



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS DISTRICT
7400 LEAKE AVE
NEW ORLEANS, LA 70118-3651

July 17, 2023

Regulatory Division
Western Evaluation Branch

Project Manager:
Johnny Duplantis
(504) 862-2548
johnny.j.duplantis@usace.army.mil

Application #: MVN-2022-00728-WPP

PUBLIC NOTICE

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), and/or [X] Section 14 of the Rivers and Harbors Act of 1899 (33 U.S.C. Section 408).

FLOOD PROTECTION LEVEE CONSTRUCTION IN TERREBONNE PARISH

NAME OF APPLICANT: Terrebonne Levee & Conservation District, c/o: GIS Engineering, LLC, 2503 Petroleum Drive, Suite 110, Houma, Louisiana 70363.

LOCATION OF WORK: Located in Terrebonne Parish, along La. Highway 182, Bayou Black and Geraldine Road, near the communities of Houma and Gibson, Louisiana, (lat. 29.590575, long. -90.8309972), as shown within the enclosed drawings. (Hydrologic Unit Code 8090301, Barataria Watershed).

The work described below was partially completed prior to obtaining a Department of the Army permit and was in violation of Section 301 of the Clean Water Act. All legal issues concerning the unauthorized work have since been deferred.

CHARACTER OF WORK: This proposal is for Department of The Army authorization to construct four flood protection levees referred to as the Bayou Black Barrier Levee project (BBBL), Reaches 1, 2, 3, and 4, all as part of the Morganza to Gulf Flood Protection System. The project was originally placed on 20-day public notice (PN) on October 11, 2021. Due to updates on the overall BBBL proposal, combination of multiple levees and applications into a single application, and the length of time since the original posting, a secondary PN is being issued. The project stretches from LA 182 in Gibson heading southeasterly towards the Minors Canal outfall ending at the

Gulf Intracoastal Waterway (GIWW). The project includes construction of an approximate 19 mile long levee system with a proposed barge gate and gate section along the GIWW, and is intended to help prevent flooding of human habitable areas, commercial properties, agricultural areas, and to maintain and regulate drainage channels within the protected area. Fill operations includes the deposition of approximately 772,698 cy of material, and excavation of approximately 7,940 cy of on-site material. The levees will be constructed to Elevation of +7.0 and will have a 3H:1V side slope. The project includes a total of 60.68 acres of direct impacts to jurisdictional Bottomland Hardwoods wetlands and 47.63 acres of direct impacts to jurisdictional Cypress Tupelo wetlands. All 4 levee reaches are described further in detail in the enclosed drawings. If a Department of the Army permit is found to be in the public interest, the applicant has proposed to mitigate unavoidable wetlands impacts at an approved and acceptable mitigation bank or banks within the N.O. District.

The applicant may be required to fully or partially restore the site to pre-project conditions if issuance of a permit is determined to be contrary to the public interest.

The comment period on the requested Department of the Army Permit will close **20 days** from the date of this 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 request, and must be submitted so as to be received before or by the last day of the comment period. Letters and/or comments concerning the subject permit application must reference the Applicant's Name and the Permit Application Number and can be preferably emailed to the Corps of Engineer's project manager listed above or forwarded to the Corps of Engineers at the address above, **ATTENTION: REGULATORY DIVISION, RGW, Johnny Duplantis.** Individuals or parties may also request an extension of time in which to comment on the proposed work by mail or preferably by emailing the specified project manager listed above. Any request for an extension of time to comment 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 Branch Chief will review the request and the requester will be promptly notified of the decision to grant or deny the request. If granted, the time extension will be continuous and inclusive of the initial comment period and will not exceed a total of 30 calendar days. This public notice is also available for review online at <https://go.usa.gov/xennJ>

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.

This request will also be reviewed pursuant to Section 408 and USACE Engineering Circular (EC) 1165-2-220, which provides policy and procedural guidance for processing requests to alter USACE civil works projects. The decision whether to grant permission for the requested alteration will be based on several factors. The benefits that reasonably may be expected to accrue from the proposal will be balanced against its reasonably foreseeable detriments. Review of the requests for modification will be reviewed by a USACE technical review team considering the following factors:

1) Potential to Impair the Usefulness of the Project. Proposed alterations will be reviewed to determine whether the alteration would limit the ability of the USACE project to function as authorized, or would compromise or change any authorized project conditions, purposes, or outputs. If USACE determines that the usefulness of the authorized project would be impaired, the request will be denied.

2) Potential to be Injurious to the Public Interest. Proposed alterations will be reviewed to determine the probable impacts, including cumulative impacts, on the public interest. Factors that may be relevant to the public interest depend upon the type of USACE project being altered and may include, but are not limited to, such things as conservation, economic development, historic properties, cultural resources, environmental impacts, water supply, water quality, flood hazards, floodplains, residual risk, induced damages, navigation, shore erosion or accretion, and recreation. This evaluation will consider information received from the interested parties, including tribes, agencies, and the public. The decision whether to approve an alteration will be determined by the consideration of whether benefits are commensurate with risks. If the potential detriments are found to outweigh the potential benefits, then it may be determined that the proposed alteration is injurious to the public interest.

The Section 408 review will consider the potential impact to the usefulness of the Federal project and whether the proposed alteration would be injurious to the public interest. Policy and legal compliance will also be considered.

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 presently unaware of properties listed on the National Register of Historic Places at or near the proposed work but is pending further review in accordance with the National Historic Preservation Act. The possibility exists that the proposed work may damage or destroy presently unknown archeological, scientific, prehistorical, historical sites, or data. As deemed necessary, copies of this public notice will be sent to the State Archeologist, State Historic Preservation Officer, and federally listed tribes regarding potential impacts to cultural resources.

Based on the Information Planning and Consultation (IPaC) tool for Endangered Species in Louisiana, as signed on January 27, 2020, between the U.S. Army Corps of Engineers, New Orleans and the U.S. Fish and Wildlife Service, it has been determined that the project is located in habitat known to be utilized by the Western Manatee (*Trichechus manatus*) and the Eastern Black Rail (*Laterallus jamaicensis* ssp. *jamaicensis*), and determined that the activity is not likely to adversely affect these species. If the DA permit is approved, the permittee will be required to follow the IPaC mitigative conditions for the Western Manatee (*Trichechus manatus*) and the Eastern Black Rail (*Laterallus jamaicensis* ssp. *jamaicensis*).

Our initial finding is that the proposed work would have no effect on any species listed as endangered by the U.S. Department of Commerce, nor affect any habitat designated as critical to the survival and recovery of any such species.

This notice initiates the Essential Fish Habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. The applicant's proposal may result in the destruction, alteration, and/or disturbance of **47.63 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 Louisiana Department of Environmental Quality before a Department of the Army permit could be issued.*

Any person may request 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, and can be preferably emailed to the USACE project manager listed above or mailed to the address listed above.

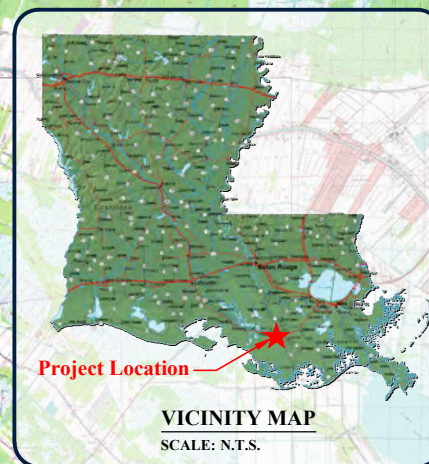
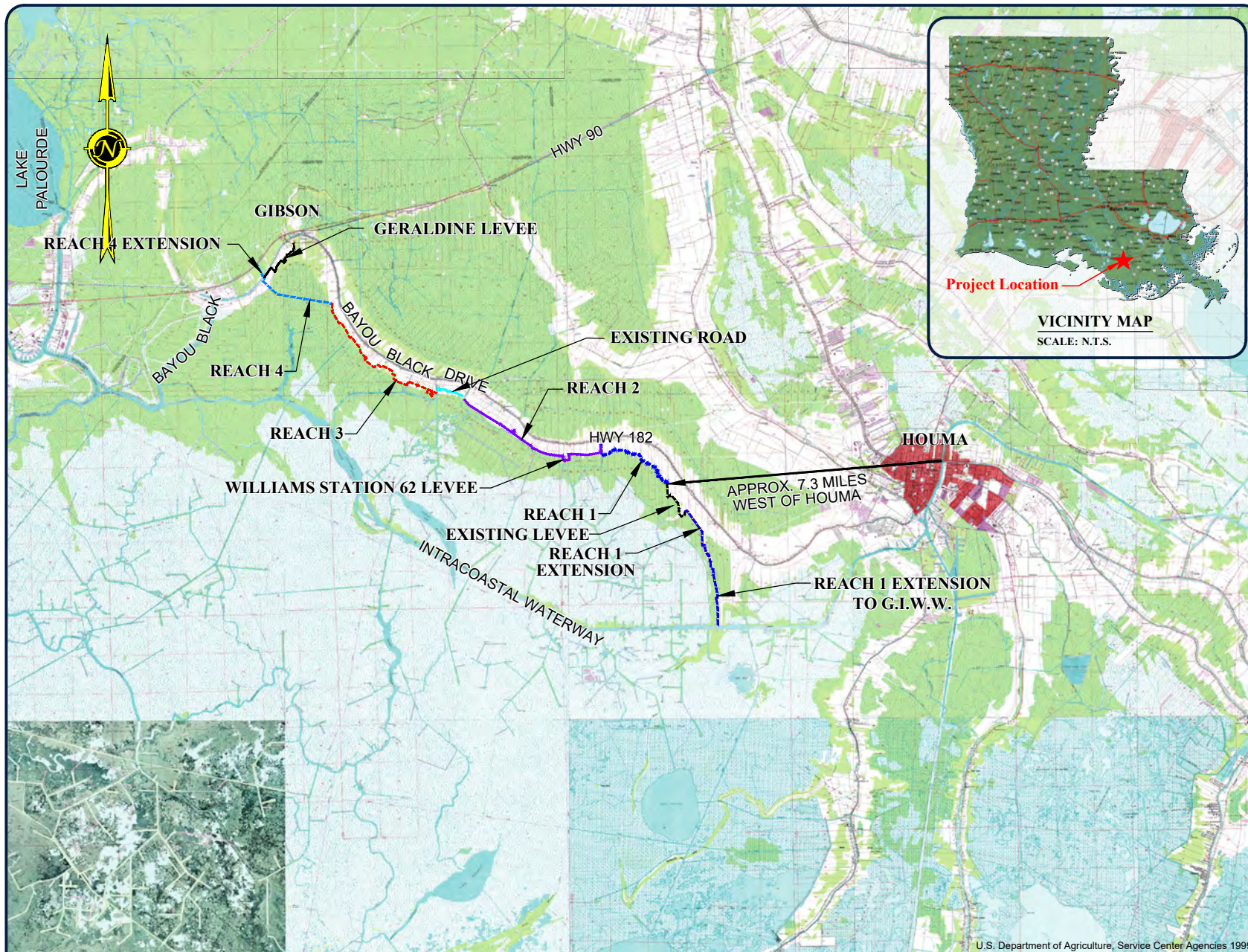
The applicant has certified that the proposed activity described in the application complies with and will be conducted in a manner that is consistent with the Louisiana

Department of Natural Resource's Coastal Resources Program (Application # P20220353). The Department of the Army permit will not be issued unless the applicant receives approval or a waiver of the Coastal Use Permit by the Louisiana Department of Natural Resources.

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

Darrell S. Barbara
Chief, Western Evaluation Branch
Regulatory Division

Enclosures



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

ENGINEER'S NAME
LA. LICENSE NO. 00000

**TERREBONNE LEVEE
CONSOLIDATION DISTRICT**

**BAYOU BLACK
BARRIER LEVEE SYSTEM**

VICINITY MAP

Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	March 27, 2023

01

NOTE: THE IMAGE ABOVE IS A GENERAL REPRESENTATION OF THE WORK AREA, ACTUAL FIELD CONDITIONS MAY DIFFER.





ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

ENGINEER'S NAME
LA. LICENSE NO. 00000

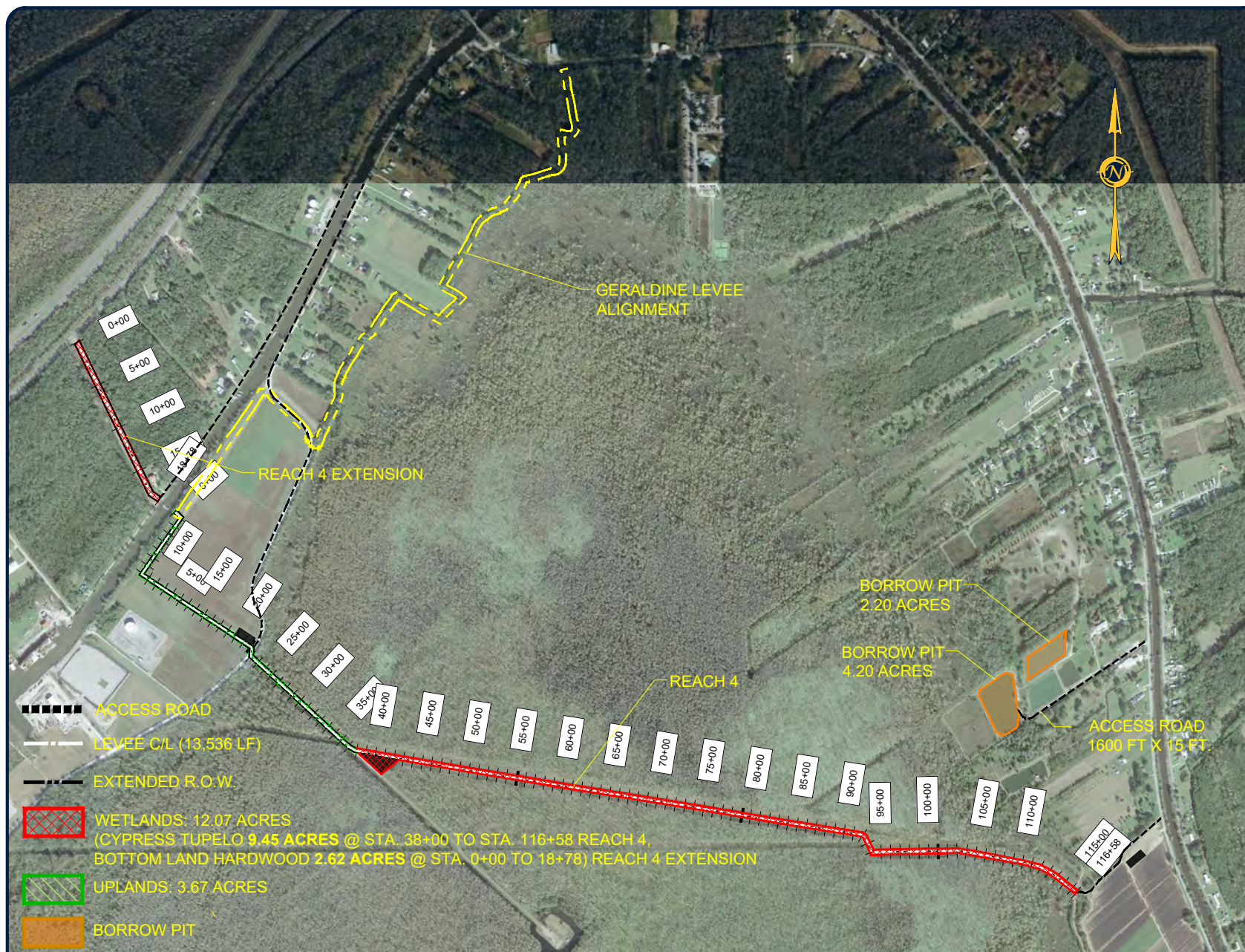
TERREBONNE LEVEE CONSOLIDATION DISTRICT

**BAYOU BLACK
BARRIER LEVEE SYSTEM**

REACH 4 LEVEE

Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	May 1, 2023

02



NOTE: THE IMAGE ABOVE IS A GENERAL REPRESENTATION OF THE WORK AREA, ACTUAL FIELD CONDITIONS MAY DIFFER.



M:\Department 39\CDI-Terrebonne Levees\294 General Engineering (2021)\400 Execution\460 Drawings\461 DWG\Bayou Black Barrier Levee\CAD\DWG\REACH 4.dwg



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 473-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

PERMIT ONLY

THESE DRAWINGS TO BE USED EXCLUSIVELY FOR
ACQUIRING REGULATORY PERMITS

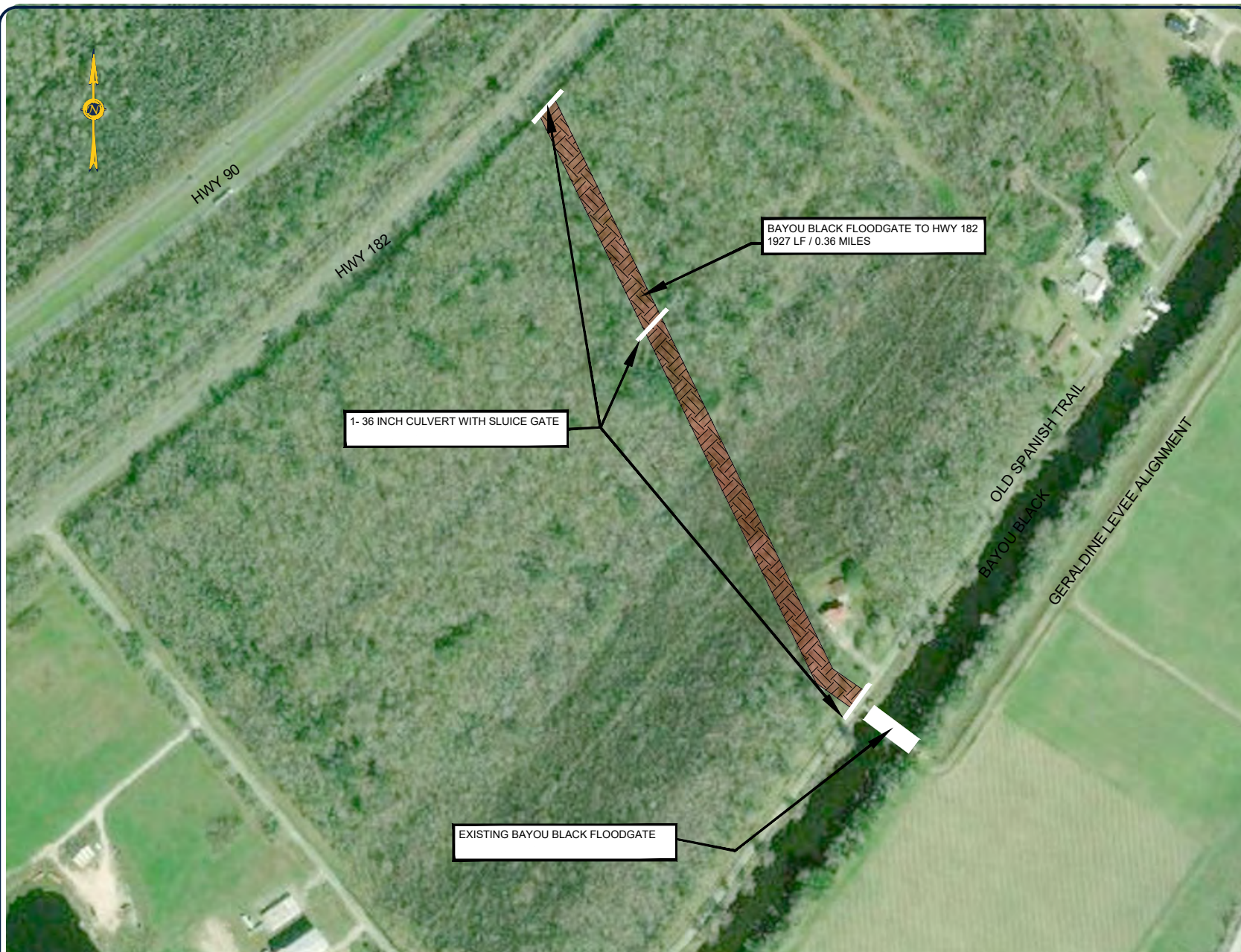
ENGINEER'S NAME
LA. LICENSE NO. 00000

BAYOU BLACK
2019 EMERGENCY
LEVEE ALIGNMENT

REACH 4
EXTENSION

Project number	39130-1087
Date	DEC 2020
Designed by	XXX
Drawn by	MJC
Checked by	SP
Checked by	XXX
Plot Date	March 27, 2023

03



NOTE: THE IMAGE ABOVE IS A GENERAL REPRESENTATION OF THE WORK AREA, ACTUAL FIELD CONDITIONS MAY DIFFER.

NOTE:
VOLUME OF MATERIAL REQUIRED = 16,560 CY

- AREA OF WETLAND IMPACTED = 2.6 ACRES
- LEVEE ALIGNMENT (1,927 LF)



NOTE: SEE TYPICAL SECTION SHEET 08



REACH 4 - POB
LAT: N029° 40' 15.27"
LONG: W091° 00' 30.84"

5+00

10+00

15+00

LAT: N029° 40' 01.22"
LONG: W091° 00' 21.86"

1- 36 INCH CULVERT
WITH SLUICE GATE

LEVEE C/L

EXTENDED R.O.W.

WETLANDS

UPLANDS

CULVERT

ACCESS ROAD
(EXISTING 25 FT. WIDE ROAD)

MATERIAL STOCKPILE AREA
200 FT X 75 FT.



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

PRELIMINARY

THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION,
BIDDING, RECORDATION, CONVEYANCE, SALES OR AS THE
BASE FOR ANY OTHER PROJECT OF ANY TYPE.
DUSTIN M. MALBROUGH
LA 12258-98 10 38779

TERREBONNE PARISH
CONSOLIDATED GOVERNMENT

BAYOU BLACK
BARRIER LEVEE SYSTEM

REACH 4 LEVEE DETAILED PLAN

Project number	39130-1087
Date	APRIL 2016
Designed by	DMM
Drawn by	JPT
Checked by	XXX
Checked by	XXX
Plot Date	April 16, 2019

04

NOTE: THE IMAGE ABOVE IS A GENERAL REPRESENTATION OF THE WORK AREA. ACTUAL FIELD CONDITIONS MAY DIFFER.

NOTE: THE FOOTPRINT OF THE REACH 4 LEVEE FROM STA. 0+00 TO STA. 37+50 (3,750 LF) IS ± 50 FT.
DISTANCE BETWEEN TWO STATIONS IS 100 FT.
SEE TYPICAL SECTION FOR REACH 4 EXTENSION ON SHEET 10
THE LENGTH OF THE ACCESS ROAD (GERALDINE ROAD) FROM LA 182 IS ± 7,600 FT.





ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

PRELIMINARY

THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION.
IT IS A PRELIMINARY DESIGN AND SHALL BE USED AS A
BASIS FOR THE ISSUANCE OF A PERMIT.
DUSTIN M. MALBROUGH
LA. LICENSE NO. 36779

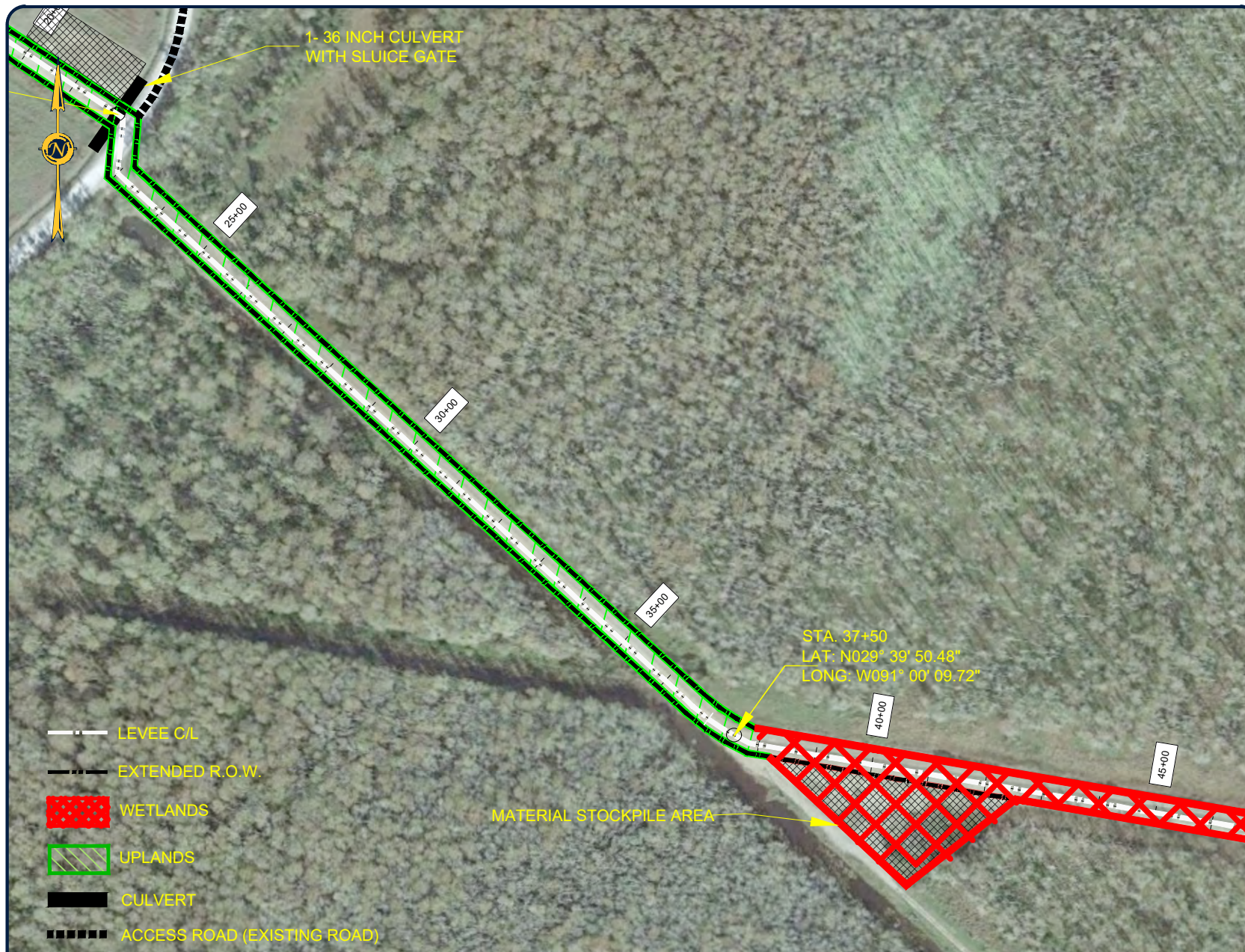
TERREBONNE PARISH CONSOLIDATED GOVERNMENT

BAYOU BLACK BARRIER LEVEE SYSTEM

REACH 4 LEVEE DETAILED PLAN

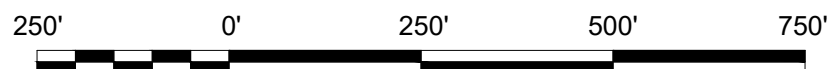
Project number	39130-1087
Date	APRIL 2016
Designed by	DMM
Drawn by	JPT
Checked by	XXX
Checked by	XXX
Plot Date	April 16, 2019

05



NOTE: THE IMAGE ABOVE IS A GENERAL REPRESENTATION OF THE WORK AREA, ACTUAL FIELD CONDITIONS MAY DIFFER.

NOTE:
THE FOOTPRINT OF THE REACH 4 LEVEE FROM STA. 0+00 TO STA. 37+50 IS ± 50 FT.
THE FOOTPRINT OF THE REACH 4 FROM STA. 37+50 TO STA. 116+58 IS ± 61 FT
SEE TYPICAL SECTION FOR REACH 4 EXTENSION ON SHEET 10





ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014
ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

PRELIMINARY

THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION.
NO WARRANTY IS GIVEN FOR ANY AND ALL SERVICES OR AS IS.
BASED FOR THE ISSUANCE OF A PERMIT.
DUSTIN M. MALBROUGH
LA LICENSE NO. 36779

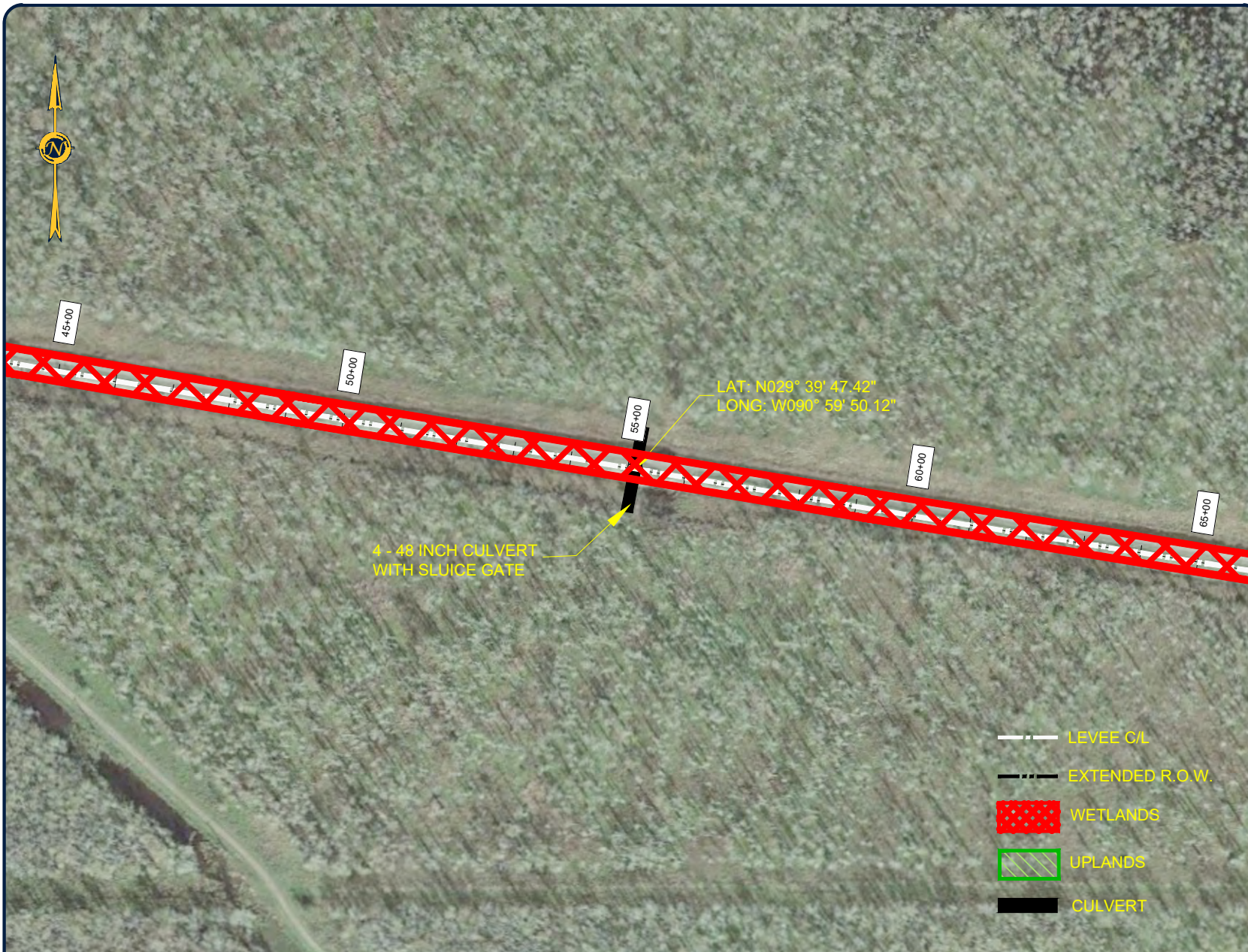
TERREBONNE PARISH CONSOLIDATED GOVERNMENT

BAYOU BLACK BARRIER LEVEE SYSTEM

REACH 4 LEVEE DETAILED PLAN

Project number	39130-1087
Date	APRIL 2016
Designed by	DMM
Drawn by	JPT
Checked by	XXX
Checked by	XXX
Plot Date	April 16, 2019

06



NOTE: THE IMAGE ABOVE IS A GENERAL REPRESENTATION OF THE WORK AREA, ACTUAL FIELD CONDITIONS MAY DIFFER.



NOTE:
THE FOOTPRINT OF THE REACH 4 FROM STA. 37+50 TO STA. 116+58 IS ± 61 FT
SEE TYPICAL SECTION FOR REACH 4 EXTENSION ON SHEET 10



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014
ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

PRELIMINARY

THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION.
IT IS FOR INFORMATION ONLY. NO GUARANTEE IS MADE AS TO THE
BASIS FOR THE ISSUANCE OF A PERMIT.

DUSTIN M. MALBROUGH
LA. LICENSE NO. 36779

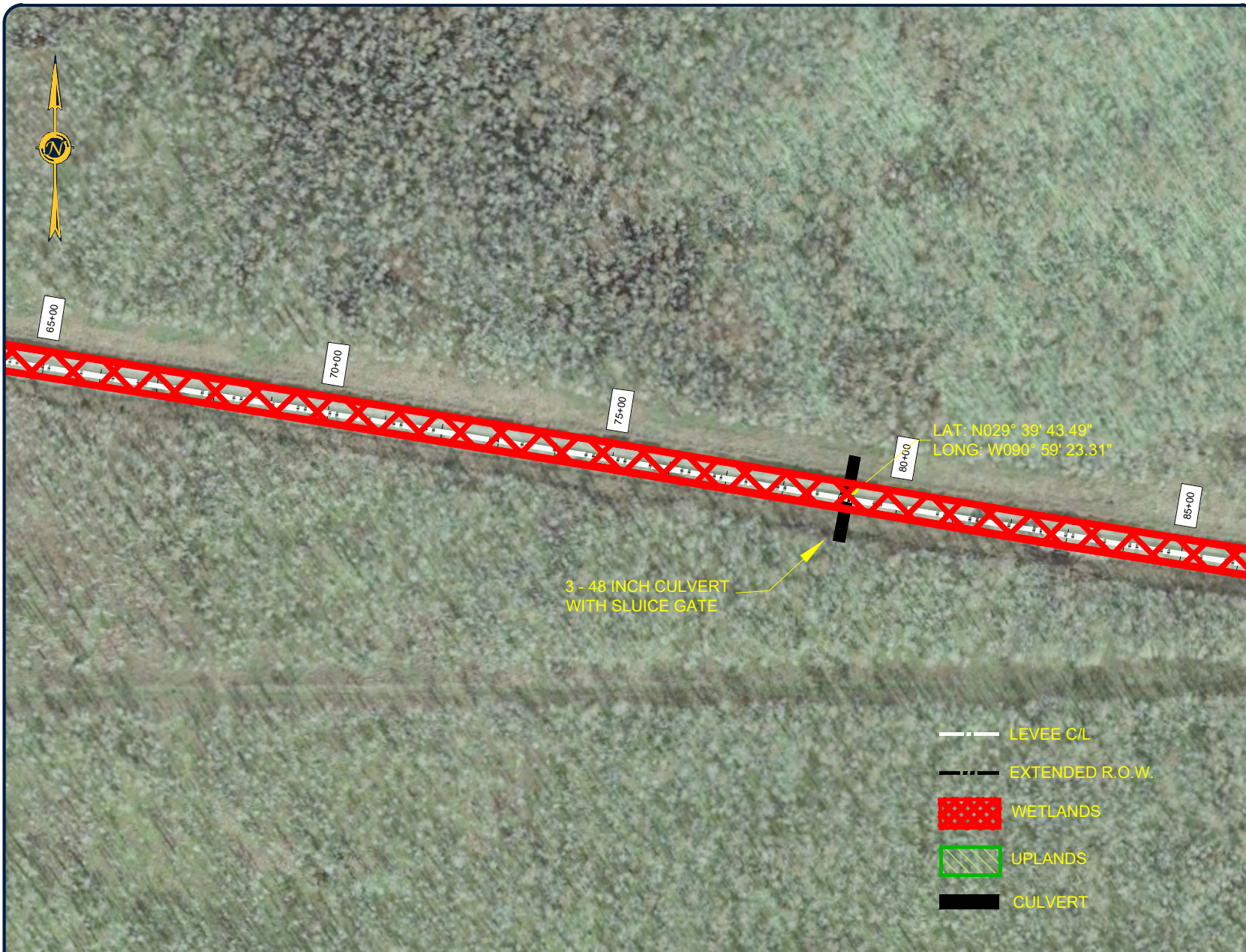
TERREBONNE PARISH CONSOLIDATED GOVERNMENT

BAYOU BLACK BARRIER LEVEE SYSTEM

REACH 4 LEVEE DETAILED PLAN

Project number	39130-1087
Date	APRIL 2016
Designed by	DMM
Drawn by	JPT
Checked by	XXX
Checked by	XXX
Plot Date	April 16, 2019

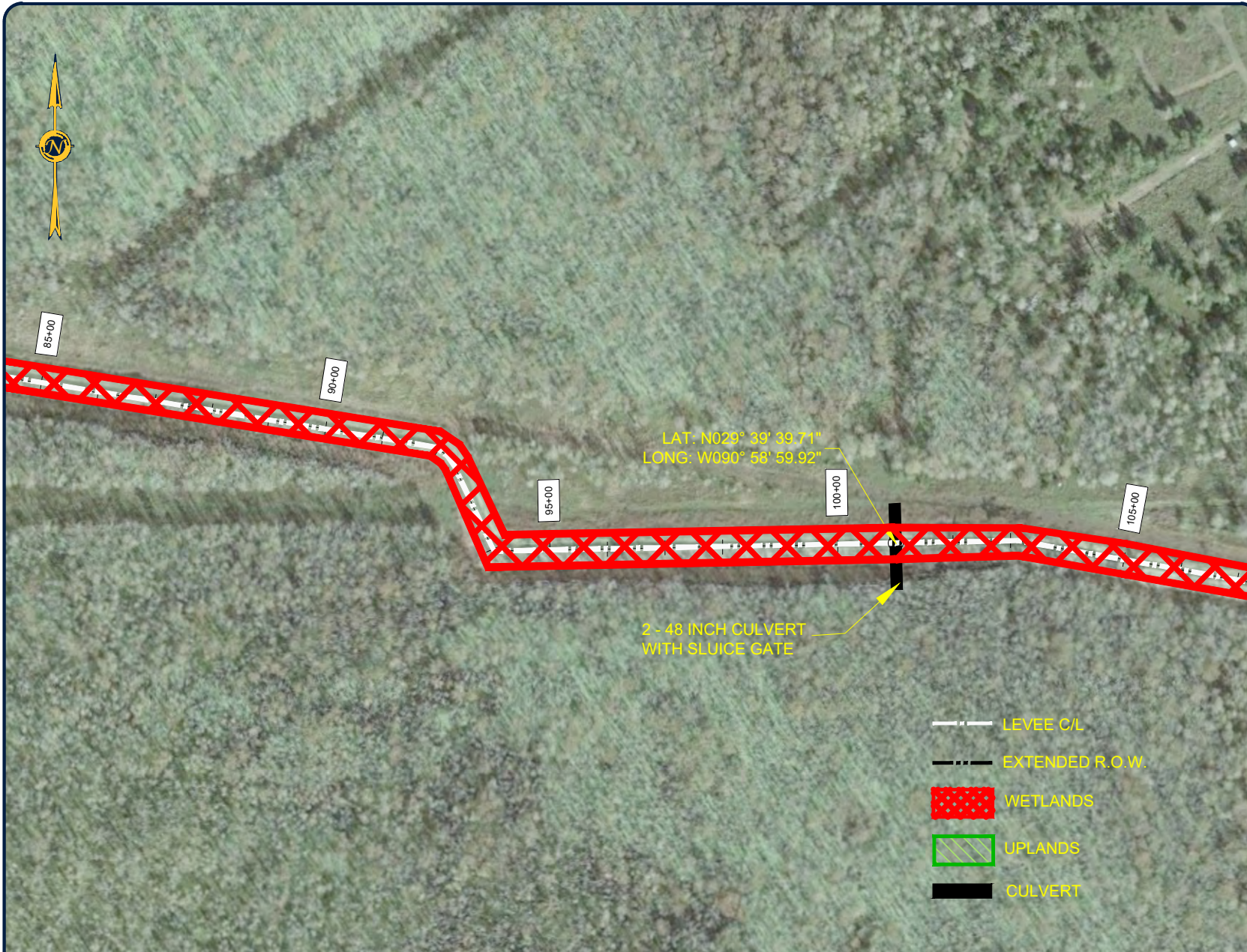
07



NOTE: THE IMAGE ABOVE IS A GENERAL REPRESENTATION OF THE WORK AREA, ACTUAL FIELD CONDITIONS MAY DIFFER.



NOTE:
THE FOOTPRINT OF THE REACH 4 FROM STA. 37+50 TO STA. 116+58 IS ± 61 FT
SEE TYPICAL SECTION FOR REACH 4 EXTENSION ON SHEET 10



NOTE: THE IMAGE ABOVE IS A GENERAL REPRESENTATION OF THE WORK AREA, ACTUAL FIELD CONDITIONS MAY DIFFER.



NOTE:
THE FOOTPRINT OF THE REACH 4 FROM STA. 37+50 TO STA. 116+58 IS ± 61 FT
SEE TYPICAL SECTION FOR REACH 4 EXTENSION ON SHEET 10



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

PRELIMINARY

THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION
WITHOUT SUCCESSFUL PERMITTING AND SHALL BE AS IS
BASIS FOR THE ISSUANCE OF A PERMIT

DUSTIN M. MALBROUGH
LA LICENSE NO. 36779

TERREBONNE PARISH CONSOLIDATED GOVERNMENT

BAYOU BLACK BARRIER LEVEE SYSTEM

REACH 4 LEVEE DETAILED PLAN

Project number	39130-1087
Date	APRIL 2016
Designed by	DMM
Drawn by	JPT
Checked by	XXX
Checked by	XXX
Plot Date	April 16, 2019

08



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014
ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

PRELIMINARY

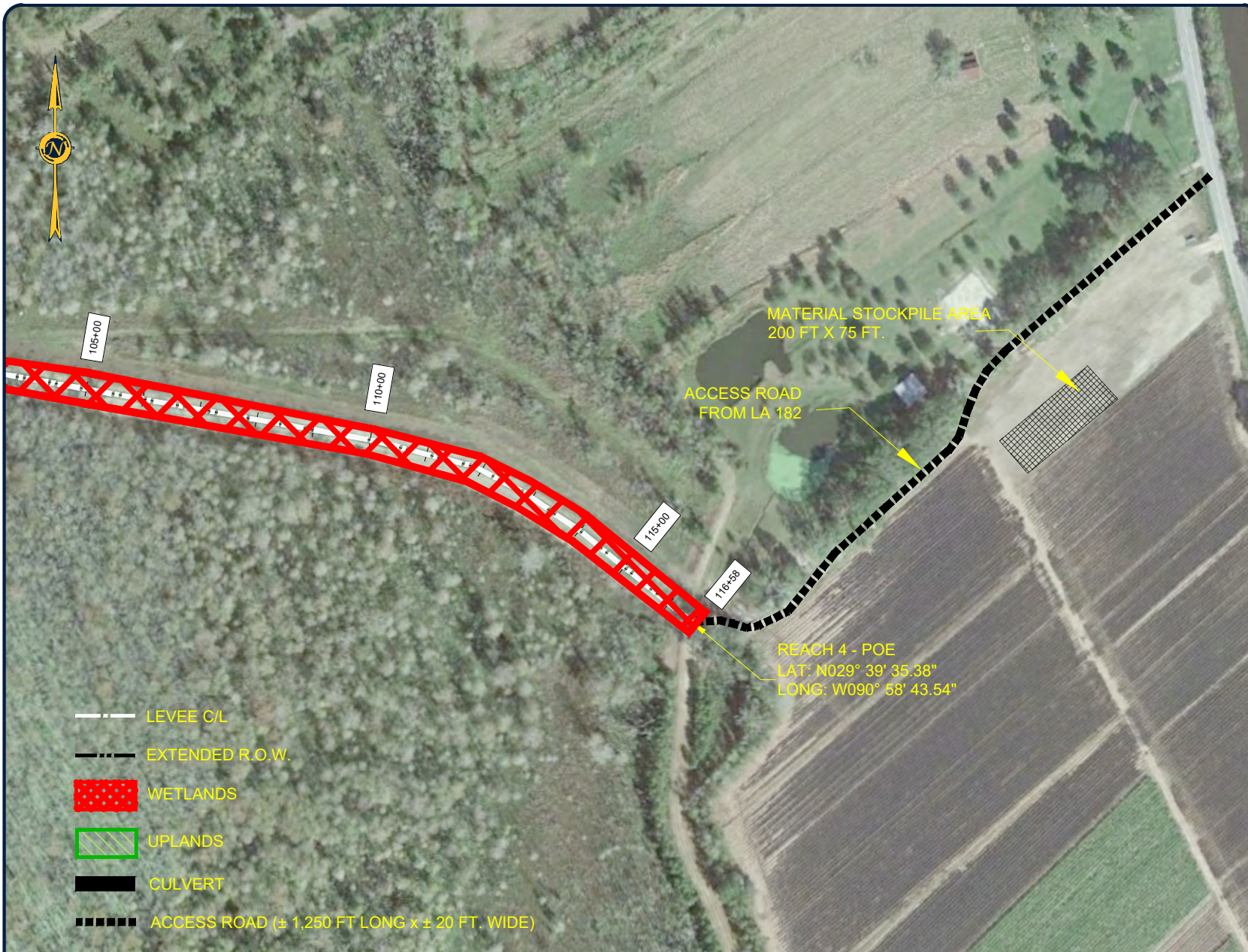
THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION.
IT IS FOR INFORMATION ONLY AND SHALL BE USED AS A
BASIS FOR THE ISSUANCE OF A PERMIT.
DUSTIN M. MALBROUGH
LA LICENSE NO. 36779

TERREBONNE PARISH
CONSOLIDATED GOVERNMENT
BAYOU BLACK
BARRIER LEVEE SYSTEM

REACH 4 LEVEE DETAILED PLAN

Project number	39130-1087
Date	APRIL 2016
Designed by	DMM
Drawn by	JPT
Checked by	XXX
Checked by	XXX
Plot Date	April 16, 2019

09



NOTE: THE IMAGE ABOVE IS A GENERAL REPRESENTATION OF THE WORK AREA, ACTUAL FIELD CONDITIONS MAY DIFFER.



NOTE: THE FOOTPRINT OF THE REACH 4 FROM STA. 37+50 TO STA. 116+58 IS ± 61 FT.
SEE TYPICAL SECTION FOR REACH 4 EXTENSION ON SHEET 10



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

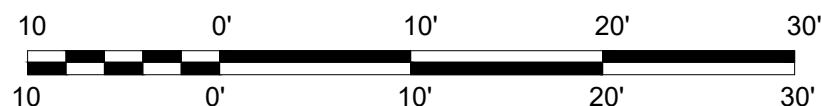
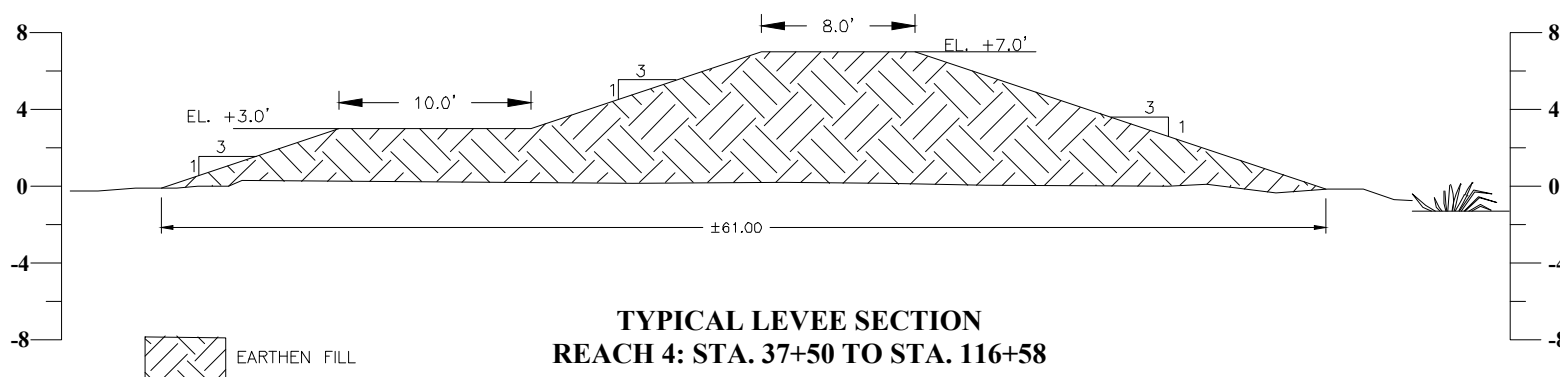
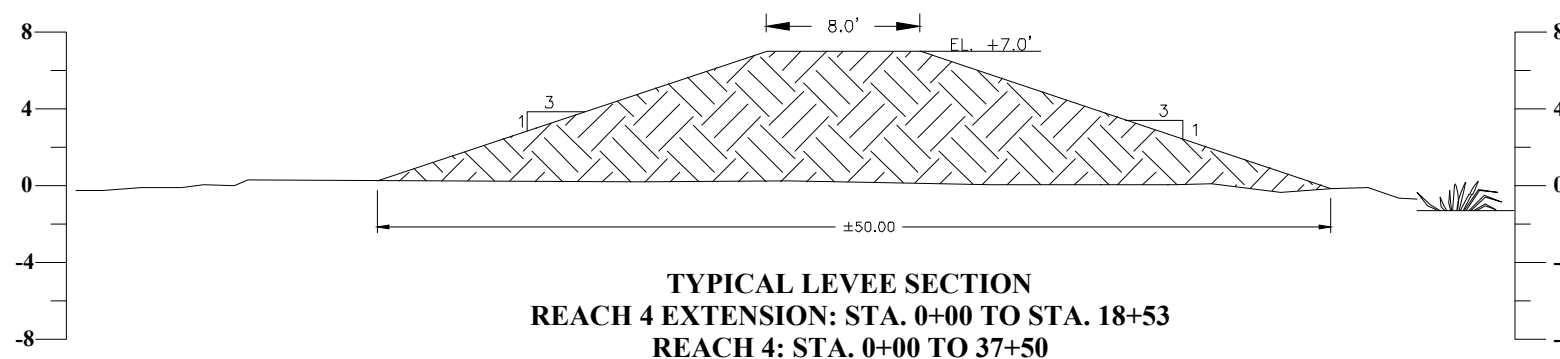
ENGINEER'S NAME
LA LICENSE NO. 00000

**TERREBONNE LEVEE
CONSOLIDATION DISTRICT**
**BAYOU BLACK
BARRIER LEVEE SYSTEM**

**REACH 4
LEVEE TYPICAL
CROSS SECTIONS**

Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	March 27, 2023

10



M:\Department 39\Client\TOD-Terrebonne Levee\284 General Engineering (2021)\400 Execution\460 Drawings\461 DWG\Bayou Black Barrier Levee\Reach 4 Typical Sections.dwg



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

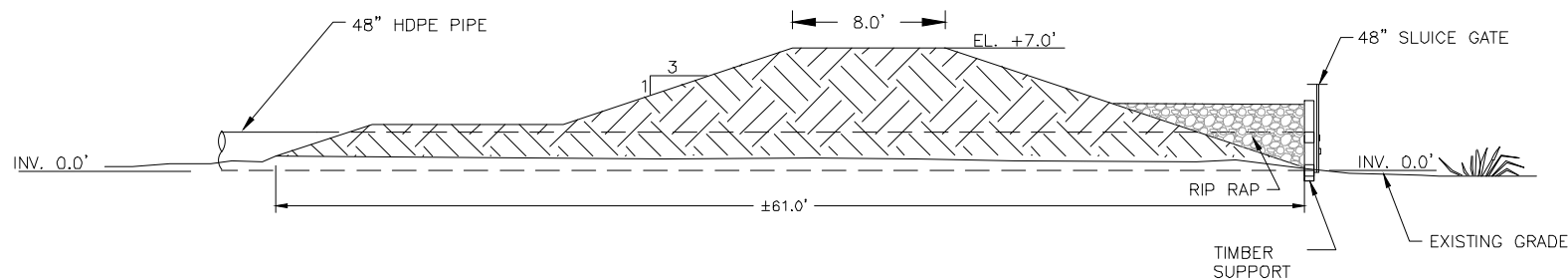
ENGINEER'S NAME
LA. LICENSE NO. 00000

TERREBONNE LEVEE
CONSOLIDATION DISTRICT
BAYOU BLACK
BARRIER LEVEE SYSTEM

REACH 4
LEVEE TYPICAL
CROSS SECTIONS

Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	March 27, 2023

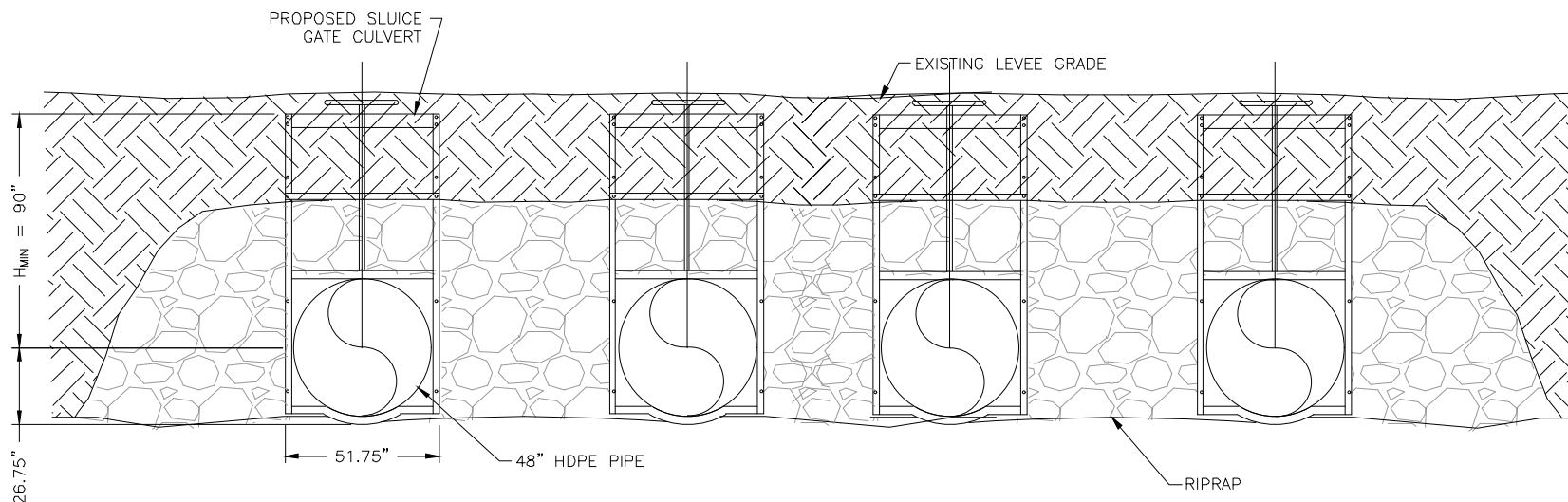
11



TYPICAL SLUICE GATE CULVERT PROFILE



NOTE: SLUICE GATE TO REMAIN OPEN DURING NORMAL TIDAL CONDITIONS TO ALLOW TIDAL EXCHANGE WITH THE ADJACENT WETLANDS. THE GATE WILL BE CLOSED DURING POTENTIAL FLOOD EVENTS.



**TYPICAL SLUICE GATE CULVERT DETAIL
NOT TO SCALE**



H_{MIN} WILL VARY AS REQUIRED.



ENGINEERING LLC

Coastal Design & Infrastructure
 197 Elysian Drive
 Houma, LA 70363
 O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

ENGINEER'S NAME
 LA. LICENSE NO. 00000

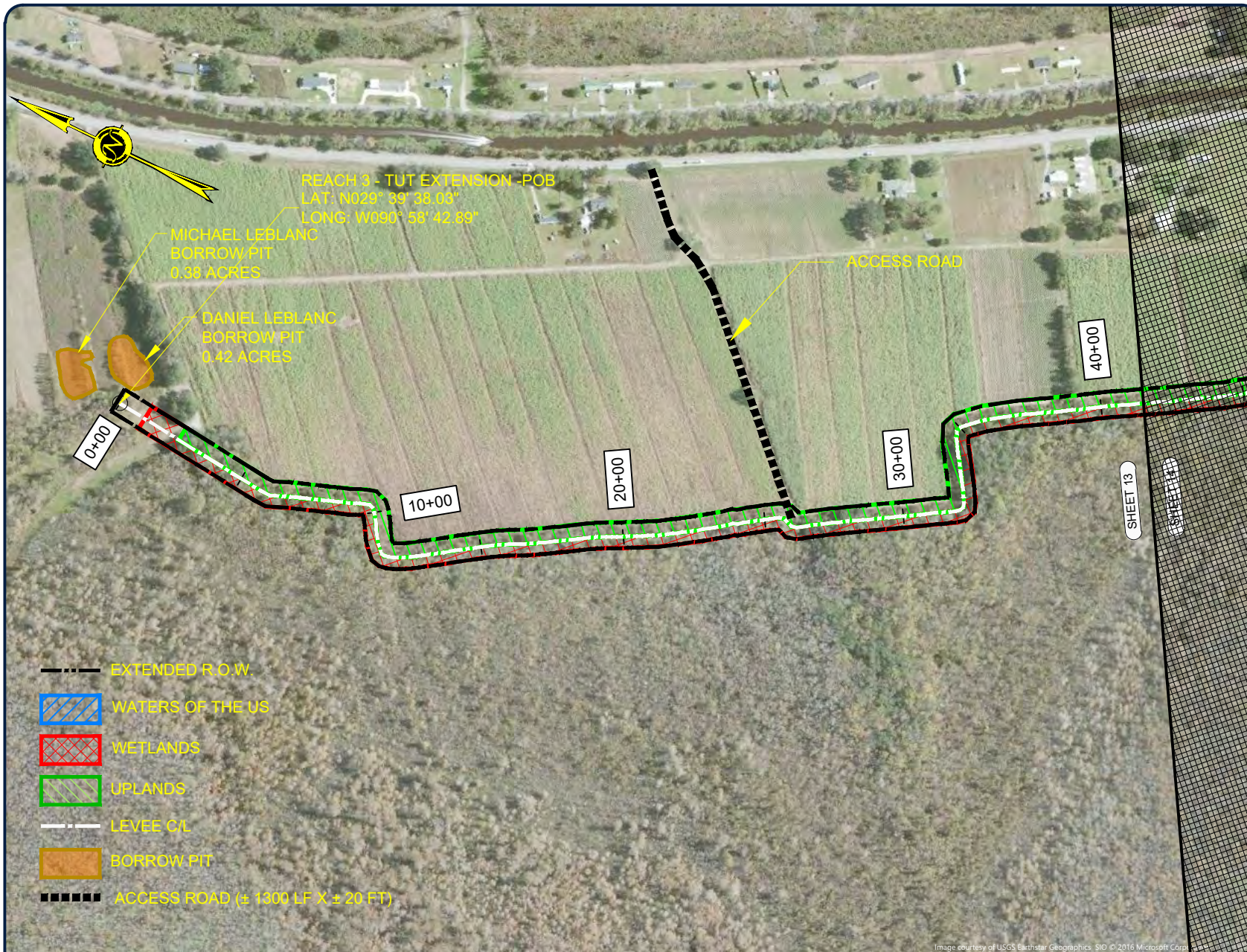
TERREBONNE LEVEE CONSOLIDATION DISTRICT

BAYOU BLACK BARRIER LEVEE SYSTEM

REACH 3 PLAN VIEW

Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	May 1, 2023

12



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

FOR PERMIT APPLICATION ONLY

ENGINEER'S NAME
LA LICENSE NO. 00000

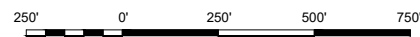
TERREBONNE LEVEE
CONSOLIDATION DISTRICT

BAYOU BLACK
BARRIER LEVEE SYSTEM

**REACH 3
TUT EXTENSION
DETAILED PLAN VIEW**

Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	March 27, 2023

13



M:\Department 39\Client\TLOD-Terrebonne Levee\284 General Engineering (2021)\400 Execution\460 Drawings\461 DWG\Bayou Black Barrier Levee\Reach 3A- TUT EXT.dwg



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

ENGINEER'S NAME
LA LICENSE NO. 00000

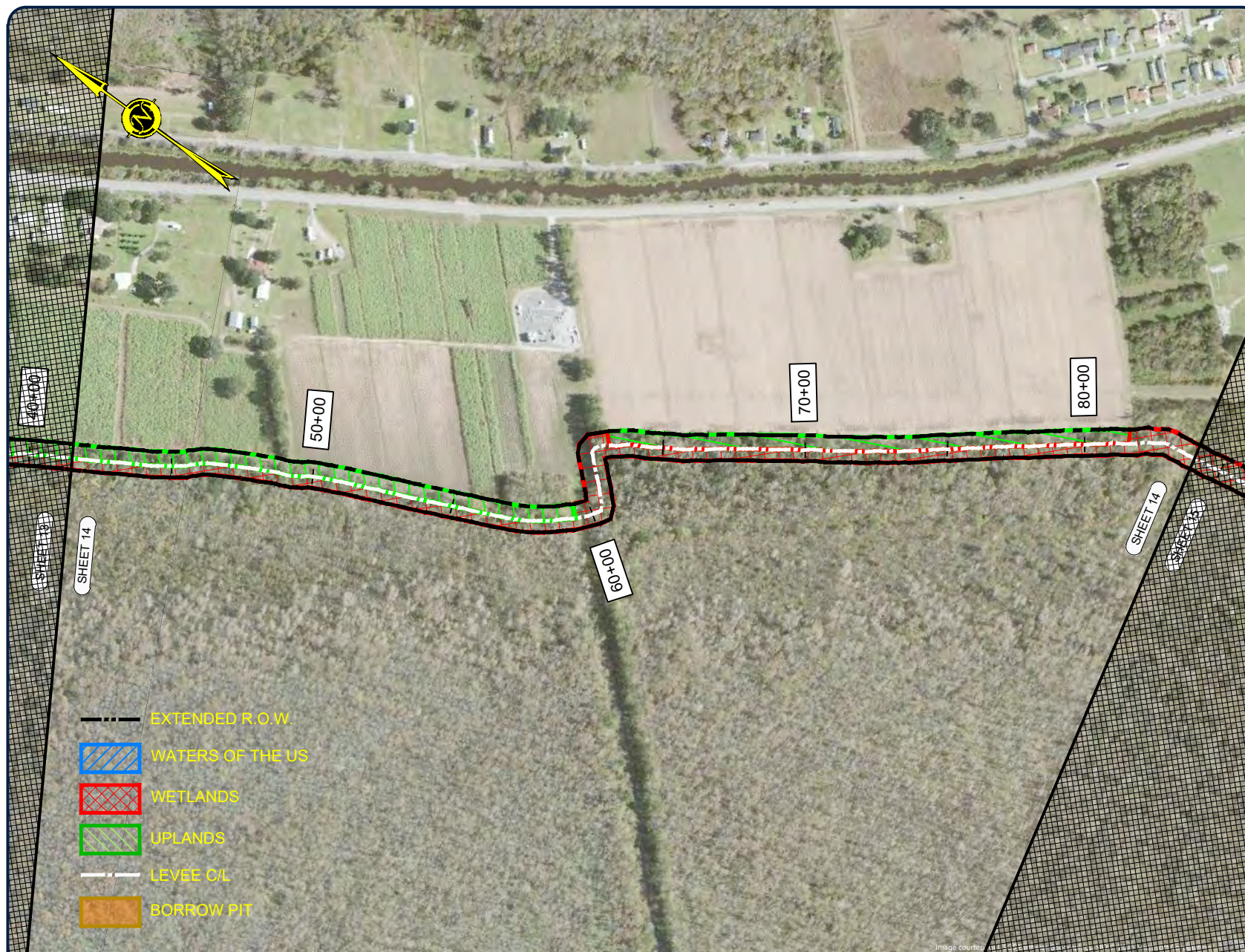
TERREBONNE LEVEE
CONSOLIDATION DISTRICT

BAYOU BLACK
BARRIER LEVEE SYSTEM

REACH 3 TUT EXTENSION DETAILED PLAN VIEW

Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	March 27, 2023

14



NOTE: THE IMAGE ABOVE IS A GENERAL REPRESENTATION OF THE WORK AREA, ACTUAL FIELD CONDITIONS MAY DIFFER.





ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

ENGINEER'S NAME
LA LICENSE NO. 00000

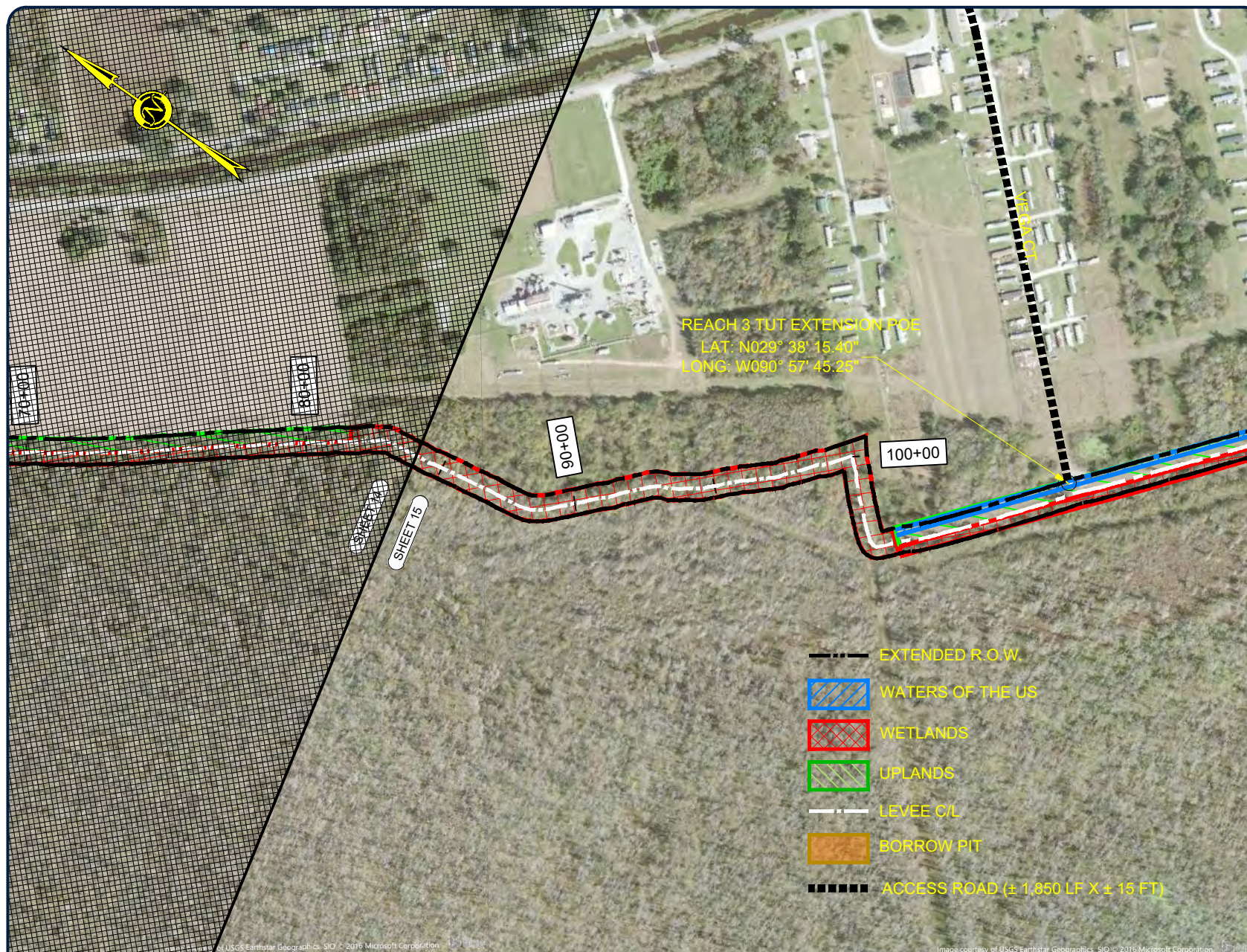
TERREBONNE LEVEE
CONSOLIDATION DISTRICT

BAYOU BLACK
BARRIER LEVEE SYSTEM

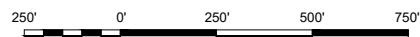
REACH 3 TUT EXTENSION DETAILED PLAN VIEW

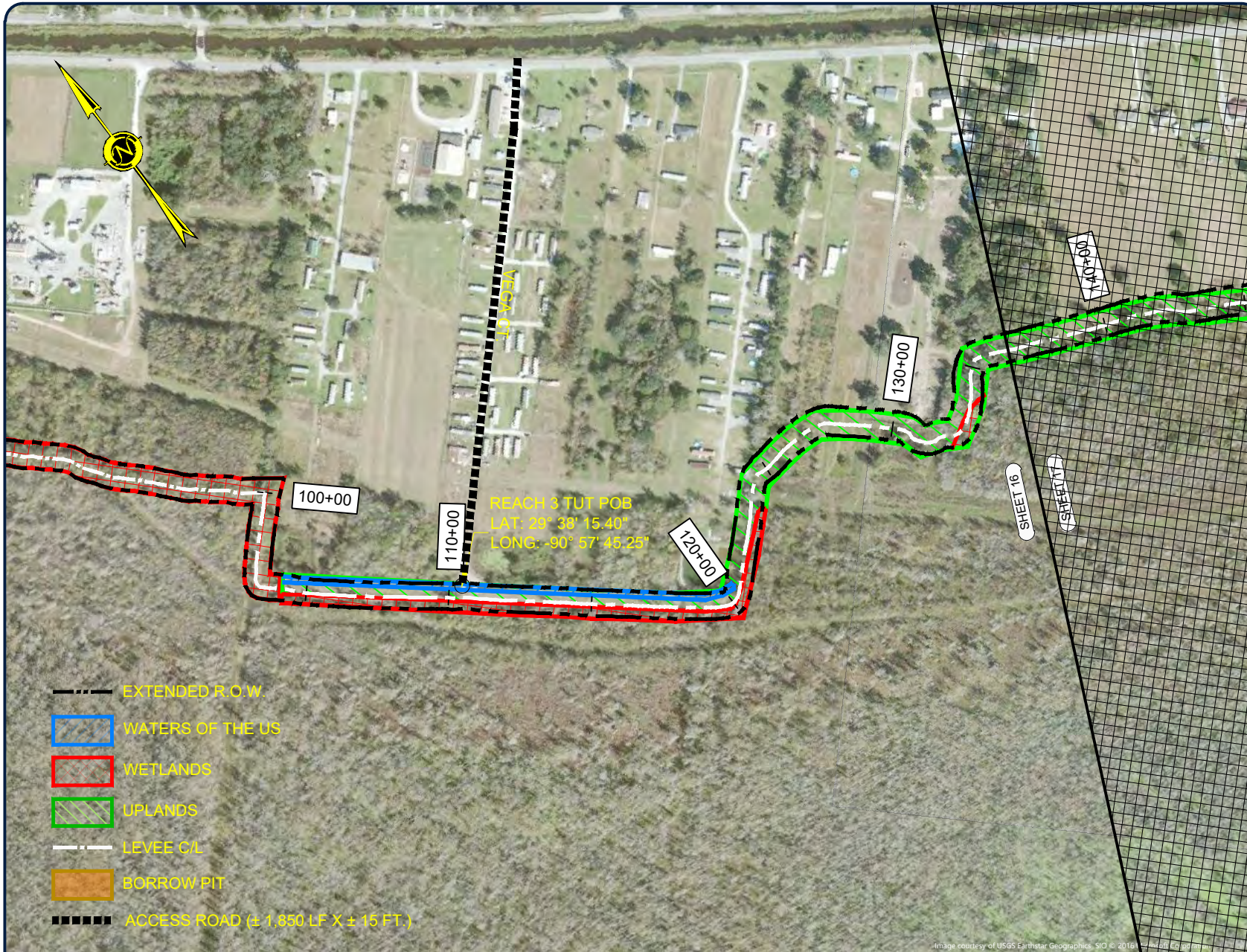
Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	March 27, 2023

15



NOTE: THE IMAGE ABOVE IS A GENERAL REPRESENTATION OF THE WORK AREA, ACTUAL FIELD CONDITIONS MAY DIFFER.





ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

ENGINEER'S NAME
LA LICENSE NO. 00000

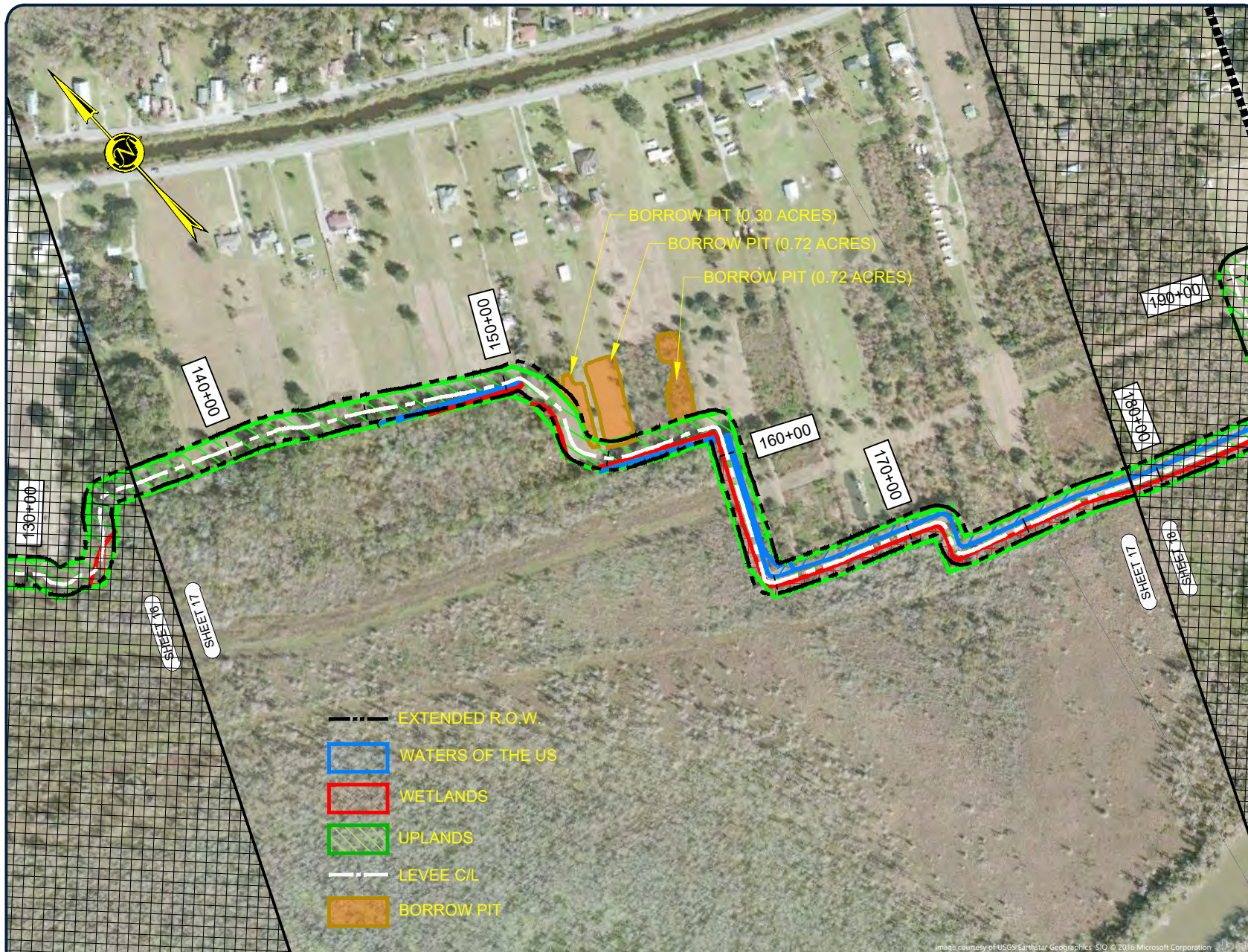
TERREBONNE LEVEE
CONSOLIDATION DISTRICT

BAYOU BLACK
BARRIER LEVEE SYSTEM

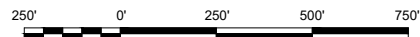
REACH 3 TUT DETAILED PLAN VIEW

Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	March 27, 2023

16



NOTE: THE IMAGE ABOVE IS A GENERAL REPRESENTATION OF THE WORK AREA, ACTUAL FIELD CONDITIONS MAY DIFFER.



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

ENGINEER'S NAME
LA LICENSE NO. 00000

TERREBONNE LEVEE
CONSOLIDATION DISTRICT

BAYOU BLACK
BARRIER LEVEE SYSTEM

REACH 3 TUT DETAILED PLAN VIEW

Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	March 27, 2023



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

ENGINEER'S NAME
LA LICENSE NO. 00000

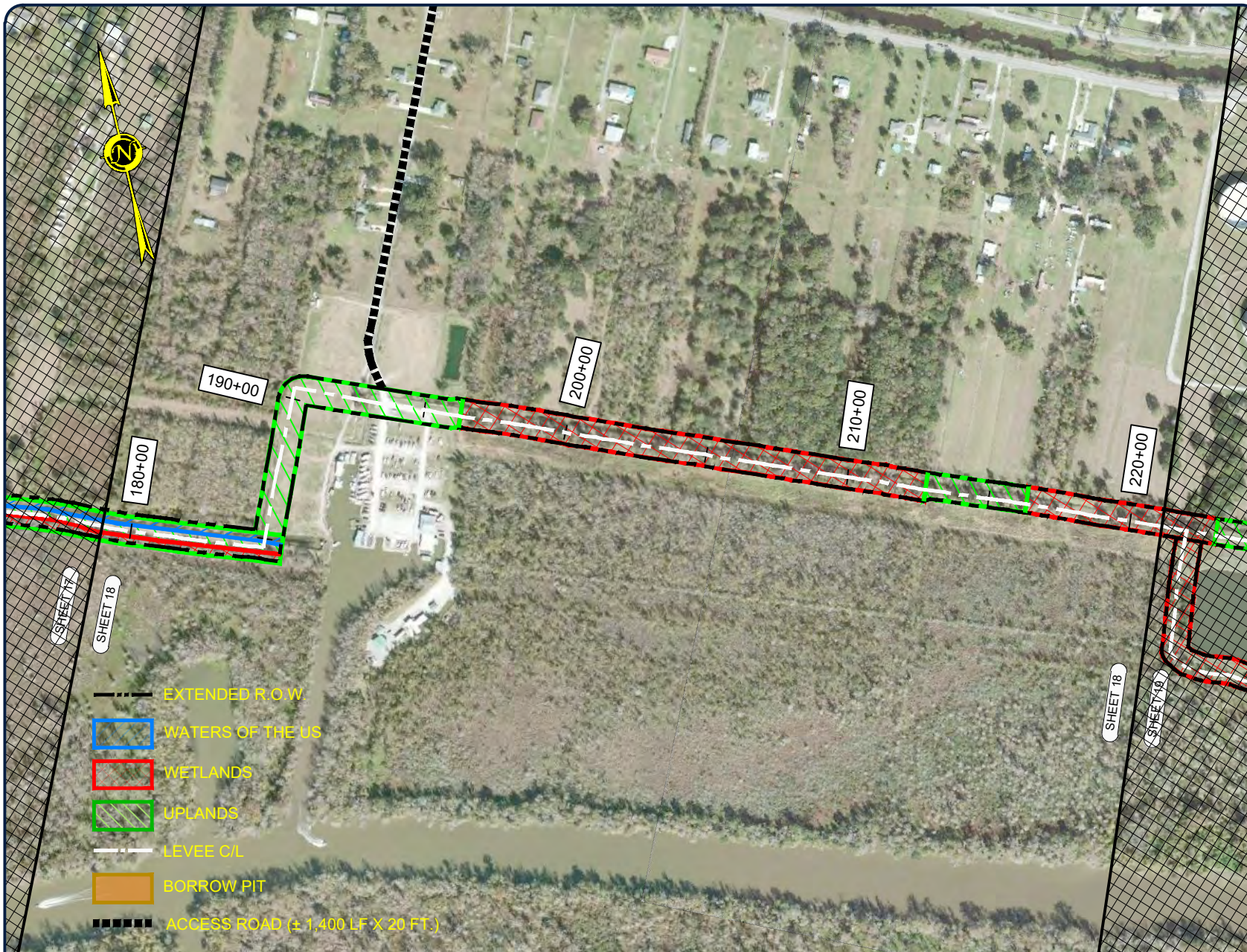
TERREBONNE LEVEE
CONSOLIDATION DISTRICT

BAYOU BLACK
BARRIER LEVEE SYSTEM

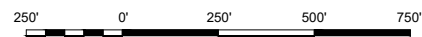
REACH 3 TUT DETAILED PLAN VIEW

Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	March 27, 2023

18



NOTE: THE IMAGE ABOVE IS A GENERAL REPRESENTATION OF THE WORK AREA, ACTUAL FIELD CONDITIONS MAY DIFFER.





ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

ENGINEER'S NAME
LA LICENSE NO. 00000

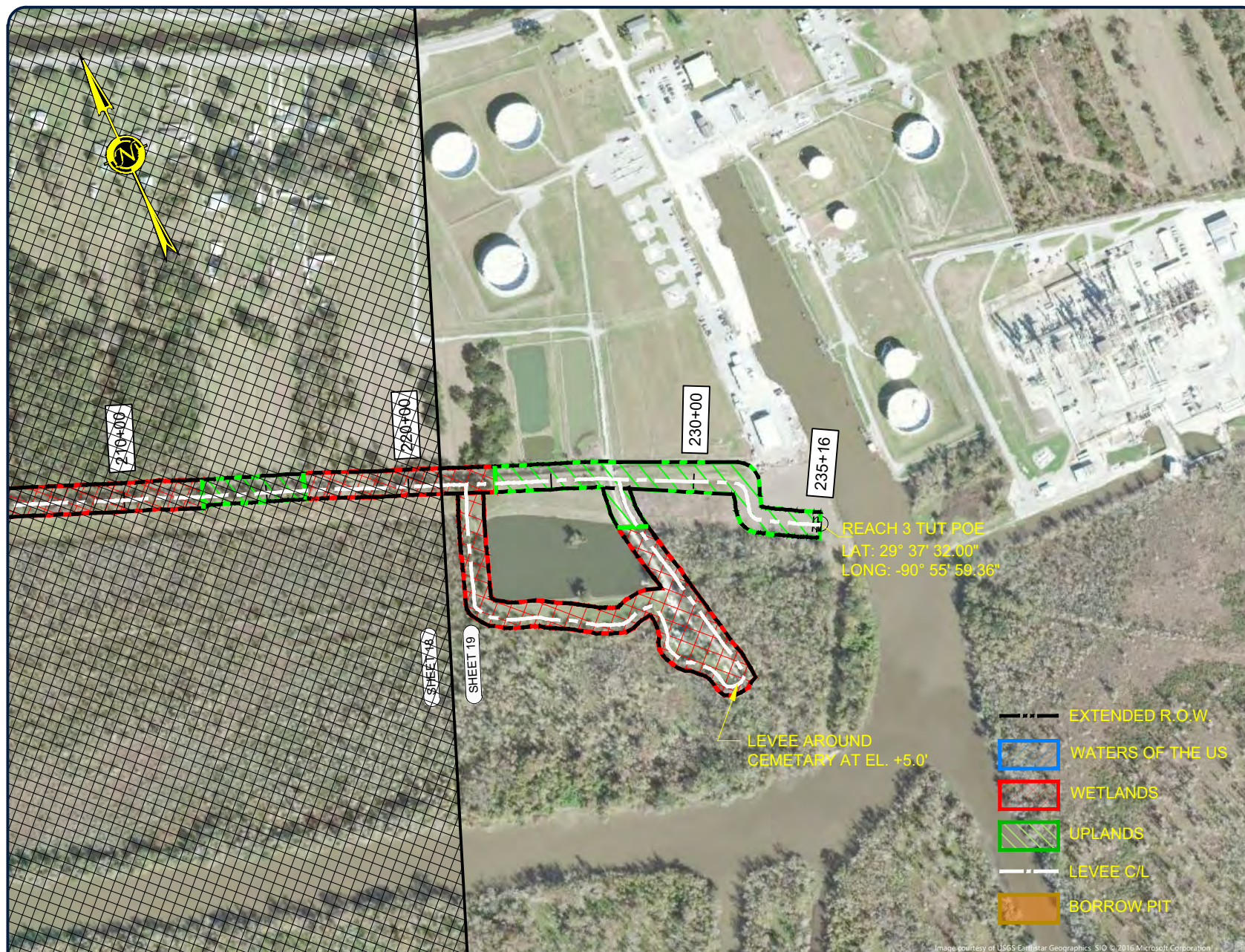
TERREBONNE LEVEE
CONSOLIDATION DISTRICT

BAYOU BLACK
BARRIER LEVEE SYSTEM

REACH 3 TUT DETAILED PLAN VIEW

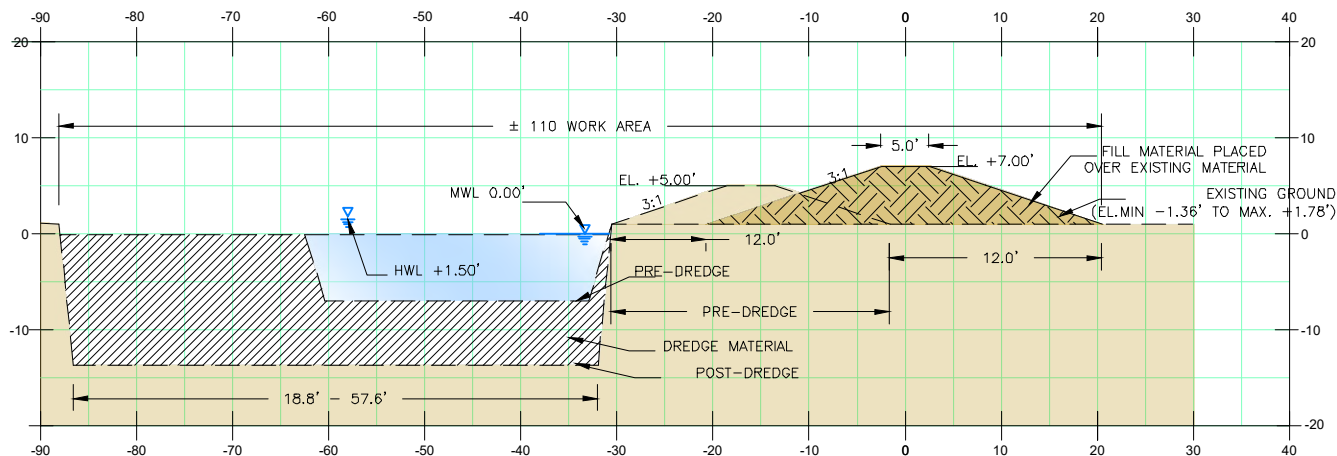
Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	March 27, 2023

19

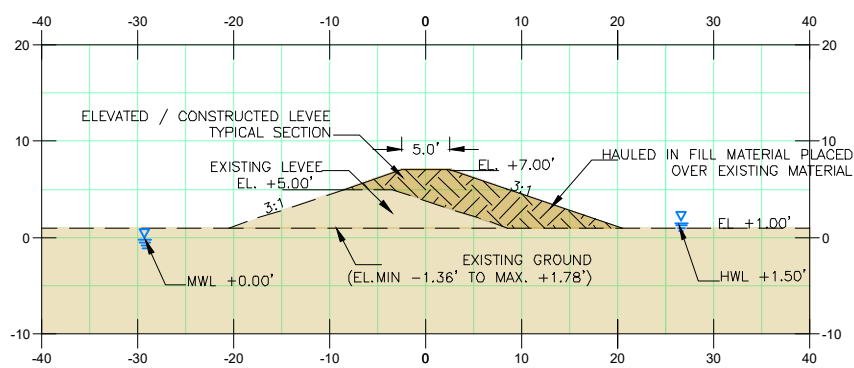


NOTE: THE IMAGE ABOVE IS A GENERAL REPRESENTATION OF THE WORK AREA, ACTUAL FIELD CONDITIONS MAY DIFFER.

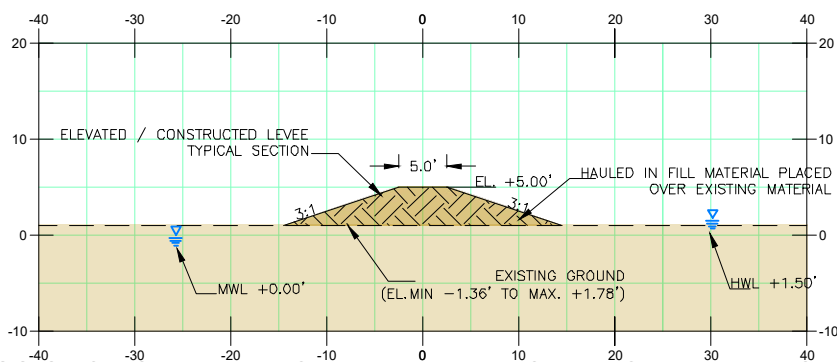




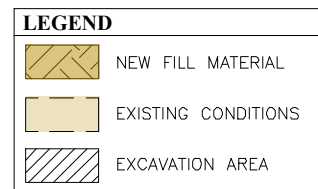
TYPICAL CROSS SECTION 1 - REACH 3: STA. 0+00 TO STA.225+00



TYPICAL CROSS SECTION 2 - REACH 3: STA. 225+00 TO STA.234+31



TYPICAL CROSS SECTION 3 - REACH 3: LEVEE AROUND CEMETARY STA. 225+00 TO STA.234+31



NOTES:

- CROSS SECTIONS VARY ALONG THE ENTIRE LENGTH OF THE ALIGNMENT.
- EXISTING LEVEE WAS DEGRADED TO PROVIDE A BERM AND STABILITY FOR THE PROPOSED LEVEE.



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

FOR PERMIT APPLICATION ONLY

ENGINEER'S NAME
LA LICENSE NO. 00000

TERREBONNE LEVEE CONSOLIDATION DISTRICT

BAYOU BLACK BARRIER LEVEE SYSTEM

REACH 3 LEVEE CROSS-SECTIONS

Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	March 27, 2023



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

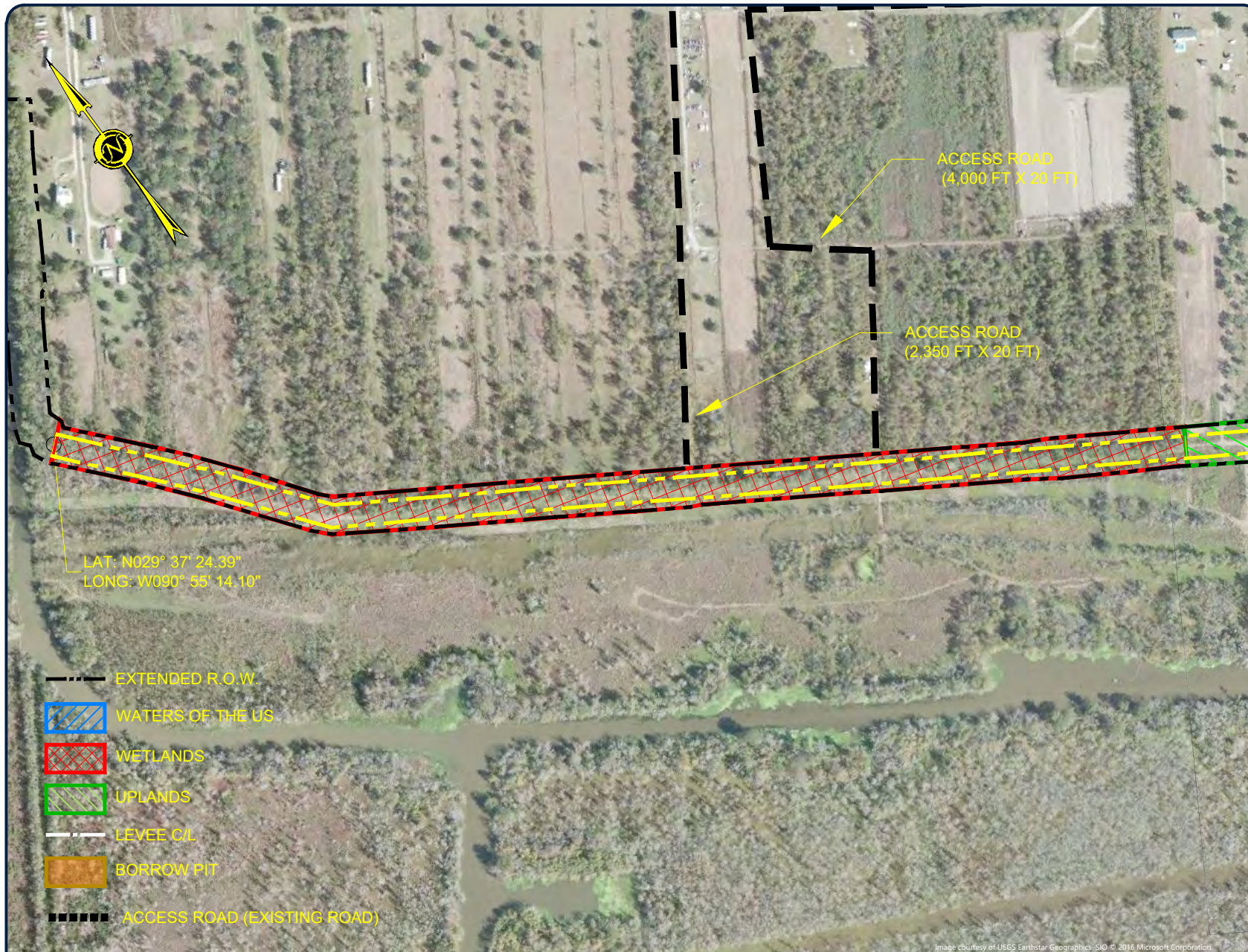
ENGINEER'S NAME
LA. LICENSE NO. 00000

TERREBONNE LEVEE
CONSOLIDATION DISTRICT

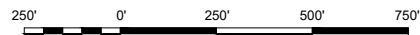
BAYOU BLACK
BARRIER LEVEE SYSTEM

REACH 2 PLAN VIEW

Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	May 1, 2023



NOTE: THE IMAGE ABOVE IS A GENERAL REPRESENTATION OF THE WORK AREA, ACTUAL FIELD CONDITIONS MAY DIFFER.



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

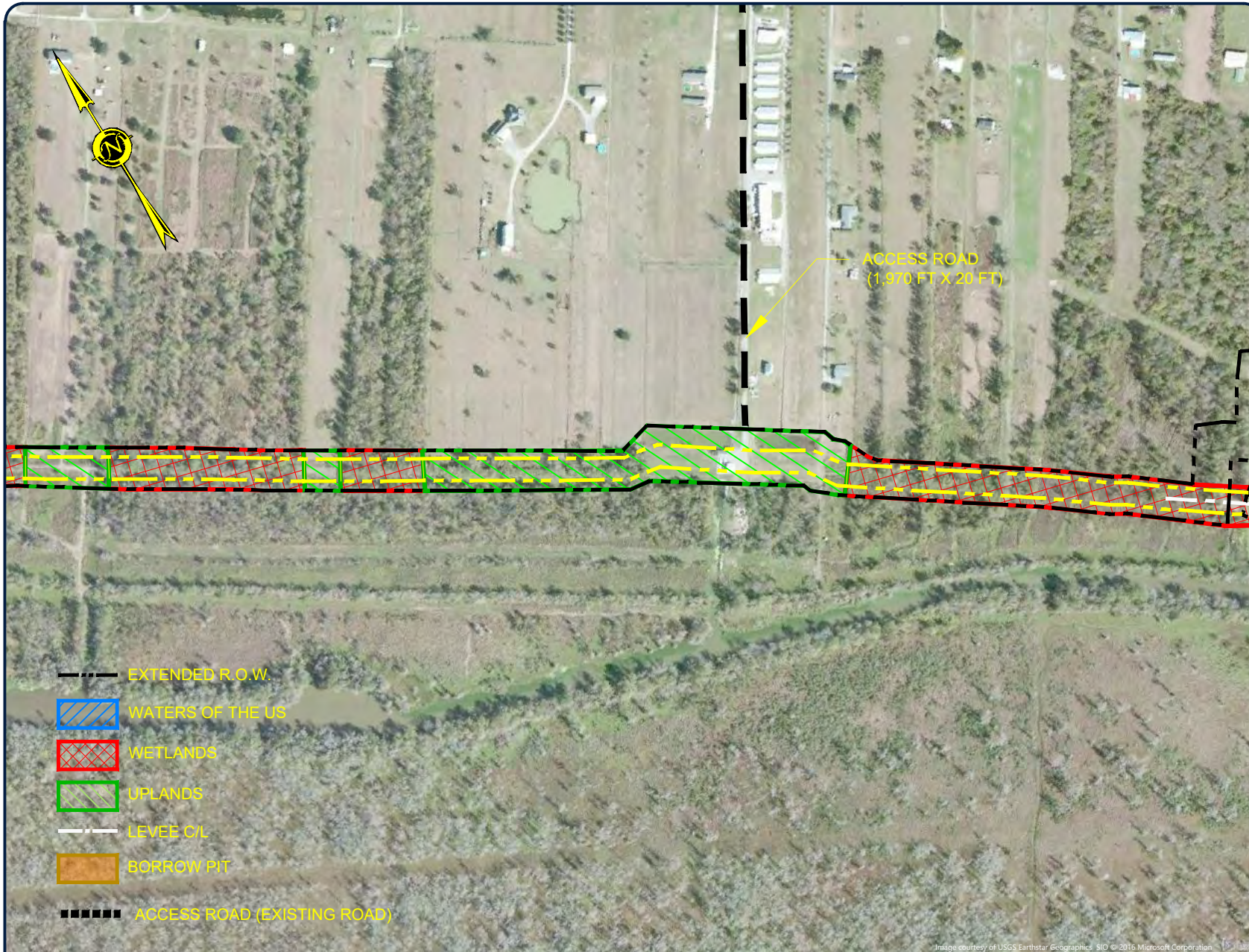
ENGINEER'S NAME
LA LICENSE NO. 00000

TERREBONNE LEVEE
CONSOLIDATION DISTRICT
BAYOU BLACK
BARRIER LEVEE SYSTEM

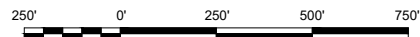
REACH 2 DETAILED PLAN VIEW

Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	March 27, 2023

22



NOTE: THE IMAGE ABOVE IS A GENERAL REPRESENTATION OF THE WORK AREA, ACTUAL FIELD CONDITIONS MAY DIFFER.



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

ENGINEER'S NAME
LA LICENSE NO. 00000

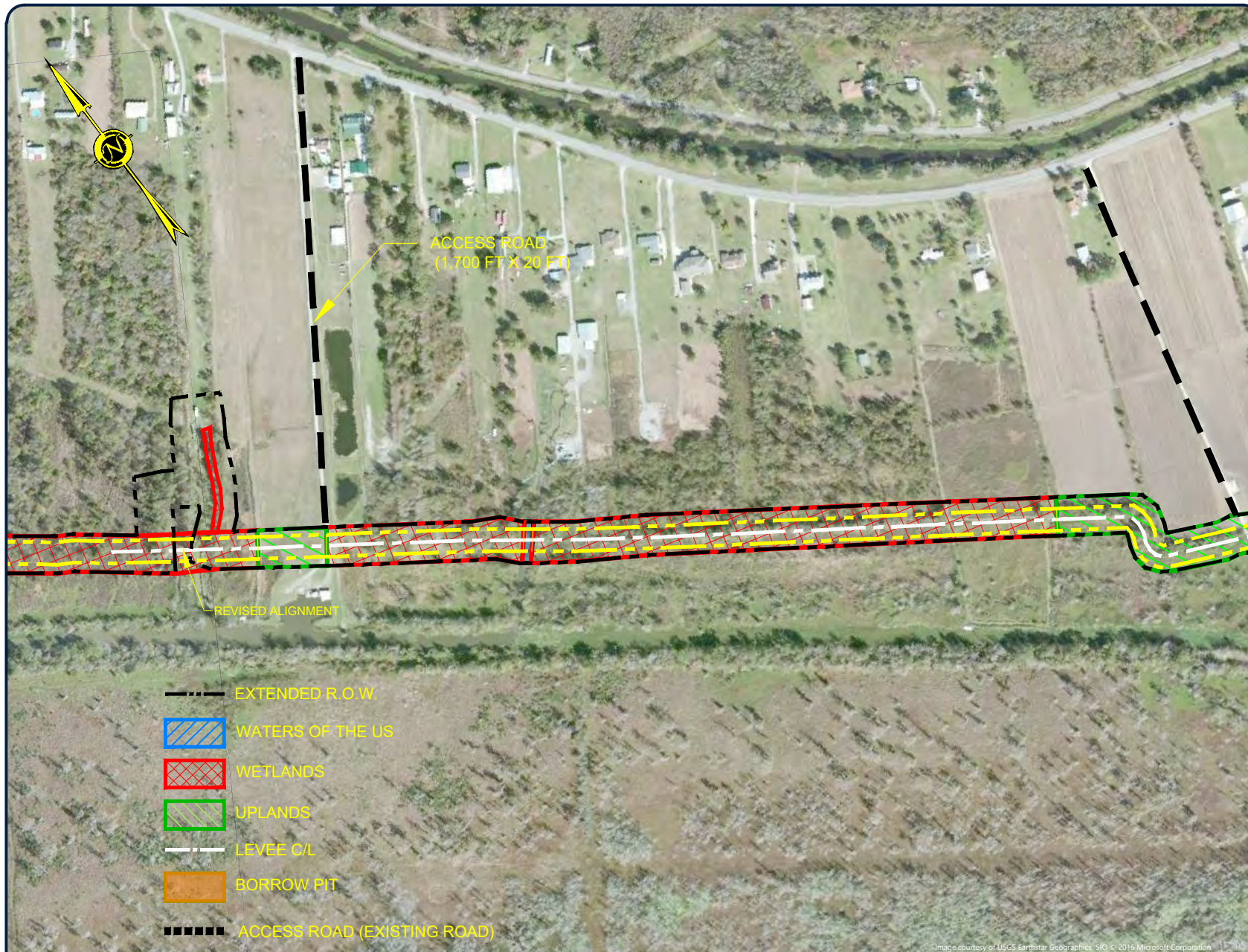
TERREBONNE LEVEE
CONSOLIDATION DISTRICT

BAYOU BLACK
BARRIER LEVEE SYSTEM

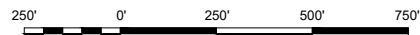
REACH 2 DETAILED PLAN VIEW

Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	March 27, 2023

23



NOTE: THE IMAGE ABOVE IS A GENERAL REPRESENTATION OF THE WORK AREA, ACTUAL FIELD CONDITIONS MAY DIFFER.



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

ENGINEER'S NAME
LA LICENSE NO. 00000

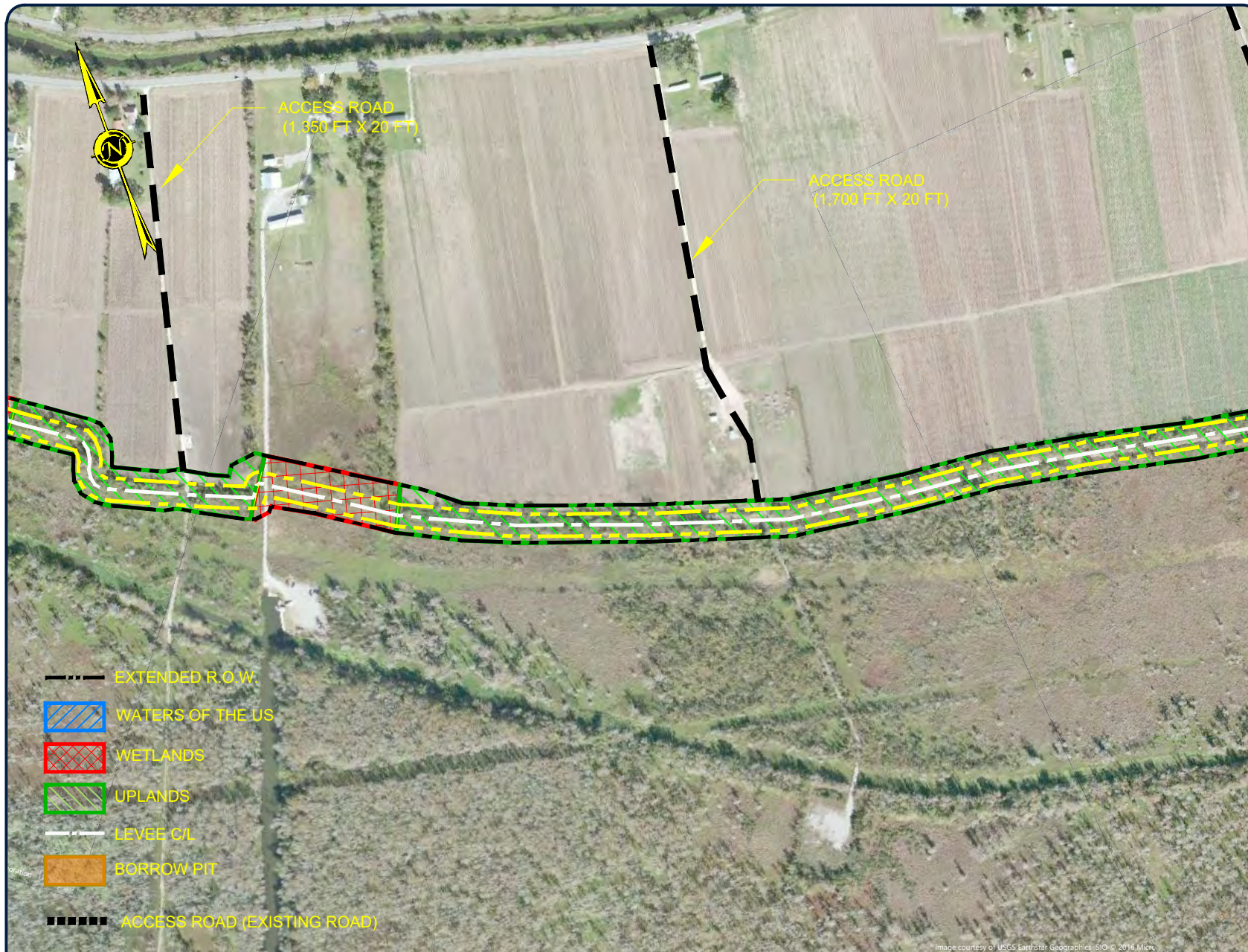
TERREBONNE LEVEE
CONSOLIDATION DISTRICT

BAYOU BLACK
BARRIER LEVEE SYSTEM

REACH 2 DETAILED PLAN VIEW

Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	March 27, 2023

24



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

ENGINEER'S NAME
LA LICENSE NO. 00000

TERREBONNE LEVEE
CONSOLIDATION DISTRICT

BAYOU BLACK
BARRIER LEVEE SYSTEM

REACH 2 DETAILED PLAN VIEW

Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	March 27, 2023

25



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

ENGINEER'S NAME
LA LICENSE NO. 00000

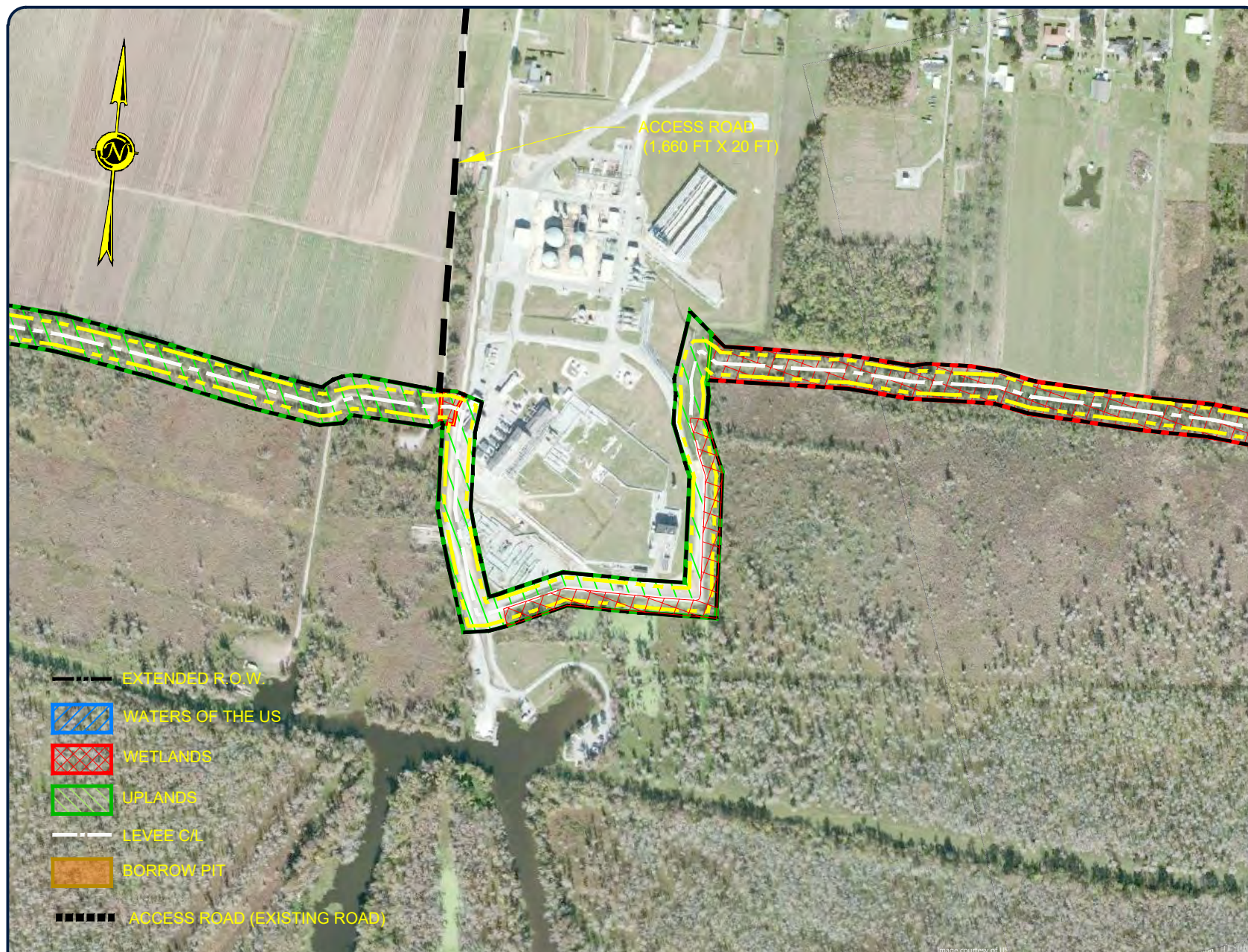
TERREBONNE LEVEE
CONSOLIDATION DISTRICT

BAYOU BLACK
BARRIER LEVEE SYSTEM

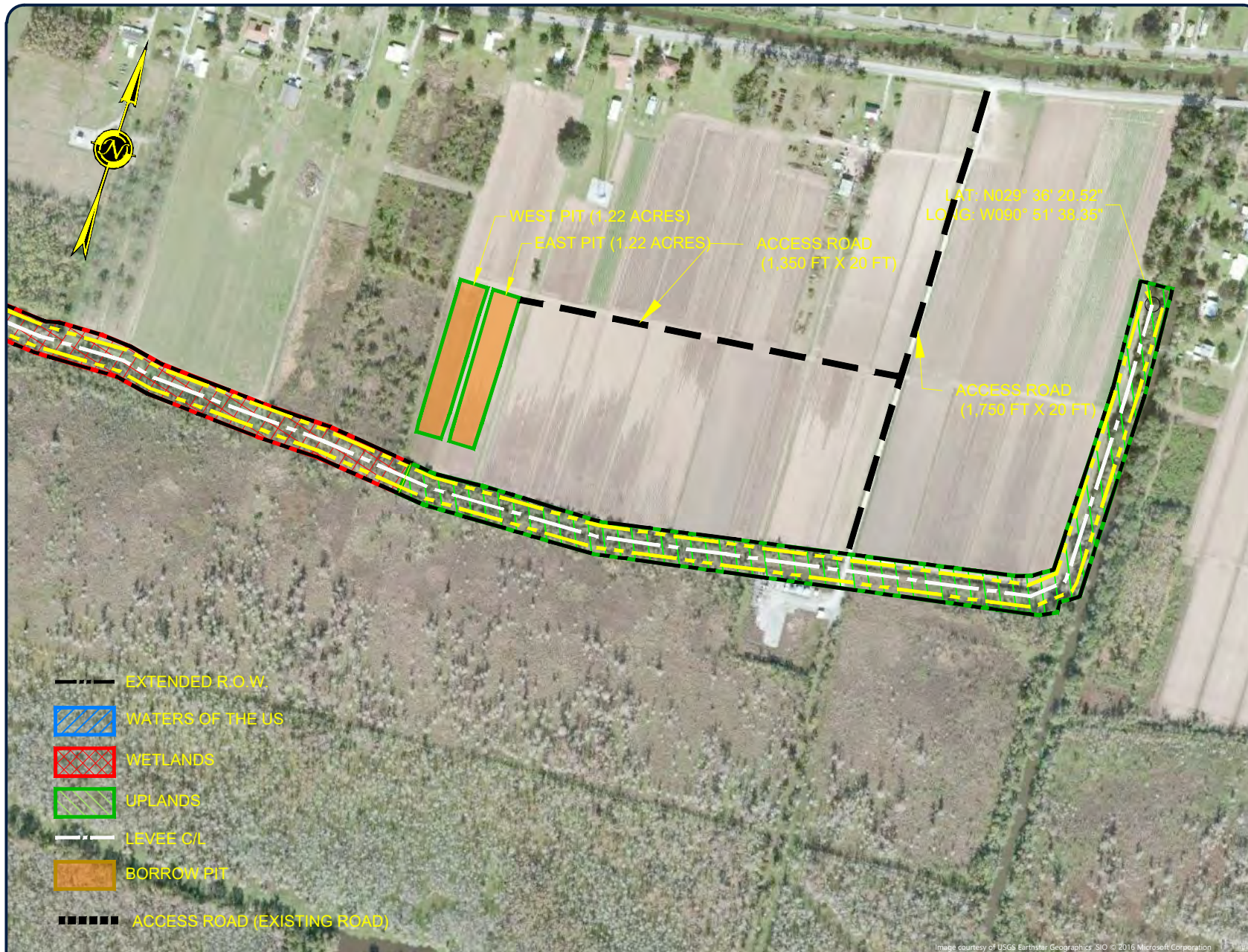
REACH 2 DETAILED PLAN VIEW

Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	March 27, 2023

26



250' 0' 250' 500' 750'



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

ENGINEER'S NAME
LA LICENSE NO. 00000

TERREBONNE LEVEE
CONSOLIDATION DISTRICT

BAYOU BLACK
BARRIER LEVEE SYSTEM

REACH 2 DETAILED PLAN VIEW

Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	March 27, 2023

27



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

ENGINEER'S NAME
LA LICENSE NO. 00000

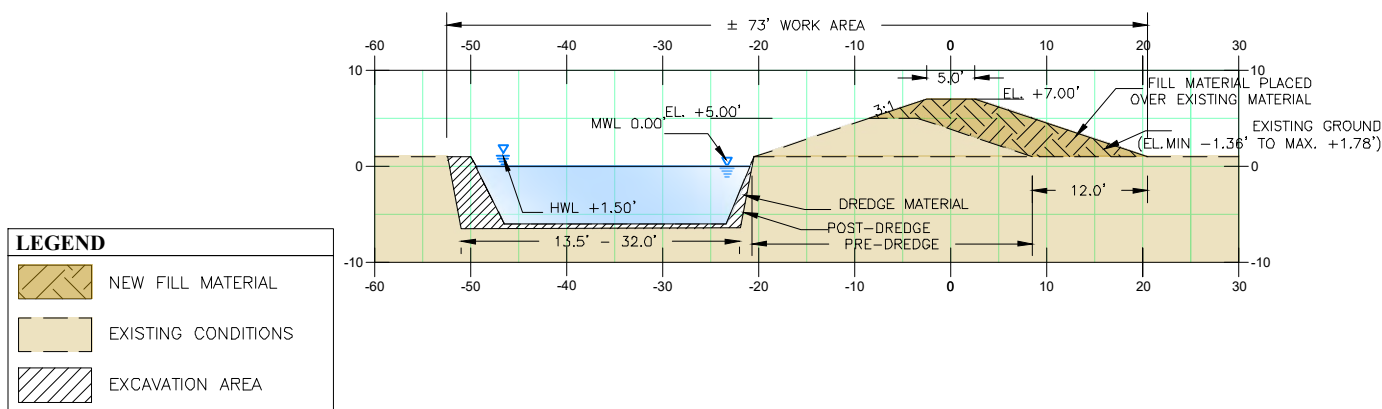
TERREBONNE LEVEE
CONSOLIDATION DISTRICT

BAYOU BLACK
BARRIER LEVEE SYSTEM

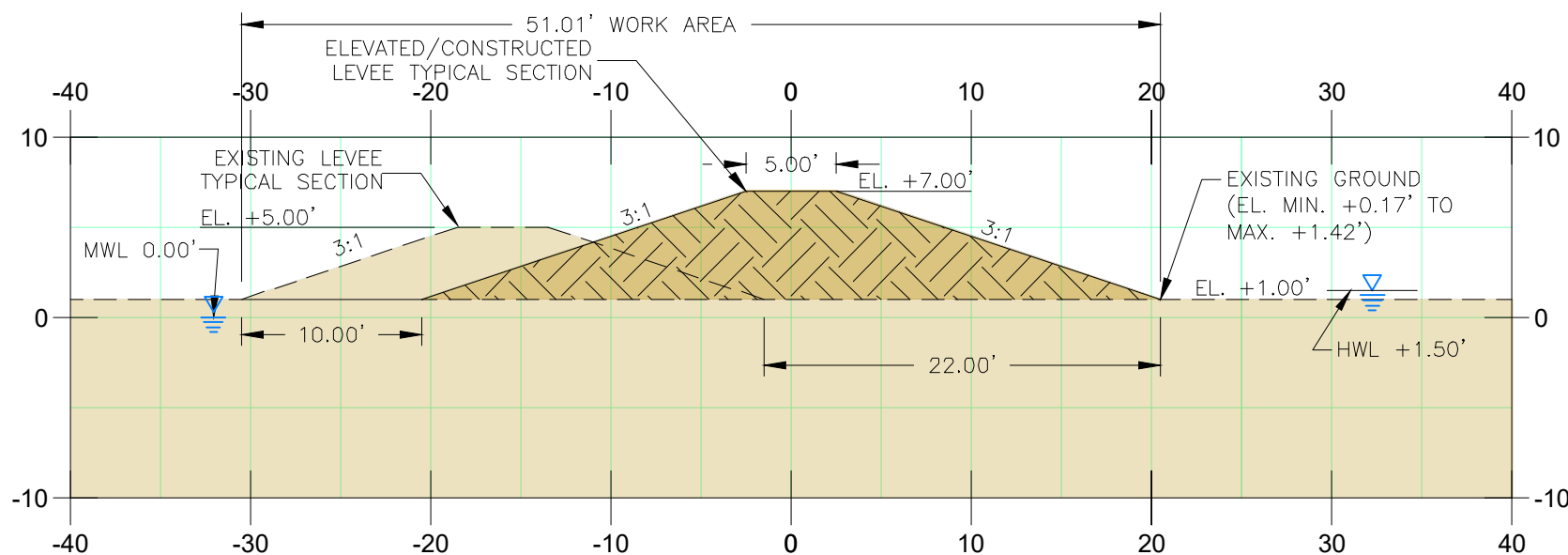
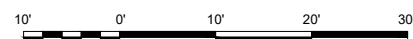
REACH 2 LEVEE CROSS-SECTIONS

Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	March 27, 2023

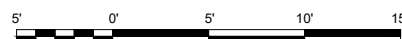
28

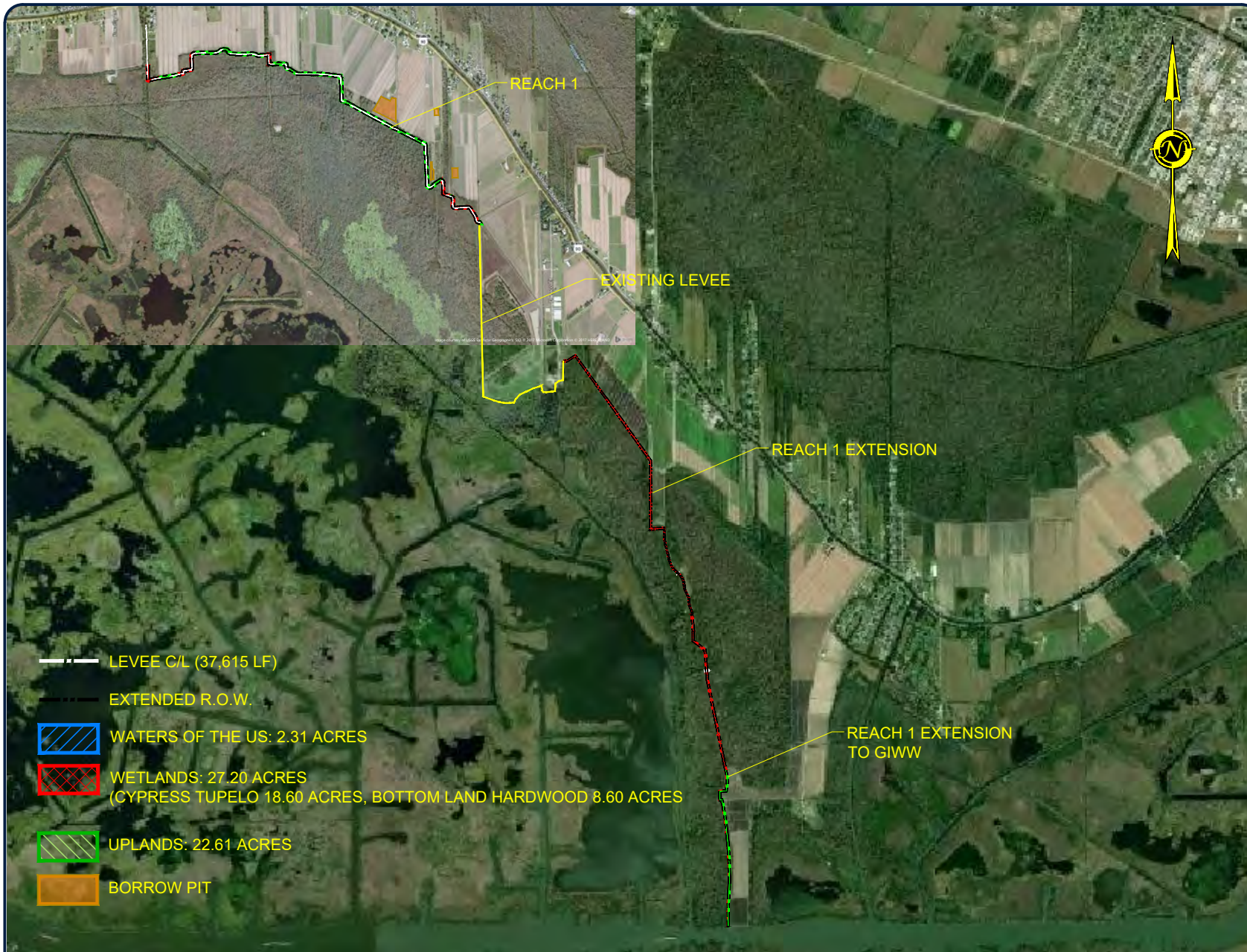


TYPICAL CROSS SECTION 2 - REACH 2: STA. 0+00 TO STA. 175+00 & STA. 200+00 TO 253+18



TYPICAL CROSS SECTION 2 - REACH 2: STA. 175+00 TO STA. 200+00





NOTE: THE IMAGE ABOVE IS A GENERAL REPRESENTATION OF THE WORK AREA, ACTUAL FIELD CONDITIONS MAY DIFFER.



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

ENGINEER'S NAME
LA. LICENSE NO. 00000

TERREBONNE LEVEE
CONSOLIDATION DISTRICT

BAYOU BLACK
BARRIER LEVEE SYSTEM

REACH 1 PLAN VIEW

Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	June 13, 2023

29



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

ENGINEER'S NAME
LA LICENSE NO. 00000

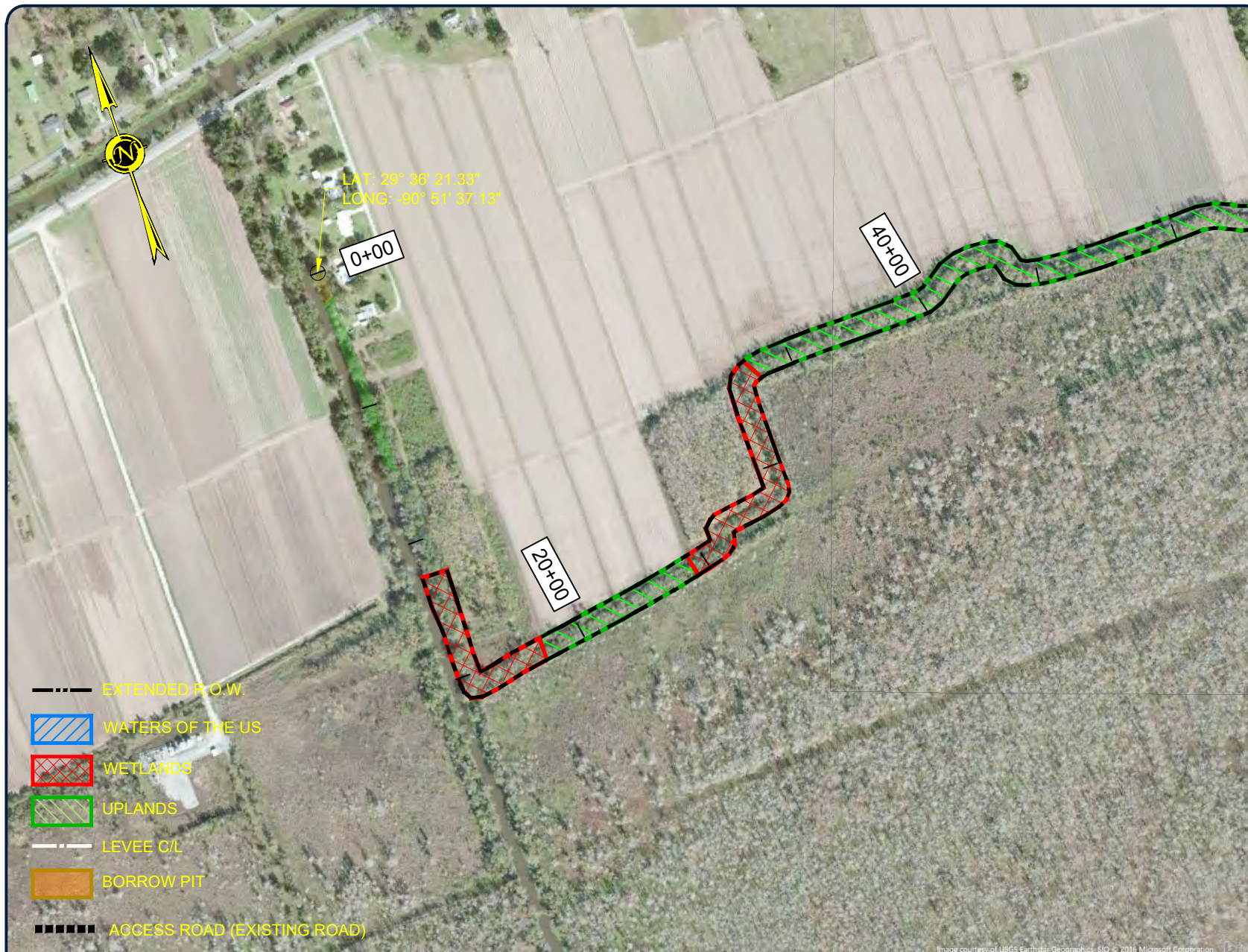
TERREBONNE LEVEE
CONSOLIDATION DISTRICT

BAYOU BLACK
BARRIER LEVEE SYSTEM

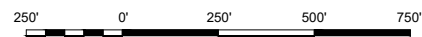
REACH 1 DETAILED PLAN VIEW

Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	March 27, 2023

30



NOTE: THE IMAGE ABOVE IS A GENERAL REPRESENTATION OF THE WORK AREA, ACTUAL FIELD CONDITIONS MAY DIFFER.





ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

ENGINEER'S NAME
LA. LICENSE NO. 00000

TERREBONNE LEVEE
CONSOLIDATION DISTRICT

BAYOU BLACK
BARRIER LEVEE SYSTEM

REACH 1 DETAILED PLAN VIEW

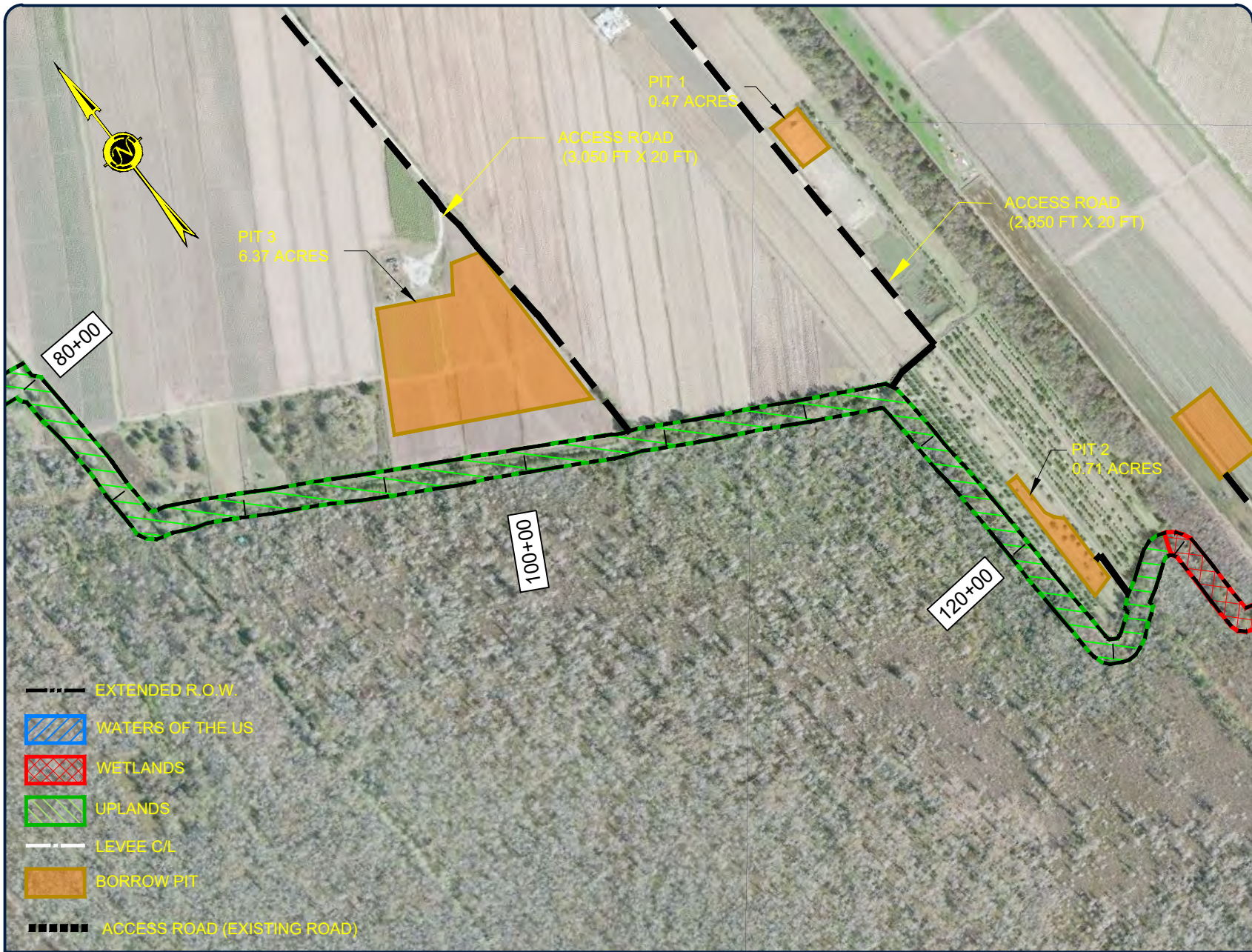
Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	March 27, 2023

31

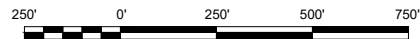


250' 0' 250' 500' 750'

M:\Department 39\Client\TCD-Terrebonne Levee\1294-General Engineering\2021\400-Execution\460-Drawings\461-DWG\Bayou Black Barrier Levee\Reach 1 - Plan View.dwg



NOTE: THE IMAGE ABOVE IS A GENERAL REPRESENTATION OF THE WORK AREA, ACTUAL FIELD CONDITIONS MAY DIFFER.



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

ENGINEER'S NAME
LA LICENSE NO. 00000

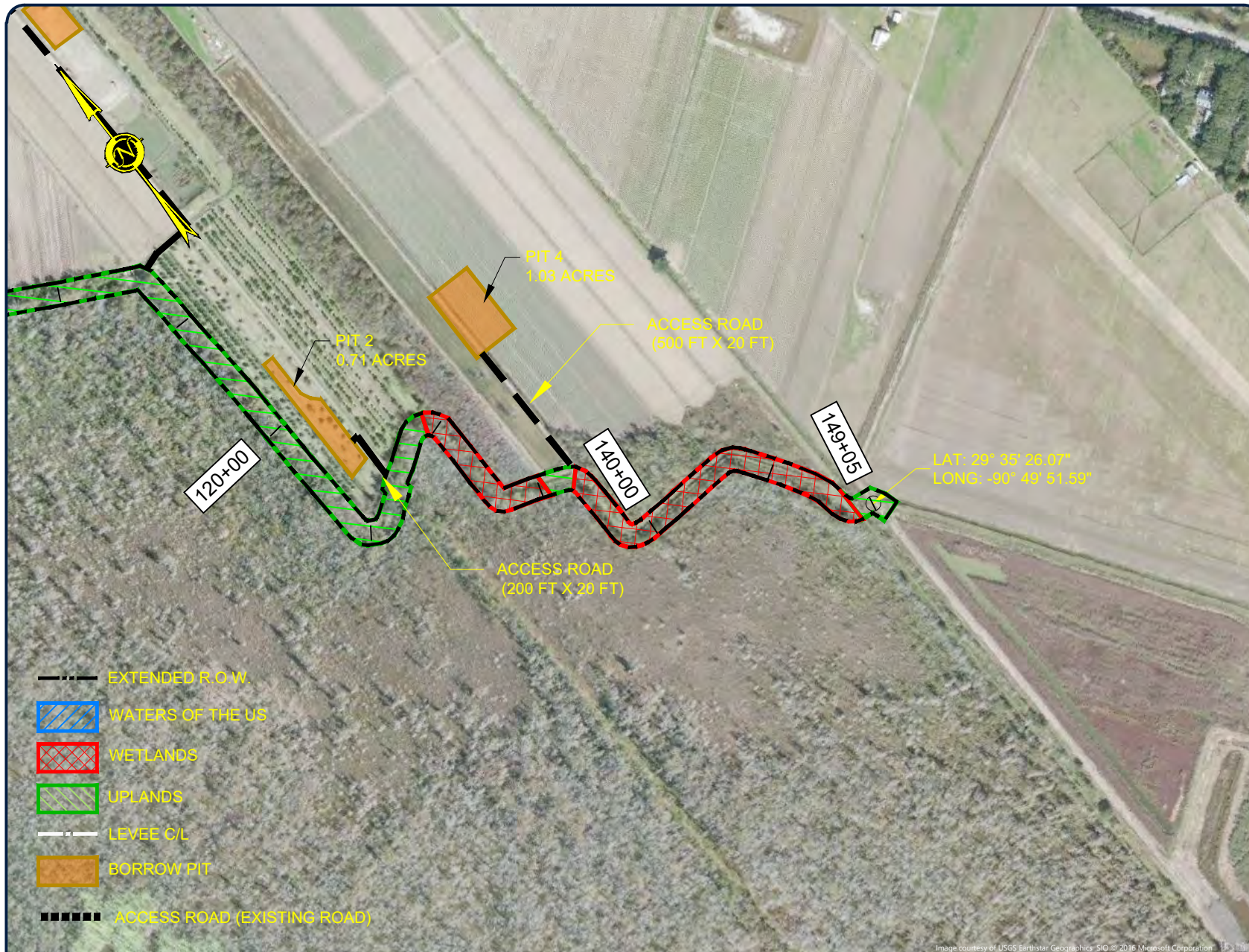
TERREBONNE LEVEE
CONSOLIDATION DISTRICT

BAYOU BLACK
BARRIER LEVEE SYSTEM

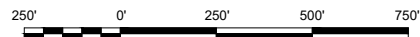
REACH 1 DETAILED PLAN VIEW

Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	March 27, 2023

32



NOTE: THE IMAGE ABOVE IS A GENERAL REPRESENTATION OF THE WORK AREA, ACTUAL FIELD CONDITIONS MAY DIFFER.



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

ENGINEER'S NAME
LA LICENSE NO. 00000

TERREBONNE LEVEE
CONSOLIDATION DISTRICT

BAYOU BLACK
BARRIER LEVEE SYSTEM

REACH 1 DETAILED PLAN VIEW

Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	March 27, 2023

33



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

PERMIT ONLY

THESE DRAWINGS TO BE USED EXCLUSIVELY FOR
ACQUIRING REGULATORY PERMITS

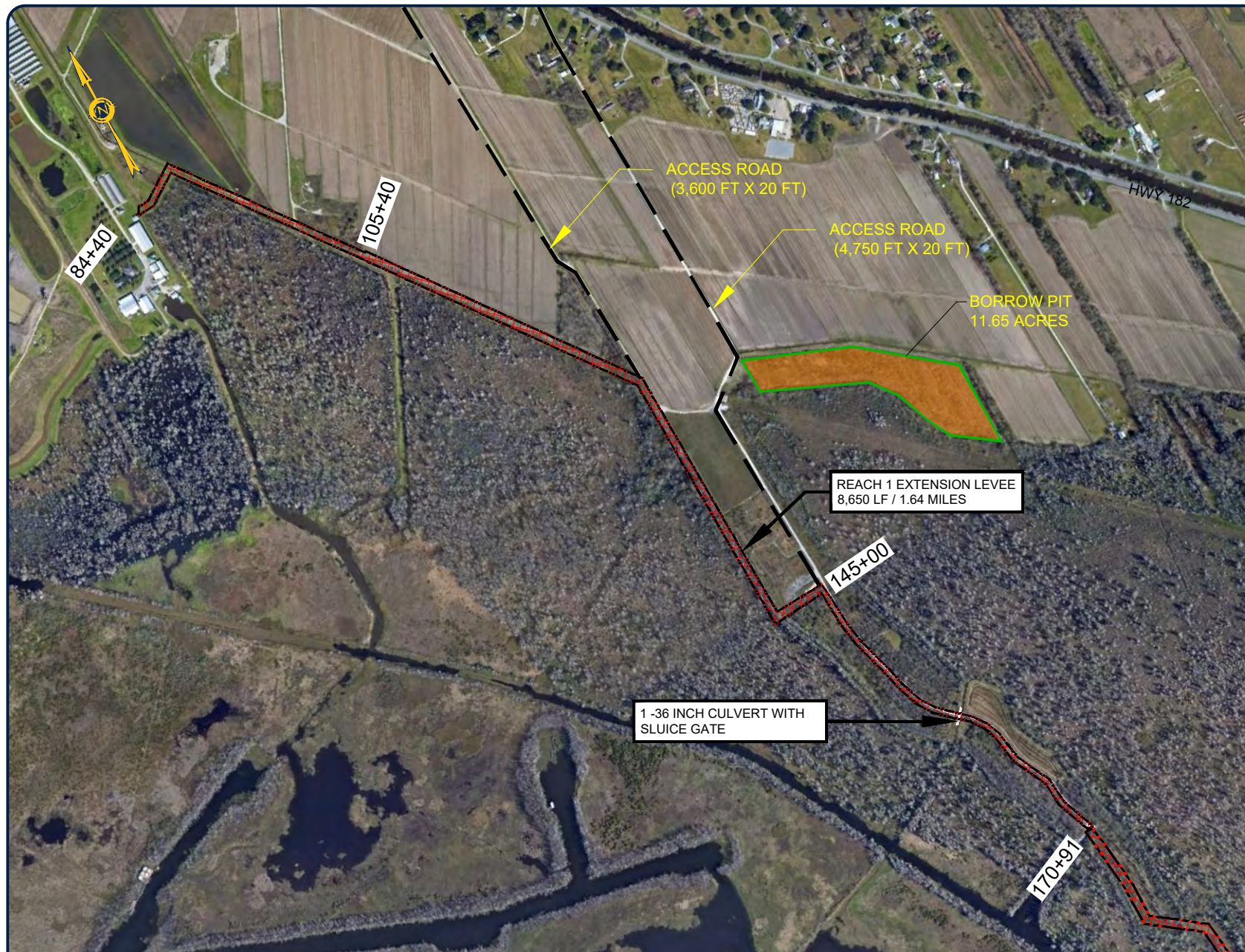
ENGINEER'S NAME
LA. LICENSE NO. 00000

BAYOU BLACK
2019 EMERGENCY
LEVEE ALIGNMENT

REACH 1 EXTENSION LEVEE ALIGNMENT PLAN

Project number	39130-1087
Date	DEC 2020
Designed by	XXX
Drawn by	MJC
Checked by	SP
Checked by	XXX
Plot Date	March 27, 2023

34



NOTE: THE IMAGE ABOVE IS A GENERAL REPRESENTATION OF THE WORK AREA, ACTUAL FIELD CONDITIONS MAY DIFFER.

NOTE:
VOLUME OF MATERIAL REQUIRED = 56,450 CY

- AREA OF WETLAND IMPACTED = 4.95 ACRES
- LEVEE ALIGNMENT (8,650 LF)



NOTE: SEE TYPICAL SECTION SHEET 38



NOTE: THE IMAGE ABOVE IS A GENERAL REPRESENTATION OF THE WORK AREA, ACTUAL FIELD CONDITIONS MAY DIFFER.

NOTE: SEE TYPICAL SECTION SHEET 39

NOTE:
VOLUME OF MATERIAL REQUIRED = 76,100 CY

AREA OF WETLAND IMPACTED = 8.5 ACRES

LEVEE ALIGNMENT (9,208 LF)



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

PERMIT ONLY

THESE DRAWINGS TO BE USED EXCLUSIVELY FOR
ACQUIRING REGULATORY PERMITS

ENGINEER'S NAME
LA. LICENSE NO. 00000

BAYOU BLACK
2019 EMERGENCY
LEVEE ALIGNMENT

REACH 1 EXTENSION TO GIWW LEVEE ALIGNMENT PLAN

Project number	39130-1087
Date	DEC 2020
Designed by	XXX
Drawn by	MJC
Checked by	SP
Checked by	XXX
Plot Date	March 27, 2023

35



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

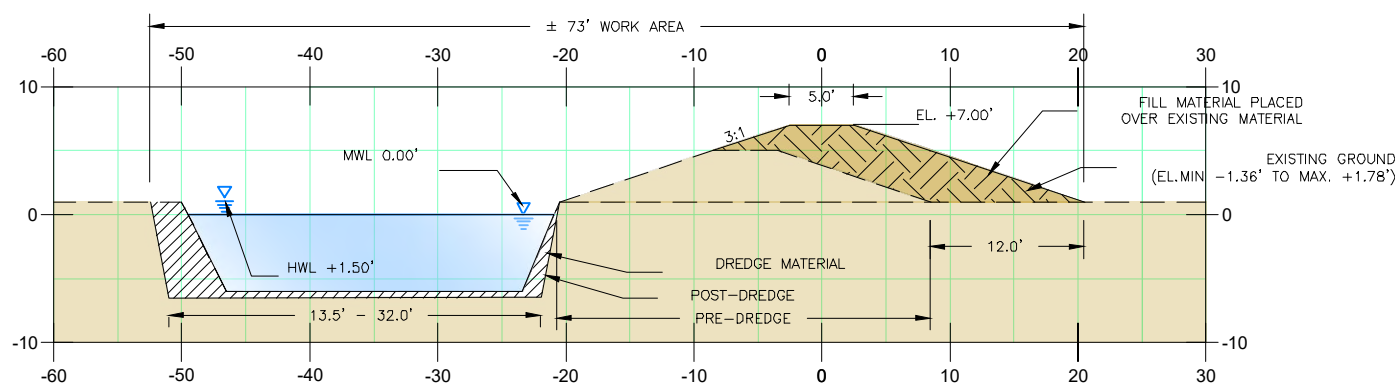
ENGINEER'S NAME
LA LICENSE NO. 00000

TERREBONNE LEVEE
CONSOLIDATION DISTRICT
BAYOU BLACK
BARRIER LEVEE SYSTEM

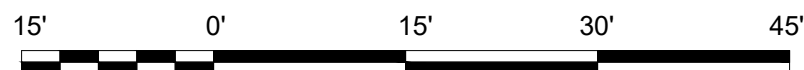
REACH 1 LEVEE CROSS-SECTIONS

Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	March 27, 2023

36



TYPICAL CROSS SECTION - REACH 1: STA. 11+00 TO STA. 149+00



LEGEND

- NEW FILL MATERIAL
- EXISTING CONDITIONS
- EXCAVATION AREA



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 473-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

PERMIT ONLY

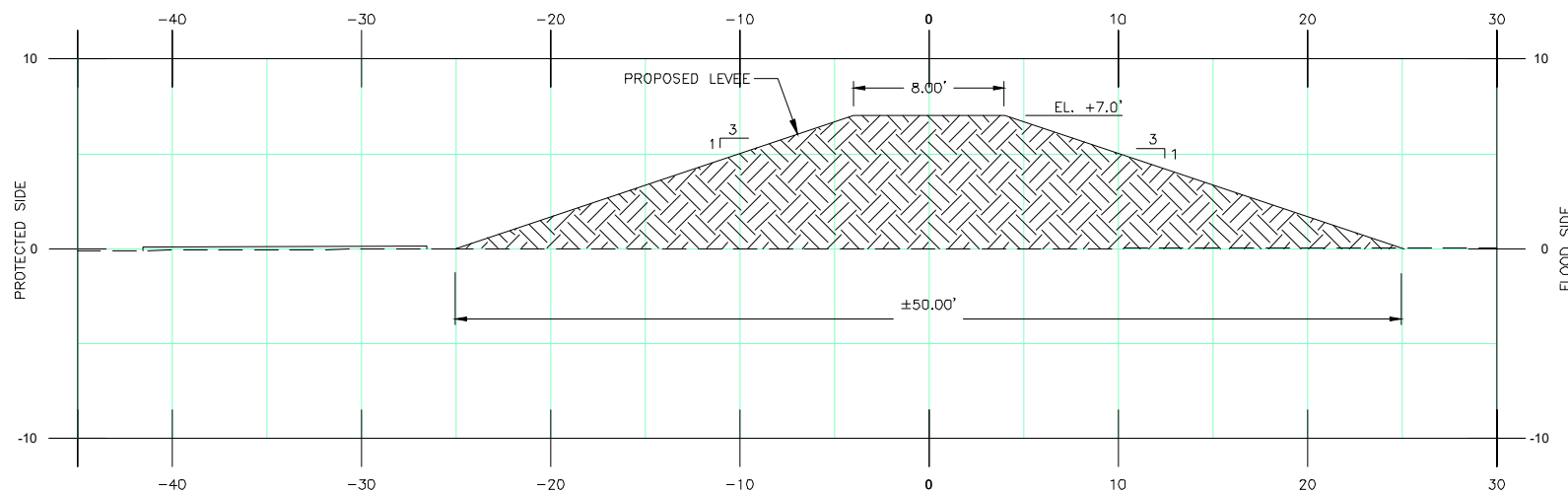
THESE DRAWINGS TO BE USED EXCLUSIVELY FOR
ACQUIRING REGULATORY PERMITS
DUSTIN M. MALBROUGH
LA LICENSE NO. 36779

**BAYOU BLACK
2019 EMERGENCY
LEEVE ALIGNMENT**

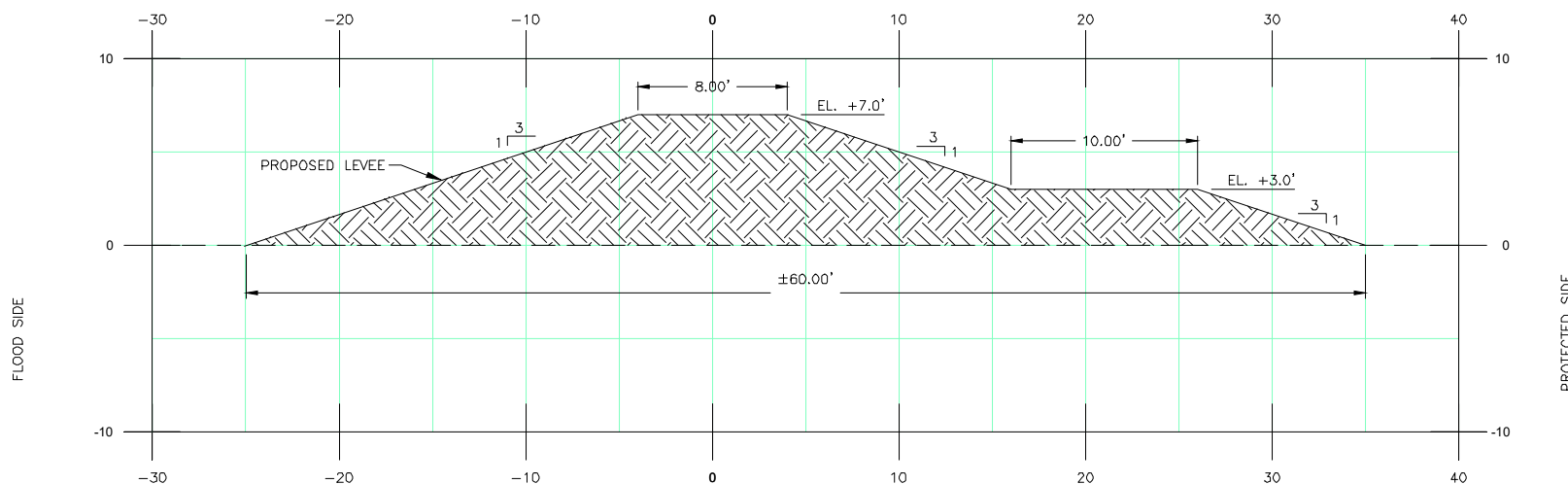
**REACH 1 EXTENSION
TYPICAL SECTIONS**

Project number	39130-1087
Date	DEC 2020
Designed by	XXX
Drawn by	MJC
Checked by	SP
Checked by	XXX
Plot Date	March 27, 2023

37



**REACH 1 EXTENSION LEEVE ALIGNMENT
TYPICAL SECTION: STA. 145+00 TO STA. 170+91**
SCALE: 1" = 10'-0"



**TYPICAL SECTION: REACH 1 EXTENSION LEEVE ALIGNMENT
STA. 105+40 TO STA. 145+00**
SCALE: 1" = 10'-0"



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 473-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

PERMIT ONLY

THESE DRAWINGS TO BE USED EXCLUSIVELY FOR
ACQUIRING REGULATORY PERMITS

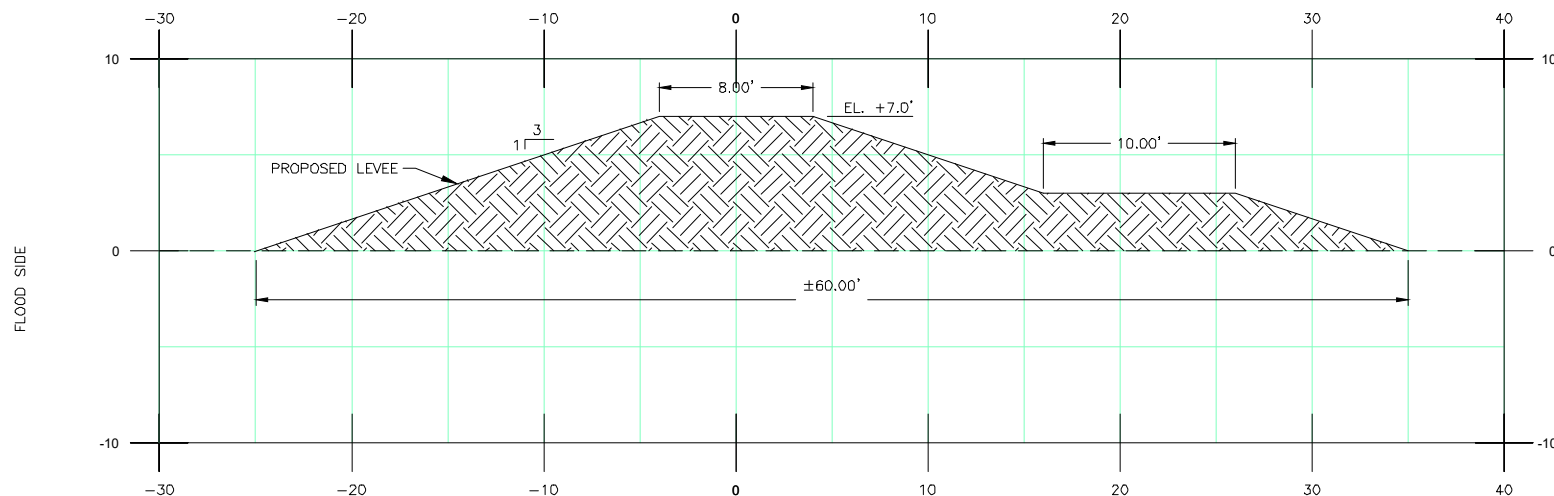
ENGINEER'S NAME
LA. LICENSE NO. 00000

**BAYOU BLACK
2019 EMERGENCY
LEVEE ALIGNMENT**

**REACH 1
EXTENSION TO GIWW
TYPICAL SECTIONS**

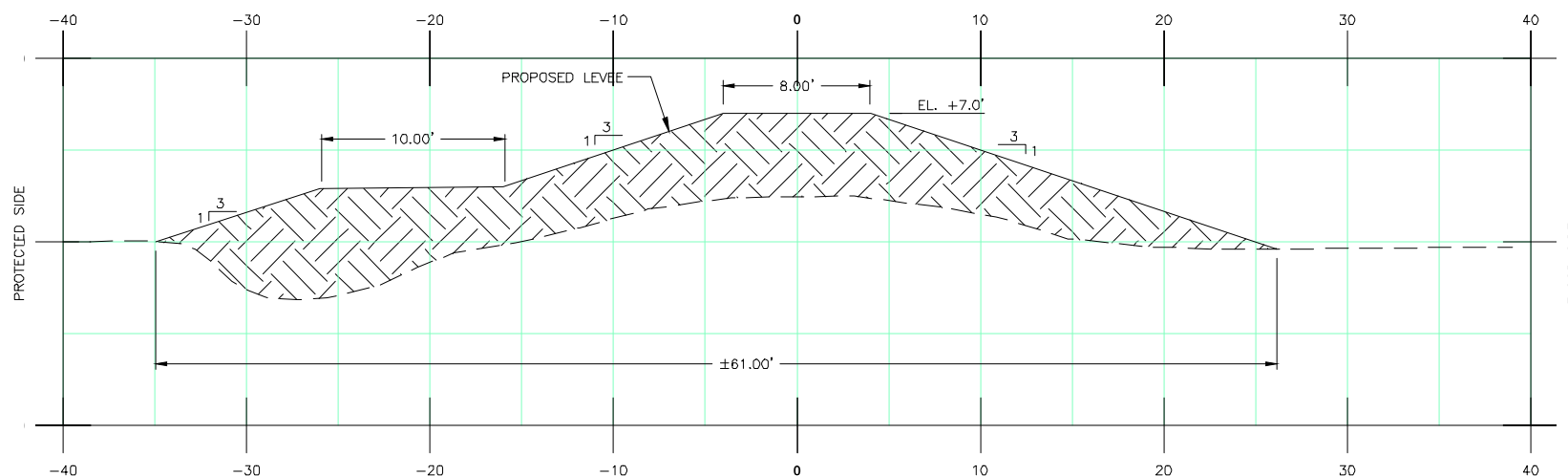
Project number	39130-1087
Date	DEC 2020
Designed by	XXX
Drawn by	MJC
Checked by	SP
Checked by	XXX
Plot Date	March 27, 2023

38



**TYPICAL SECTION: REACH 1 EXTENSION TO GIWW LEVEE ALIGNMENT
STA. 00+00 TO STA. 84+00**

SCALE: 1" = 10'-0"



**TYPICAL SECTION: REACH 1 EXTENSION TO GIWW LEVEE ALIGNMENT
STA. 84+00 TO STA. 92+08**

SCALE: 1" = 10'-0"



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 473-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

PERMIT ONLY

THESE DRAWINGS TO BE USED EXCLUSIVELY FOR
ACQUIRING REGULATORY PERMITS

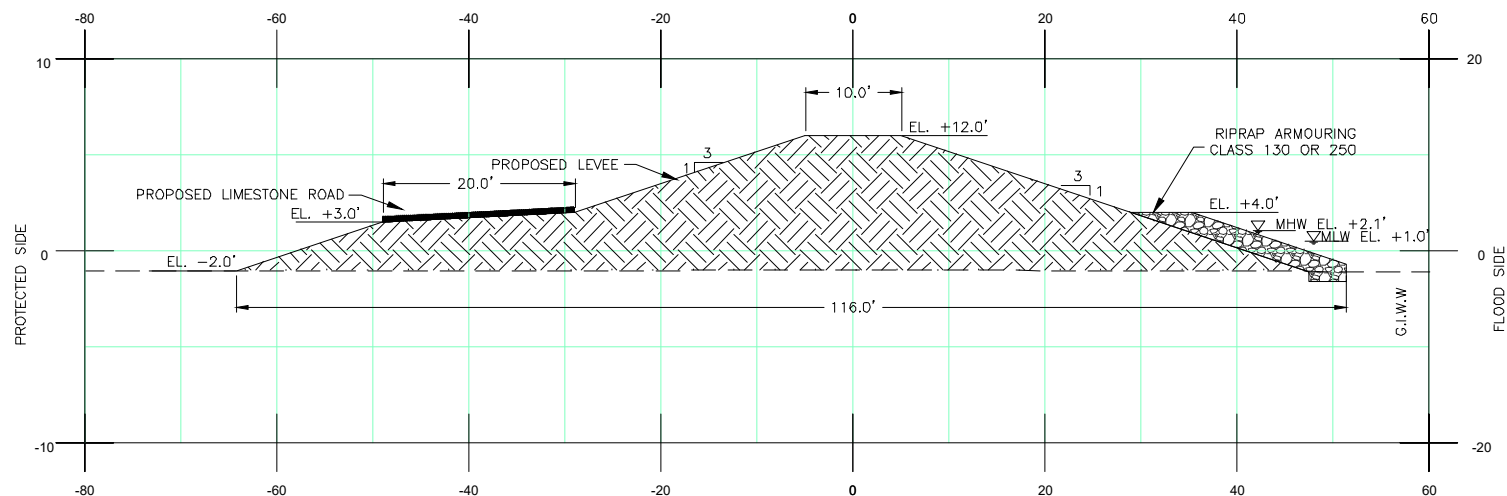
ENGINEER'S NAME
LA. LICENSE NO. 00000

**BAYOU BLACK
2019 EMERGENCY
LEVEE ALIGNMENT**

**REACH 1
EXTENSION TO GIWW
TYPICAL SECTIONS**

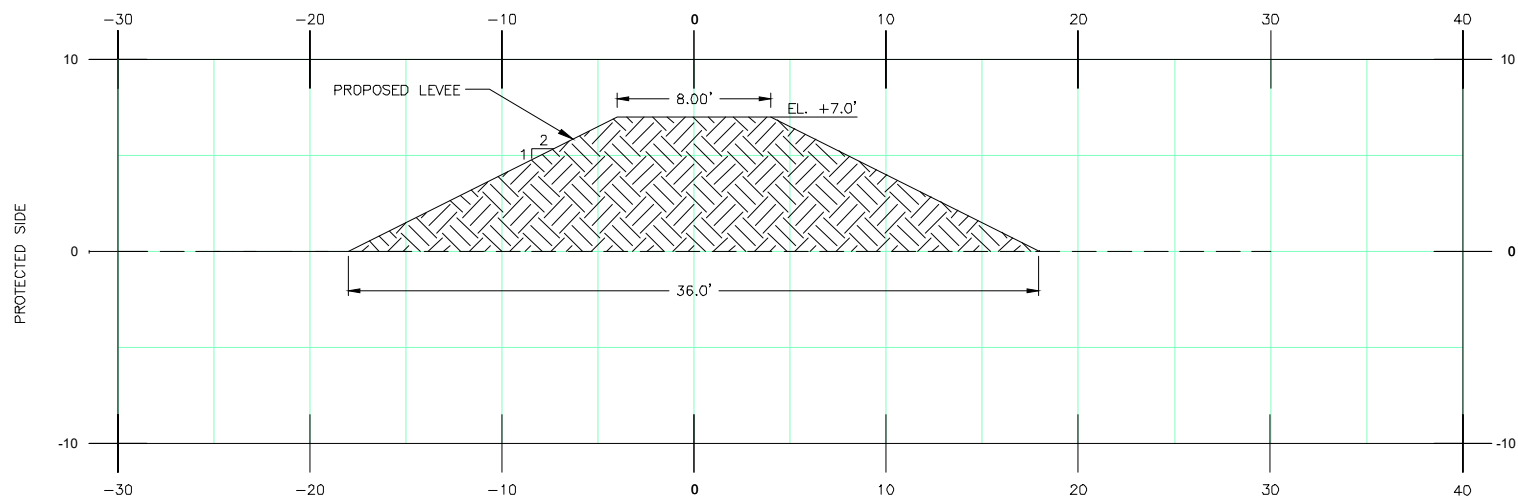
Project number	39130-1087
Date	DEC 2020
Designed by	XXX
Drawn by	MJC
Checked by	SP
Checked by	XXX
Plot Date	March 27, 2023

39



**TYPICAL SECTION: LEVEE EXTENSION TO MINORS CANAL FLOODGATE
STA. 00+00 TO STA. 55+50**

SCALE: 1" = 20'-0"



**TYPICAL SECTION: REACH 1 EXTENSION LEVEE ALIGNMENT
STA. 84+40 TO STA. 105+40**

SCALE: 1" = 10'-0"



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

ENGINEER'S NAME
LA. LICENSE NO. 00000

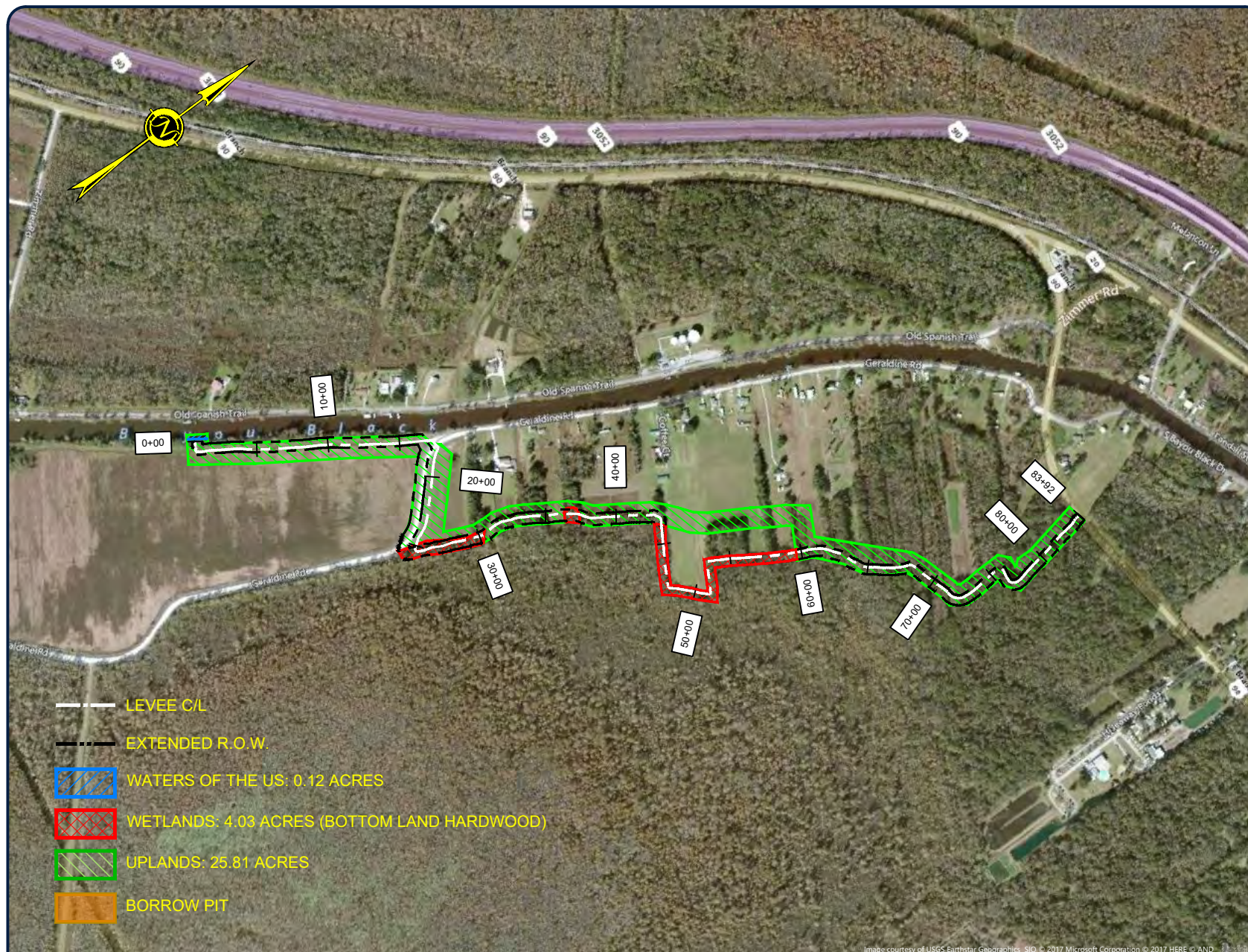
TERREBONNE LEVEE
CONSOLIDATION DISTRICT

BAYOU BLACK
BARRIER LEVEE SYSTEM

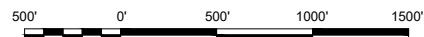
GERALDINE ALIGNMENT PLAN VIEW

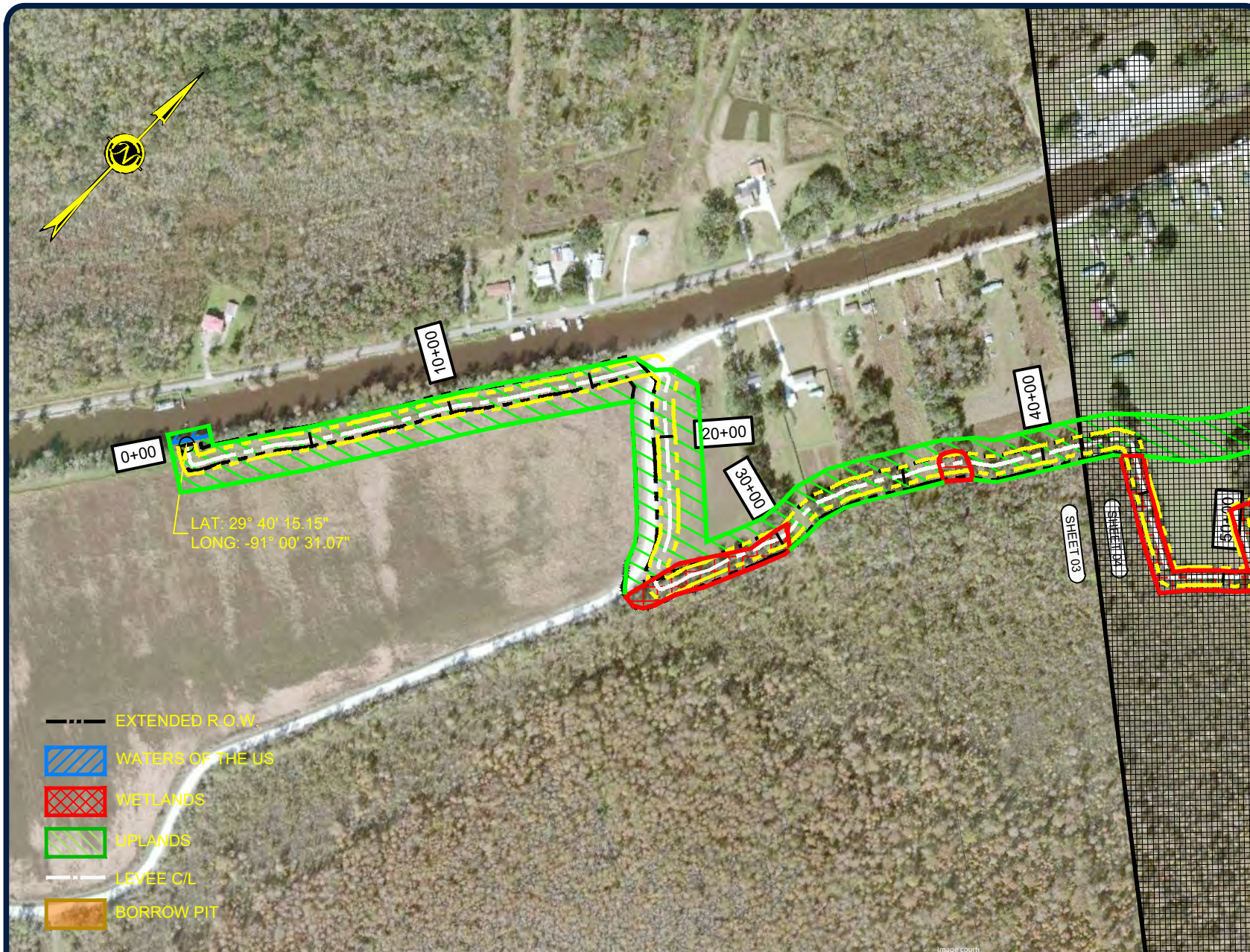
Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	May 1, 2023

40



NOTE: THE IMAGE ABOVE IS A GENERAL REPRESENTATION OF THE WORK AREA, ACTUAL FIELD CONDITIONS MAY DIFFER.





ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

ENGINEER'S NAME
LA LICENSE NO. 00000

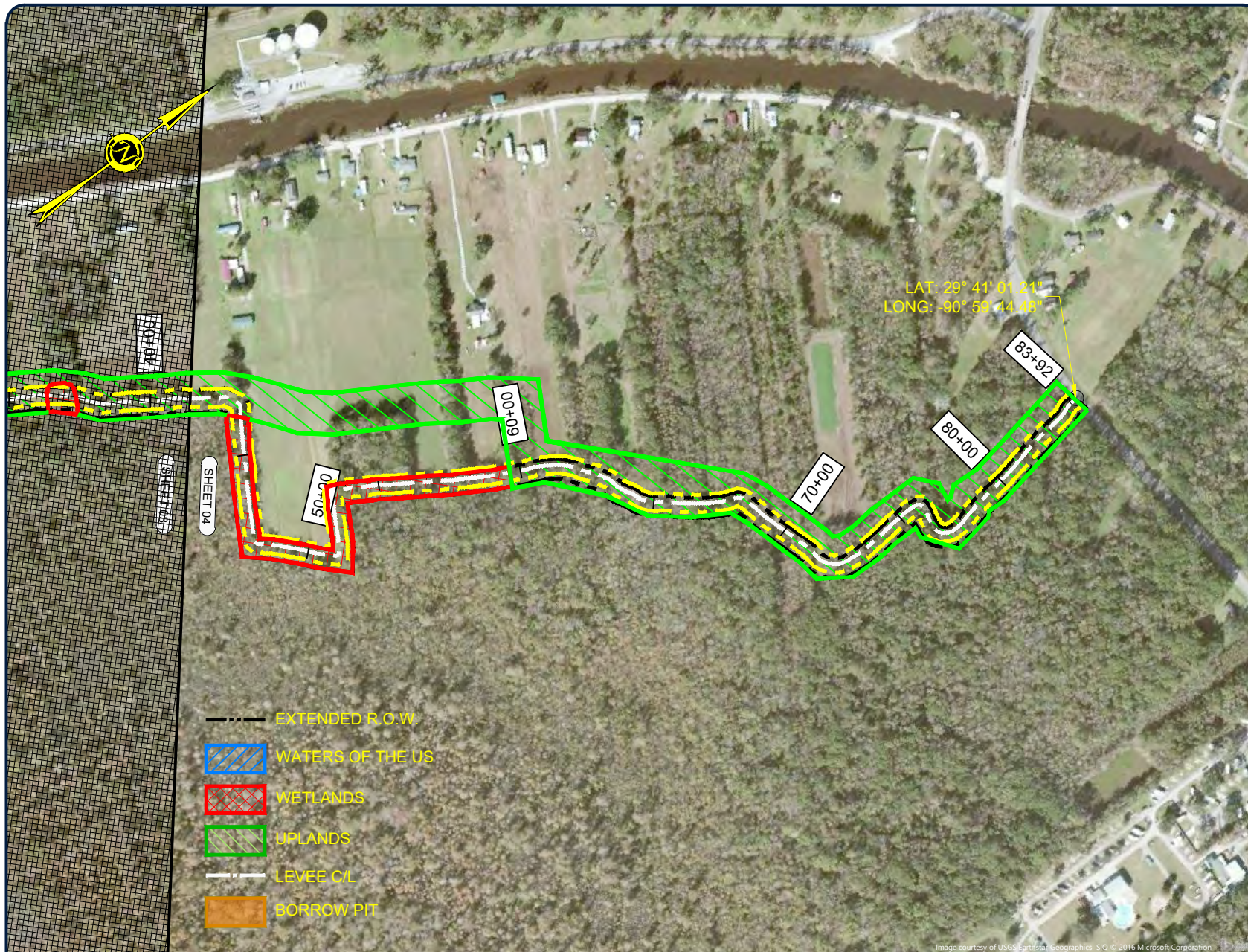
TERREBONNE LEVEE
CONSOLIDATION DISTRICT

BAYOU BLACK
BARRIER LEVEE SYSTEM

**GERALDINE
ALIGNMENT DETAILED
PLAN VIEW**

Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	March 27, 2023

41



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014
ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

ENGINEER'S NAME
LA LICENSE NO. 00000

TERREBONNE LEVEE
CONSOLIDATION DISTRICT

BAYOU BLACK
BARRIER LEVEE SYSTEM

GERALDINE ALIGNMENT DETAILED PLAN VIEW

Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	March 27, 2023

42



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014
ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

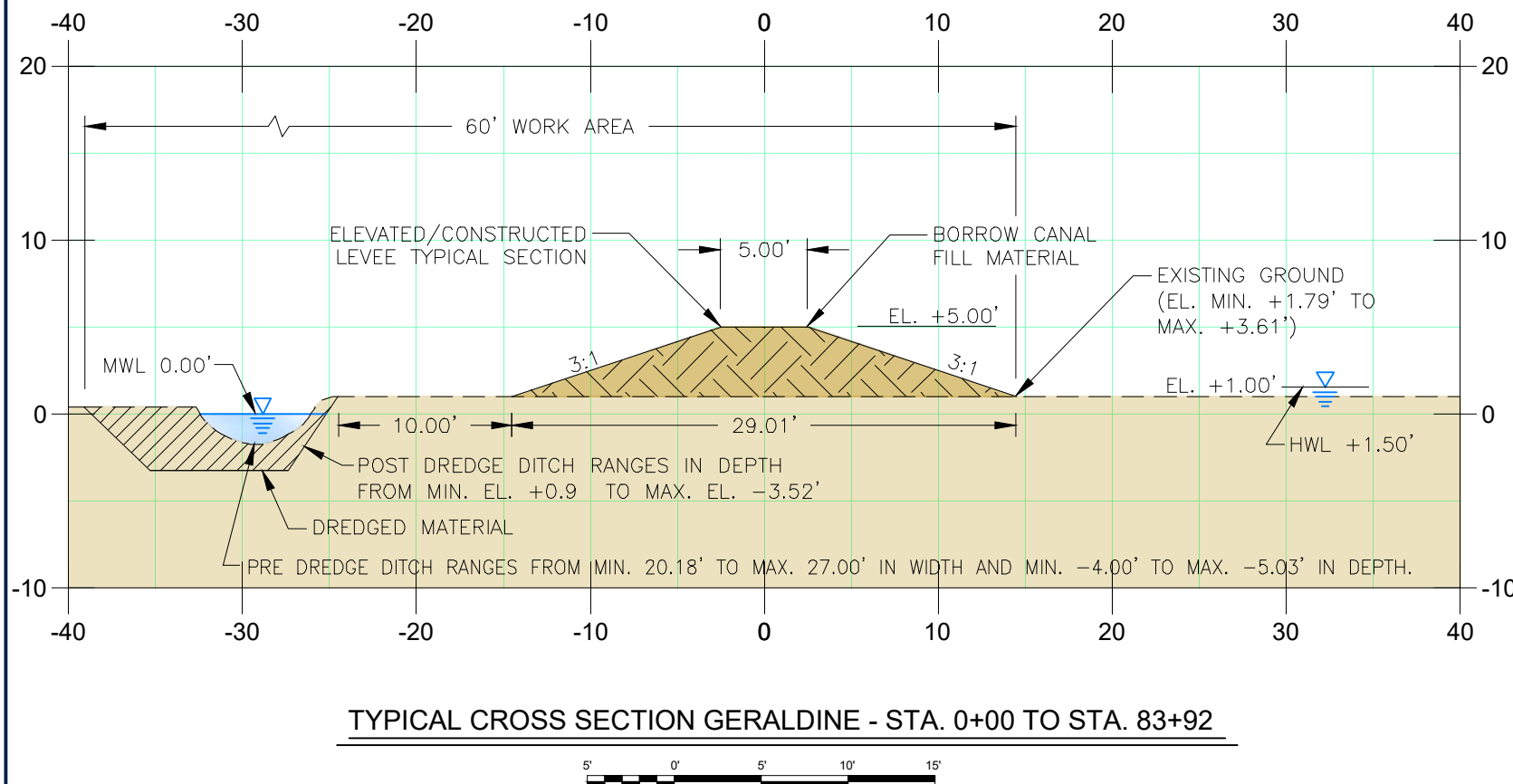
ENGINEER'S NAME
LA. LICENSE NO. 00000

TERREBONNE LEVEE
CONSOLIDATION DISTRICT
BAYOU BLACK
BARRIER LEVEE SYSTEM

GERALDINE LEVEE CROSS-SECTION

Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	March 27, 2023

43



NOTES:

- CROSS SECTIONS VARY ALONG THE ENTIRE LENGTH OF THE ALIGNMENT.
- USE TYPICAL SECTION GIVEN INITIALLY (AT PLACES WHERE THE CROSS SECTION IS NOT AVAILABLE) TO DENOTE THE WIDTH OF THE WORKING AREA.
- NO CONSTRUCTION WORK WAS PERFORMED OUTSIDE OF THE LEVEE R.O.W.

LEGEND

	NEW FILL MATERIAL
	EXISTING CONDITIONS
	EXCAVATION AREA



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, LA 70363
O: (985) 219-1000 | F: (985) 475-7014
ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

ENGINEER'S NAME
LA. LICENSE NO. 00000

TERREBONNE LEVEE
CONSOLIDATION DISTRICT

BAYOU BLACK
BARRIER LEVEE SYSTEM

BAYOU BLACK BARRIER
LEVEE SYSTEM
WETLAND IMPACTS

Project number	39130-1294
Date	DEC 2021
Designed by	SDP
Drawn by	SDP
Checked by	MM
Checked by	XXX
Plot Date	June 12, 2023

44

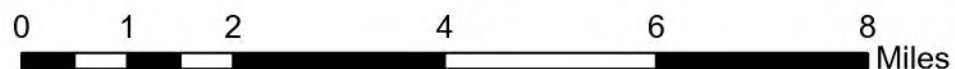
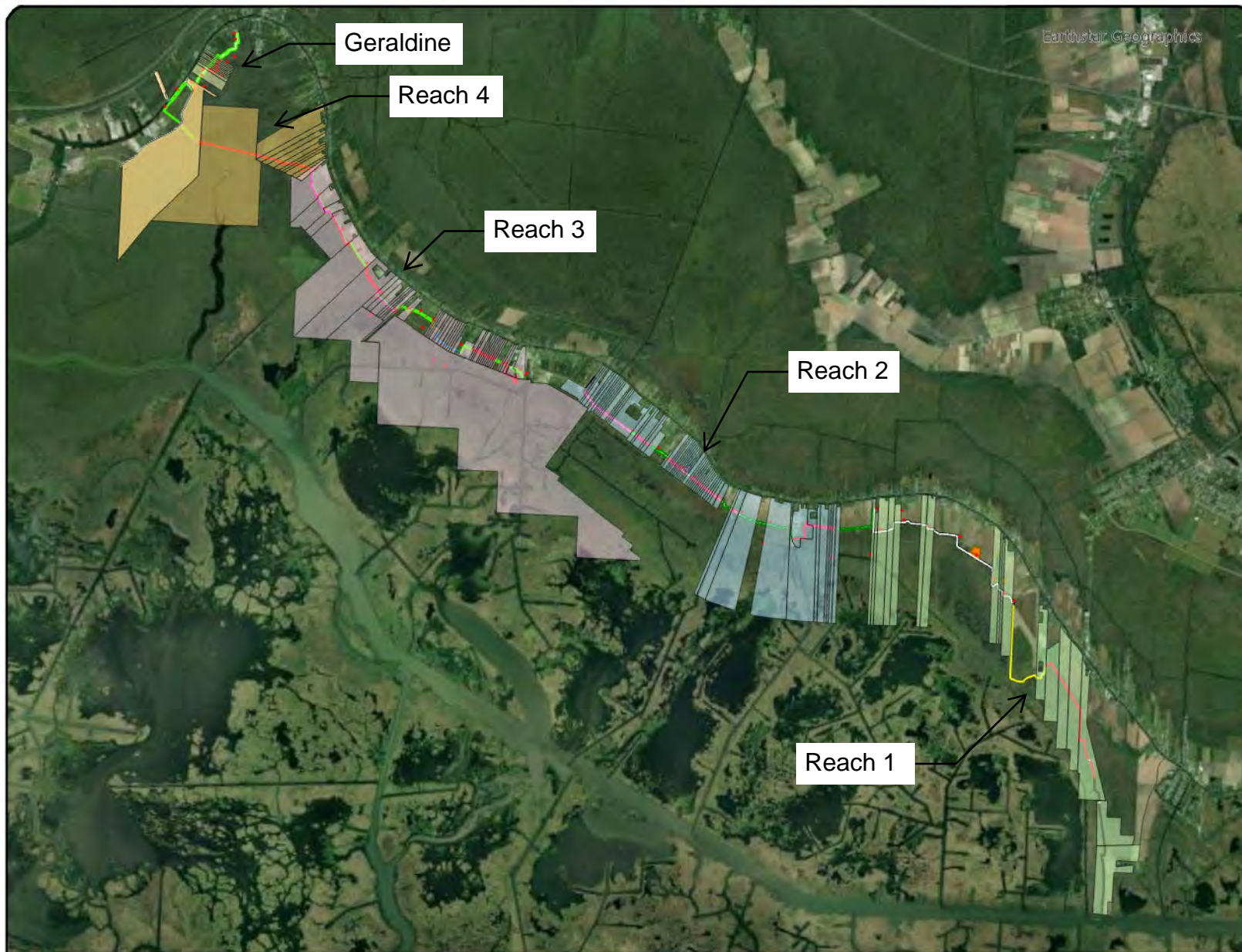
WETLAND IMPACT (acres)

REACH	UPLANDS	PFO2/1F WETLANDS CYPRESS TUPELO	PFO1C BOTTOMLAND HARDWOOD
REACH 1*	22.61	18.6	8.6
REACH 2	35.77	5.62	32.75
REACH 3	26.69	13.96	12.68
REACH 4**	3.67	9.45	2.62
GERALDINE	25.81	0	4.03
TOTAL	114.55	47.63	60.68

* Includes Reach 1 Extension

**17.90 acres PFO2/1F (7795'x100'), 4.36 acres PFO1C (1900'x100')

NOTE: THE IMAGE ABOVE IS A GENERAL REPRESENTATION OF THE WORK AREA, ACTUAL FIELD CONDITIONS MAY DIFFER.



Scale: 1:115,000



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, Louisiana 70363
O: 985-219-1000

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

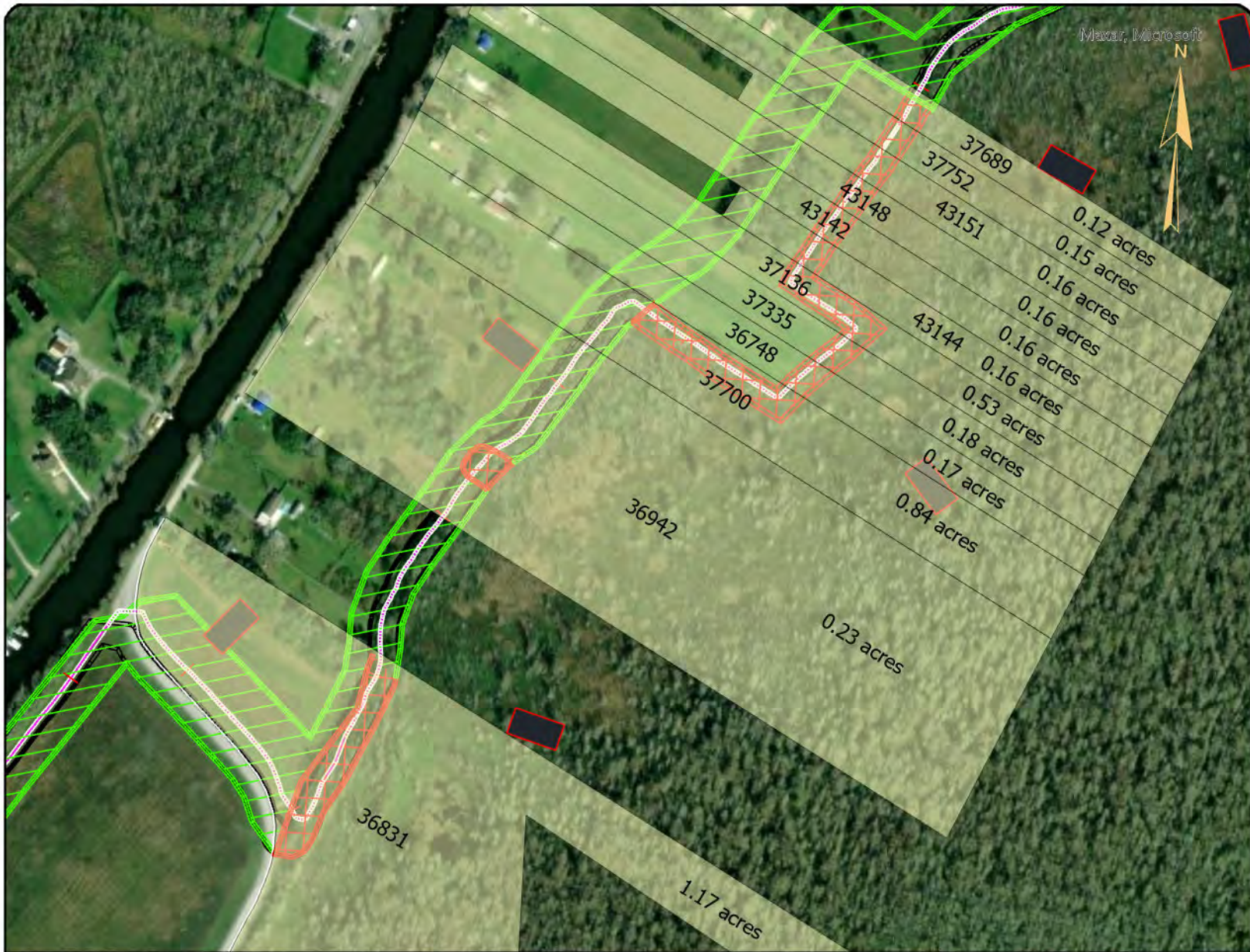
TERREBONNE LEVEE CONSERVATION DISTRICT

BAYOU BLACK BARRIER
LEVEE SYSTEM

INDIVIDUAL PARCEL IMPACT

Project Number	39130-1025
Date	MAY 2023
Designed by	MCB
Drawn by	MCB
Checked by	MM
Checked by	MM
Date Printed:	June 12, 2023

45



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, Louisiana 70363
O: 985-219-1000

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

**TERREBONNE LEVEE
CONSERVATION DISTRICT**

BAYOU BLACK BARRIER
LEVEE SYSTEM

GERALDINE REACH

Project Number	39130-1025
Date	MAY 2023
Designed by	MCB
Drawn by	MCB
Checked by	MM
Checked by	MM
Date Printed:	June 12, 2023

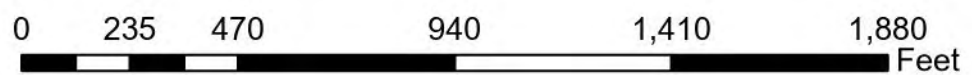
46

0 0.04 0.09 0.17 0.26 0.34 Miles

Scale: 1:5,000



Scale: 1:5,000



ENGINEERING LLC
 Coastal Design & Infrastructure
 197 Elysian Drive
 Houma, Louisiana 70363
 O: 985-219-1000
 ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS		
No.	Description	Date

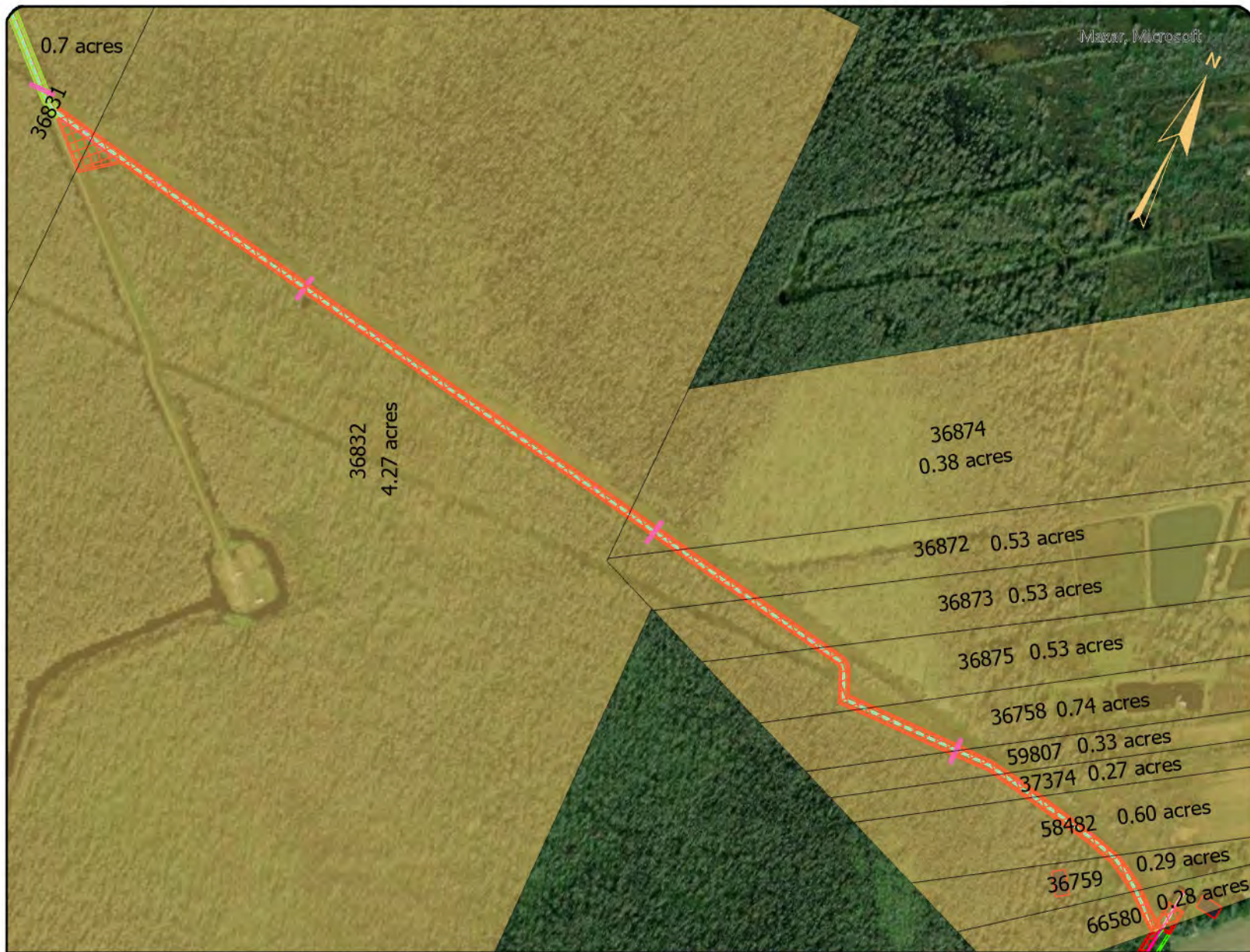
FOR PERMIT APPLICATION ONLY

TERREBONNE LEVEE
CONSERVATION DISTRICT
 BAYOU BLACK BARRIER
 LEVEE SYSTEM

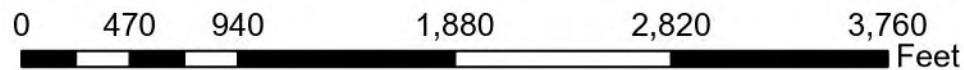
REACH 4

Project Number	39130-1025
Date	MAY 2023
Designed by	MCB
Drawn by	MCB
Checked by	MM
Checked by	MM
Date Printed:	June 12, 2023

47



Scale: 1:10,000



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, Louisiana 70363
O: 985-219-1000

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

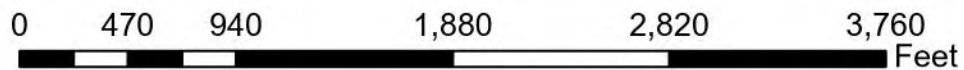
**TERREBONNE LEVEE
CONSERVATION DISTRICT**

BAYOU BLACK BARRIER
LEVEE SYSTEM

REACH 4

Project Number	39130-1025
Date	MAY 2023
Designed by	MCB
Drawn by	MCB
Checked by	MM
Checked by	MM
Date Printed:	June 12, 2023

48



Scale: 1:10,000



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, Louisiana 70363
O: 985-219-1000

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

**TERREBONNE LEVEE
CONSERVATION DISTRICT**

BAYOU BLACK BARRIER
LEVEE SYSTEM

REACH 3

Project Number	39130-1025
Date	MAY 2023
Designed by	MCB
Drawn by	MCB
Checked by	MM
Checked by	MM
Date Printed:	June 12, 2023

49



0 470 940 1,880 2,820 3,760 Feet

Scale: 1:10,000



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, Louisiana 70363
O: 985-219-1000

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

FOR PERMIT APPLICATION ONLY

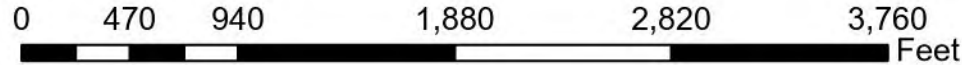
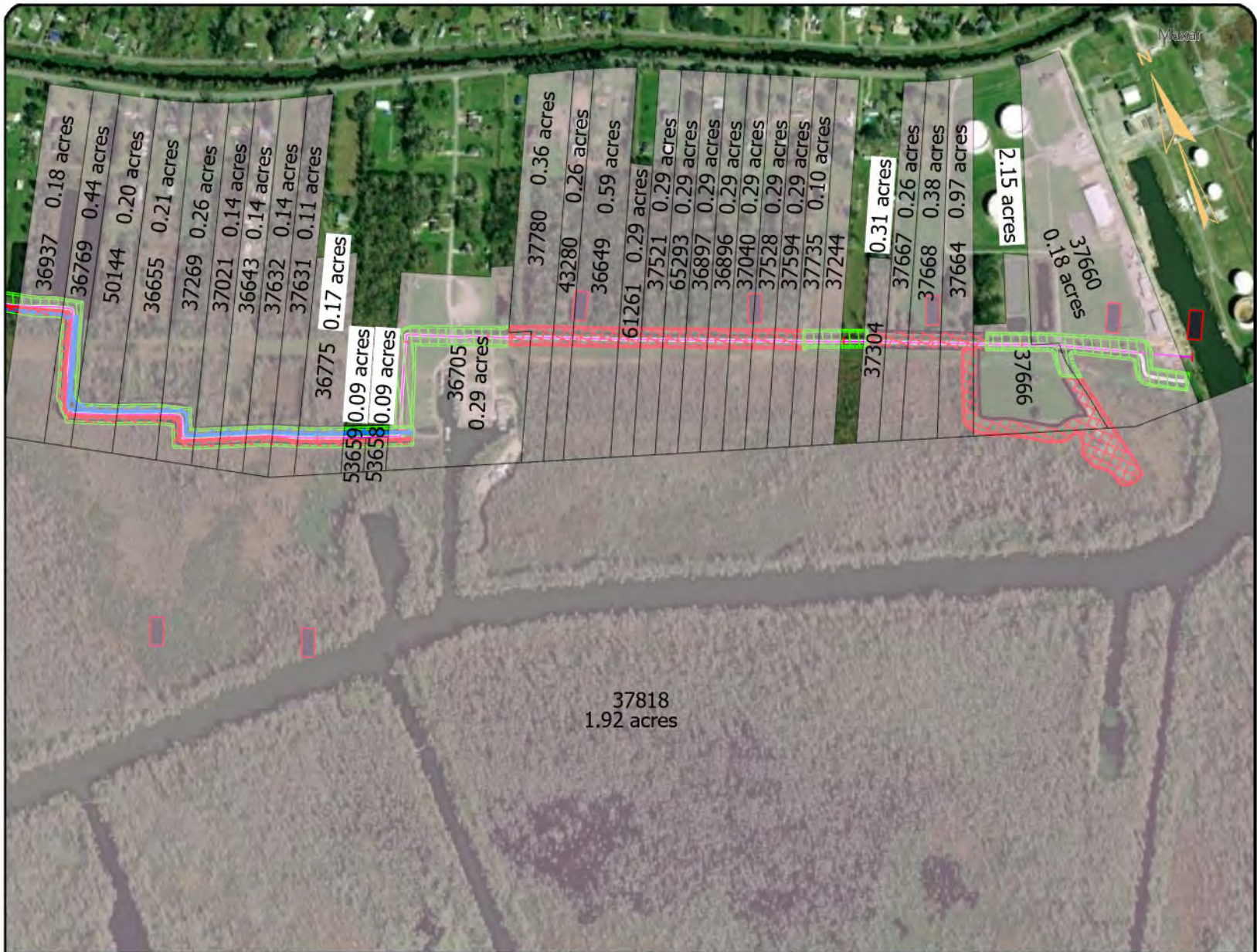
TERREBONNE LEVEE CONSERVATION DISTRICT

BAYOU BLACK BARRIER
LEVEE SYSTEM

REACH 3

Project Number	39130-1025
Date	MAY 2023
Designed by	MCB
Drawn by	MCB
Checked by	MM
Checked by	MM
Date Printed:	June 12, 2023

50



Scale: 1:10,000



ENGINEERING LLC
 Coastal Design & Infrastructure
 197 Elysian Drive
 Houma, Louisiana 70363
 O: 985-219-1000
 ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

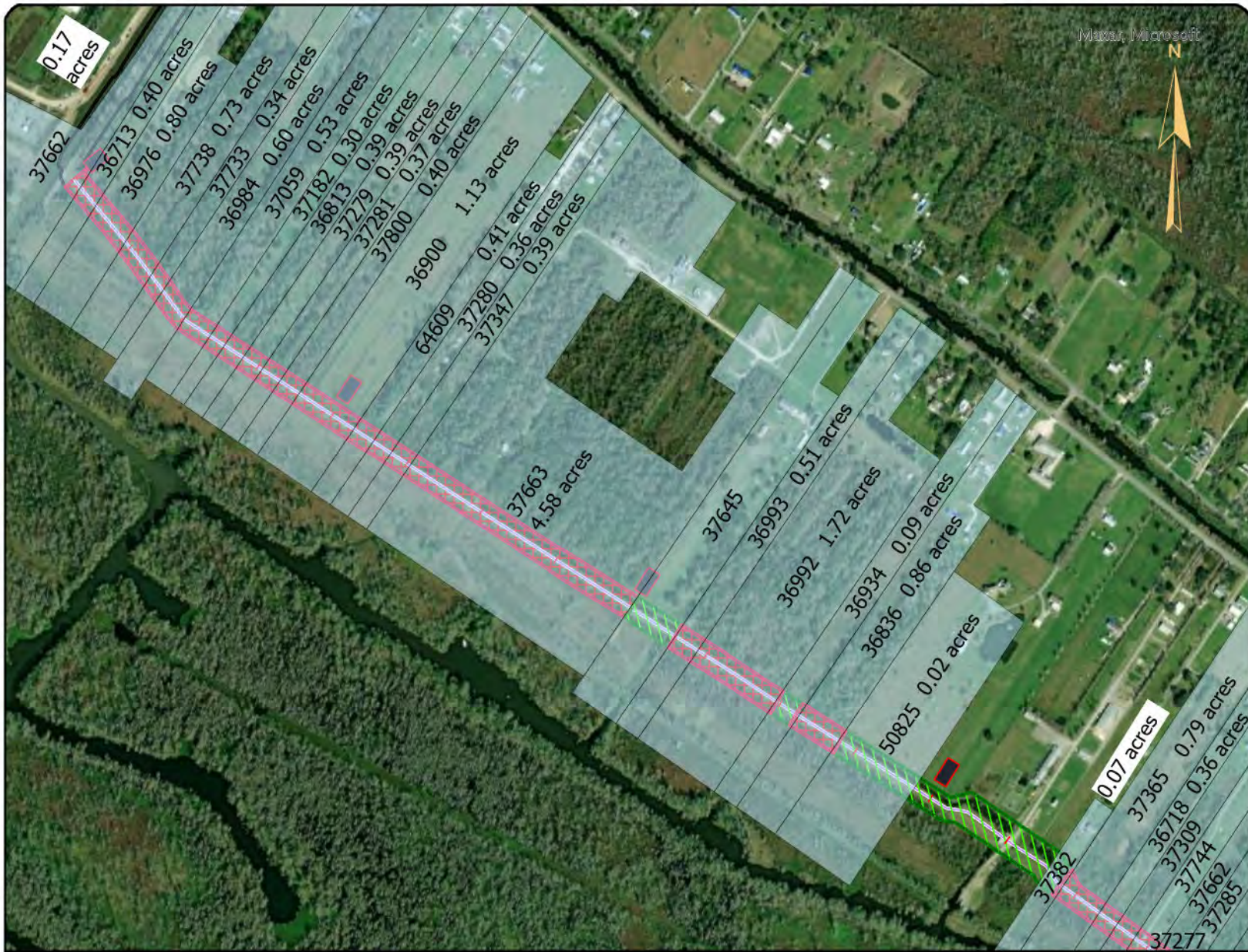
REVISIONS		
No.	Description	Date

FOR PERMIT APPLICATION ONLY

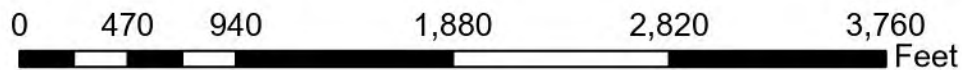
TERREBONNE LEVEE
CONSERVATION DISTRICT
 BAYOU BLACK BARRIER
 LEVEE SYSTEM

REACH 3

Project Number	39130-1025
Date	MAY 2023
Designed by	MCB
Drawn by	MCB
Checked by	MM
Checked by	MM
Date Printed:	June 13, 2023



Scale: 1:10,000



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, Louisiana 70363
O: 985-219-1000

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

FOR PERMIT APPLICATION ONLY

TERREBONNE LEVEE CONSERVATION DISTRICT

BAYOU BLACK BARRIER
LEVEE SYSTEM

REACH 2

Project Number	39130-1025
Date	MAY 2023
Designed by	MCB
Drawn by	MCB
Checked by	MM
Checked by	MM
Date Printed:	June 12, 2023

52



0 470 940 1,880 2,820 3,760 Feet

Scale: 1:10,000



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, Louisiana 70363
O: 985-219-1000

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

FOR PERMIT APPLICATION ONLY

TERREBONNE LEVEE CONSERVATION DISTRICT

BAYOU BLACK BARRIER
LEVEE SYSTEM

REACH 2

Project Number	39130-1025
Date	MAY 2023
Designed by	MCB
Drawn by	MCB
Checked by	MM
Checked by	MM
Date Printed:	June 13, 2023

53



0 470 940 1,880 2,820 3,760 Feet

Scale: 1:10,000



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, Louisiana 70363
O: 985-219-1000

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

FOR PERMIT APPLICATION ONLY

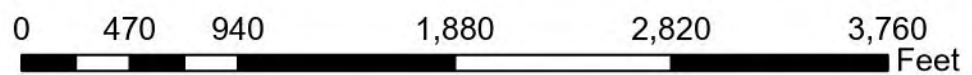
TERREBONNE LEVEE CONSERVATION DISTRICT

BAYOU BLACK BARRIER
LEVEE SYSTEM

REACH 1

Project Number	39130-1025
Date	MAY 2023
Designed by	MCB
Drawn by	MCB
Checked by	MM
Checked by	MM
Date Printed:	June 12, 2023

54



Scale: 1:10,000



ENGINEERING LLC

Coastal Design & Infrastructure
 197 Elysian Drive
 Houma, Louisiana 70363
 O: 985-219-1000

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS		
No.	Description	Date

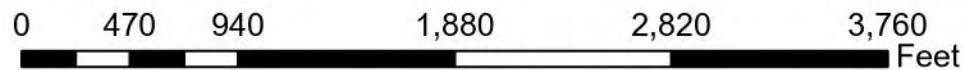
FOR PERMIT APPLICATION ONLY

TERREBONNE LEVEE
CONSERVATION DISTRICT

BAYOU BLACK BARRIER
 LEVEE SYSTEM

REACH 1

Project Number	39130-1025
Date	MAY 2023
Designed by	MCB
Drawn by	MCB
Checked by	MM
Checked by	MM
Date Printed:	June 12, 2023



Scale: 1:10,000



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, Louisiana 70363
O: 985-219-1000

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

FOR PERMIT APPLICATION ONLY

TERREBONNE LEVEE CONSERVATION DISTRICT

BAYOU BLACK BARRIER
LEVEE SYSTEM

REACH 1

Project Number	39130-1025
Date	MAY 2023
Designed by	MCB
Drawn by	MCB
Checked by	MM
Checked by	MM
Date Printed:	June 12, 2023

56



Scale: 1:15,000



ENGINEERING LLC

Coastal Design & Infrastructure
197 Elysian Drive
Houma, Louisiana 70363
O: 985-219-1000

ENGINEERING • PLANNING • ENVIRONMENTAL CONSULTING

REVISIONS

No.	Description	Date

**FOR PERMIT
APPLICATION ONLY**

**TERREBONNE LEVEE
CONSERVATION DISTRICT**

BAYOU BLACK BARRIER
LEVEE SYSTEM

REACH 1

Project Number	39130-1025
Date	MAY 2023
Designed by	MCB
Drawn by	MCB
Checked by	MM
Checked by	MM
Date Printed:	June 12, 2023

57