitude under the Louisiana Conservation Servitude Act (the "Act," La.R.S. 9:1271, *et seq*). The conservation servitude shall be substantially similar to the draft annexed hereto as Figure 12.

The Port proposes to utilize the Barataria-Terrebonne Estuary Foundation ("The Foundation") as the holder of the conservation servitude. The Foundation is a 505(c)(3) non-profit organization committed to supporting stewardship of the cultural, economic and ecological resources of the Barataria and Terrebonne Basins within which the mitigation bank will sit. Accordingly, as a charitable corporation formed for protecting the natural, scenic and open-space values of the Basin and preserving historical, archaeological and cultural aspects of the Basin, The Foundation clearly fits the definition of an acceptable "Holder" under the Act.

6.5 Long-Term Strategy

The Port will establish the proposed marsh pursuant to the means and methods previously set forth in this Prospectus. Following completion of fill operations and (if necessary) planting, the site will be routinely monitored by the Port personnel to ensure factors such as vegetative health, water exchange and shoreline integrity all remain in order to meet the goal of increasing the ecological benefit of the site.

There are no long-term structural management features of the mitigation bank site.

7.0 REFERENCES

http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1198&context=usarmyresearch

Smith, J., & Anderson, M. (2014). LIMITS OF WETLAND WAVE DISSIPATION. *Coastal Engineering Proceedings*, *1*(34), waves.18.

http://www.lsuagcenter.com/portals/communications/publications/agmag/archive/2013/spring/wetland-soil-carbon-sequestration

http://www.habitat.noaa.gov/coastalcarbonsequestration.html

https://websoilsurvey.sc.egov.usda.gov/App/HomePage.html

STATE VICINITY MAP

NOT TO SCALE

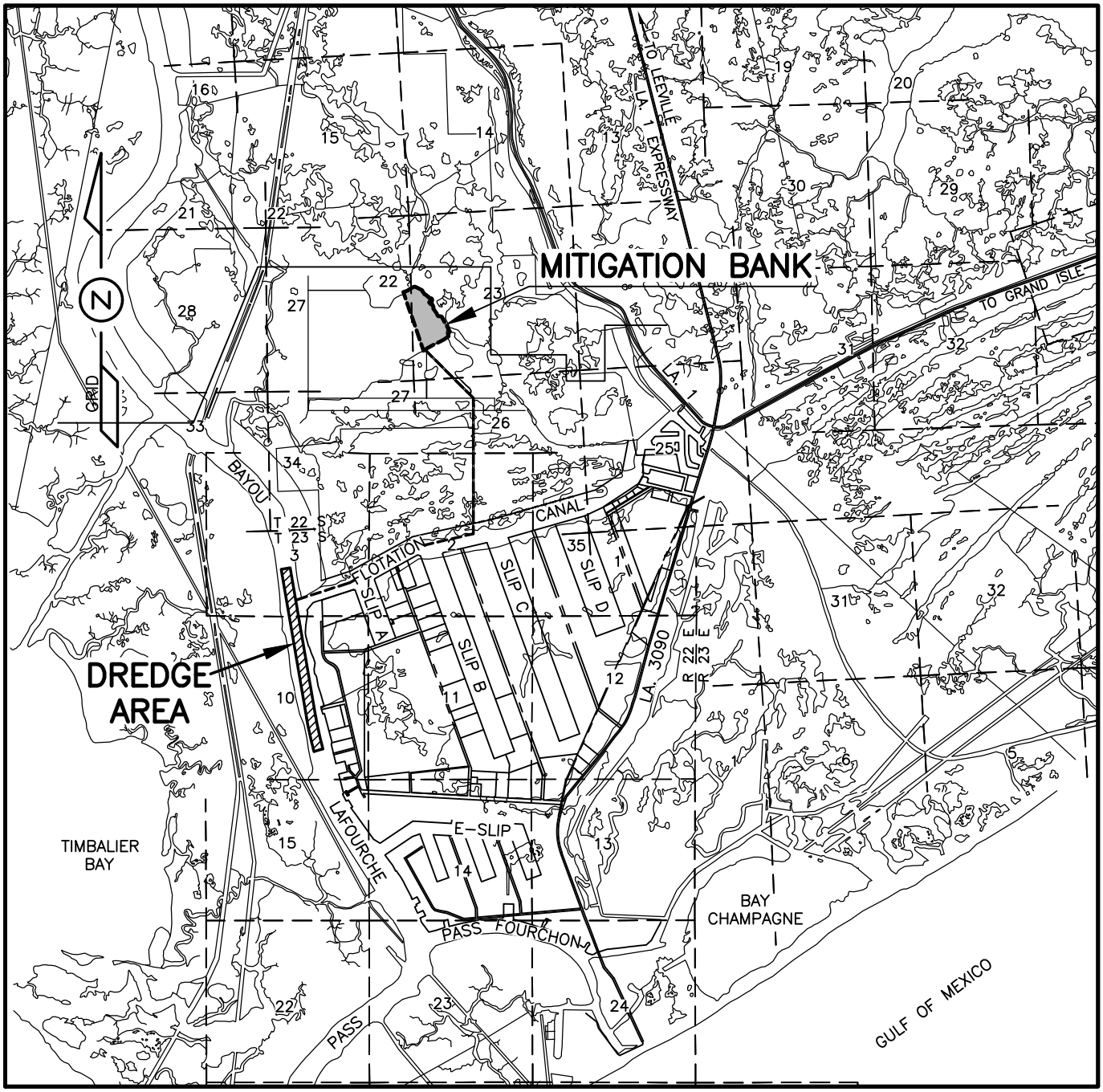
PORT FOURCHON MITIGATION BANK

PROPOSED: MITIGATION BANK
APPLIED BY: GREATER LAFOURCHE PORT COMMISSION
AREA: PORT FOURCHON, LAFOURCHE PARISH, LOUISIANA

PICCIOLA & ASSOCIATES, INC.
CIVIL ENGINEERS
LAND SURVEYORS
NAVAL ARCHITECTS
MARINE ENGINEERS
P.O. BOX. 687
CUT OFF, LOUISIANA 70345
(985) 632-5786

J.N. 0822-1601

REV3: 06-15-2018
DATE: 03-16-2017



LEEVILLE & BELLE PASS QUAD. MAPS

LOCAL VICINITY MAP

5000 0 5000

SCALE: 1" = 500'

PROPOSED: PORT FOURCHON MITIGATION BANK
APPLIED BY: GREATER LAFOURCHE PORT COMMISSION
AREA: PORT FOURCHON, LAFOURCHE PARISH, LOUISIANA
PROPERTY IS LOCATED IN SECTIONS 22 & 23, T-22-S, R-22-E

LATITUDE = 29.1650446°
LONGITUDE = -90.2078125°
(LAT. & LON. IS LOCATED AT THE SOUTHWESTERN CORNER OF THE MITIGATION BANK)

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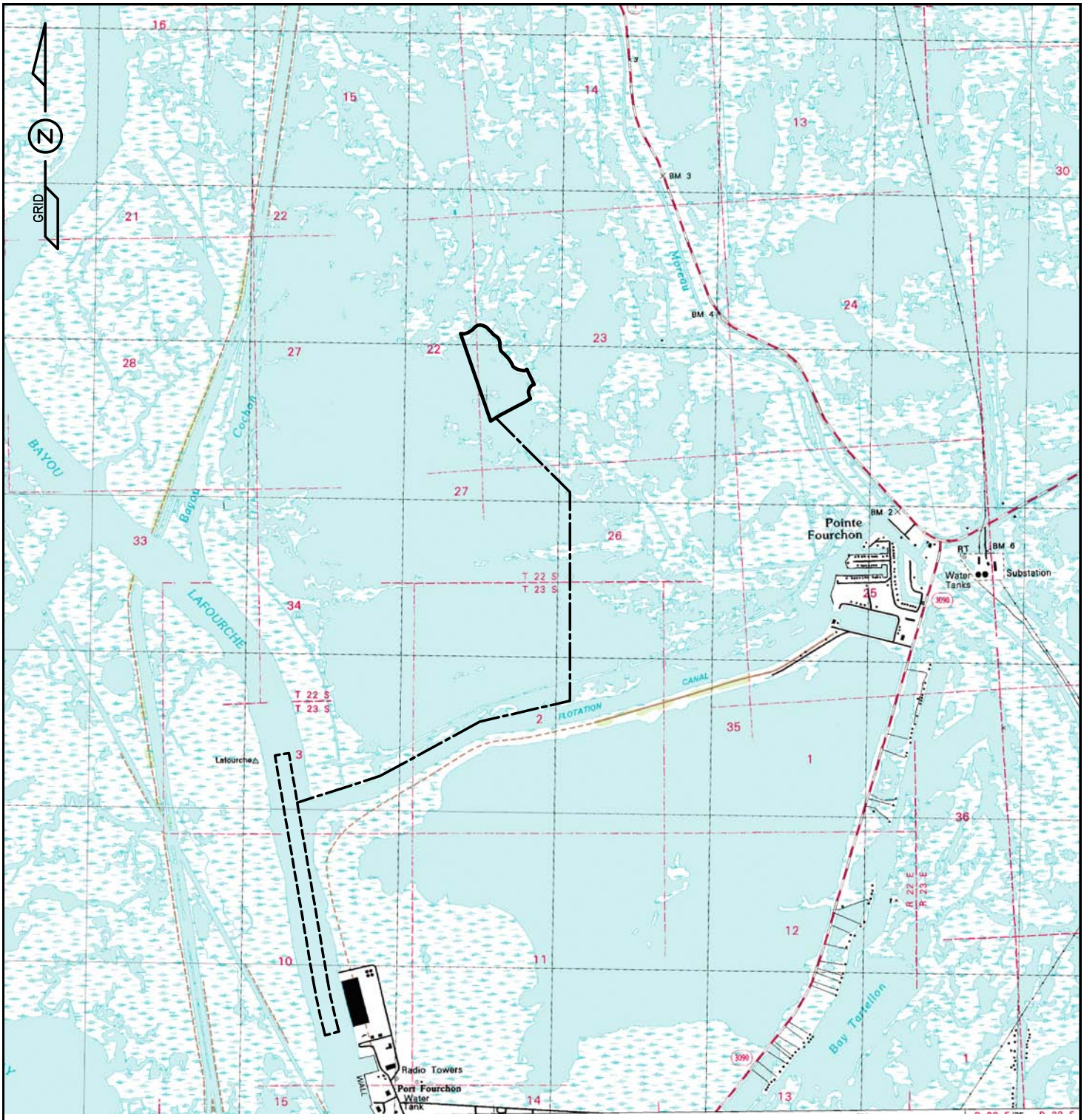

PROJECT BOUNDARY
36.0 AC. +/-

DREDGE AREA-41.32 AC.
PREVIOUSLY PERMITTED
C.U.P. P20140043
C.O.E. MVN-2014-0043-WJJ

DISCHARGE PIPE
±12,800'

3000 0 3000 6000 9000

SCALE: 1" = 3000'

USGS 7.5' QUADRANGLE MAP

LEEVILLE, LA 1998

PORT FOURCHON MITIGATION BANK
PORT FOURCHON, LAFOURCHE PARISH, LOUISIANA

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J.N. 0822-1601 DATE: 03-16-2017 SHEET 3 OF 16

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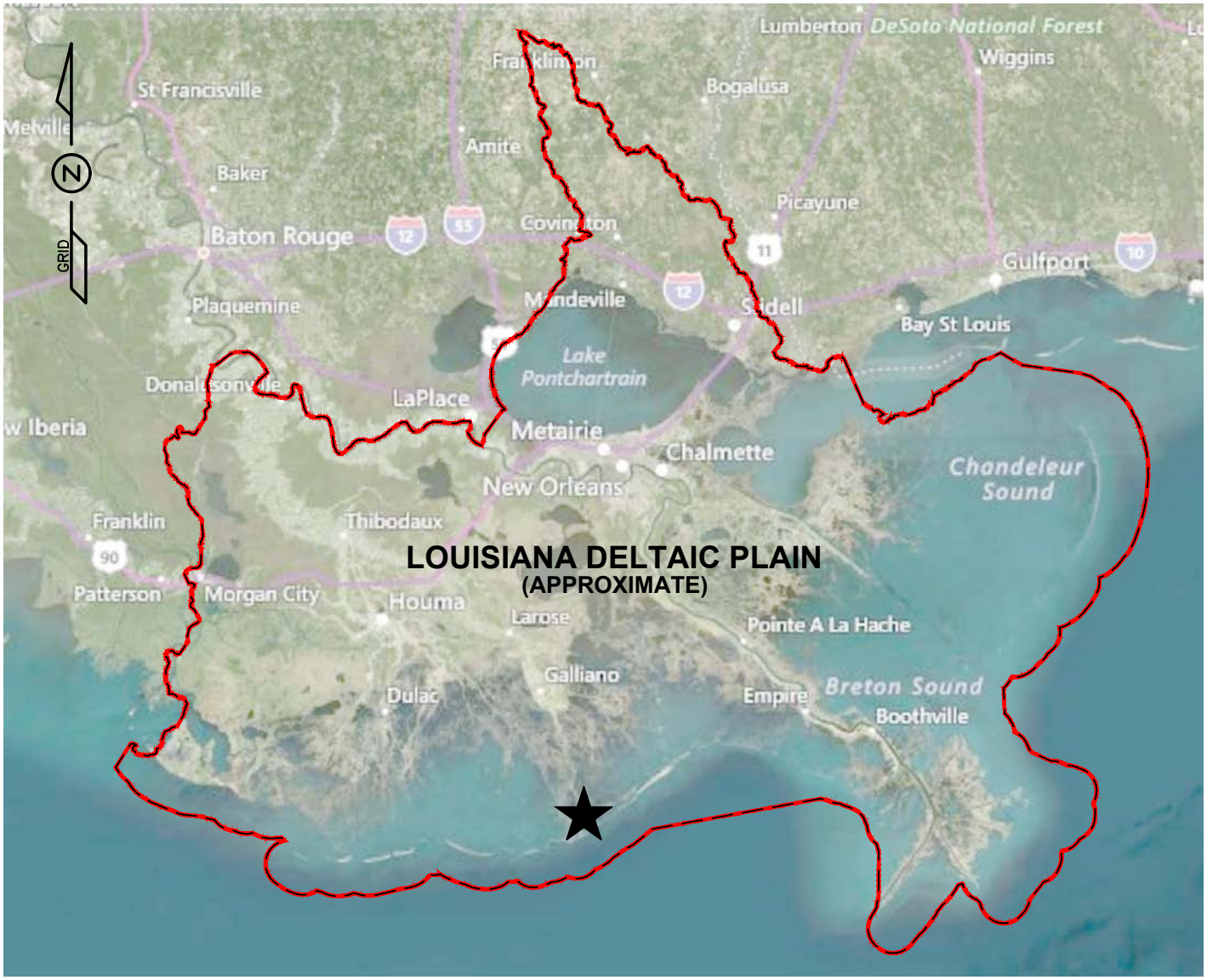

25 0 25 50 75

SCALE: 1" = 25 MILES

BASIN MAP

★ MITIGATION BANK LOCATION

PLAIN/HUC BOUNDARIES

PORT FOURCHON MITIGATION BANK
PORT FOURCHON, LAFOURCHE PARISH, LOUISIANA

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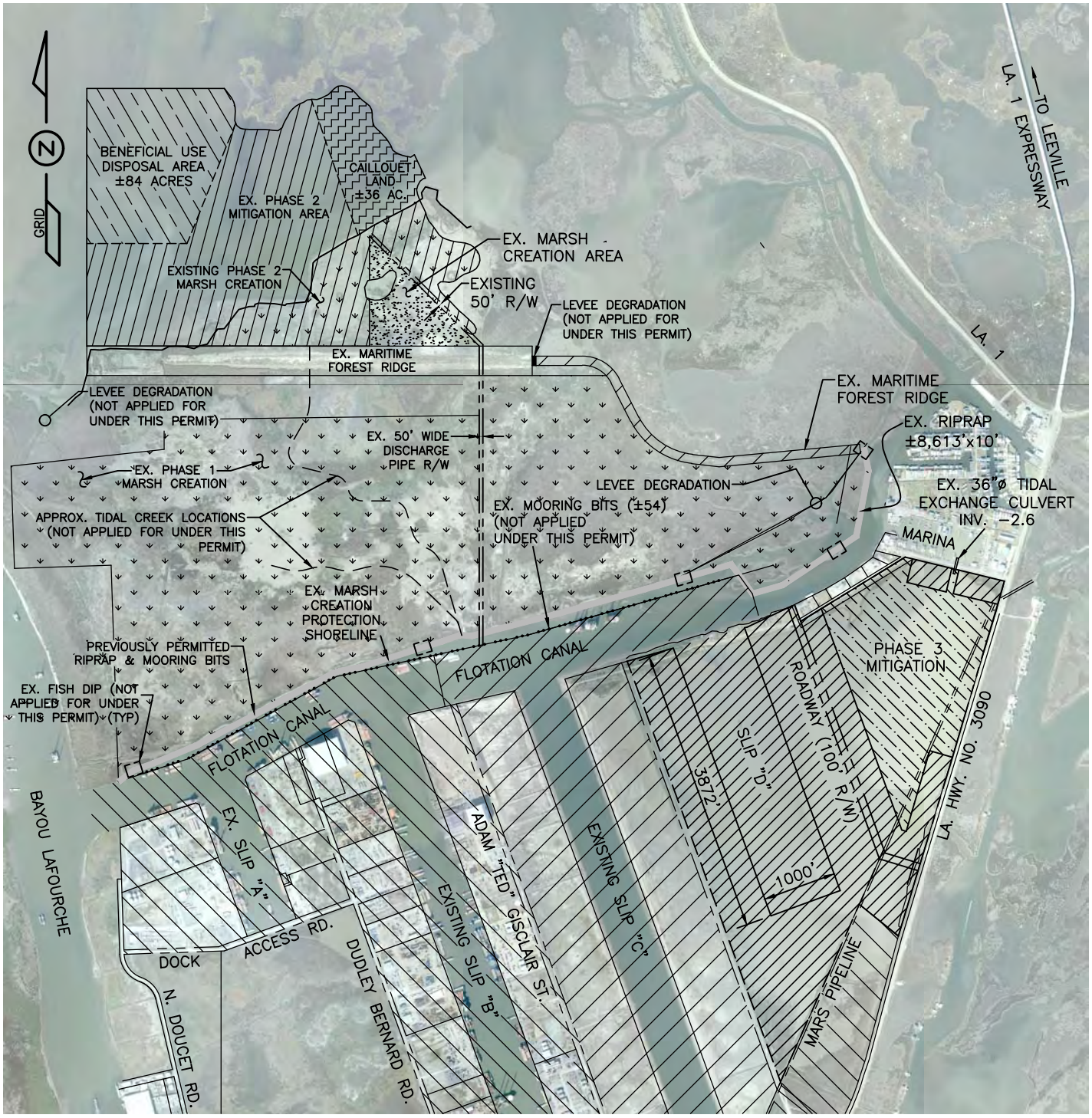

IMAGES: GLPC AERIAL PHOTOGRAPHY, 2014

EXISTING SITE MAP

2000 0 2000

SCALE: 1" = 2000'

LEGEND:

- PHASE 3 DEVELOPMENT AREA – ±321.5 ACRES TOTAL
- PHASE 3 MITIGATION – ±98.1 ACRES TOTAL
- EX. PHASE 1 (CUP P981007 & COE PERMIT EG-19-980-1340)
- EX. PHASE 2 (CUP 20071098 & MVN-2008-00037-WPP)
- EX. PHASE 1 MARSH CREATION (CUP P981007 & COE PERMIT EG-19-980-1340)
- EX. PHASE 2 MARSH CREATION (CUP 20071098 & MVN-2008-00037-WPP)
- EX. 23.28 AC. MARSH CREATION AREA (CUP P080321 & MVN 2008-978-CY)

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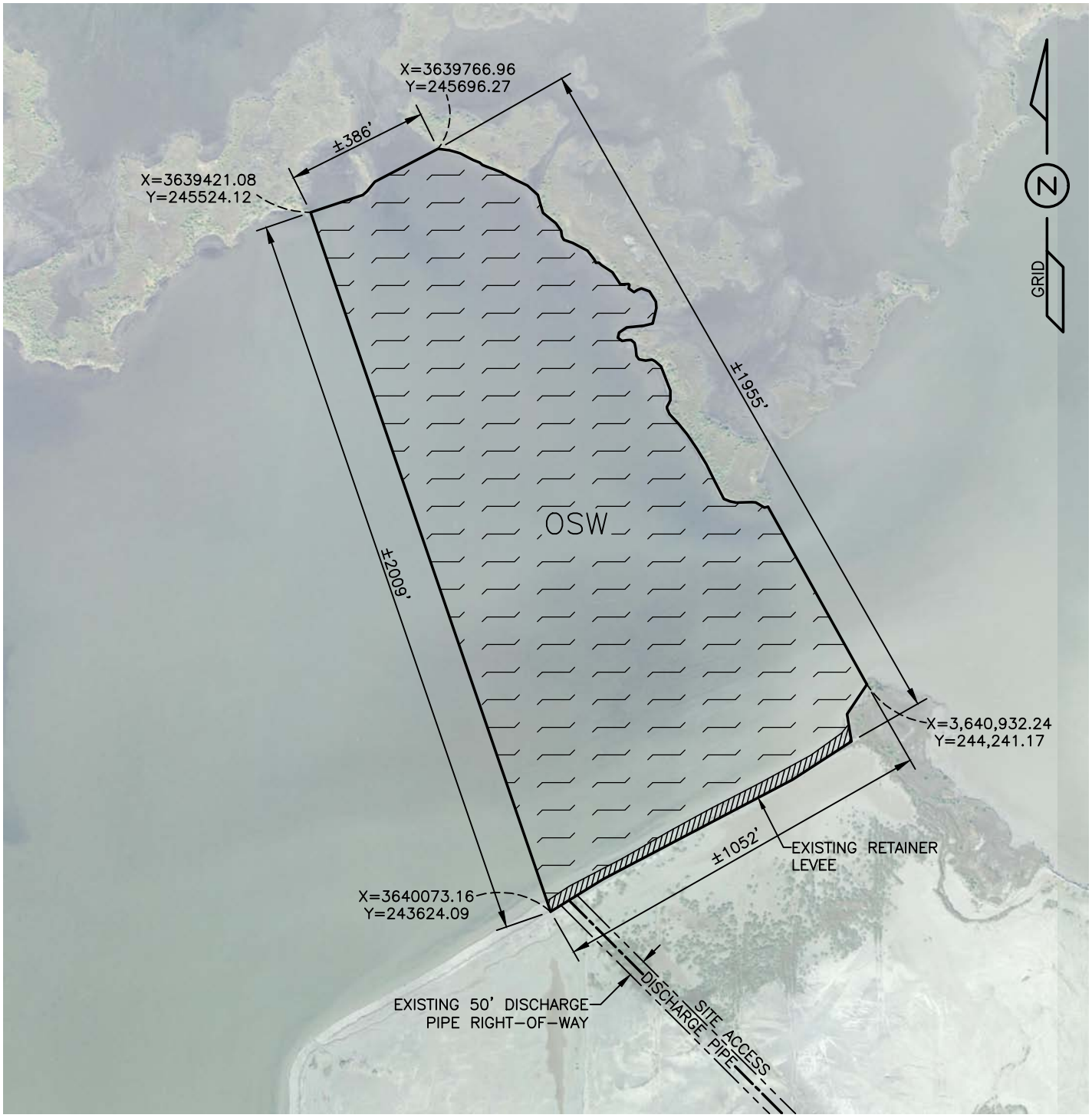

IMAGES: GLPC AERIAL PHOTOGRAPHY, 2014

EXISTING HABITAT MAP

400 0 400

SCALE: 1" = 400'

PROJECT BOUNDARY – 36.0 AC. +/–

OSW OPEN SALT WATER – 36.0 AC. +/–

PORT FOURCHON MITIGATION BANK
PORT FOURCHON, LAFOURCHE PARISH, LOUISIANA

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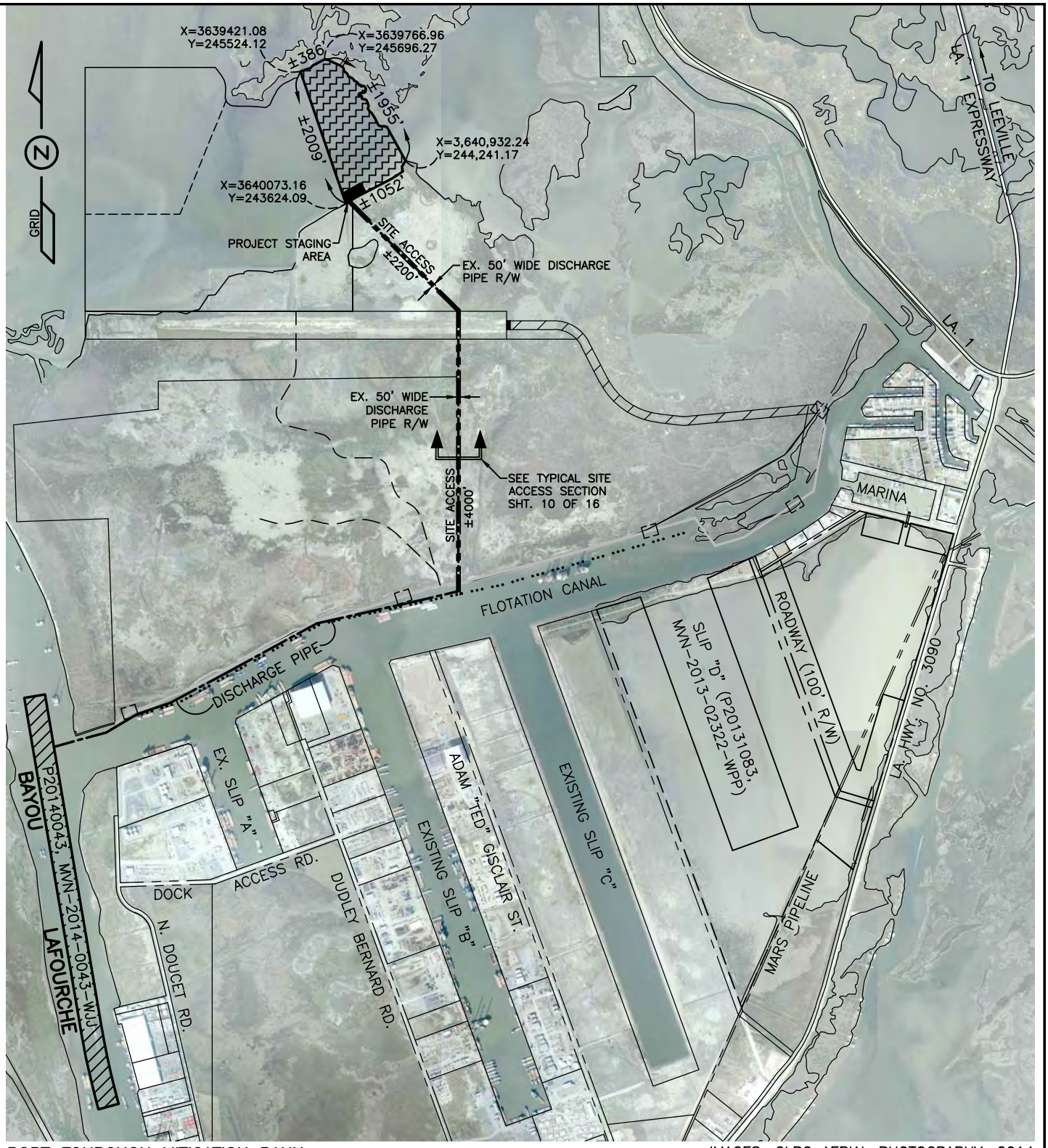

PORT FOURCHON MITIGATION BANK

36.0 AC. +/-, TYPE: RE-ESTABLISH SALINE MARSH (SM)
EXISTING HABITAT: OPEN SALT WATER - 36.0 AC. +/-
PROPOSED HABITAT: VEGETATED SALT MARSH WETLANDS - 36.0 AC. +/-

AVAILABLE SPOIL MATERIAL

DREDGING OF BAYOU LAFOURCHE
(P20140043, MVN-2014-0043-WJJ)
41.32 AC. +/-, 467,613 CY. +/-

IMAGES: GLPC AERIAL PHOTOGRAPHY, 2014

PROPOSED SITE MAP

2000 0 2000

SCALE: 1" = 2000'

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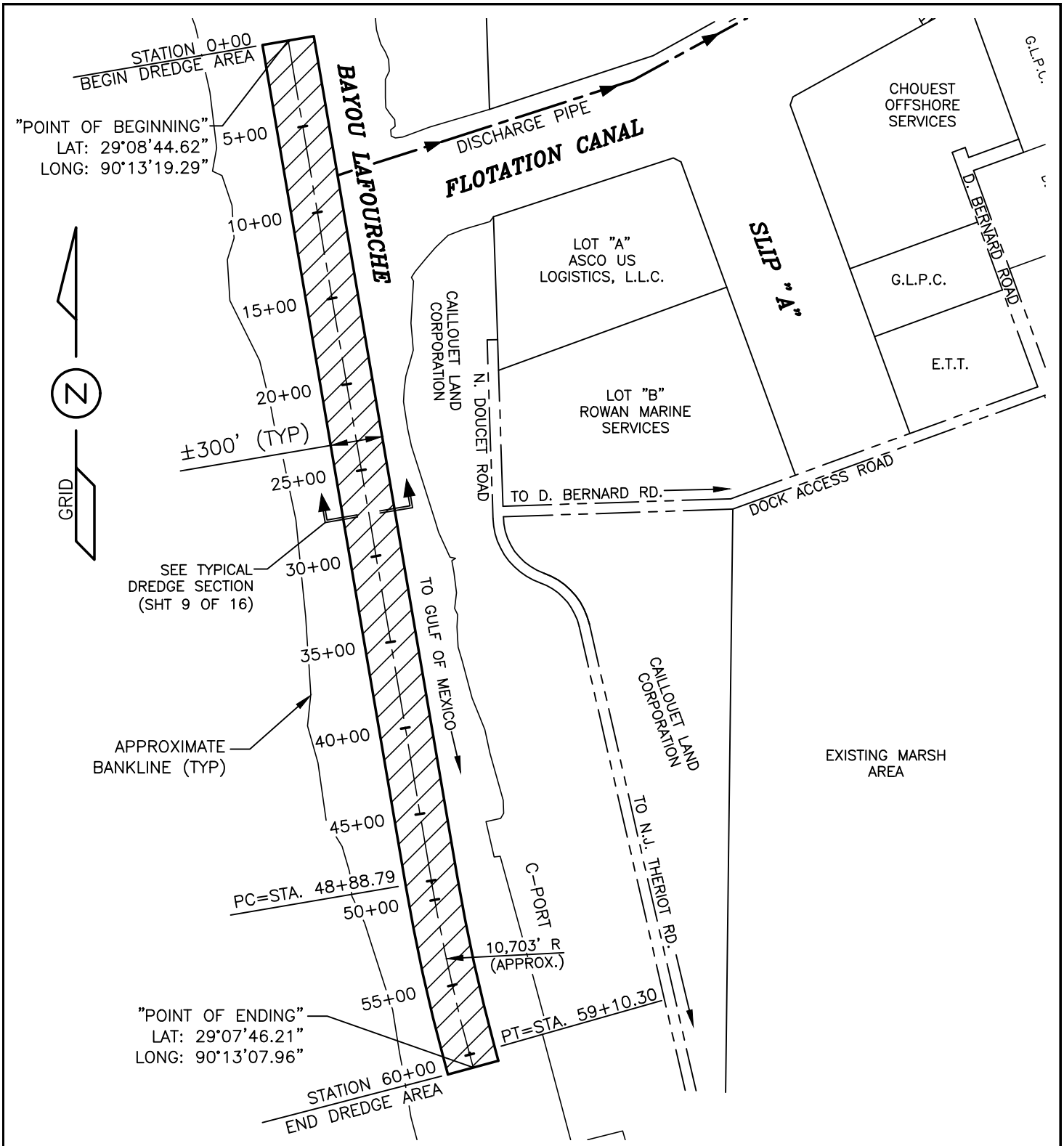
J.N. 0822-1601

REV3: 06-15-2018
DATE: 03-16-2017



BAYOU LAFOURCHE MAINTENANCE DREDGING

C.O.E. MVN–2014–0043–WJJ

C.U.P. P20140043

DREDGE AREA=±6,000'x300' TO –24.0 N.A.V.D.
1,800,000 SQ. FT. OR 41.32 ACRES

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J.N. 0822–1601 DATE: 03–16–2017 SHEET 8 OF 16

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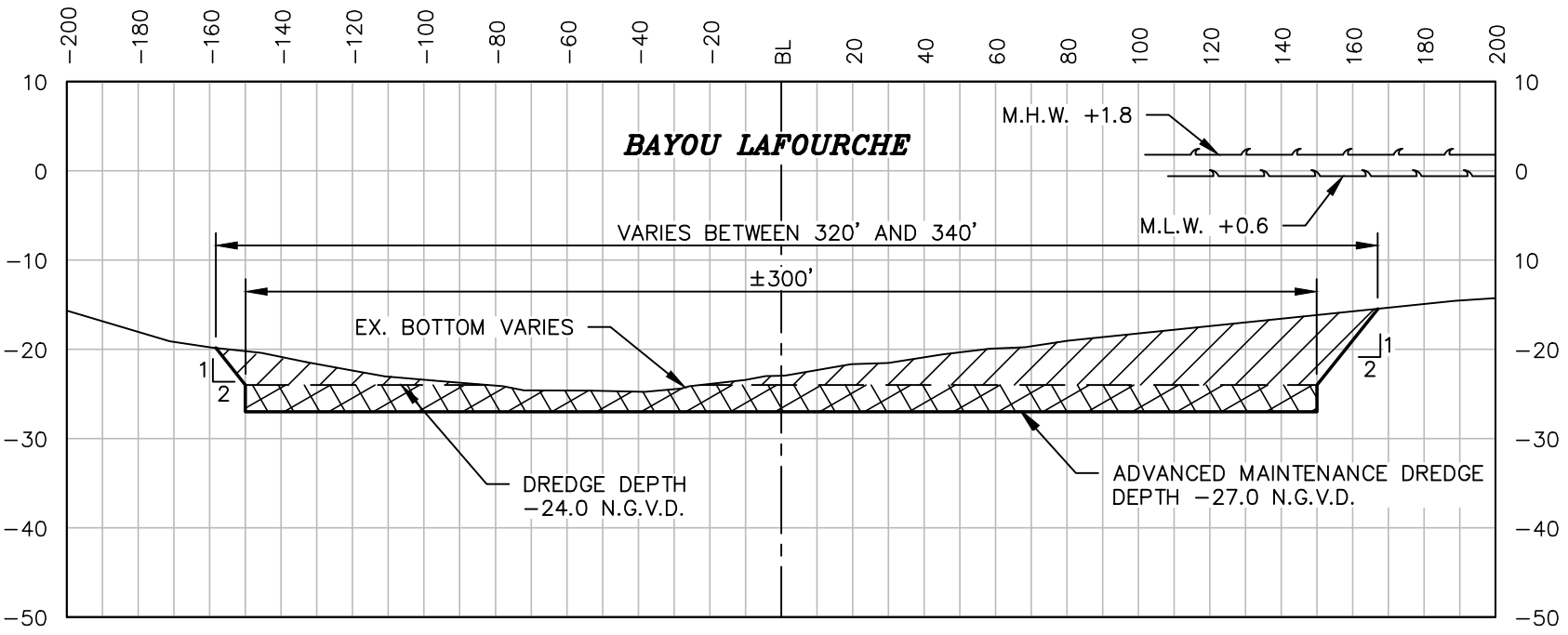

TYPICAL DREDGE SECTION

SCALE: HORZ. 1"=50' VERT. 1"=20'

LEGEND:

DREDGE (EL. −24.0)

3' ADVANCE MAINTENANCE DREDGE (EL. −27.0)

DREDGE AREA

1,800,000 SQ. FT. OR 41.32 ACRES

DREDGE VOLUME

±467,613 CU. YD.

NOTES:

1. BAYOU LAFOURCHE MAINTENANCE DREDGING PREVIOUSLY PERMITTED UNDER C.U.P. P20140043, C.O.E. MVN−2014−0043−WJJ
2. EXISTING BOTTOM ELEVATIONS VARY BETWEEN −16.0' AND −25.0' WITHIN THE DREDGE FOOTPRINT SHOWN ON SHEET 8 OF 16.
3. MATERIAL GENERATED FROM THE DREDGING PROCESS SHALL BE BENEFICIALLY USED AS FILL MATERIAL FOR MARSH CREATION. (SEE SHEET 7 OF 16)
4. TO MAINTAIN CONSISTENCY WITH USACE AUTHORIZATION TERMINOLOGY, THE ADDITIONAL 3' FROM −24' TO −27' IS DENOTED AS "ADVANCED MAINTENANCE."
5. THE MAINTENANCE DREDGING PROCESS WILL CUT THE TYPICAL "EXISTING BOTTOM" TO THE −27.0 N.G.V.D. DEPTH PROFILE SHOWN ABOVE.
6. DREDGE MATERIAL WILL BE HYDRAULICALLY PUMPED TO MARSH CREATION AREA. DREDGING ACTIVITIES UNDER THIS PERMIT WILL INVOLVE DREDGE BARGES DRAFTING ROUGHLY 6FT TO 8FT MANEUVERED BY TUG BOATS DRAFTING ROUGHLY 5FT.

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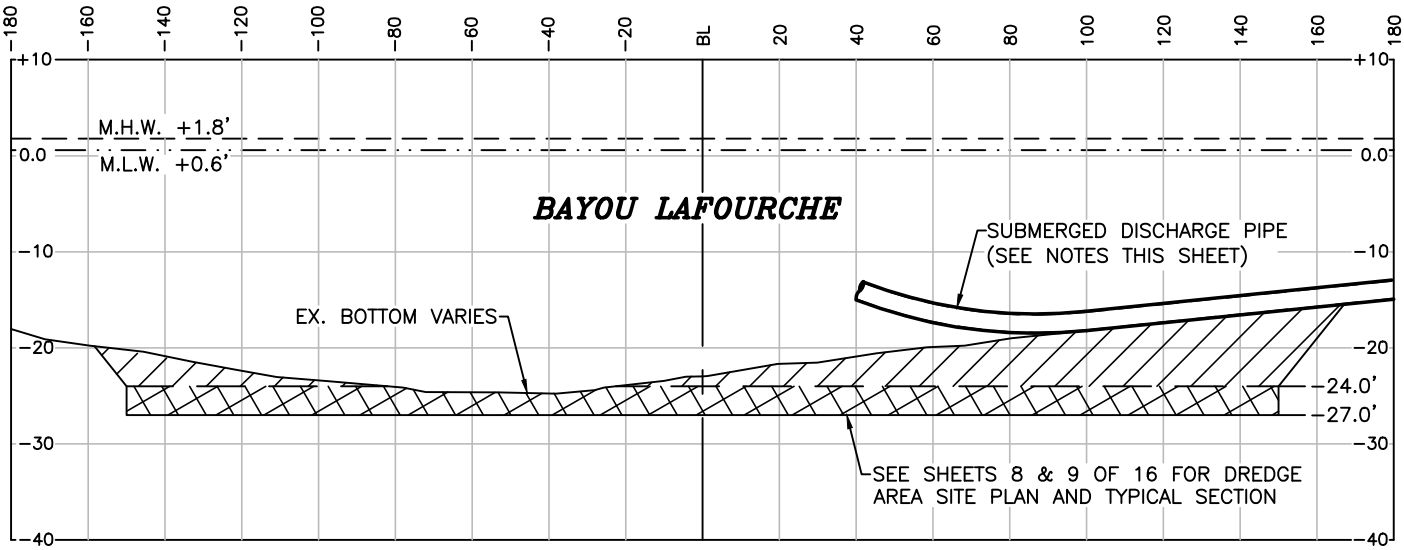
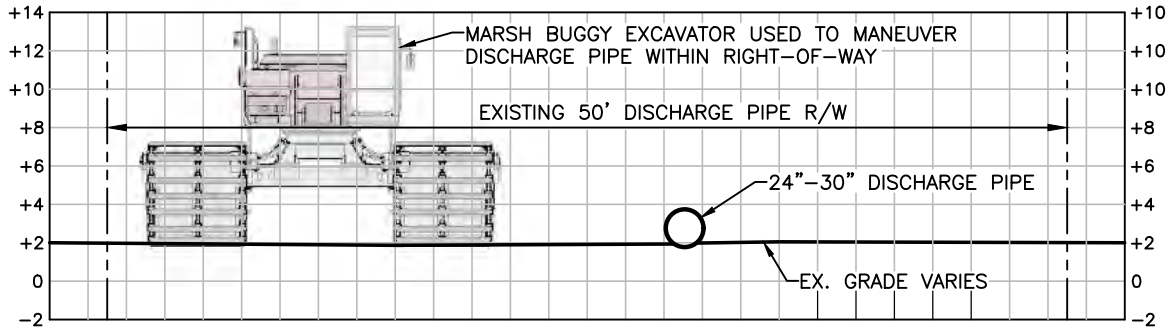


SUBMERGED DISCHARGE PIPE (BAYOU LAFOURCHE)

SCALE: HORZ. 1"=20', VERT. 1"=20'



DISCHARGE PIPE SECTION (LAND) & TYPICAL SITE ACCESS SECTION

SCALE: HORZ. 1"=10', VERT. 1"=10'

NOTES:

1. DISCHARGE PIPE DIAMETER WILL VARY BETWEEN 24" AND 30" DEPENDING ON DREDGE CONTRACTOR.
2. DISCHARGE PIPE WILL BE FLOATED EXCEPT IN BAYOU LAFOURCHE OR OTHER AREAS SUBJECT TO VESSEL TRAFFIC. THE DISCHARGE PIPE WILL BE SUNK TO THE CANAL BOTTOM TO ALLOW FOR VESSEL TRAFFIC TO CROSS.
3. DISCHARGE PIPE WILL BE ROUTED WITHIN THE EXISTING 50' DISCHARGE PIPE RIGHT-OF-WAY TO THE MARSH CREATION AREA. NO PIPE WILL BE ALLOWED TO BE PLACED ON LANDS OUTSIDE THE LIMITS OF THE EXITING RIGHT-OF-WAY.
4. ANY EQUIPMENT (MARSH BUGGIES, ETC.) USED FOR THE HANDLING AND PLACEMENT OF THE DISCHARGE PIPE WILL REMAIN WITHIN THE EXISTING 50' RIGHT-OF-WAY.
5. ONCE SPOIL PLACEMENT IS COMPLETE, THE 50' DISCHARGE PIPE RIGHT-OF-WAY WILL BE RETURNED TO PRE-EXISTING NATURAL GROUND ELEVATIONS.

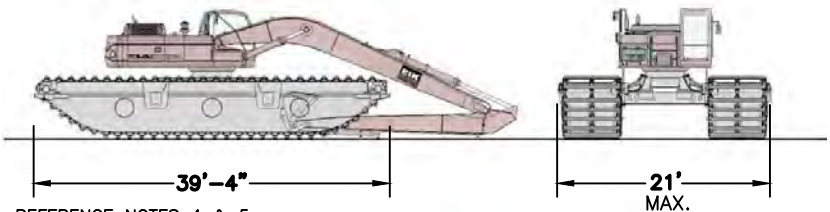
SUBMERGED PIPE NOTES:

1. WHERE DISCHARGE PIPE CROSSES A NAVIGATION CHANNEL OR OTHER AREA SUBJECT TO BOAT TRAFFIC, SUBMERGED PIPE MUST REST ON THE CHANNEL BOTTOM. THE TOP OF THE PIPE AND ANY ANCHOR SECURING THE PIPE MUST BE NO HIGHER THAN THE MAXIMUM DRAFT OF TRAFFIC EXPECTED IN THE AREA WHERE THE PIPE IS PLACED.
2. THE DREDGE OPERATOR MUST ENSURE THE PIPE REMAINS FULLY SUBMERGED AND ON THE BOTTOM.
3. MARK THE ENTIRE LOCATION OF THE SUBMERGED PIPE WITH SIGNS, BUOYS, LIGHTS, OR FLAGS AS REQUIRED BY USCG AND AS APPROVED BY THE AUTHORITY HAVING JURISDICTION.
4. CONDUCT ROUTINE INSPECTION OF THE SUBMERGED PIPE TO ENSURE ANCHORAGE.
5. REMOVE ALL ANCHORS AND RELATED MATERIALS WHEN REMOVING THE SUBMERGED PIPE.

DISCHARGE PIPE:

LAND ROUTE – ±6200 FT
FLOATING – ±5000 FT
SUBMERGED – ±6,500 FT

(SUBMERGED DISCHARGE PIPE LENGTH WILL VARY BASED ON DREDGE LOCATION DURING DREDGING PROCESSES.)



TYPICAL MARSH BUGGY
NOT TO SCALE

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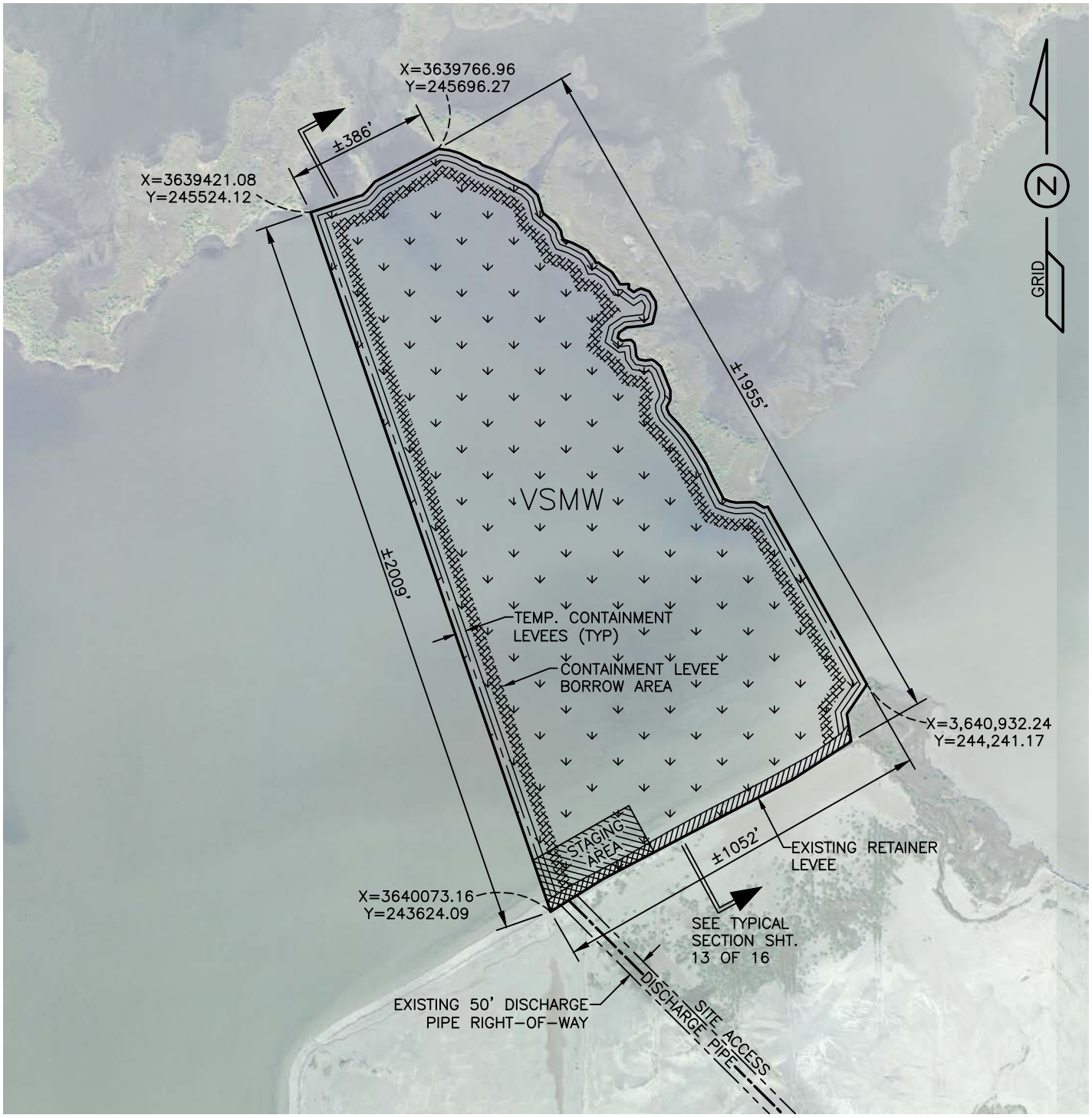

IMAGES: GLPC AERIAL PHOTOGRAPHY, 2014

PROPOSED HABITAT MAP

400 0 400

SCALE: 1" = 400'

PROJECT BOUNDARY – 36.0 AC. +/–

VSMW VEGETATED SALT MARSH WETLANDS – 36.0 AC. +/–

PORT FOURCHON MITIGATION BANK
PORT FOURCHON, LAFOURCHE PARISH, LOUISIANA

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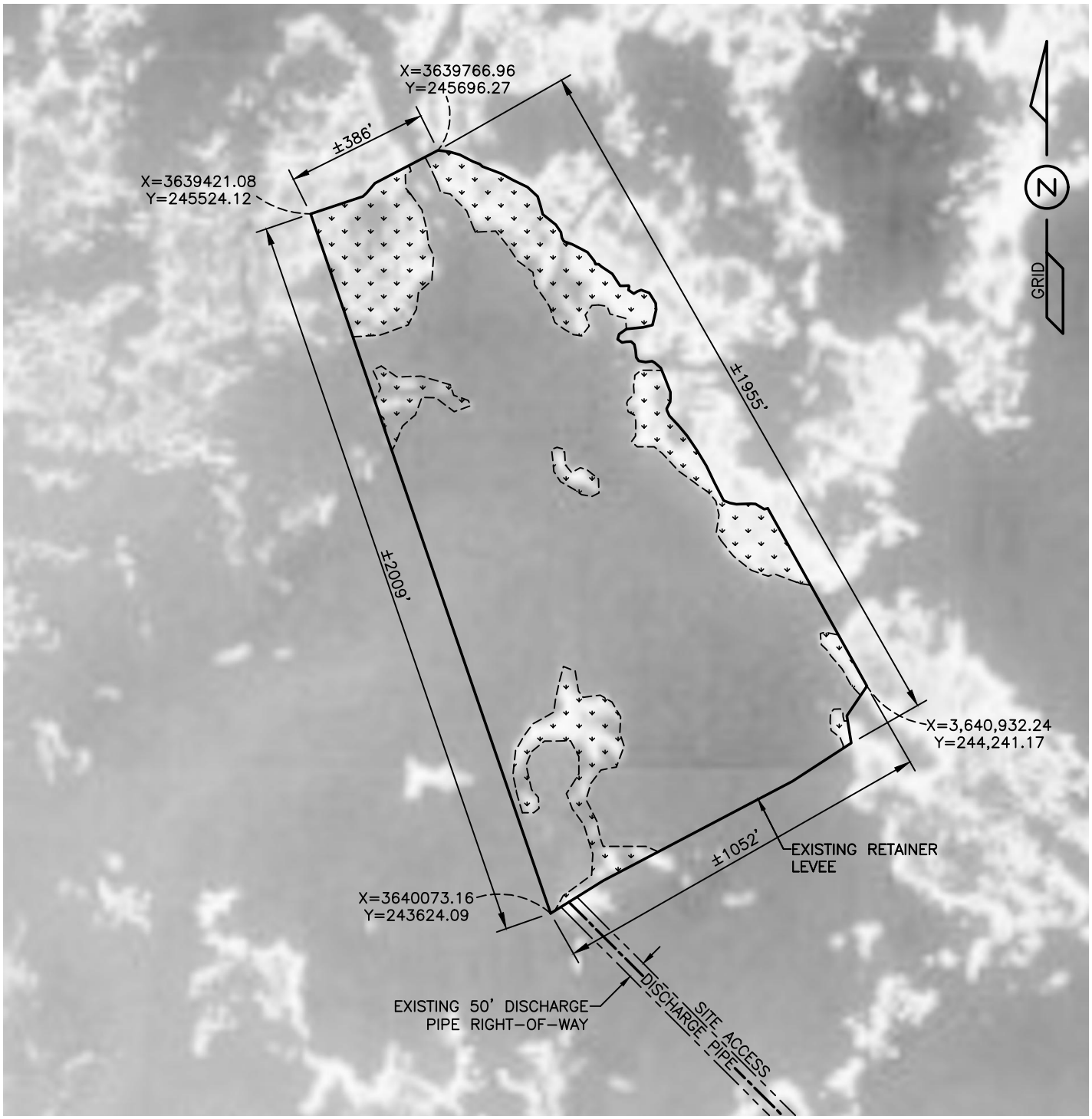

IMAGE: 1989

HISTORICAL CONDITIONS MAP

400 0 400

SCALE: 1" = 400'

PROJECT BOUNDARY – 36.0 AC. +/–

VEGETATED SALT MARSH WETLANDS – 8.54 AC. +/–

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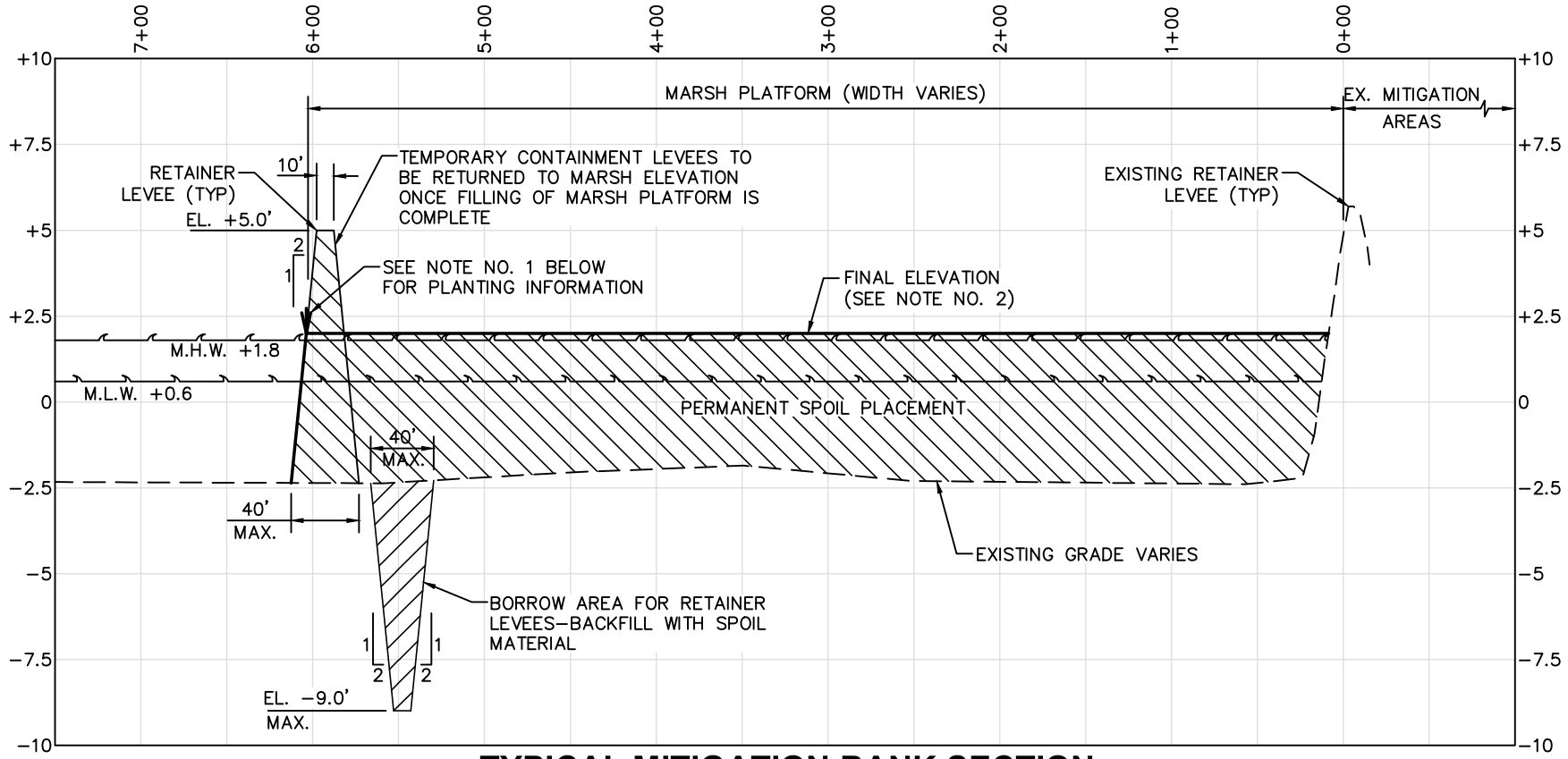

TYPICAL MITIGATION BANK SECTION

SCALE: HORZ. 1"=100' VERT. 1"=5'

NOTES:

1. NO INITIAL PLANTING OF THE MITIGATION BANK SITE IS BEING PROPOSED. SHOULD NATURAL VEGETATIVE COVERAGE OF THE MITIGATION BANK SITE BE LESS THAN 80% THROUGH THE THIRD GROWING SEASON FOLLOWING THE COMPLETION OF FILLING OPERATIONS, THE GREATER LAFOURCHE PORT COMMISSION WILL IMPLEMENT THOSE MEASURES PROVEN TO BE EFFECTIVE ON NEARBY MITIGATION SITES – PLUGS OF SPARTINA ALTERNIFLORA CV. VERMILLION (CULTIVATED VARIETY OF SMOOTH CORDGRASS RELEASED BY NATURAL RESOURCES CONSERVATION SERVICE (NRCS) IN LOUISIANA) WILL BE PLANTED ON 20 FOOT CENTERS WITHIN THE NON–VEGITATED AREAS.
2. IN AN EFFORT TO OBTAIN OPTIMUM ELEVATIONS IN THE MARSH PLATFORM AREA THE FINAL FILL ELEVATIONS FOLLOWING COMPACTION AND CONSOLIDATION SHALL RANGE BETWEEN +1.5 FEET TO +2.0 FEET NGVD WITH NO FINAL ELEVATIONS TO EXCEED +2.5 FEET NGVD. NO MORE THAT 15% OF THE FINAL FILL AREA SHALL EXCEED +2.0 FEET NGVD. IF 15% OR MORE OF THE FINAL FILL AREA EXCEEDS +2.0 FEET NGVD THE PERMITTEE SHALL TAKE WHATEVER STEPS NECESSARY TO COMPLY WITH THE 15% RESTRICTION CRITERIA.
3. TO ASSURE THE PLACEMENT OF SPOIL MATERIAL TO PROPER ELEVATIONS, SURVEY STAKES MARKED WITH THE TARGET ELEVATIONS (+2.0 TO +2.5 FEET NGVD) SHALL BE PLACED ON A 200–FOOT GRID THROUGHOUT THE MITIGATION DISPOSAL AREAS.
4. A FULL TIME INSPECTOR WILL BE ON SITE TO ASSURE THE TARGET ELEVATION IS MET AND NOT EXCEEDED. BASED ON AS–BUILT SURVEYS ADDITIONAL WORK MAY BE REQUIRED, AT THE PERMITTEE'S EXPENSE, TO OBTAIN APPROPRIATE ELEVATIONS WITHIN THE MITIGATION AREA.
5. CONTAINMENT WILL BE CONSTRUCTED USING A MARSH BUGGY EXCAVATOR DRAFTING ±4FT. MARSH BUGGY EXCAVATOR WILL ACCESS THE MARSH CREATION AREA BY FLOATING IN THROUGH OPEN WATER AND WILL NOT TRACK ON EXISTING MARSH.
6. ONCE ACCEPTABLE MARSH ELEVATIONS ARE ACHIEVED WITHIN THE MITIGATION BANK THE TEMPORARY CONTAINMENT LEVEES WILL BE DEGRADED TO SAID MARSH ELEVATIONS. THE LEVEES WILL BE DEGRADED AND THE MATERIAL WILL BE DISPERSED INTO THE MITIGATION BANK. NO LEVEE MATERIAL WILL BE PLACED IN OPEN WATER OR IN EXISTING MARSH AREAS NOT CREATED UNDER THIS PERMIT.

MITIGATION BANK:

±36 ACRES

APPROXIMATE FILL VOLUME:

±260,050 CU. YD. (NET SECTION)

J.N. 0822–1601

REV2: 04–28–2017
DATE: 03–16–2017

SHEET 13 OF 16

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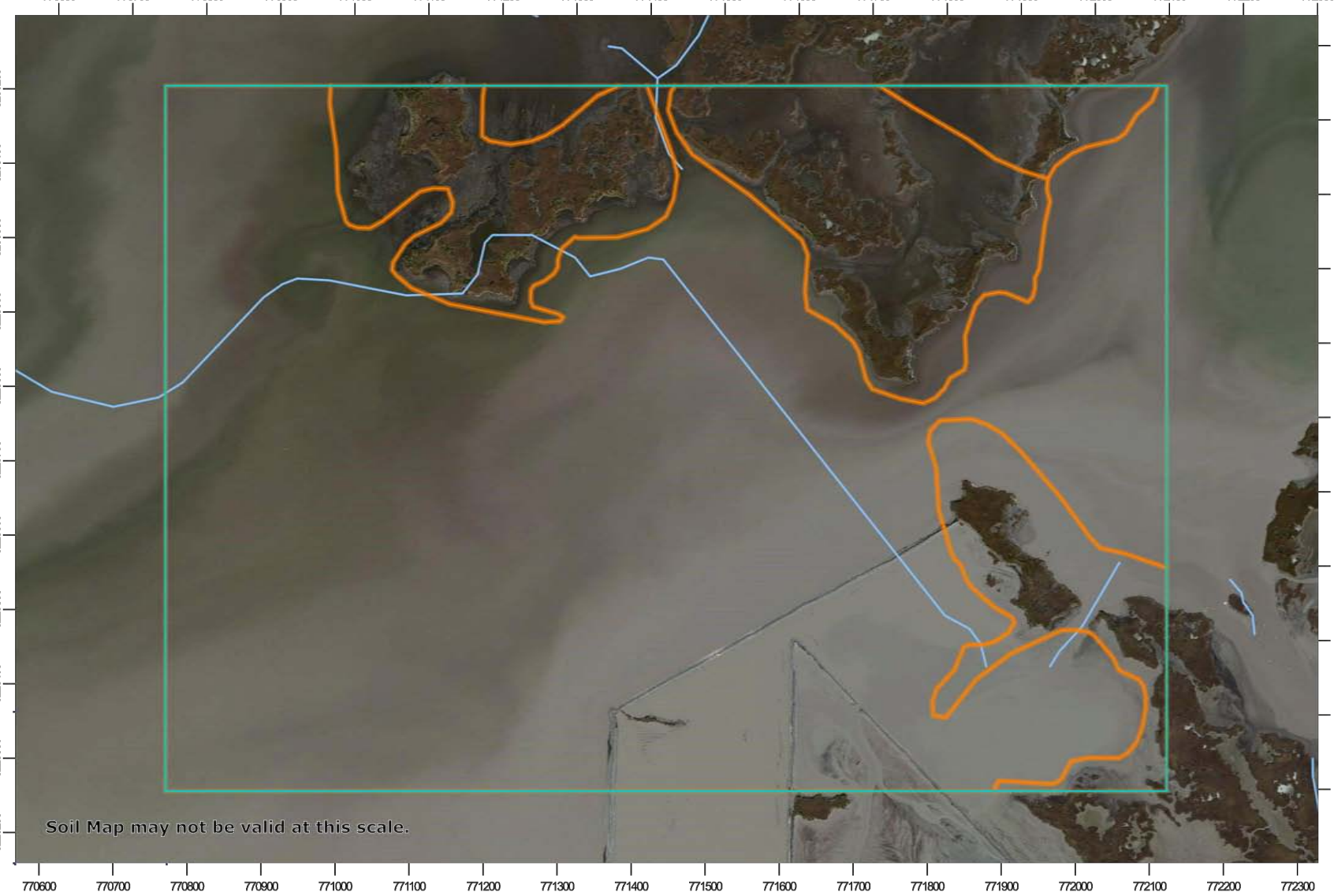
SHEET **14** OF **16**

Soil Map—Lafourche Parish, Louisiana
(Port Fourchon Mitigation Bank)



Map Scale: 1:8,050 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 350 700 1400 2100

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

SEE SHEETS 15 AND 16 FOR MAP AND MAP UNIT LEGENDS.

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J.N. 0822-1601 DATE: 03-16-2017

Soil Map—Lafourche Parish, Louisiana
(Port Fourchon Mitigation Bank)

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Lafourche Parish, Louisiana
Survey Area Data: Version 11, Sep 28, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 29, 2010—Jan 3, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

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Map Unit Legend

Lafourche Parish, Louisiana (LA057)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
BE	Bellpass-Scatlake association	72.1	22.7%
SA	Scatlake muck, 0 to 0.2 percent slopes, tidal	6.5	2.0%
W	Water	239.4	75.3%
Totals for Area of Interest		**318.0**	**100.0%**

J.N. 0822-1601 DATE: 03-16-2017 SHEET **16** OF **16**