



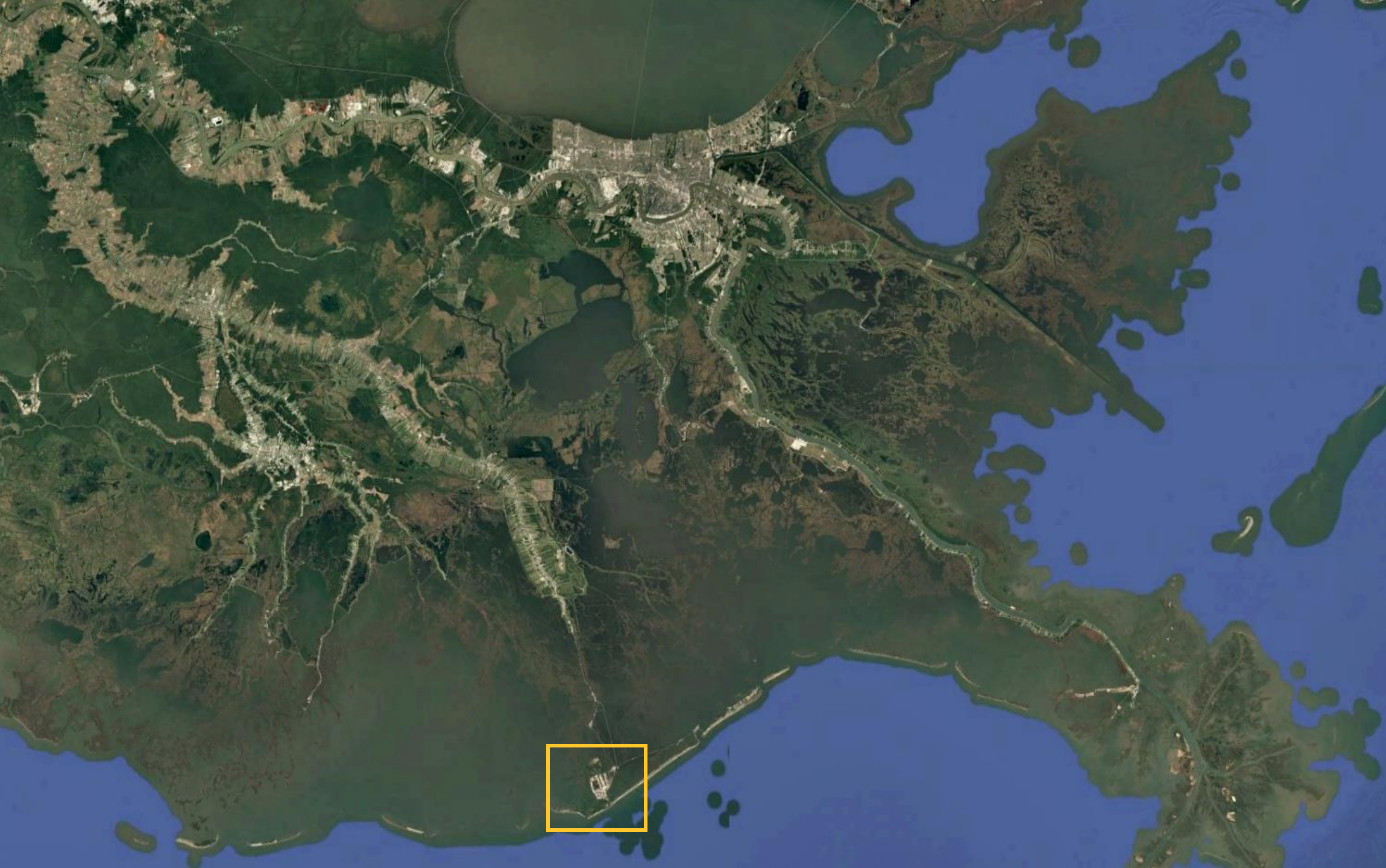
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Port Fourchon & Coastal Restoration

May 22, 2025 | 12:30





FOURCHON
65 Years Strong



FOURCHON
65 Years Strong



READY TODAY.
READY FOR TOMORROW.

Bryce Autin, General Counsel

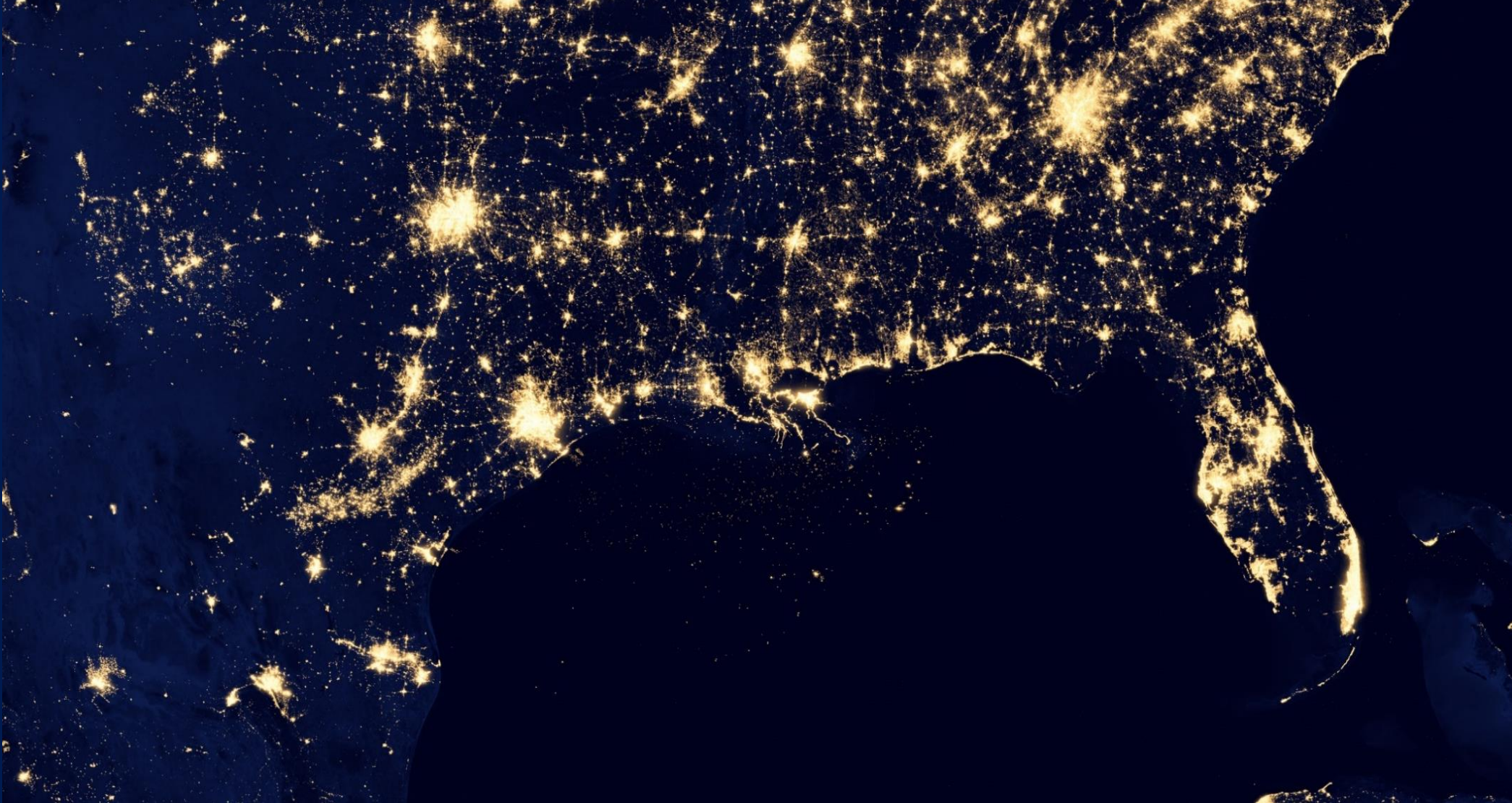
Port Fourchon



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Location, Location, Location



09



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Gulf of America's Service Hub

- Approximately 15,000 people per month are *flown* to offshore locations supported by Port Fourchon
- Up to 270 *vessels* traverse the port's channels each day
- Up to 1,000 *trucks* per day travel in and out of Port Fourchon
- Home to over 200 *companies* who operate within and/or utilize Port Fourchon by LAND, AIR, or WATER, making Port Fourchon the premier intermodal hub supporting deepwater activities in the Gulf of America

Ready Today, Ready for Tomorrow

AUTHORIZED CHANNEL DEPTHS (Corps-maintained)

Belle Pass (Entrance to Port Fourchon):

- -26ft plus 4ft advanced maintenance to -30ft (jetty reach)
- -24ft plus 3ft advanced maintenance to -27ft

Bayou Lafourche to Northern Expansion:

- -24ft plus 3ft advanced maintenance to -27ft

December 2020 WRDA Authorization:

- -30ft plus 3ft advanced maintenance to -33ft

Authorization for further deepening of Belle Pass anticipated for next

WRDA Bill

- Plan to deepen Belle Pass to -50ft



Ready Today, Ready for Tomorrow

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- Plan to deepen Belle Pass to -50ft



Fourchon Island



Between the Barataria and Terrebonne Estuaries





Green Infrastructure = Resiliency

This vibrant marsh and Cheniere Ridge platform had once degraded into open water. Through mitigation works completed in conjunction with the expansion of Port Fourchon, 1,200+ acres of wetlands have been restored to the landscape. Those wetlands now help to protect the Port.



Mitigation and Restoration



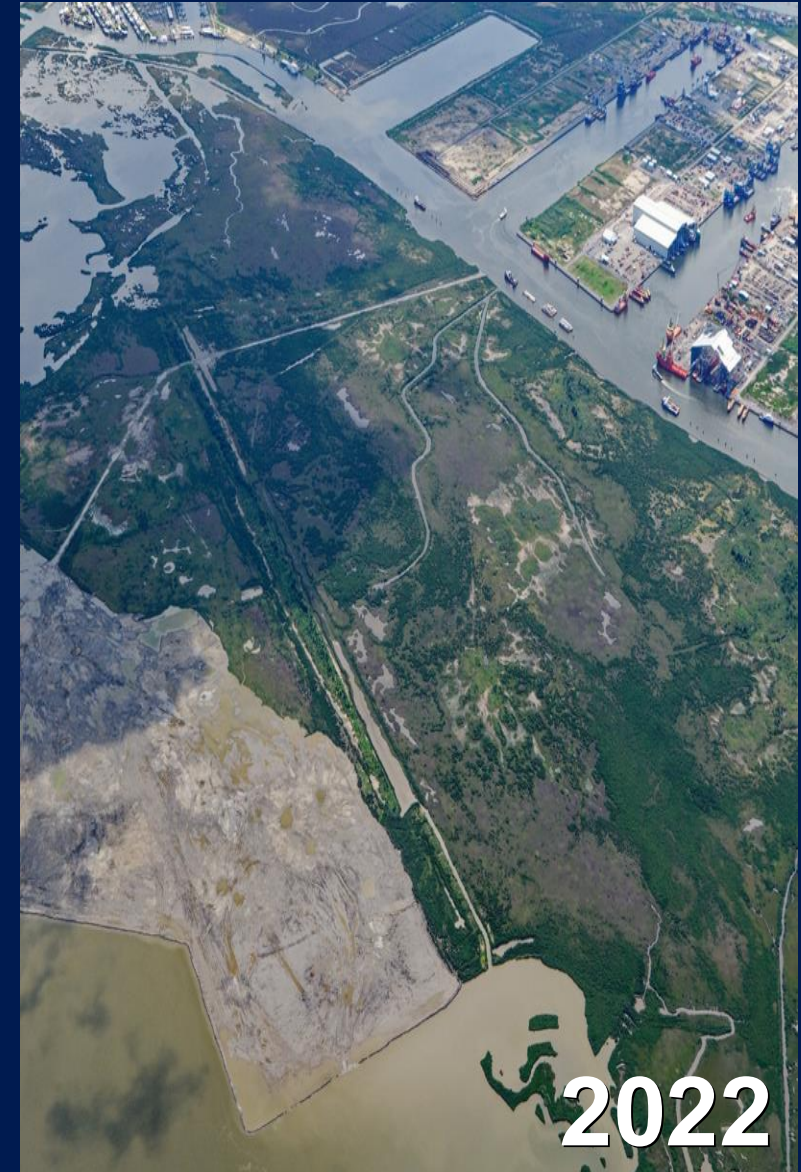
At Port Fourchon, mitigation is done in a way which restores the historic landscape.

1999

Maritime Forest Ridge: Beyond Mitigation

Port Fourchon worked in conjunction with several public and private partners to complete this innovative restoration project, including:

- Barataria-Terrebonne National Estuary Program
- Gulf of Mexico Program
- Gulf of Mexico Foundation
- NOAA
- Louisiana Department of Natural Resources
- USDA National Resources Conservation Service
- Shell



Coastal Wetlands Park



Coastal Wetlands Park & Kayak Launch



Coastal Wetlands Park Observation Tower



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Newly Constructed Fourchon Pavilion





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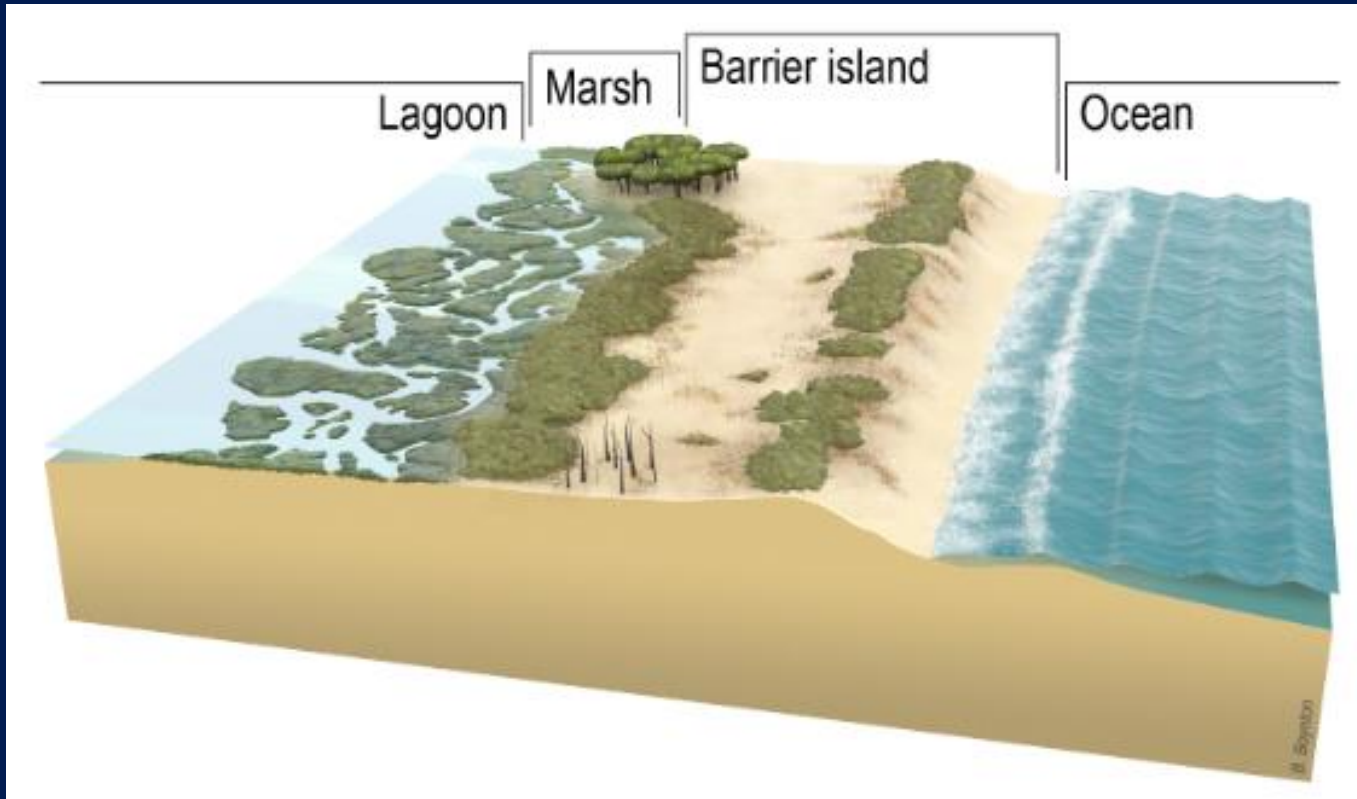


Shoreline Stability

Amelie Lagarde, E.I. | GIS Engineering



Barrier Islands

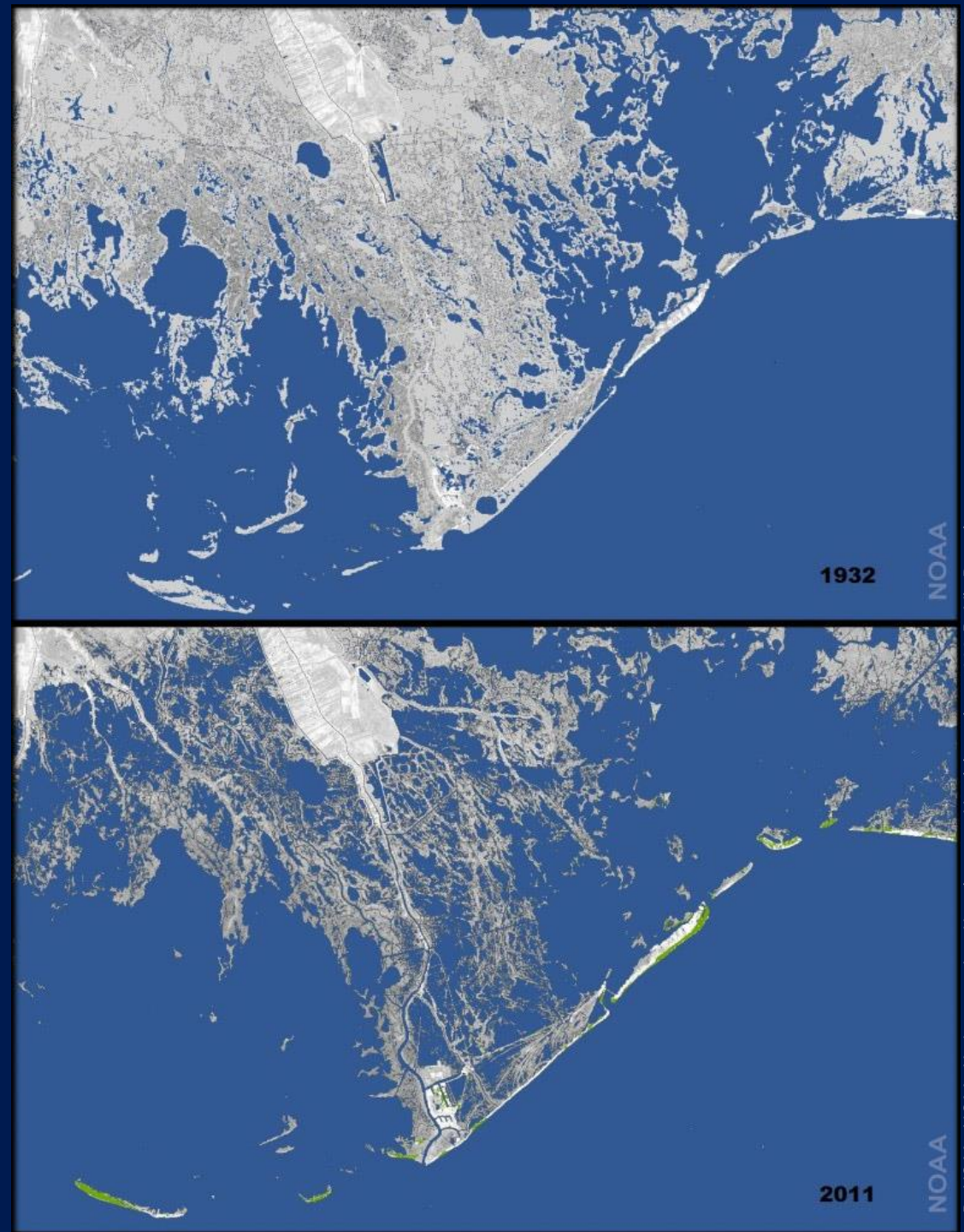


<https://geonarrative.usgs.gov/cch-bi/>



USGS Land Loss

- High wind/ wave energies in this area
- USGS Data:
 - 1984 to 2024
 - Land loss rate: -0.97%
 - Terrebonne basin was the highest in the state



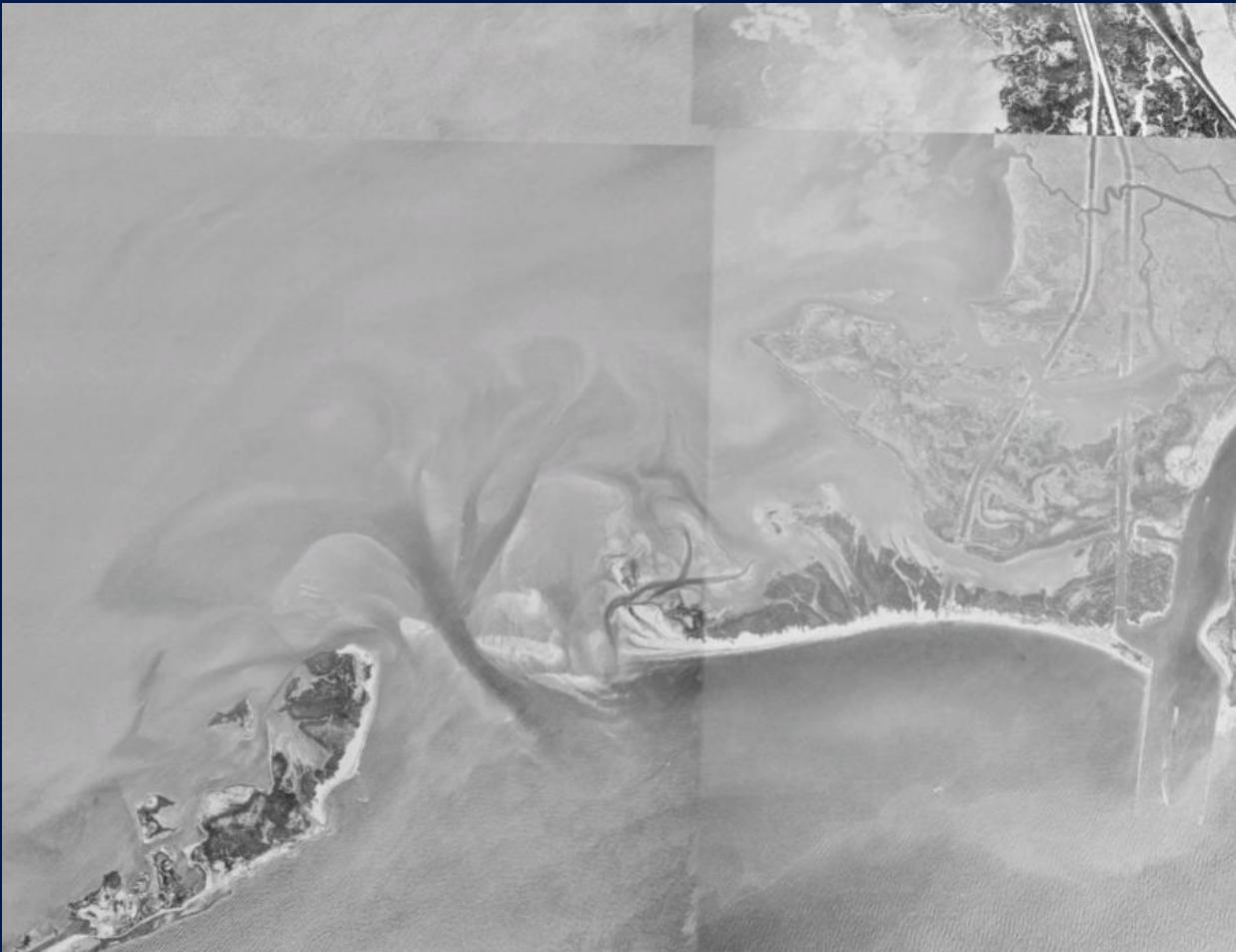
1989



2024



West Belle Headlands



1989



2024

Caminada Headlands

1989



2024



West Belle Headlands



Caminada Headlands



1989



2011



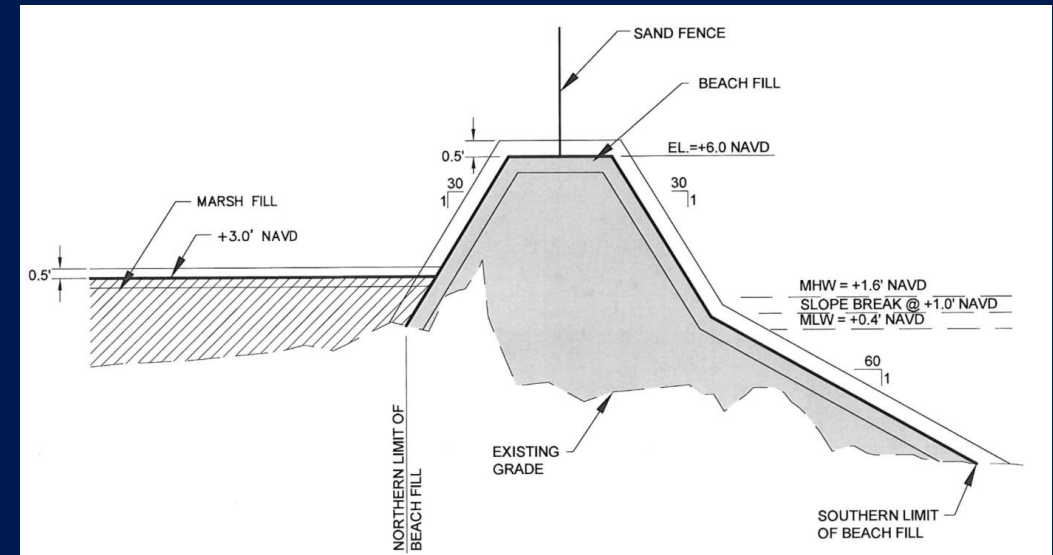
2024

West Belle Pass Barrier Headland Restoration (TE-0052)



2023

INFO	DESCRIPTION
CONSTRUCTION COMPLETED	2012
FUNDING	CWPPRA
FEDERAL SPONSOR	NOAA
SAND AND DUNE FILL	1.2 MCY
MARSH FILL	1.9 MCY

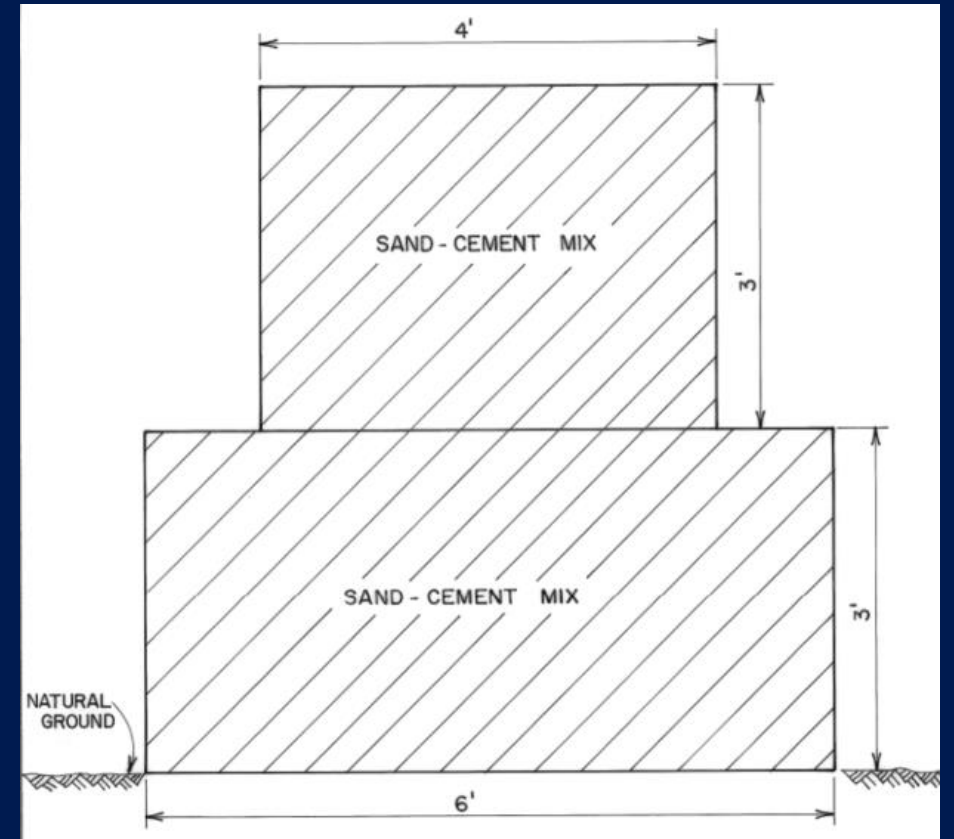


West Belle Pass Headland Restoration (TE-0118)

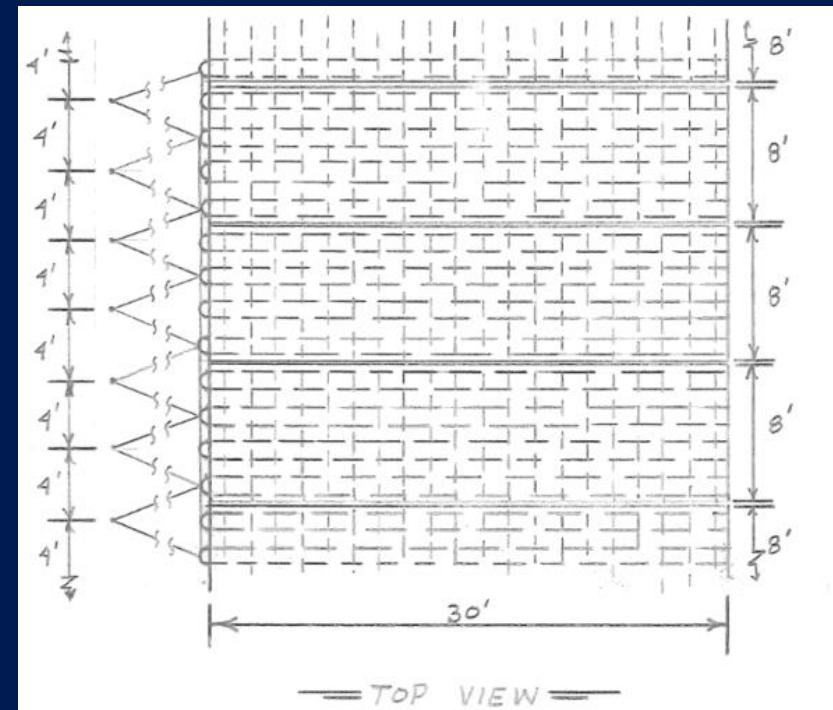
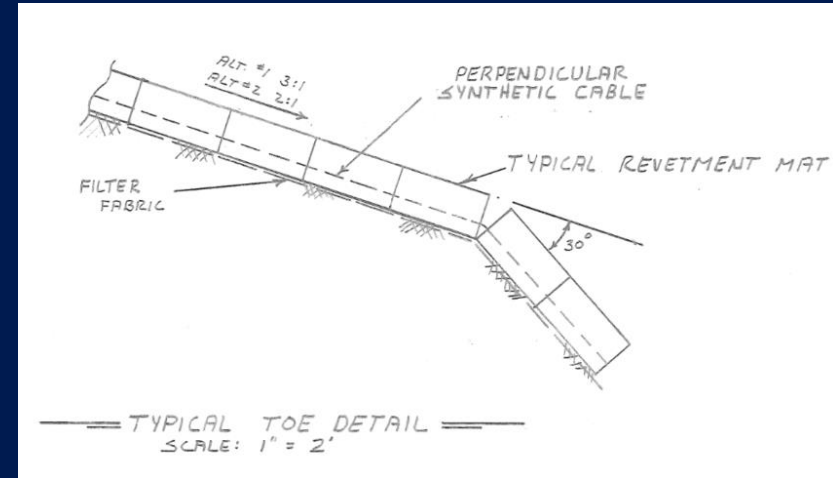
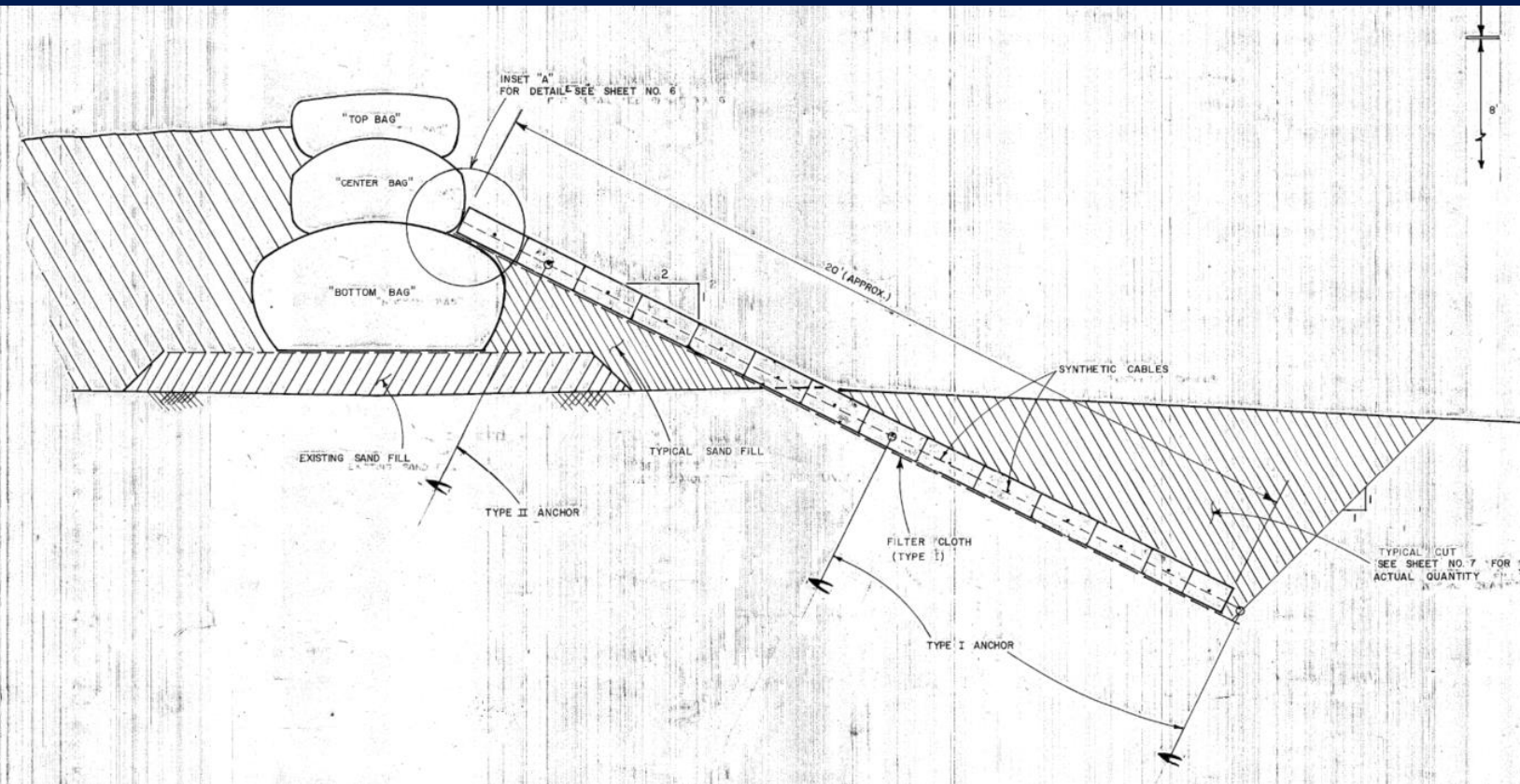


2020

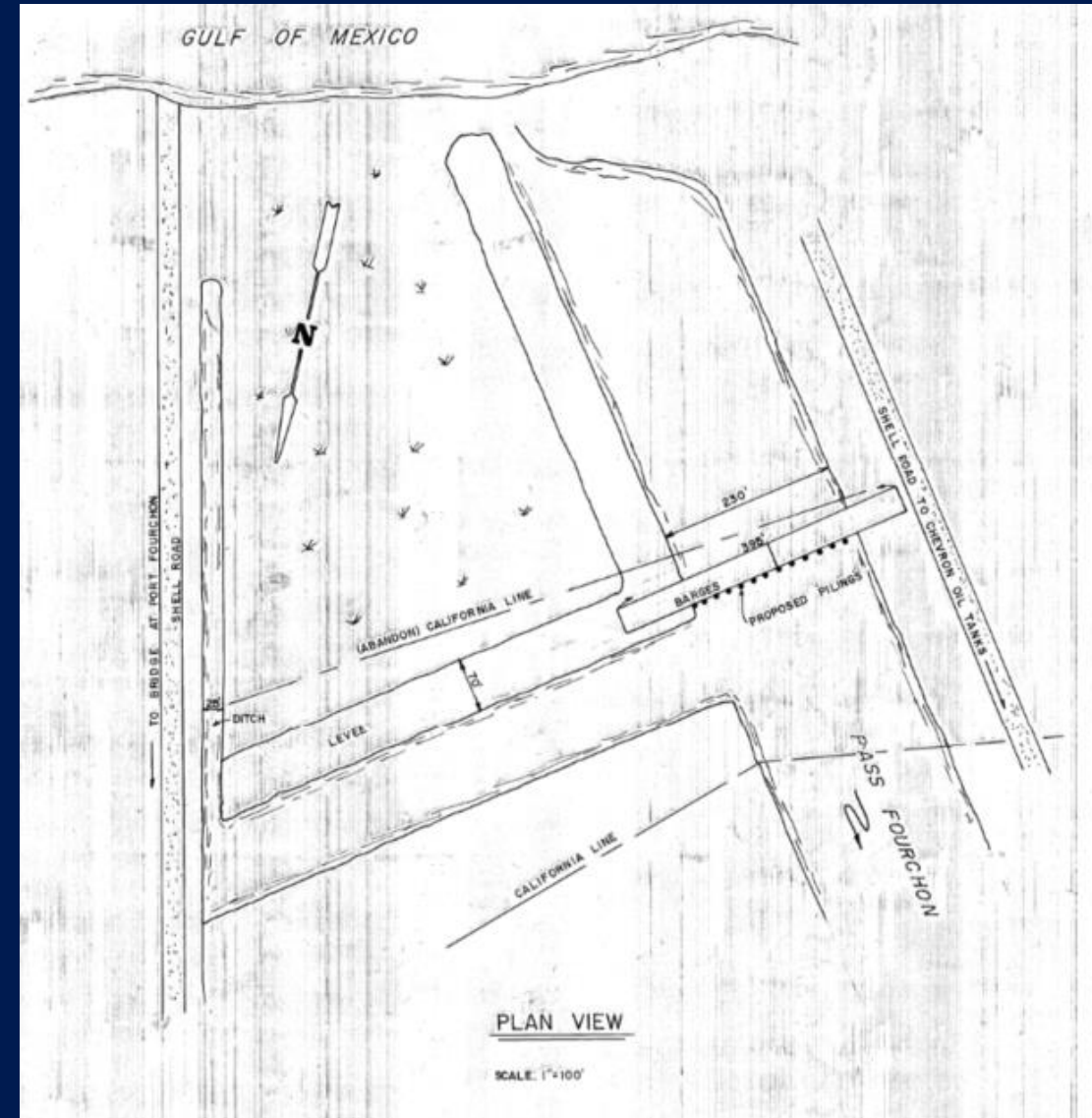
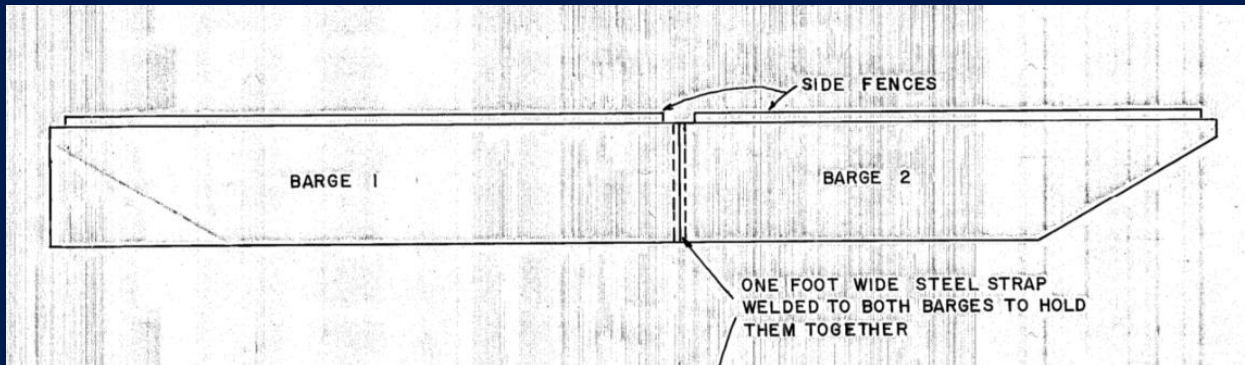
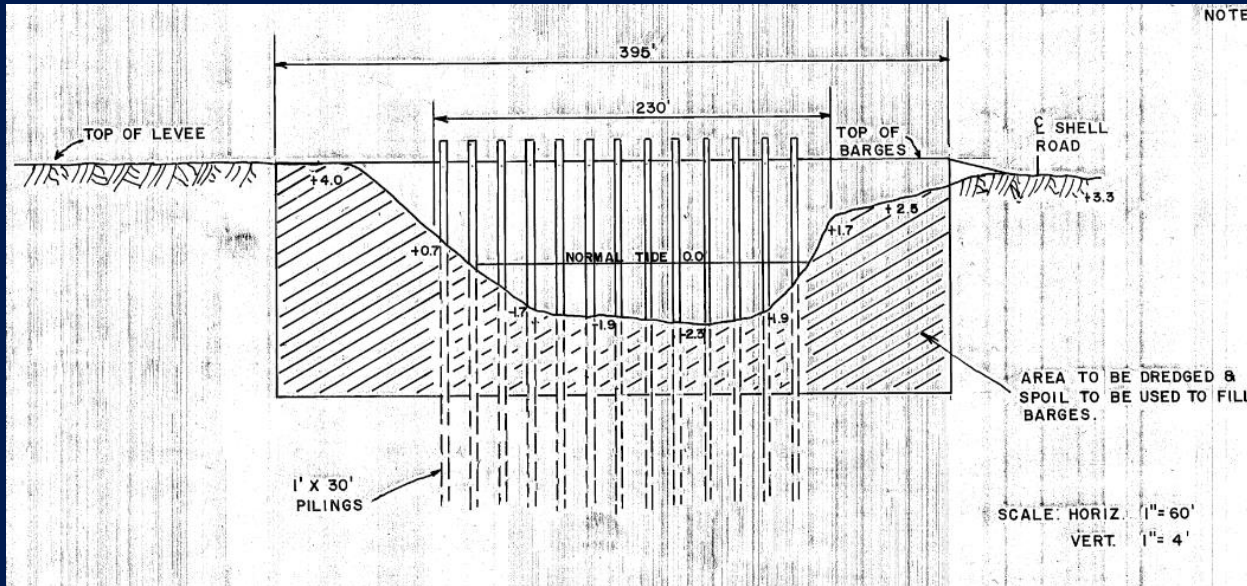
Stabilizing Fourchon Beach-1985



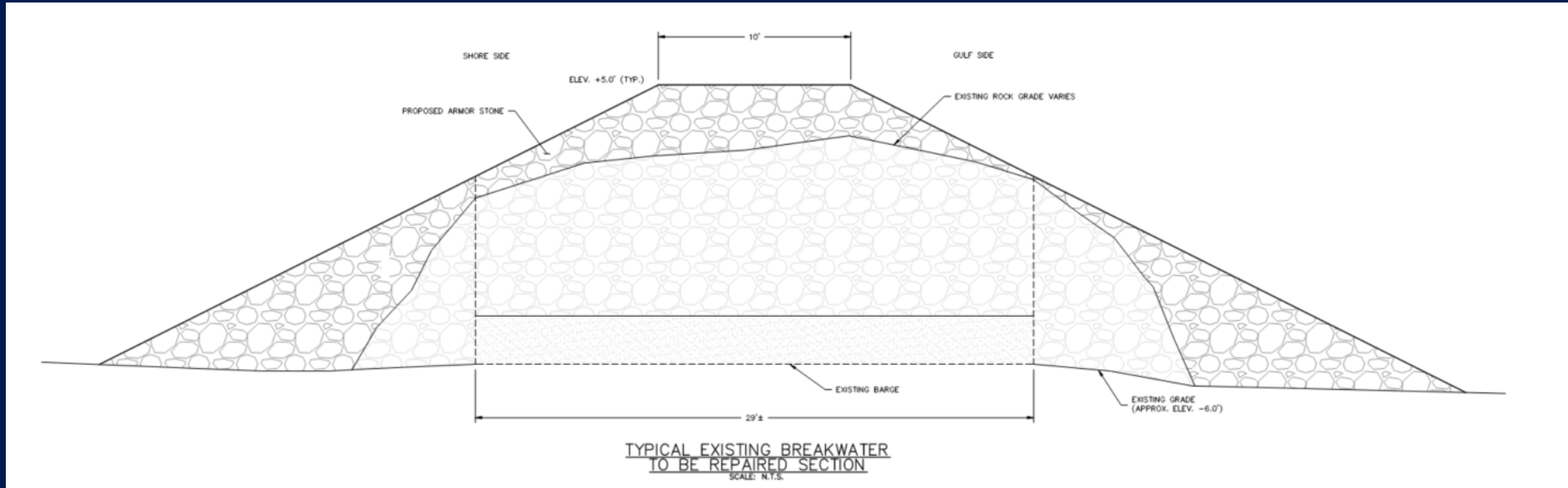
Stabilizing Fourchon Beach-1986



Fourchon Innovation



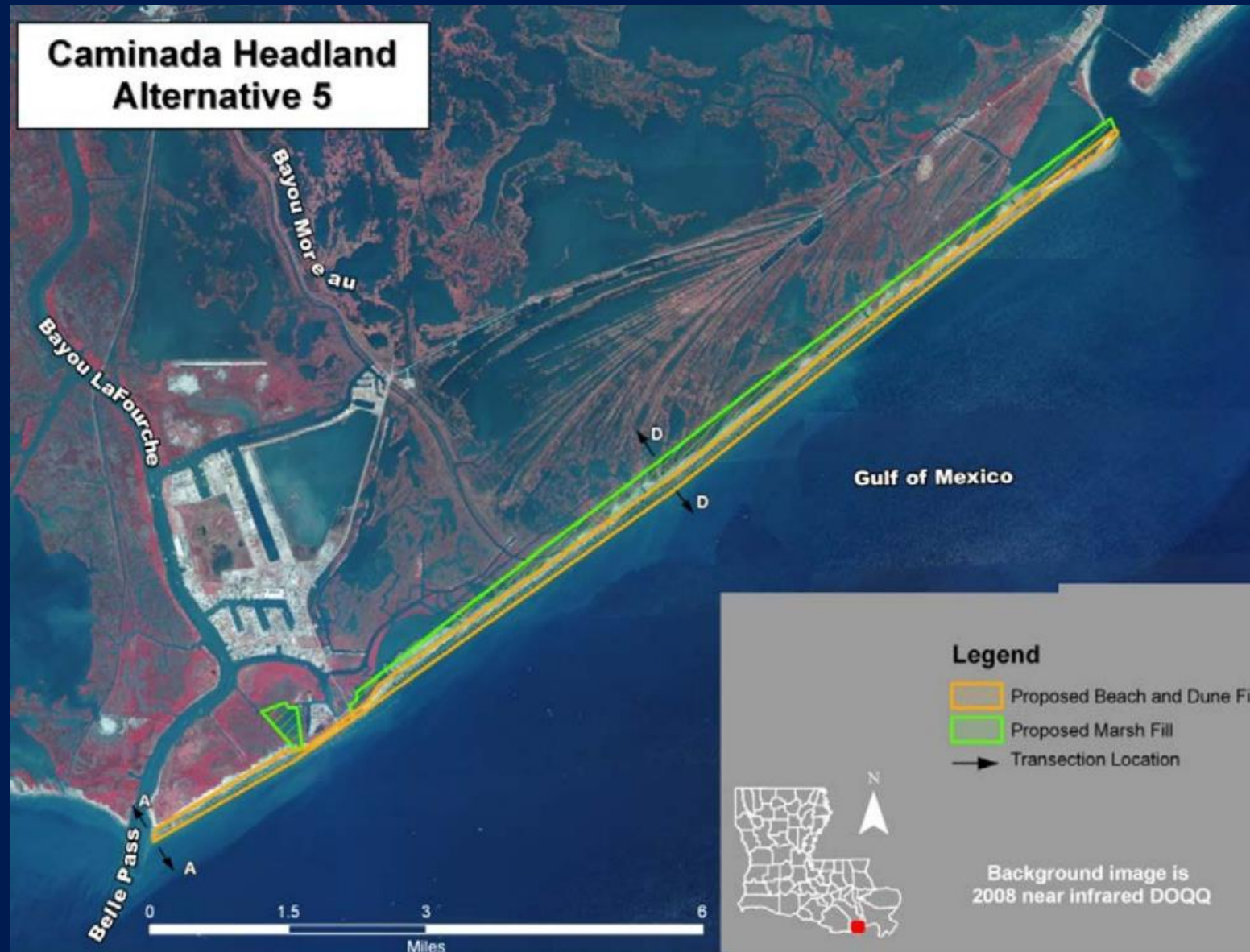
Fourchon Breakwaters



Port Fourchon/ Fourchon Island Long Term Resiliency Analysis: TE-0178



Barataria Basin Barrier Shoreline Restoration Study



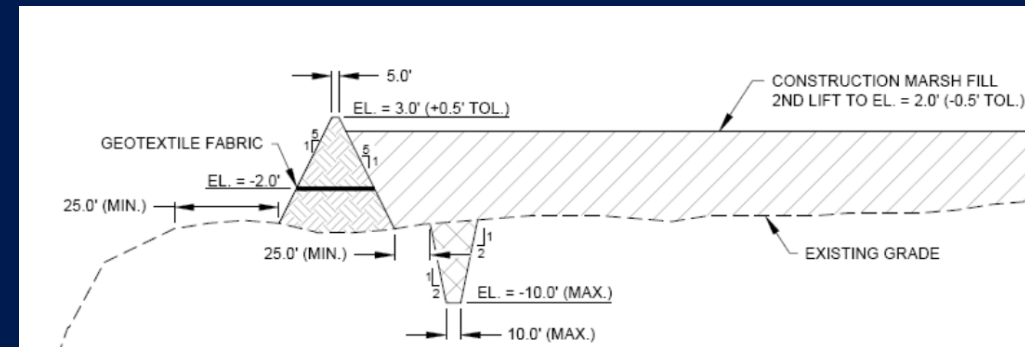
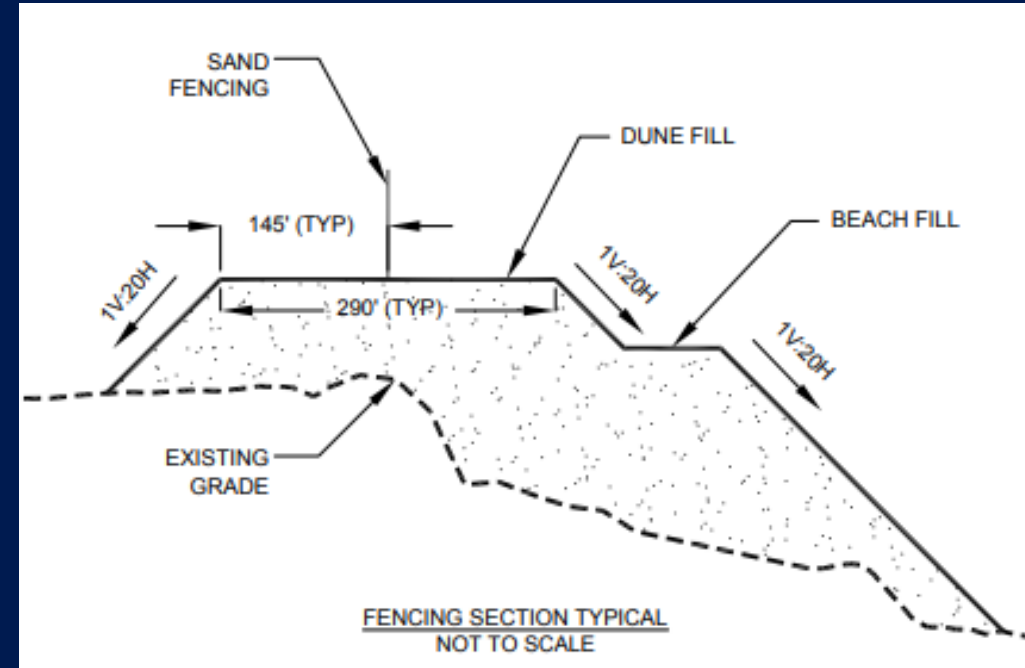
Caminada Headlands Restoration

The BA-171 Project works synergistically with the other Caminada Headland Projects and protect infrastructure

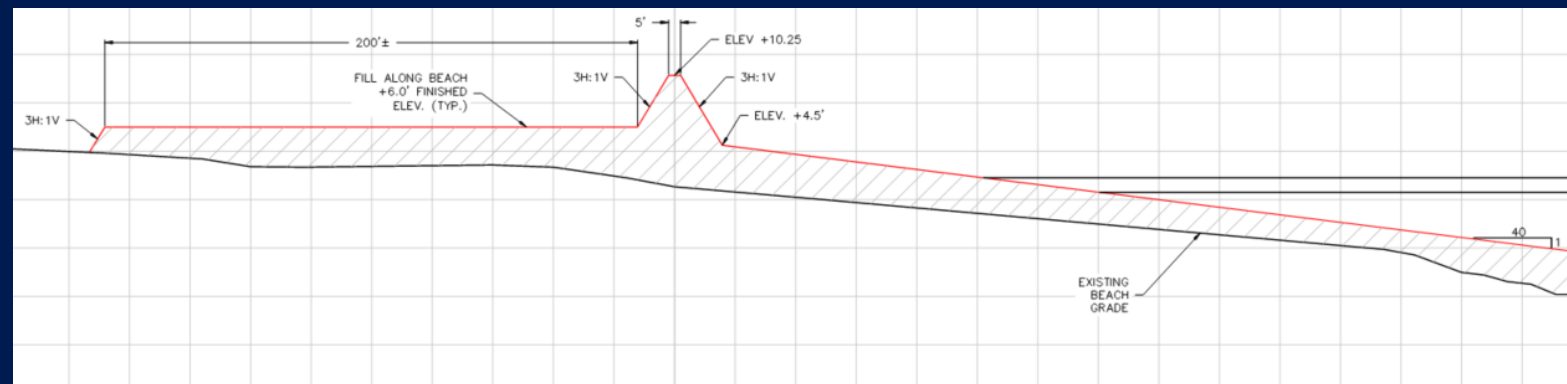
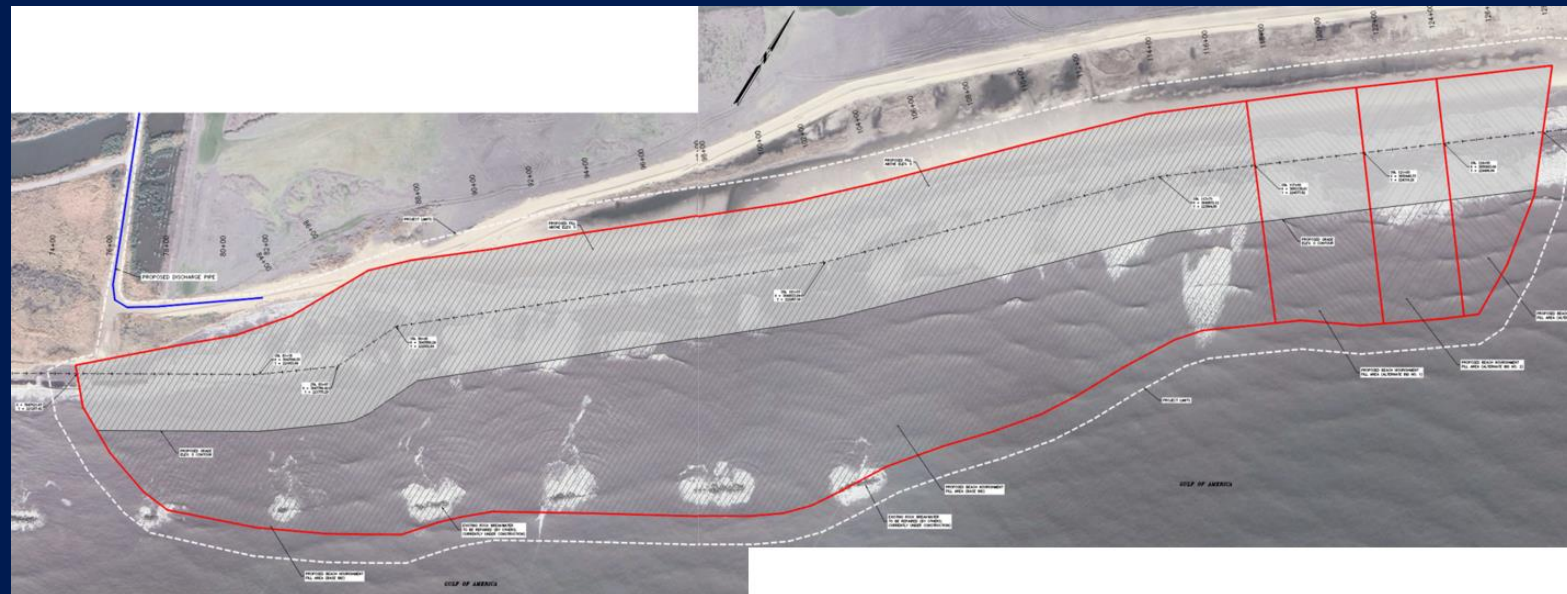
Port Fourchon

BA-171
BA-143
BA-45

Gulf of Mexico



Fourchon Beach Maintenance, Restoration, and Protection





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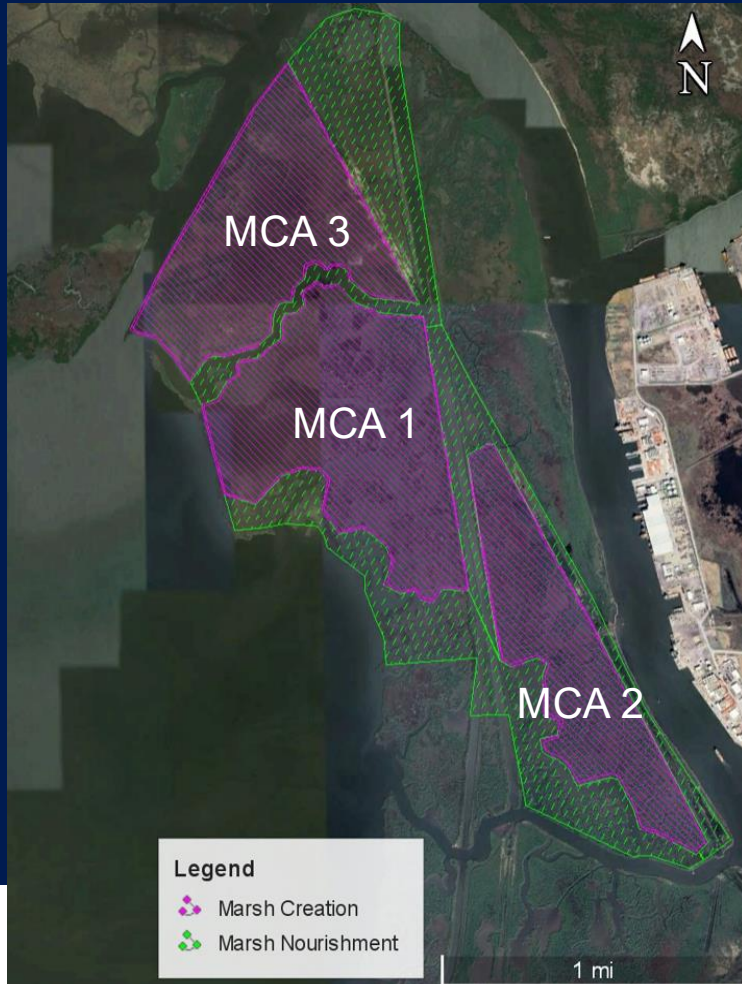
West Fourchon Marsh Creation Project (TE-0134)

Lafourche Parish, Louisiana

Michael Bernard, E.I. | CPRA



General Project Information



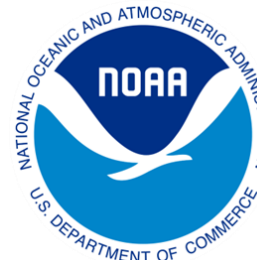
INFO	DESCRIPTION
LOCATION	Lafourche Parish, Adjacent to Port Fourchon
FUNDING	CWPPRA (PPL24): Phase 2 Construction Funded Jan. 2020
PROJECT TYPE	Marsh Creation Project
FEDERAL SPONSOR	National Oceanic and Atmospheric Administration (NOAA)



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Project Layout

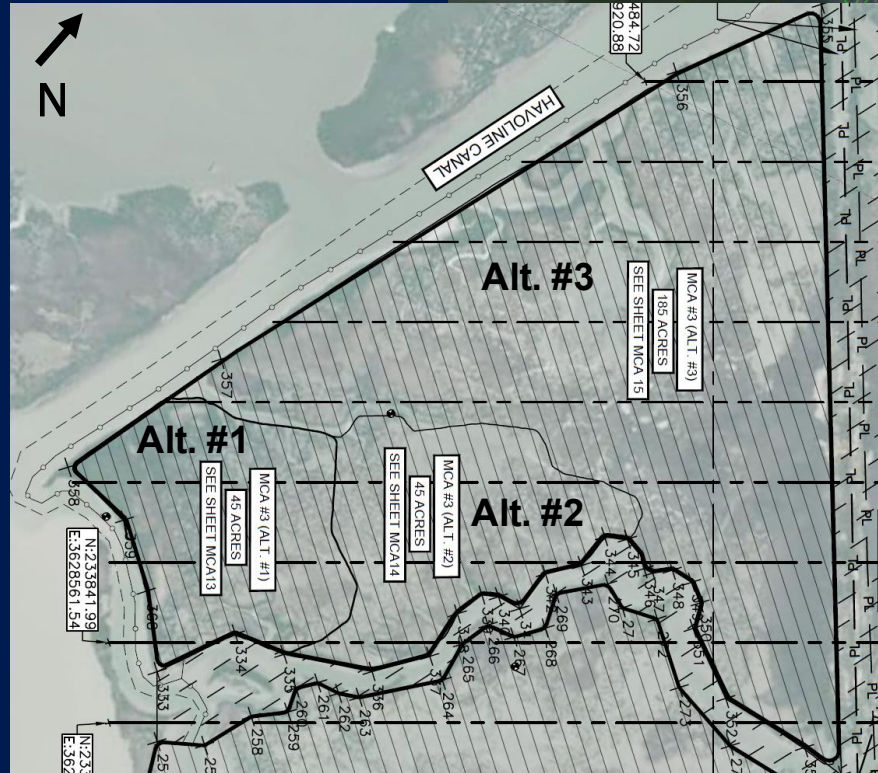
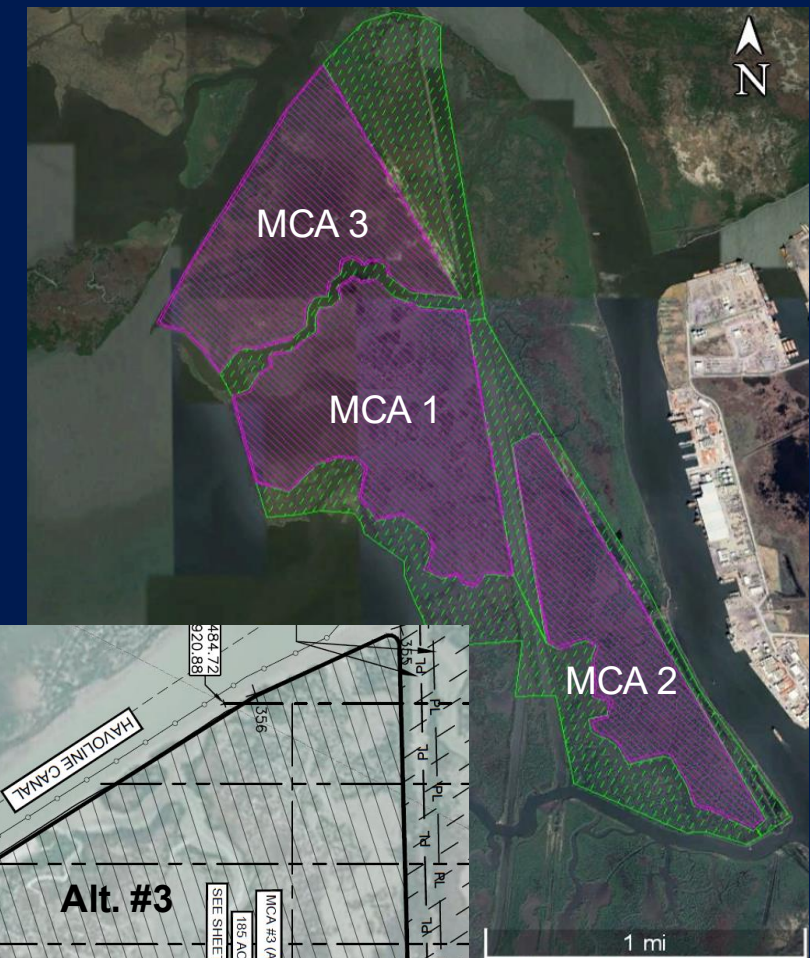
- Up to 800 Acres of Marsh Creation
- 3 Marsh Creation Areas:
 - Base Bid: MCA 1 & MCA 2
 - Bid Alternates: MCA 3 (three alternates)
- Belle Pass/ Bayou Lafourche/ Inner Port Fourchon Slips Borrow
- 3-5 Mile Average Pump Distance



Marsh Creation Areas

Up to 800 Acres of Marsh Creation & 444 acres of Marsh Nourishment

- **MCA 1: 331 Acres**
 - Avg. Bottom Elevation: -0.6'
 - Construction Fill Elevation: +1.75' ± 0.25'
 - Approx. 1,182,890 CY
- **MCA 2: 194 Acres**
 - Avg. Bottom Elevation: -0.5'
 - Construction Fill Elevation: +2.25' ± 0.25'
 - Approx. 735,205 CY
- **Additional MCA (MCA 3): 275 Acres**
 - Avg. Bottom Elevation: -0.1'
 - Construction Fill Elevation: +1.60' ± 0.25'
 - Approx. 722,709 CY
 - Bid Alternates #1, #2, and #3 – form a combined MCA if more than one Alt. chosen



Earthen Containment Dikes

MCA 1

- ECD Length: 18,239 LF
- Crown Elevation: +3.0' + 0.5'
- Side Slopes: 4H:1V

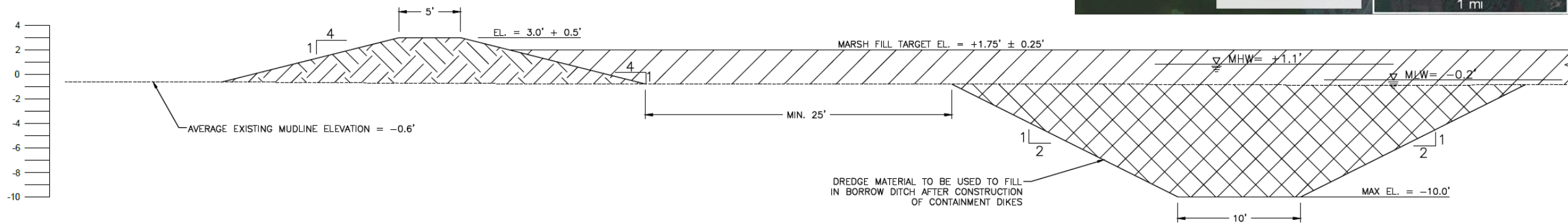
MCA 2

- ECD Length: 18,172 LF
- Crown Elevation: +3.5' + 0.5'
- Side Slopes: 4.5H:1V and 5H:1V

Additional MCA (MCA 3) (Alt. 1+2+3)

- ECD Length: 16,915 LF
- Crown Elevation: +3.0' + 0.5'
- Side Slopes: 4H:1V and 5H:1V

- Stability Bench: 25'
- Crown Width: 5'
- Total ECD LF: 53,326 LF
- Interior Borrow
- Some Gapping/Degrading Required After Acceptance of MCA's



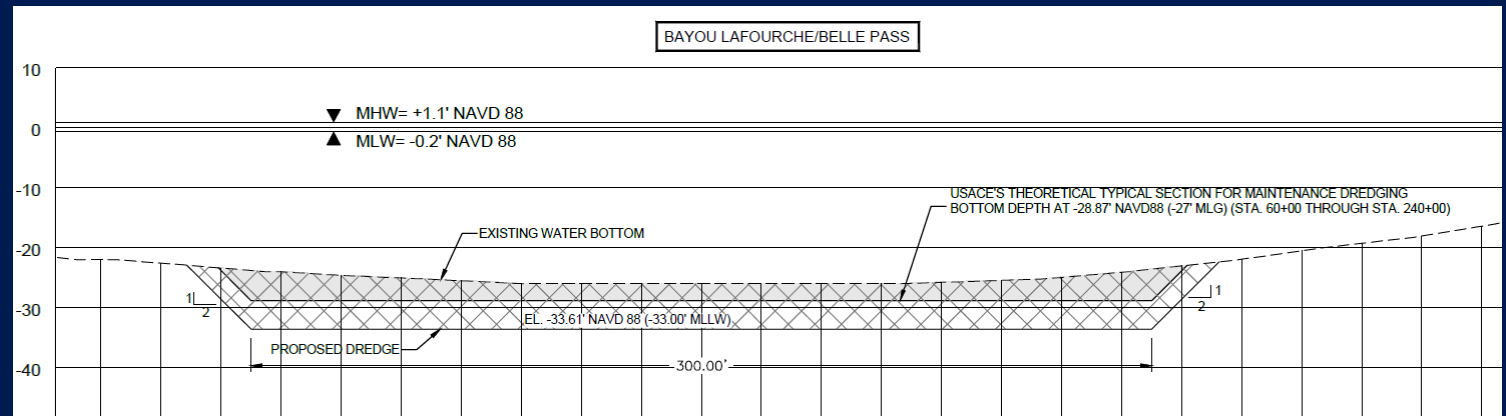
MARSH CREATION AREA 1 - TYPICAL SECTION

4H:1V SIDE SLOPE LOCATIONS:
STA. 0+00 TO END

Borrow Areas

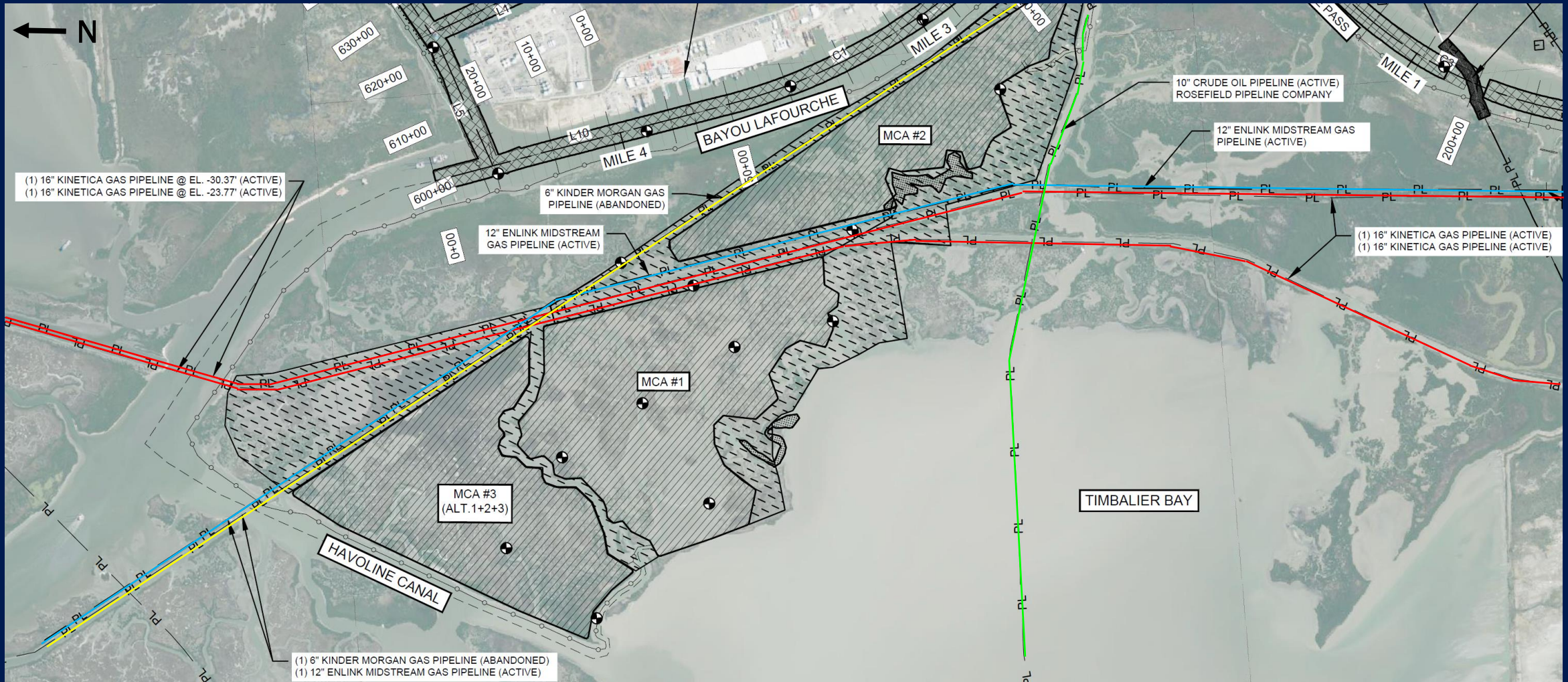


- Borrow Area includes Belle Pass, Bayou Lafourche (up to intersection with Flotation Canal), Flotation Canal, and Inner Port Slips (Slips A-D)
- Dredging will start at Sta. 330+00 and move north
- Proposed Dredging Depth -33.0' MLLW (-33.61' NAVD88)



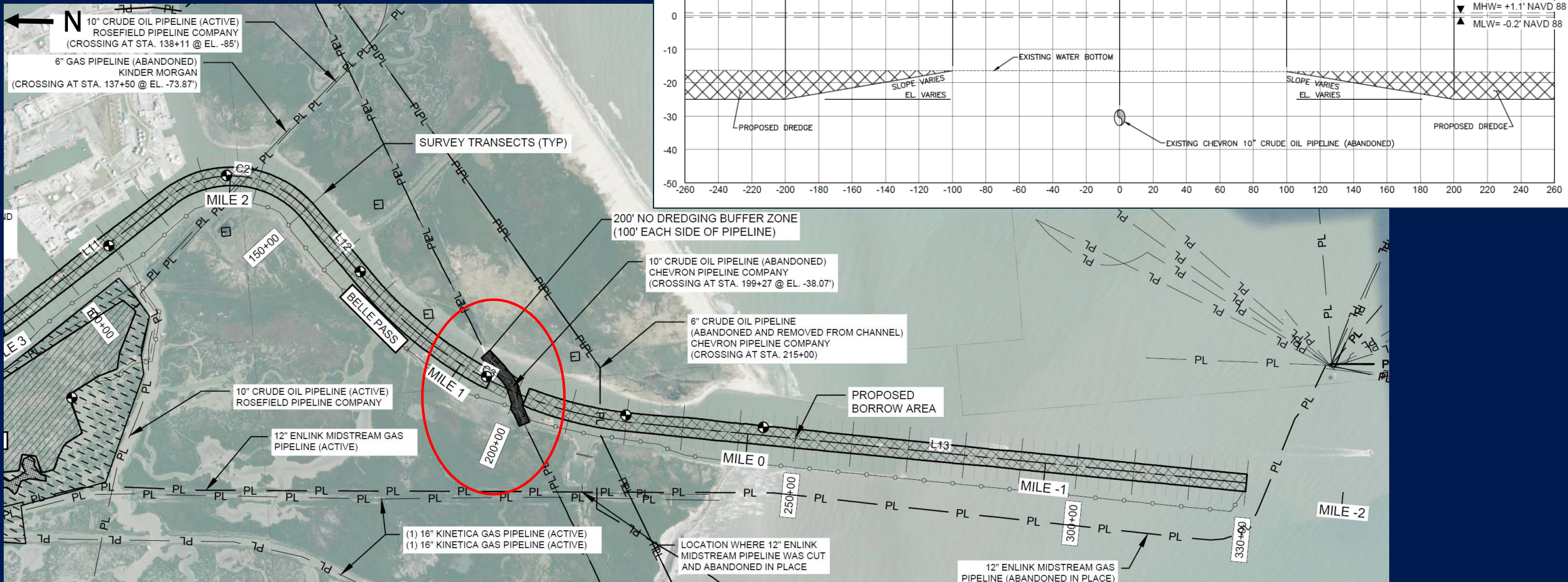
Existing Infrastructure - MCA

- Two (2) 16" Kinetica Gas Pipelines (Active)
- One (1) 12" Enlink Midstream Gas Pipeline (Active)
- One (1) 10" Rosefield Crude Oil Pipeline (Active)
- One (1) 6" Kinder Morgan Gas Pipeline (Abandoned)



Existing Infrastructure – Borrow Area

- Four pipeline crossings
 - One removed, two non-conflicting due to depth, one conflicting (Chevron)
 - Chevron in the removal process
- Excavation buffers planned



Quantities

Item No.	Work or Material	Quantity	Unit
Base Bid (MCA 1 & MCA 2) and Bid Alternates (MCA 3 Alt. 1+2+3)			
1	Mobilization/Demobilization	1	LS
2	Construction Surveys	1	LS
3	Daily Bird Abatement	267	DAY
4	Grade Stakes	100	EACH
5	Settlement Plates	16	EACH
6	Earthen Containment Dikes	53,326	LF
7	Hydraulic Dredging and Marsh Creation	2,640,804	CY

Schedule

- Construction Funding Status:
 - Received Jan. 2020
- Permit Status:
 - CUP Received Spring 2023
- Bayou Lafourche Borrow Area Analysis:
 - Completed Summer 2023
- Final Review Bid Package:
 - Completed March 2025
 - Waiting on land rights & oyster lease acquisition
- Anticipated Bid Advertisement:
 - Q4 2025
- *Will be Bid by Greater Lafourche Port Commission***
- Contract Duration:
 - 325 Days (Base Bid)
 - 40, 25, 70 Days (Bid Alternates)





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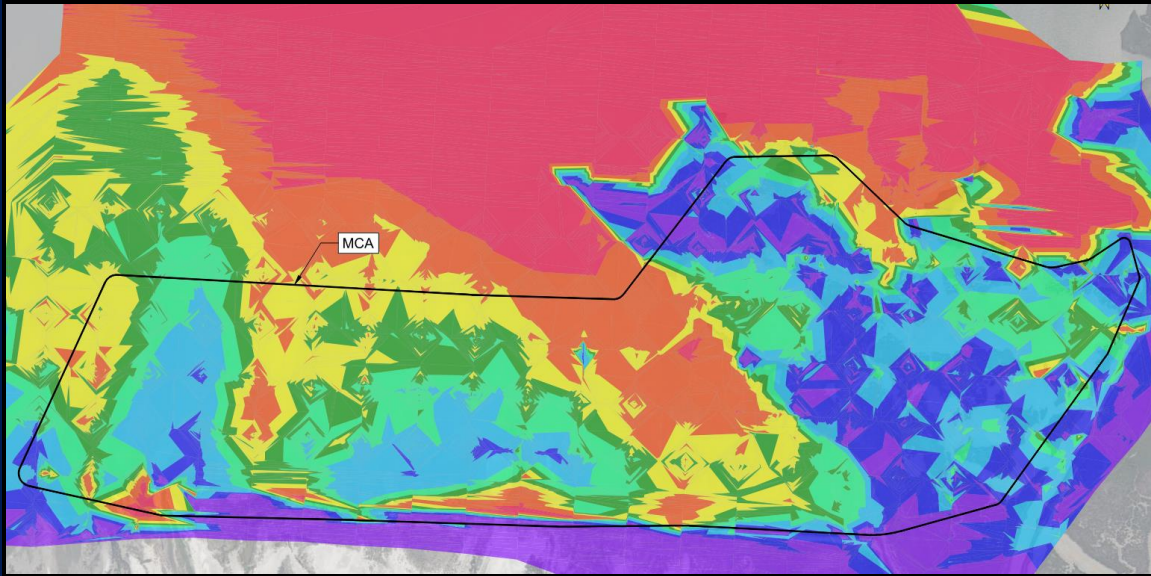
Port Fourchon Marsh Creation Project (TE-0171)

Lafourche Parish, Louisiana

Michael Bernard, E.I. | CPRA



General Project Information



INFO	DESCRIPTION
LOCATION	Lafourche Parish, West of Belle Pass
FUNDING	CWPPRA (PPL31): Phase 2 Construction Funded Jan. 2025
PROJECT TYPE	Marsh Creation Project
FEDERAL SPONSOR	Environmental Protection Agency (EPA)



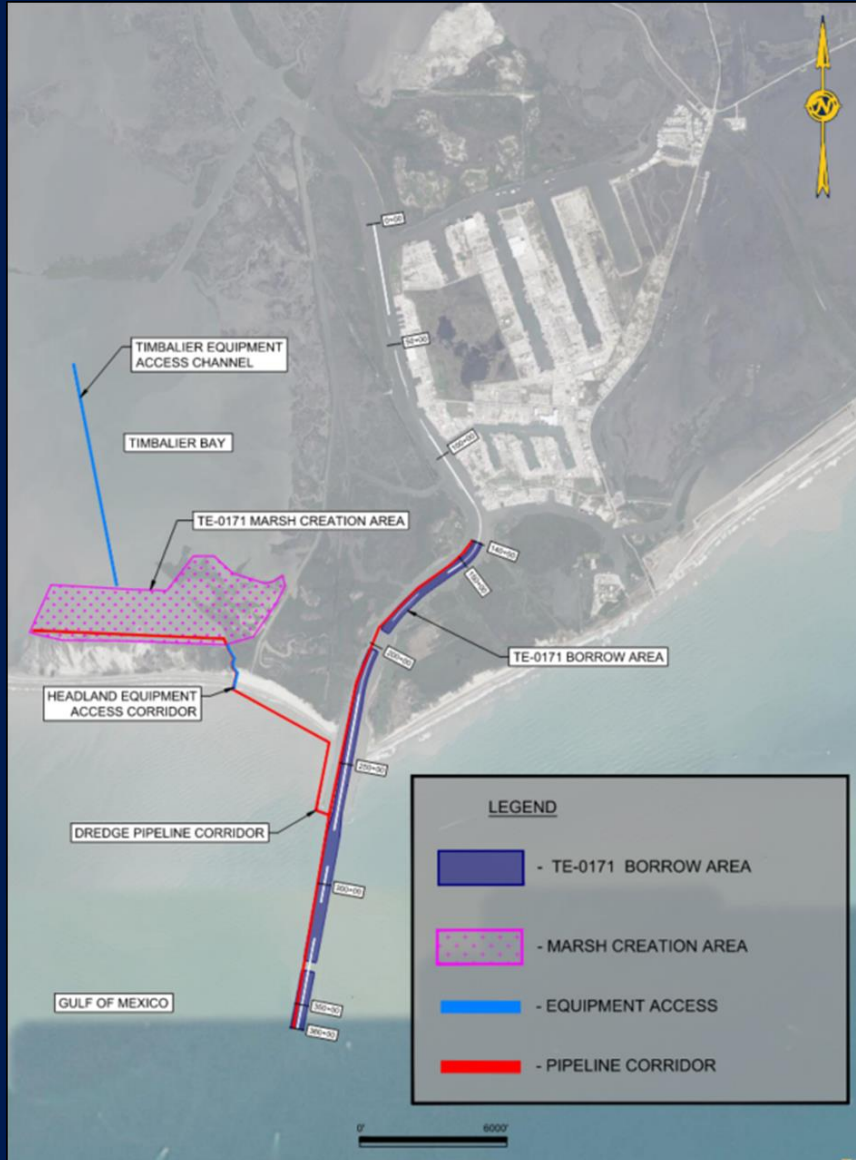
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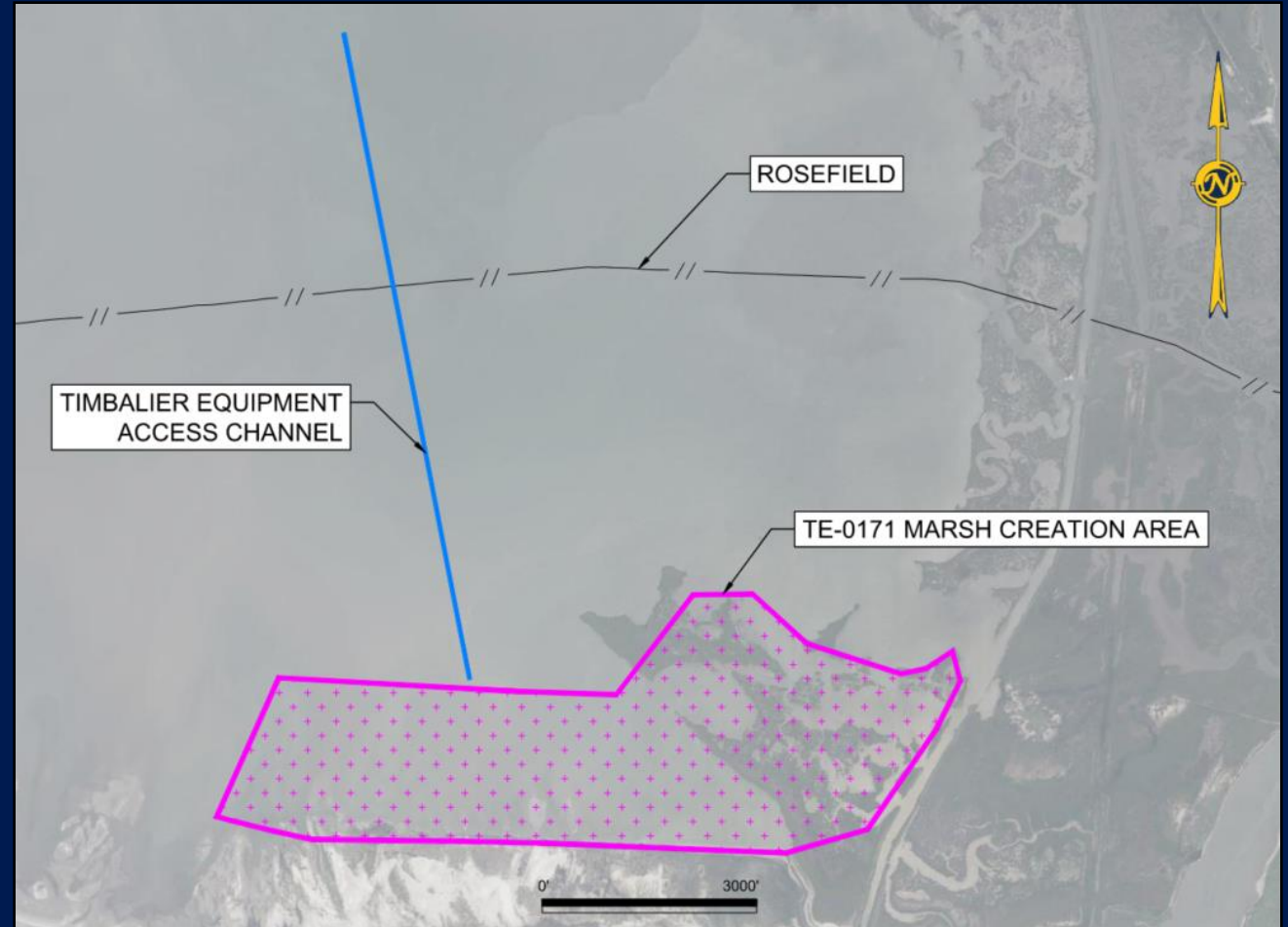
Project Layout



- Single Cell Marsh Creation Area (543–acres)
- 4.2-mile Belle Pass Borrow source
- 100% Design expected to commence in Q3 of 2025
- Bidding to follow in Q1 2026
- Permit approval is ongoing

Marsh Creation Area

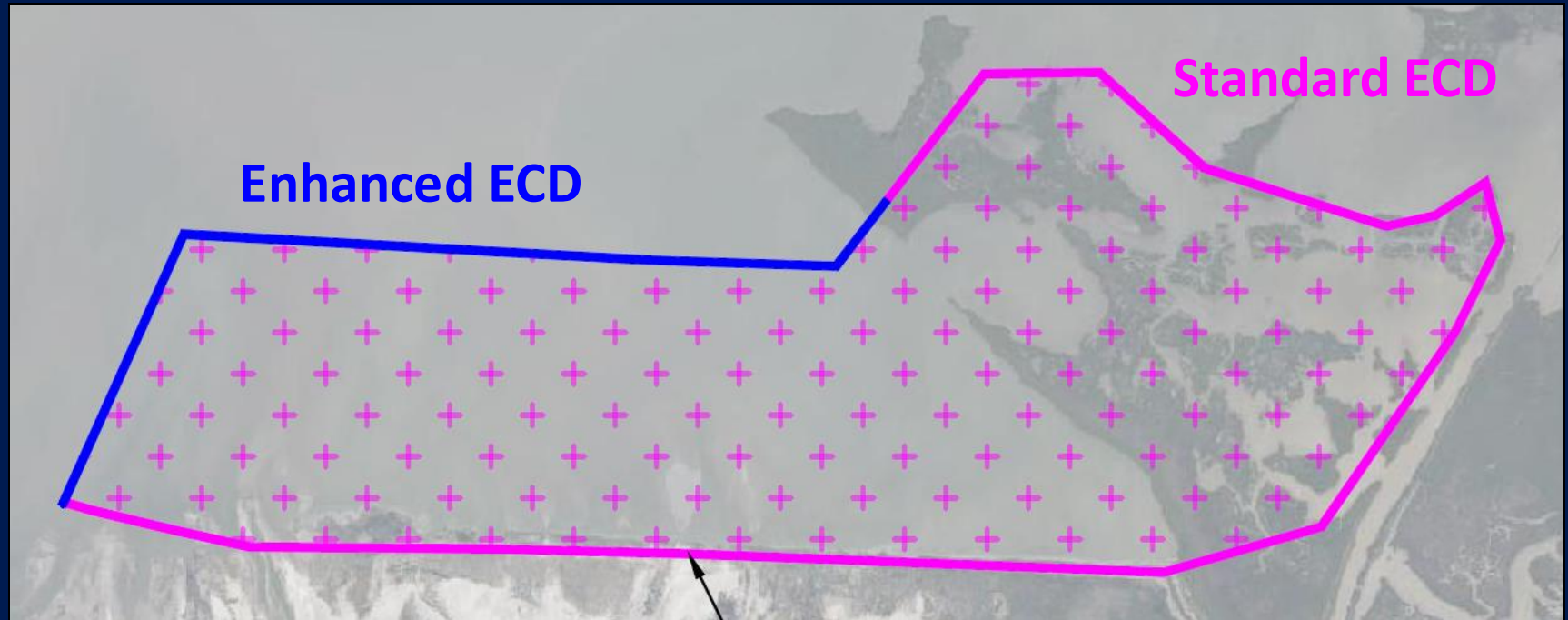
- 543 Acres of Marsh Creation
- Average Mudline Elevation: -1.24'
- Maximum Construction Marsh Fill Elevation: +3.2' + 0.25'
- Target CMFE will be given in the field after evaluating contractor's means and methods
- Approximately 2,636,354 CY
- Pay will be based on the cut



Earthen Containment Dikes

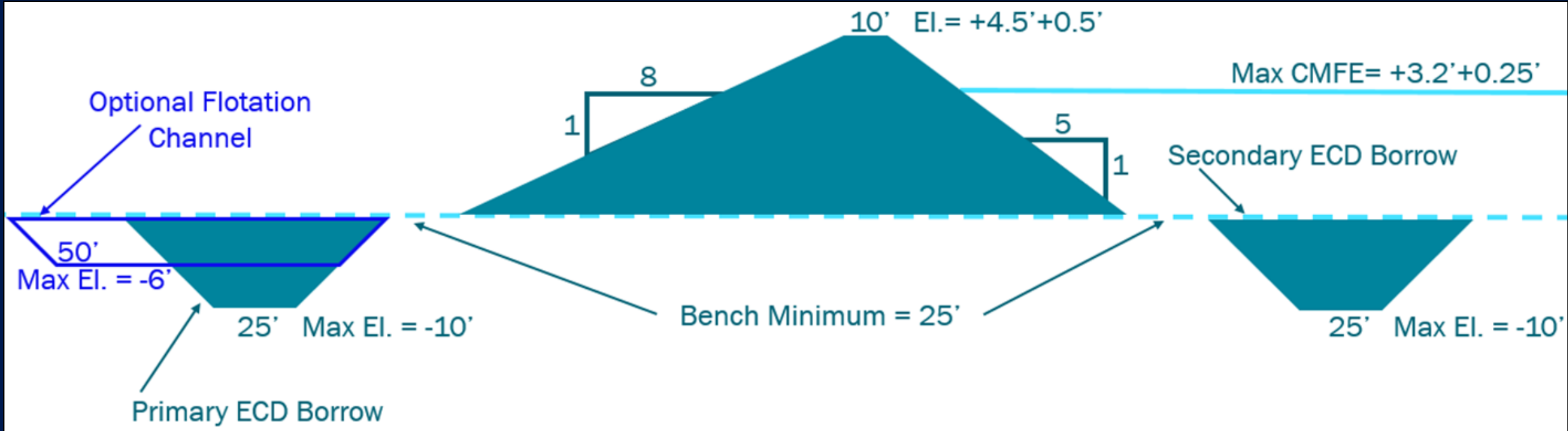
Standard

- Standard ECD
Length: 17,174 LF
- Crown Elevation:
 $+4.5 + 0.5'$
- Side Slopes: 5H:1V
- Stability Bench: 25'
- Crown Width: 5'
- Interior Borrow
- Some
Gapping/Degrading
Required After
Acceptance of MCA's



Earthen Containment Dikes

Enhanced



- Enhanced ECD Length: 7,422 LF
- Crown Elevation: $+4.5' + 0.5'$
- Side Slopes: 5H:1V and 8H:1V
- Stability Bench: 25'
- Crown Width: 10'
- Interior/Exterior Borrow
- Some Gapping/Degrading may be Required After Acceptance of MCA's

Borrow Area

Belle Pass

- Proposed Dredging Depth -43.0 Max. NAVD88

Bayou Lafourche/Belle Pass is a USACE-Maintained Navigation Channel

- Maintained to
- -24'/-26' MLLW
- -27'/-30' MLLW with Advance Maintenance



Sta. 140+00 to 275+00

- Channel Width: 300'
- Side Slope: 3H:1V
- Dredge Depth: -43'

Sta. 275+00 to 280+00 (Transition zone)

- Channel Width: Varies
- Side Slope: 3H:1V
- Dredge Depth: -43'

Sta. 280+00 to 360+00

- Channel Width: 475'
- Side Slope: 3H:1V
- Dredge Depth: -43'

Existing Infrastructure

Borrow Area

100' buffers will be implemented around conflicting pipelines

Operator: Chevron

Size: 10"

Type: Crude Oil

Elevation: -38.1'

Status: Permanently Abandoned

In the removal process – may be removed prior to construction

Operator: EnLink

Size: 12"

Type: Gas

Elevation: -41.9'

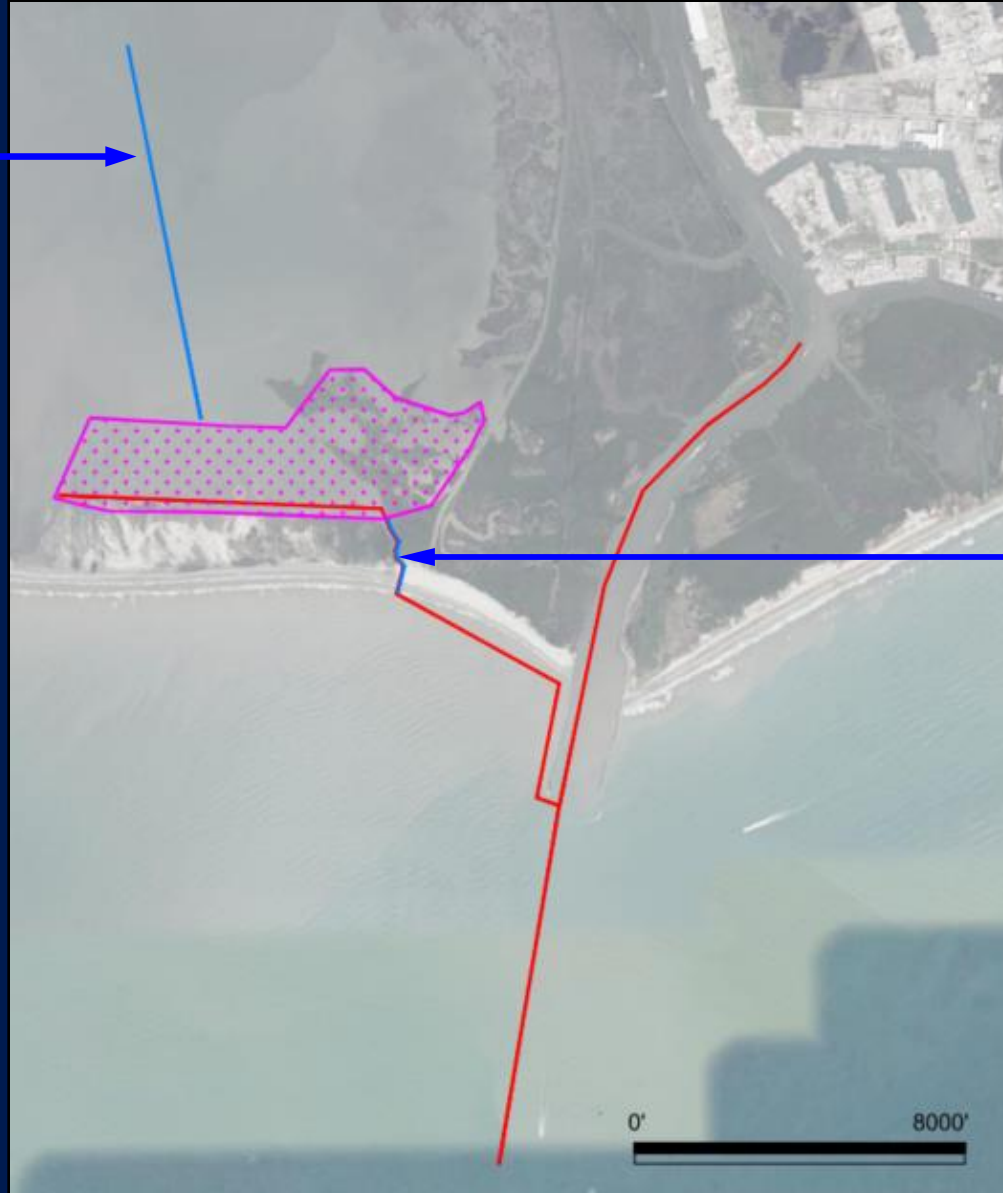
Status: Permanently Abandoned



Access Routes

Timbalier Equipment Access Channel

- Across Timbalier Bay
- Optional dredging of a 50' channel to a depth of -6'
- Will connect to optional floatation channel around enhanced ECDs
- Returning to original conditions before demobilization is required



Headland Equipment Access Corridor

- Over the beach
- Utilizing existing uplands
- Mats will be needed
- Parallel to dredge pipeline corridor

Quantities

Item No.	Work or Material	Quantity	Unit
Base Bid (MCA-1)			
1	Mobilization/Demobilization	1	LS
2	Hydraulic Dredging & Marsh Fill (incl dike backfill)	2,636,354	CY
3	Enhanced ECD	152,150	CY
4	Standard ECD	126,872	CY
5	Equipment Access Channel (Optional)	47,273	CY
6	Settlement Plates	11	EA
7	Grade Stakes	261	EA
8	Nesting Bird Abatement	332	DAY
9	Construction Surveys	1	LS

- Marsh Creation Volume based on Bayou Lafourche Borrow Material. Bid quantity is being finalized (approx. +/-10% volume change anticipated)
- Pay on the Cut

Schedule

- Construction Funding Status: Received Jan. 2025
- Permit Status: Estimated CUP approval Q3 2025
- Final Bid Package: Q3/Q4 2025
- Anticipated Bid Advertisement: Q1 2026

Will be Bid by Greater Lafourche Port Commission

- Contract Duration: 485 Days



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BUDM: Sustainable Borrow Sources for Coastal Restoration

John Plaisance II, P.E., L.S. | GIS Engineering



BUDM

- In 2016, the WRDA act called for a pilot program to explore beneficial use of dredged sediment projects. The 2020 WRDA act authorizes the USACE to beneficially use dredged materials even if it costs more to do so.
- Beneficial uses are defined as “productive and positive uses of dredged material, which cover broad use categories ranging from fish and wildlife habitat development, to human recreation, to industrial/commercial uses” (USACE Beneficial Uses of Dredged Material, Engineer Manual 1110-2-5026).
- The Greater Lafourche Port Commission (GLPC) has been using dredged material beneficially since its creation in 1960.



Before it was officially designated a port by the Louisiana Legislature in 1960, Fourchon only had one company with a facility in the area.



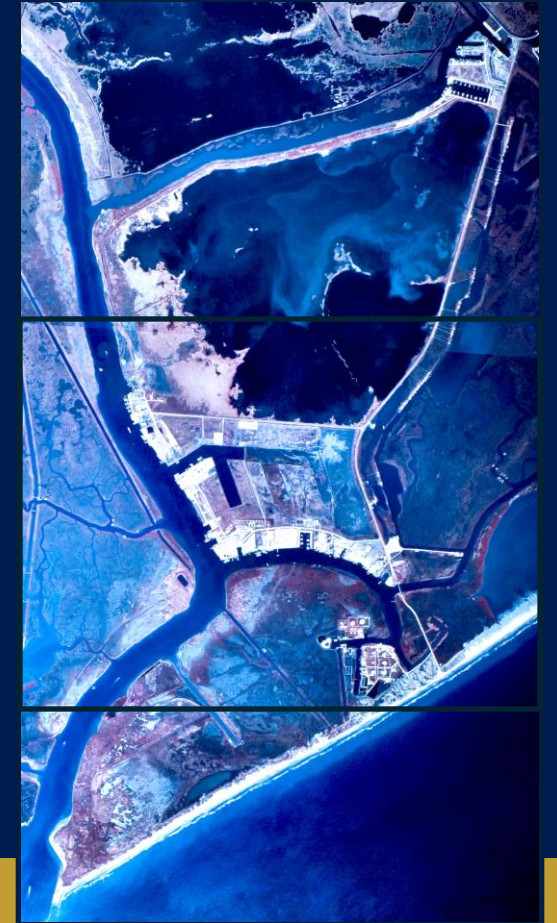
In 1967, the Belle Pass channel was dredged 12' deep and 125' wide. The spoils from that project were just spread on the banks of Bayou Lafourche.



In 1975 and 1980, the Belle Pass channel was dredged 20' deep and 300' wide. The spoils from that project were deposited along the beach west of Belle Pass.



In 1984, GLPC began development of the E-Slip area. This truly began their history of using spoil material from dredged slips to develop adjacent property.



In 2000, GLPC began development of the Northern Expansion area. In addition to using spoil material from dredged slips to develop adjacent property, this material has been beneficially used to construct marsh areas as mitigation for the development.



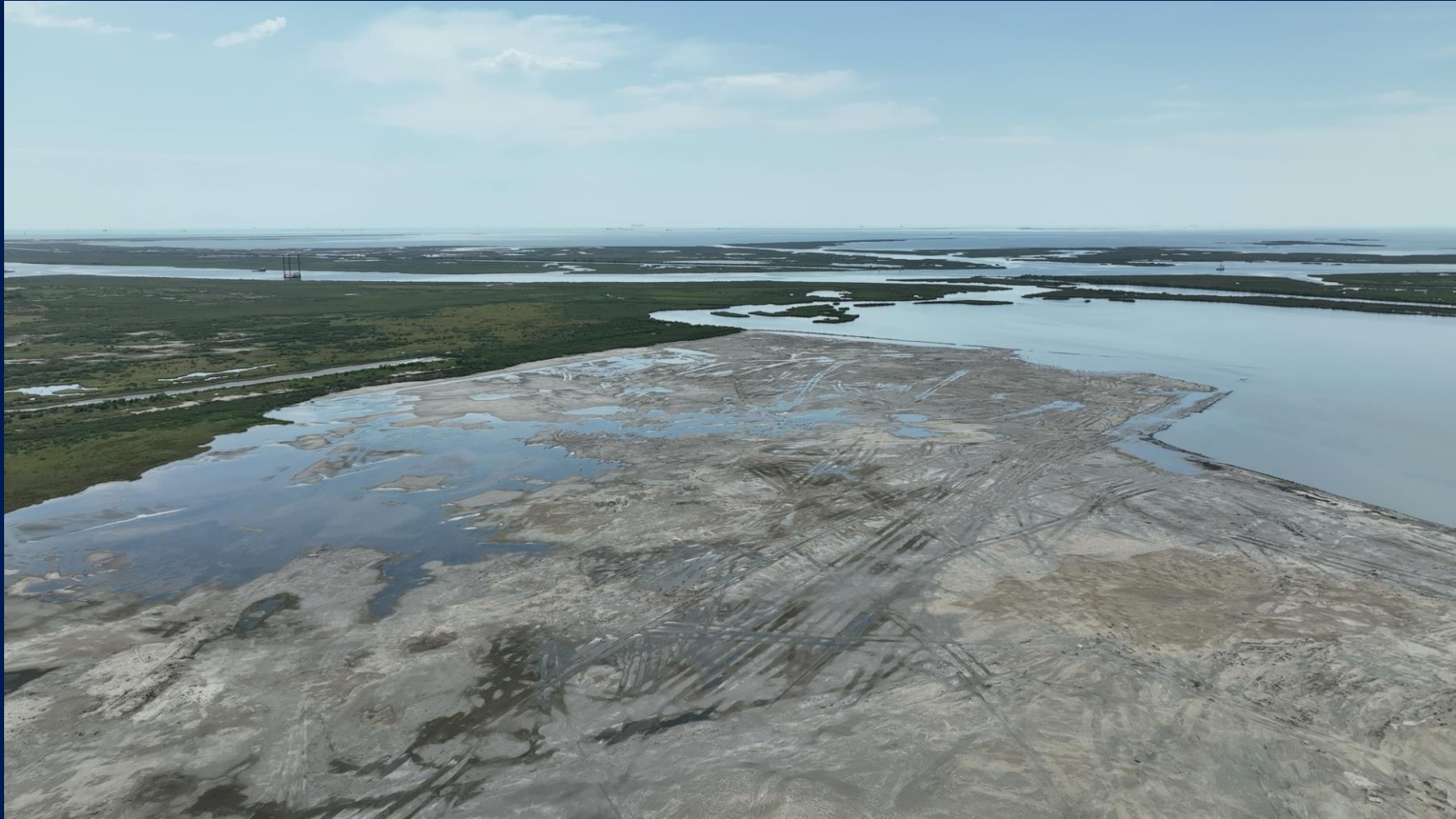
1998 photo of Northern Expansion mitigation area.



2023 photo of Northern Expansion mitigation area.



2023 photo of Northern Expansion Slip D mitigation area, looking southwest.



2019 photo of tidal creek in Northern Expansion Slip
C mitigation area, looking south.



In 2016, GLPC began working toward having deep draft available in Belle Pass and Bayou Lafourche. This project would service a potential deepwater facility on Fourchon Island as well as a potential LNG facility on the west bank of Belle Pass. The soils from this deepening project are proposed to be beneficially used as a foundation for the deepwater development in Port Fourchon as well as marsh areas for mitigation.





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Port Fourchon & Coastal Restoration QUESTIONS

STATE OF
THE COAST

