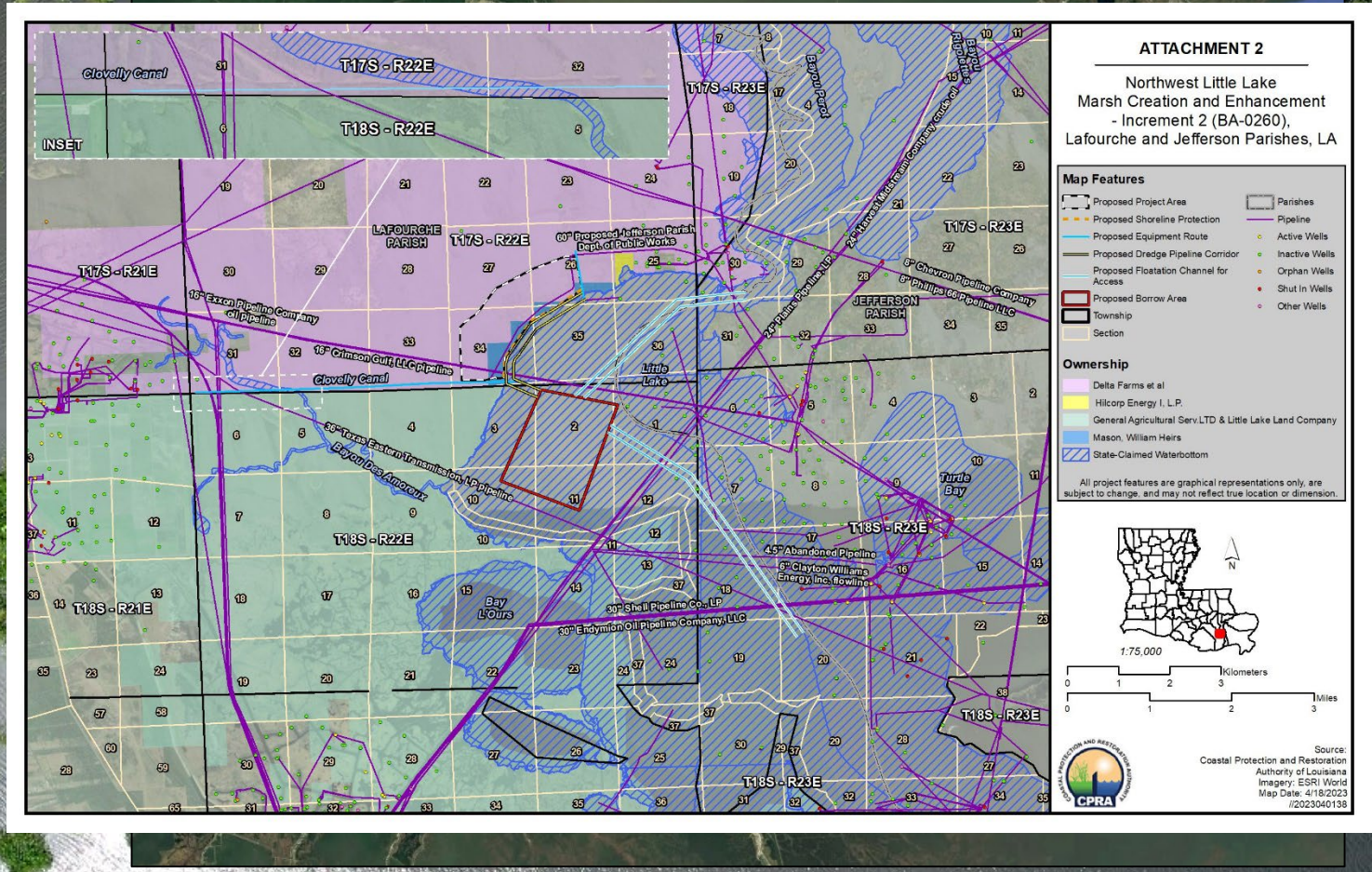
Coastal Industry Week
Webinar Series

Programmatic Approach to Restoration of Northwest Little Lake

Project Area

- Lafourche Parish
- Approximately 30 miles south of New Orleans
- Land majority owned by Delta Farms and Clovelly Farms




Post-Hurricane Ida
Google Earth
Image © 2025 Airbus
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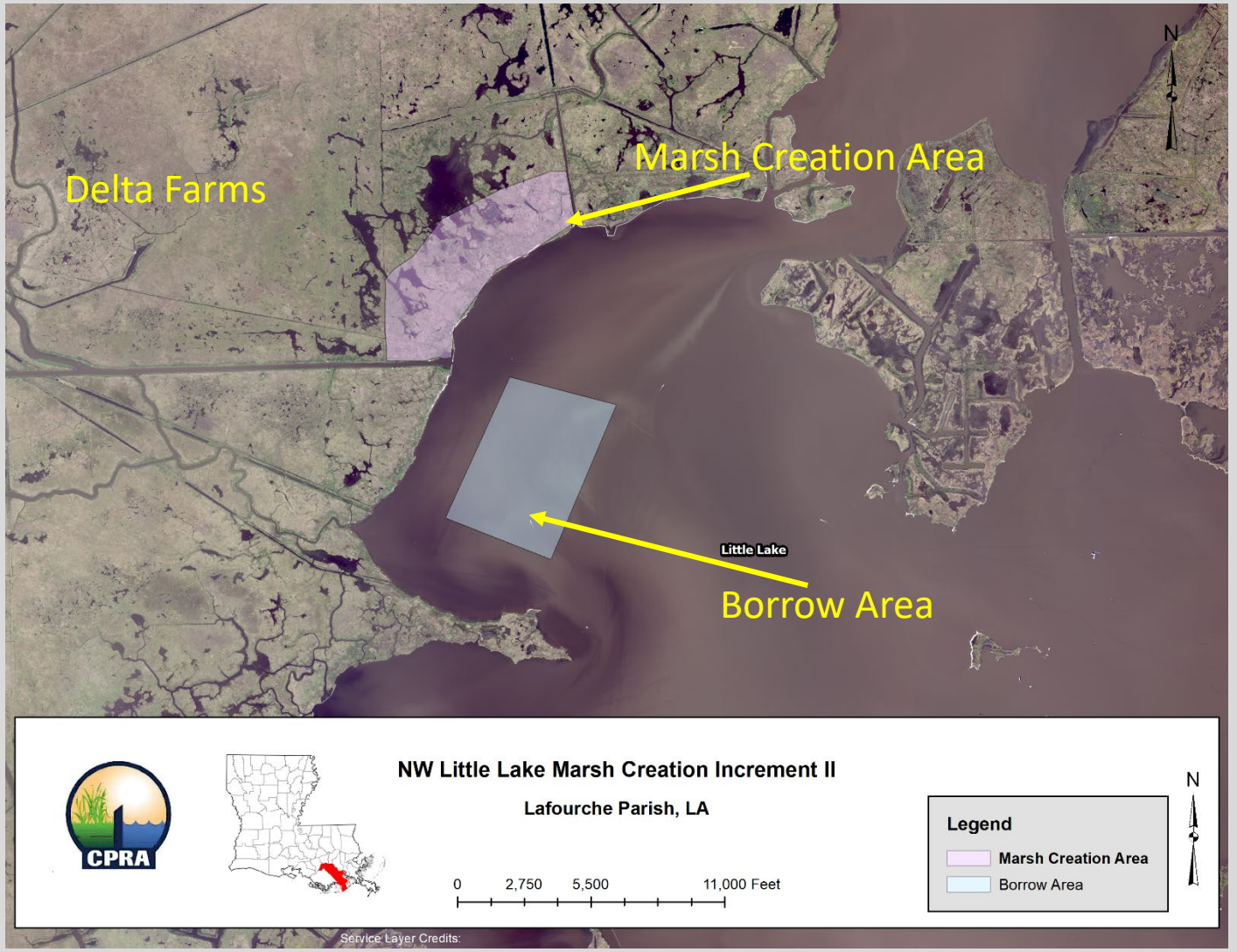
5 mi

Original Project Concept – BA-0260

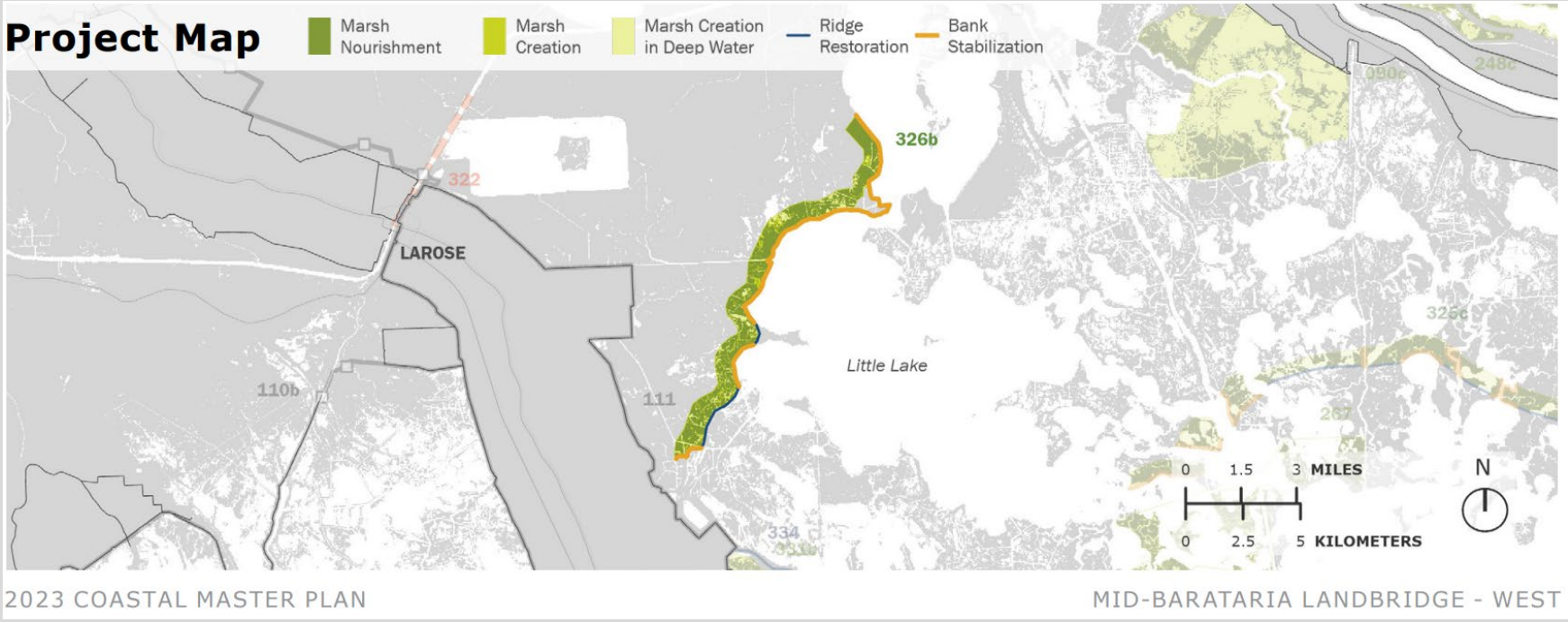
- **Goal** reestablish the boundary between Delta Farms marsh and Little Lake
- **Marsh Creation** 669 acres of marsh creation along the northwest rim of Little Lake
- **Shoreline Protection** reinforce the Little Lake shoreline adjacent to the marsh creation
- **Borrow** Little Lake



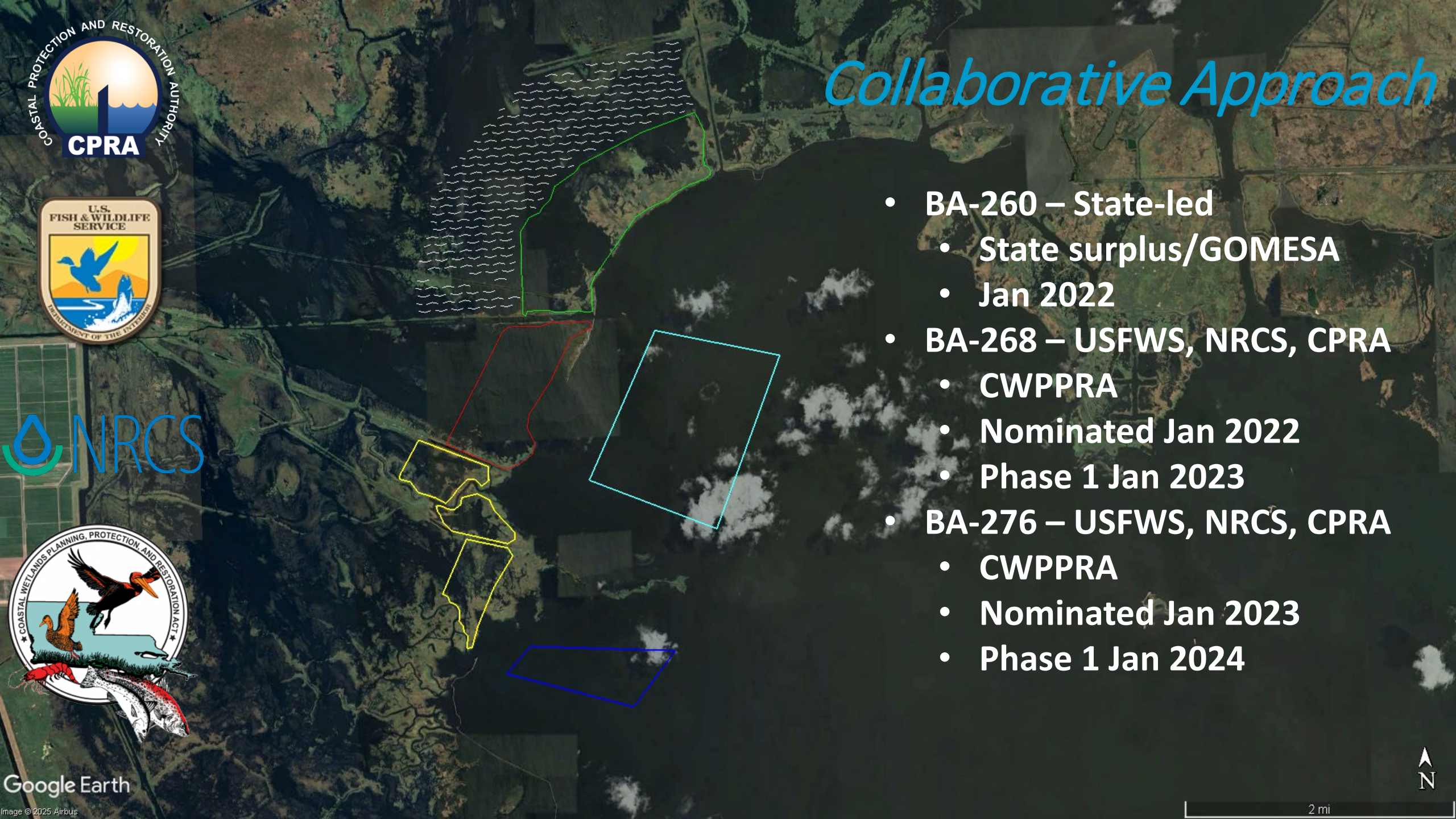
Post-Hurricane Ida

2023 Coastal Master Plan

- USGS land change analysis in 2022 estimated land change rate of 0.09% per year
- Hurricane Ida reduced the BA-260 Project Area from 84% marsh to 25%
- The 2023 Master Plan highlighted this region for a $520M project including 3,800 acres of marsh and 63,000 feet of shoreline protection



Collaborative Approach



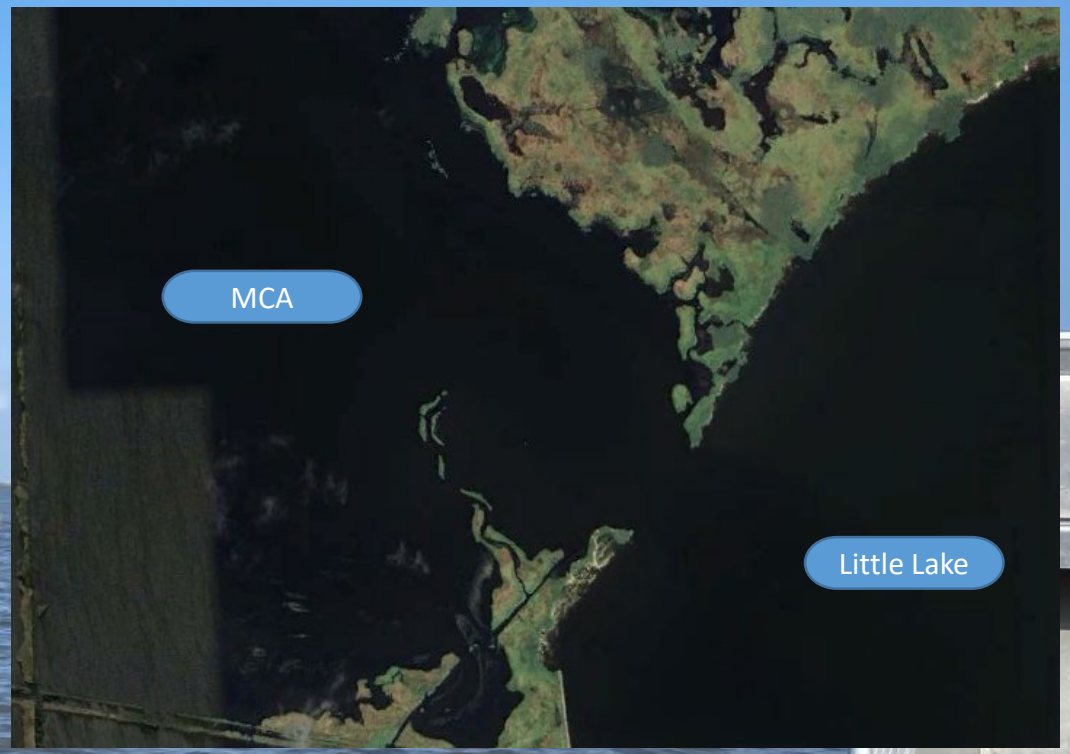
- BA-260 – State-led
  - State surplus/GOMESA
  - Jan 2022
- BA-268 – USFWS, NRCS, CPRA
  - CWPPRA
  - Nominated Jan 2022
  - Phase 1 Jan 2023
- BA-276 – USFWS, NRCS, CPRA
  - CWPPRA
  - Nominated Jan 2023
  - Phase 1 Jan 2024

Reconnaissance Effort

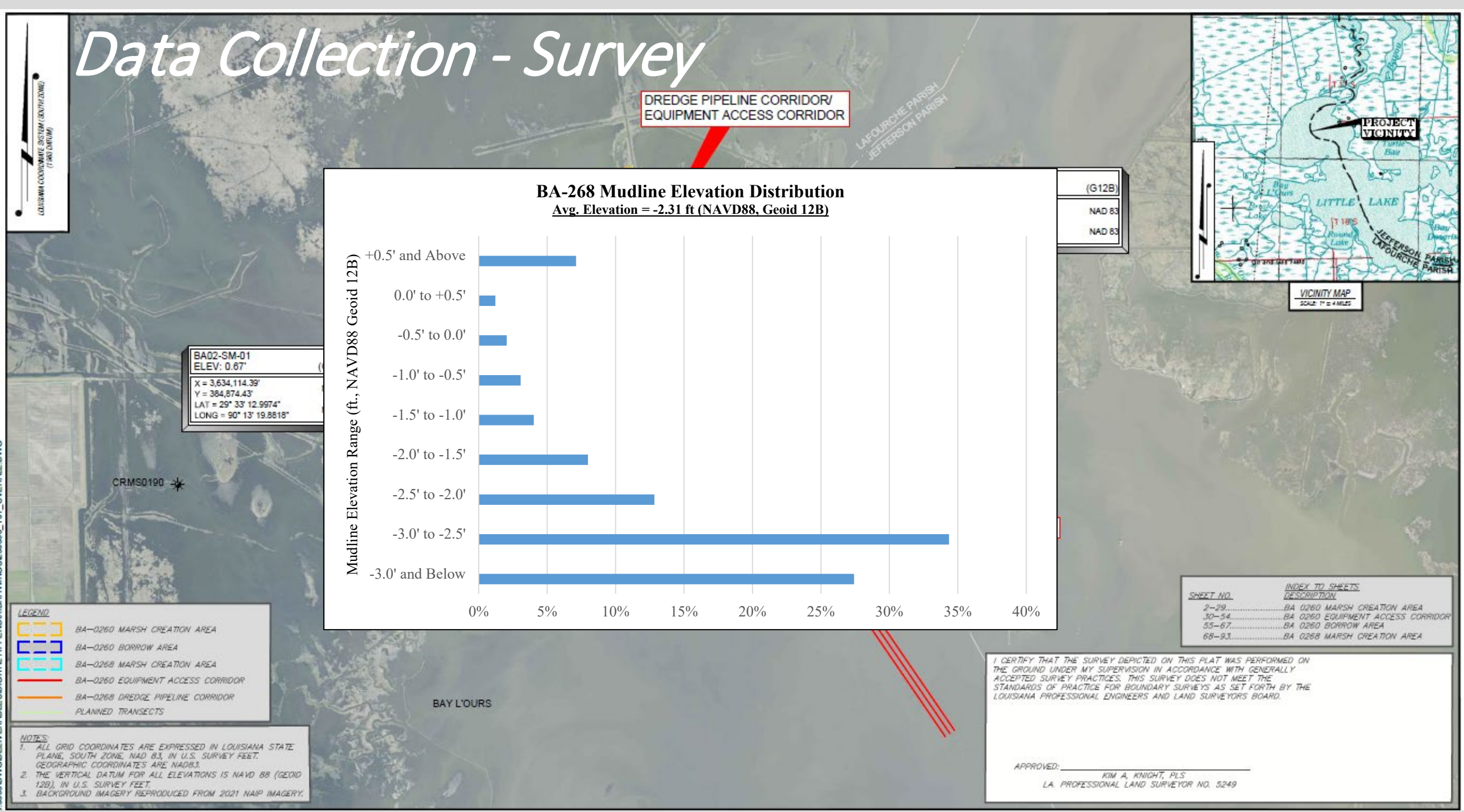
Largely open water

Shoreline Breach

Soft Organic Soils



Data Collection - Survey



BA-268 Mudline Elevation Distribution

Avg. Elevation = -2.31 ft (NAVD88, Geoid 12B)

LEGEND

- BA-0260 MARSH CREATION AREA
- BA-0260 BORROW AREA
- BA-0268 MARSH CREATION AREA
- BA-0260 EQUIPMENT ACCESS CORRIDOR
- BA-0268 DREDGE PIPELINE CORRIDOR
- PLANNED TRANSECTS

NOTES:

1. ALL GRID COORDINATES ARE EXPRESSED IN LOUISIANA STATE PLANE, SOUTH ZONE, NAD 83, IN U.S. SURVEY FEET. GEOGRAPHIC COORDINATES ARE NAD83.
2. THE VERTICAL DATUM FOR ALL ELEVATIONS IS NAVD 88 (GEOID 12B), IN U.S. SURVEY FEET.
3. BACKGROUND IMAGERY REPRODUCED FROM 2021 NAIP IMAGERY.

INDEX TO SHEETS

SHEET NO.	DESCRIPTION
2–29	BA 0260 MARSH CREATION AREA
30–54	BA 0260 EQUIPMENT ACCESS CORRIDOR
55–67	BA 0260 BORROW AREA
68–93	BA 0268 MARSH CREATION AREA

I CERTIFY THAT THE SURVEY DEPICTED ON THIS PLAT WAS PERFORMED ON THE GROUND UNDER MY SUPERVISION IN ACCORDANCE WITH GENERALLY ACCEPTED SURVEY PRACTICES. THIS SURVEY DOES NOT MEET THE STANDARDS OF PRACTICE FOR BOUNDARY SURVEYS AS SET FORTH BY THE LOUISIANA PROFESSIONAL ENGINEERS AND LAND SURVEYORS BOARD.

APPROVED: _____

KIM A. KNIGHT, PLS

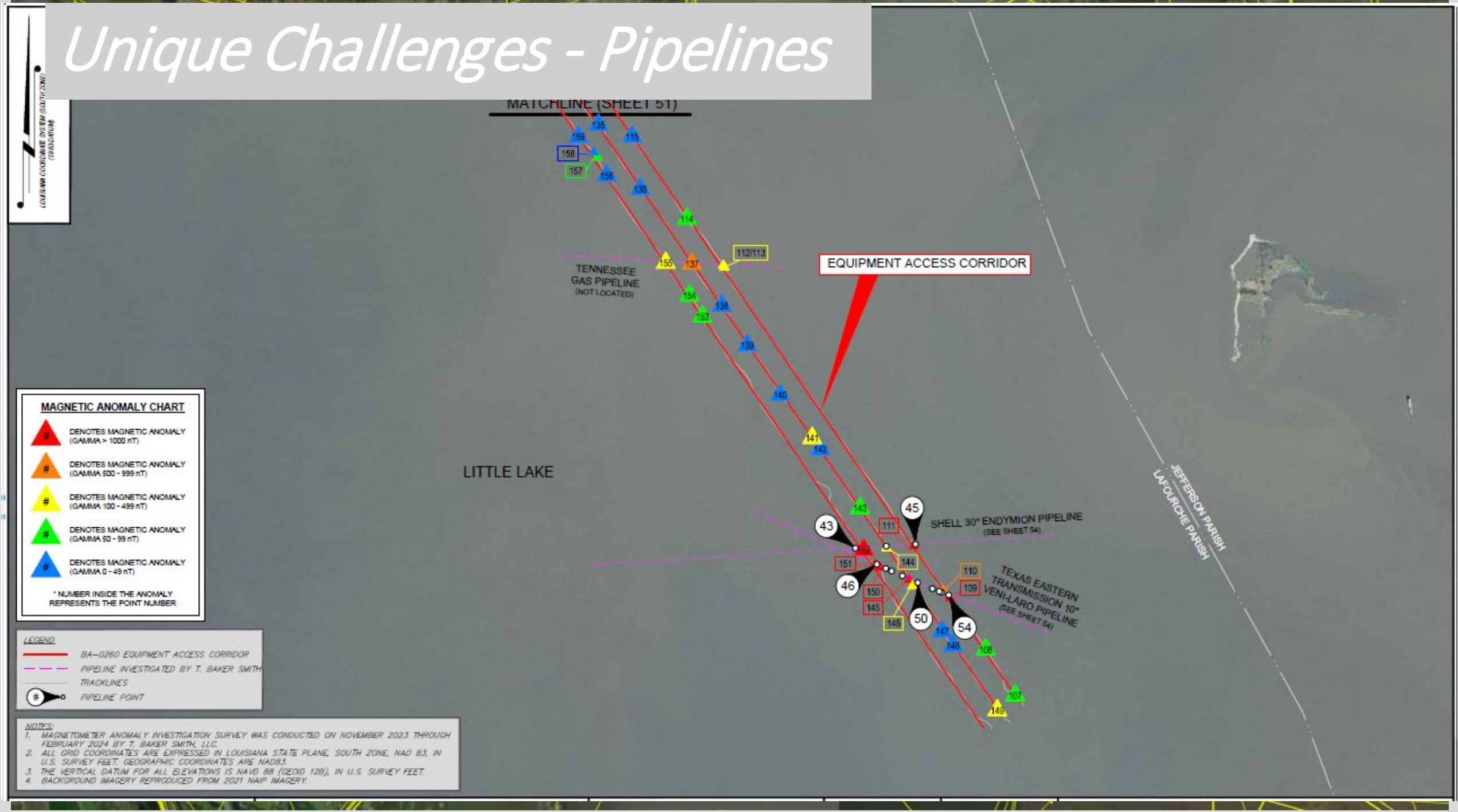
LA. PROFESSIONAL LAND SURVEYOR NO. 5249

Data Collection - Geotech

Depth	Borrow Area Classification										
	101	103	105	107	109	111	113	115	117	119	121
0	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH
2	CL	CH	CH	CH	CH	CH	CH	CH	CH	CH	CH
4	CL	CL	CL	CH	CH	CH	CH	CH	CH	CH	CH
6	CL	CH	CL	CH	CH	CH	CL	CH	CL	CH	CH
8	CL	CH	CL	CH	CL	CH	CL	CH	CH	CL	CH
10	CL	CH	CL	SC	CL	CH	CL	SC	CH	CH	CL
12	CL	CL	CH	CL	CH	SC	SC-SM	CL	CH	CH	CL
14	CL	SC	CH	CL	CH	SC	SC-SM	CL	CL	CH	CL
15								CH			
16	CL	SC	SM	CL	CL	CL	SC-SM	CL	SC	CH	CL
17								CH			
18	CL	SM	SM	SM	CH	CL	SC-SM	CH	CL	CH	CL
19						SM	SM		SM		
20	CL	SM	SM	SM	SC	SC	SC-SM	CH	CL	CH	CL
21					CH				SM		
22	SC	SM	SM	ML	CH	SM	CL	SM	CL	CH	CL
23							SM				
24	CH	SP-SM	SM	ML	CH	SC	CL	CH	CH	CH	CL
25							SM				

PT	Peat
OH	Organic Clay
CH	Fat Clay
CL	Lean Clay
ML	Sandy Silt
SC	Clayey Sand
SM	Silty Sand

Unique Challenges - Pipelines



Unique Challenges – Historic Significance

Current Progress for Northwest Little Lake

BA-260:

- **Permit submitted**
- **Design package in development**

BA-260 Terrace Field:

- **Data collection complete**

BA-268:

- **30% design complete**

BA-276:

- **Finalizing data collection scopes**

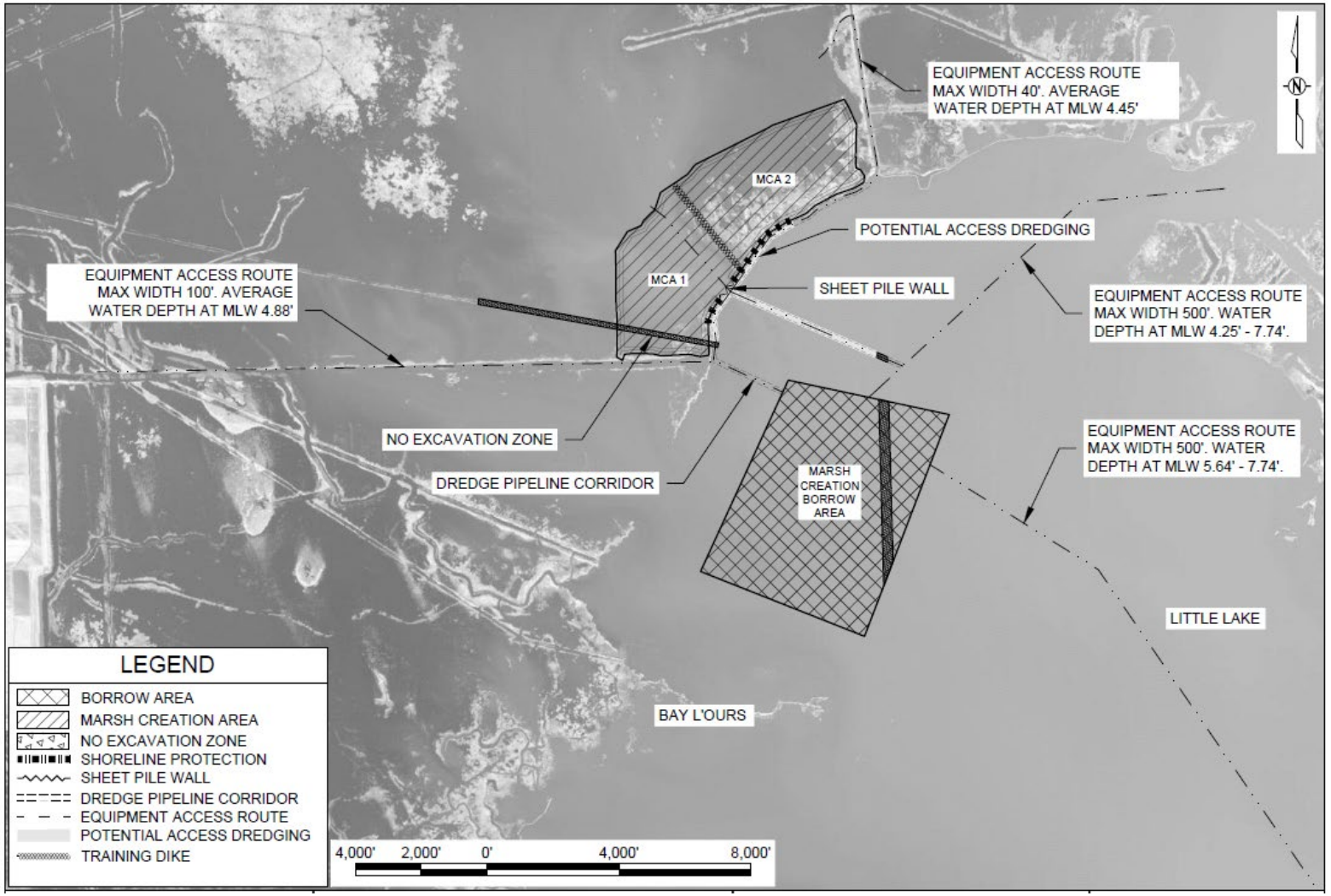
BA-260 Northwest Little Lake Marsh Creation Increment II

Proposed Project Features & Quantities

- Little Lake Borrow Area:
  - 799 acres
  - 18 MCY of borrow
- One MCA totaling approximately:
  - 650 acres
  - 5 MCY of fill
- ~27,800 LF of Earthen Containment Dike
- ~3,400 LF of Marine Mattress Shoreline Protection
- ~ 700 LF of Sheet Pile Gap Closure

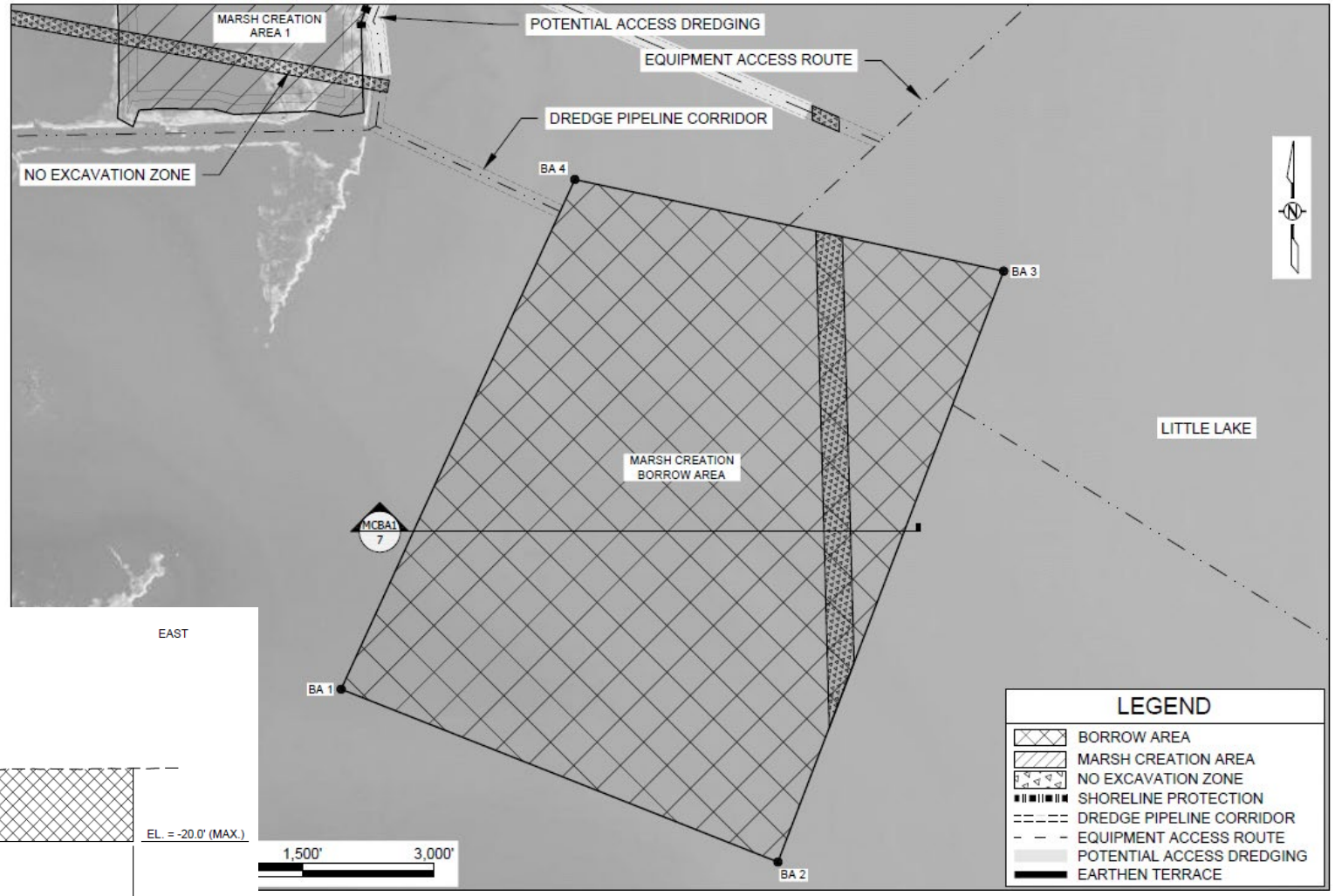
<u>Additional Notes:</u>

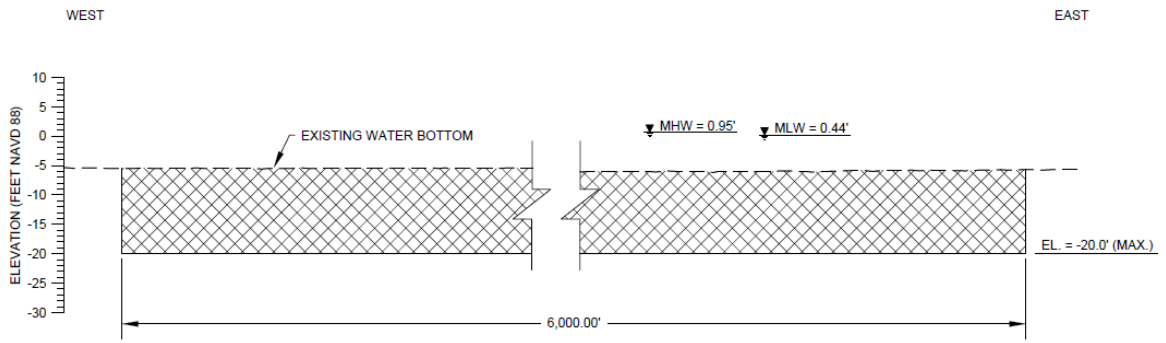
- Avoidance Areas
- Pipelines



Borrow Area Layout and Typical Section

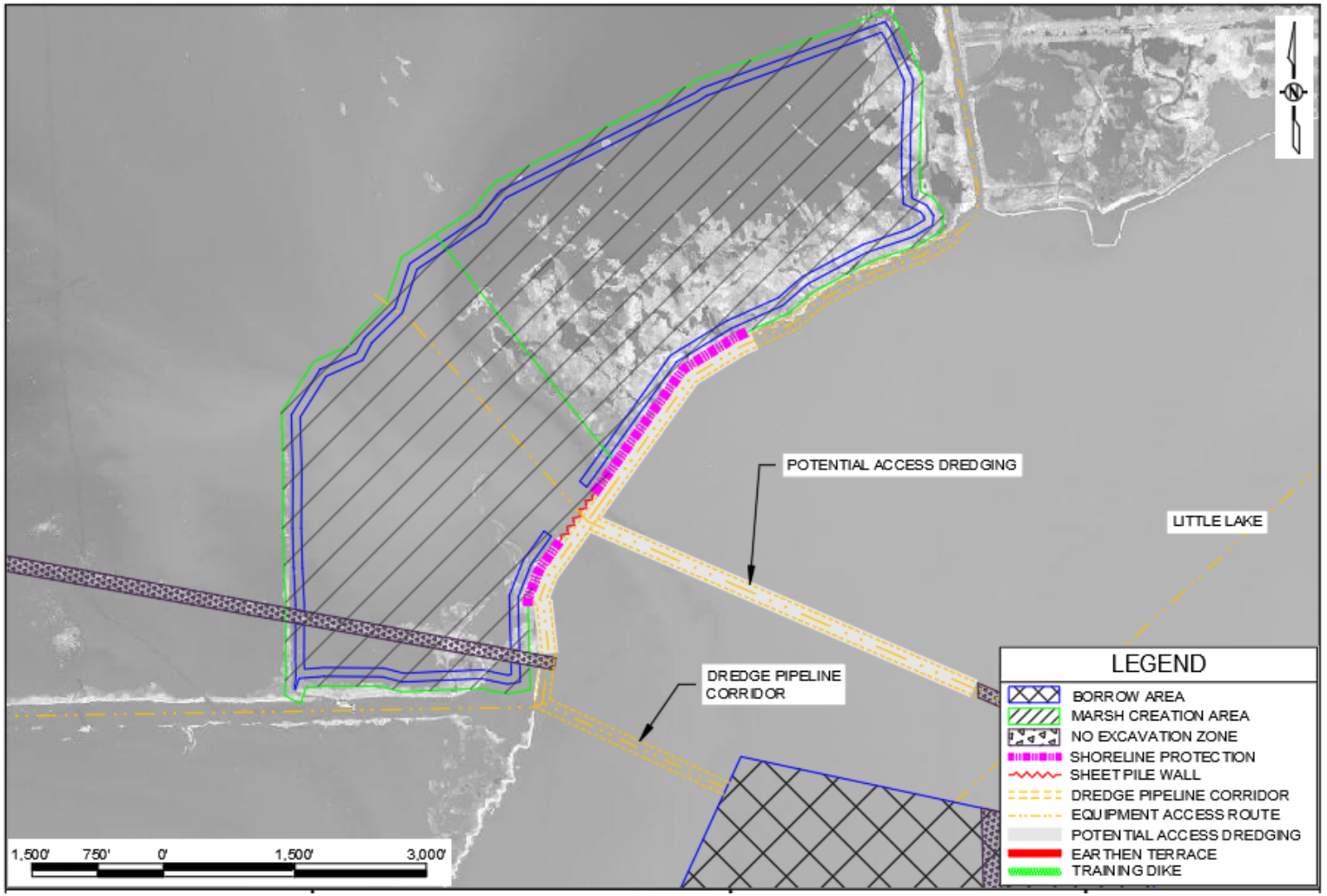
- Little Lake Mixed Sediment: primarily fat clays in upper 15 ft with mixed organics and sand
- No-excavation zone around pipeline
- -20 ft cut (maximum)
- ~18 MCY available
  - ~5,000,000 CY fill requirement
  - Sharing borrow material with BA-268
- Maximum pump distance 3 miles





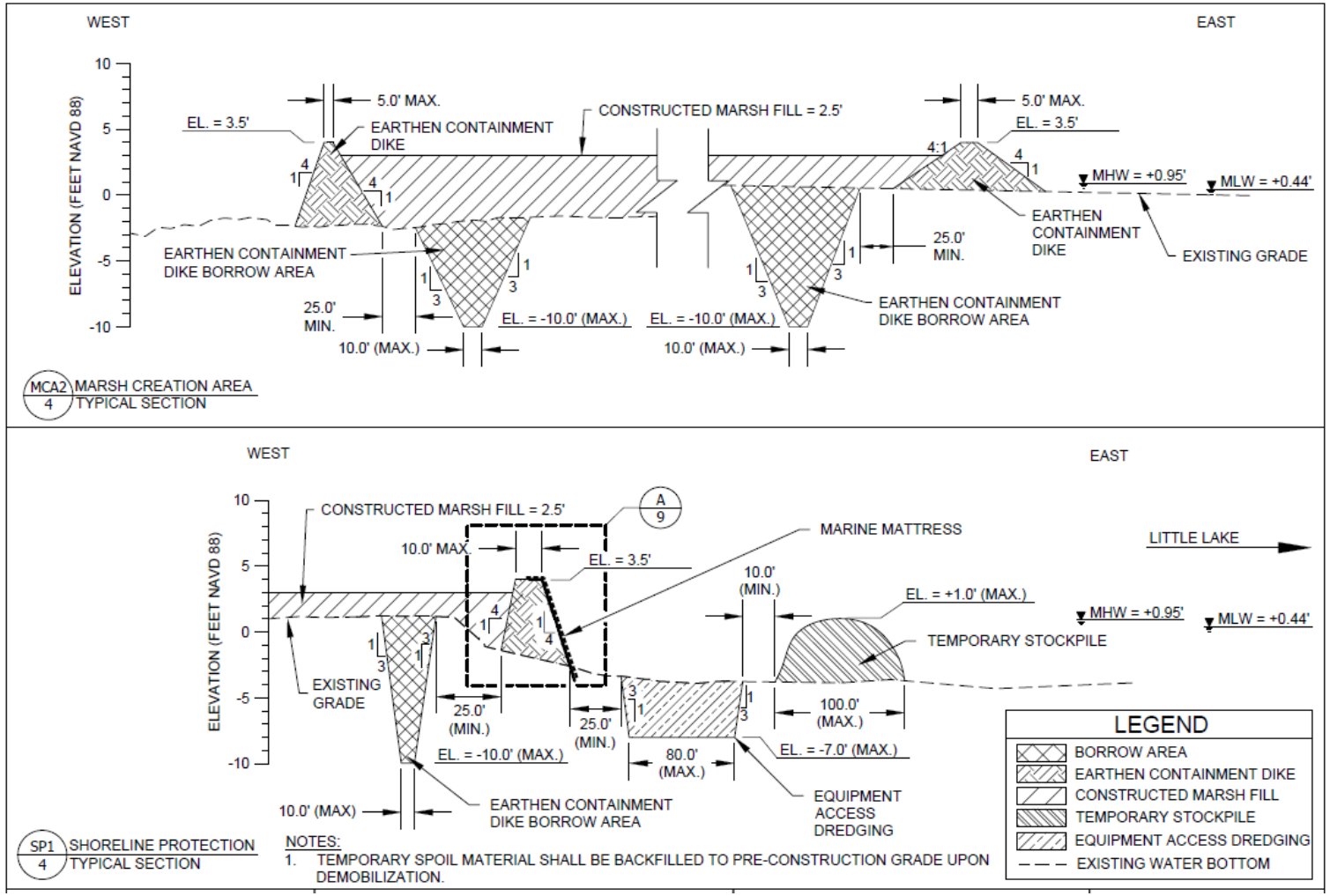
Dredge Pipeline Corridor/Equipment Access

- Equipment Access to Borrow Area: Barataria Waterway to Little Lake
  - No access dredging – Several pipelines along both routes
- Dredge Pipeline/Equipment Access for Marine Mattress Installation
  - ~ 9,260 LF of access dredging
  - Avoidance areas



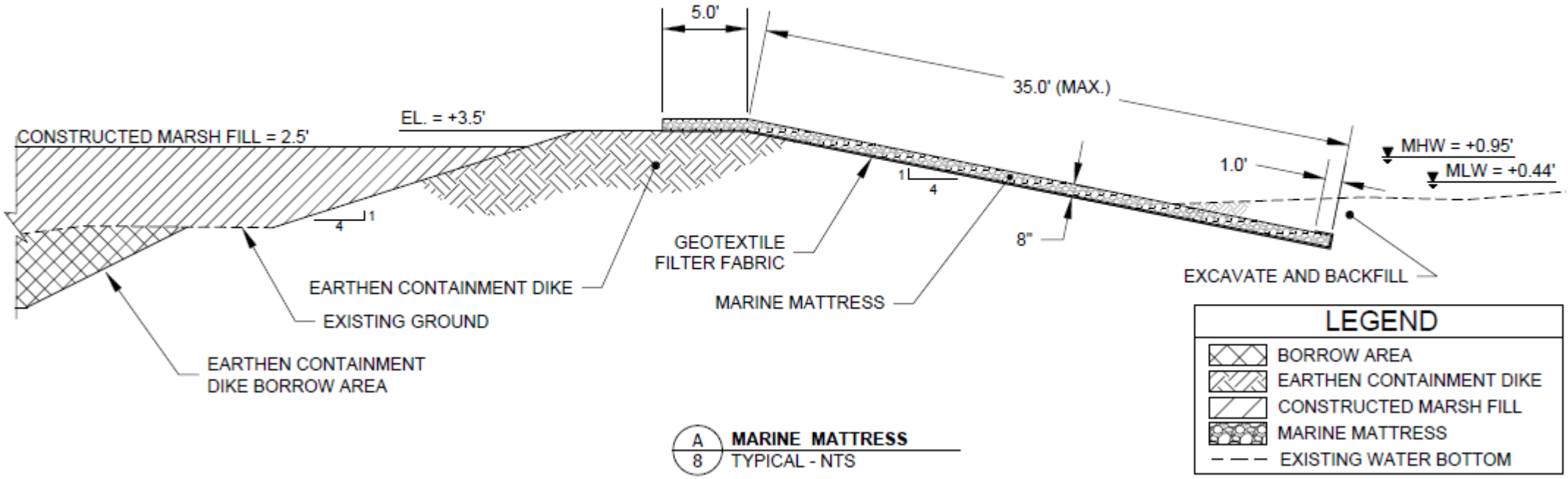
Typical Sections – ECD and Marsh Fill

- ~27,800 LF of ECD
- ECD Crown Elevation: +3.5ft (NAVD88)
- ECD Crown Width: 10 ft along Little Lake shoreline; 5 ft elsewhere
- ECD Side Slopes: 4H:1V
- Training dike to separate the MCA in two parts
- MCA Fill Elevation: +2.5ft (NAVD88)
- Average Mudline Elevation (Approx.): -1.8 ft (NAVD88)



Typical Section – Marine Mattress

- ECD Reinforcement Marine Mattress ~3,400 LF
  - 8-inch thickness, 40 ft long, with 5 ft placed across the crown
  - Follows ECD 4H:1V slope into the water
  - Geotextile fabric placed prior to the mattress



Project Quantities

Item No.	Work or Material	Quantity	Unit
1	Mobilization or Demobilization (TS-100)	1	LUMP SUM
2	Surveys (TS-200)	1	LUMP SUM
3	Grade Stakes (TS-220)	65	EACH
4	Settlement Plates (TS-250)	13	EACH
5	Earthen Containment Dikes (TS-300)	27,800	LINEAR FOOT
6	Sheet Pile Gap Closure (TS-310)	700	LINEAR FOOT
7	Pile Wall Sand (TS-311)	2,546	CUBIC YARD
8	Access and Flotation Channels (TS-320)	1	LUMP SUM
9	Hydraulic Dredging and Marsh Fill (TS-400)	5,000,000	CUBIC YARD
10	Non-Woven Geotextile Fabric (TS-600)	21,408	SQUARE YARD
11	Geogrid Marine Mattress (TS-650)	15,556	SQUARE YARD

Project Schedule

- Final Design/Bid Package Development: In progress
- Construction Permit: Submitted and Under Review
- Landrights/Servitude Agreements: In progress
- Anticipated Bid Advertisement: Spring/Summer 2026
- Construction Duration: Approximately 863 days

Parting Thoughts

- Hurricane Ida devastated a previously stable marsh habitat in the Little Lake vicinity
- Without action, erosion will continue and the levee system protecting communities like LaRose and Cut Off could be compromised
- Support from the Master Plan led to the planning of other collaborative efforts with multiple program and agency cooperation


Questions?