

*Flexibility During Design, Permitting, and Bidding Processes of  
the Caminada Headland Beach and Dune Restoration Project  
(BA-45)*



*Greg Grandy<sup>1</sup>, Michael Poff<sup>1</sup>, Brad Miller<sup>2</sup> & Catherine Ricks<sup>2</sup>*

*<sup>1</sup> Coastal Engineering Consultants, Inc.,*

*<sup>2</sup> Coastal Protection and Restoration Authority*



# *Funding Agencies – Client – Design Team*



## DESIGN TEAM



# *Outline*

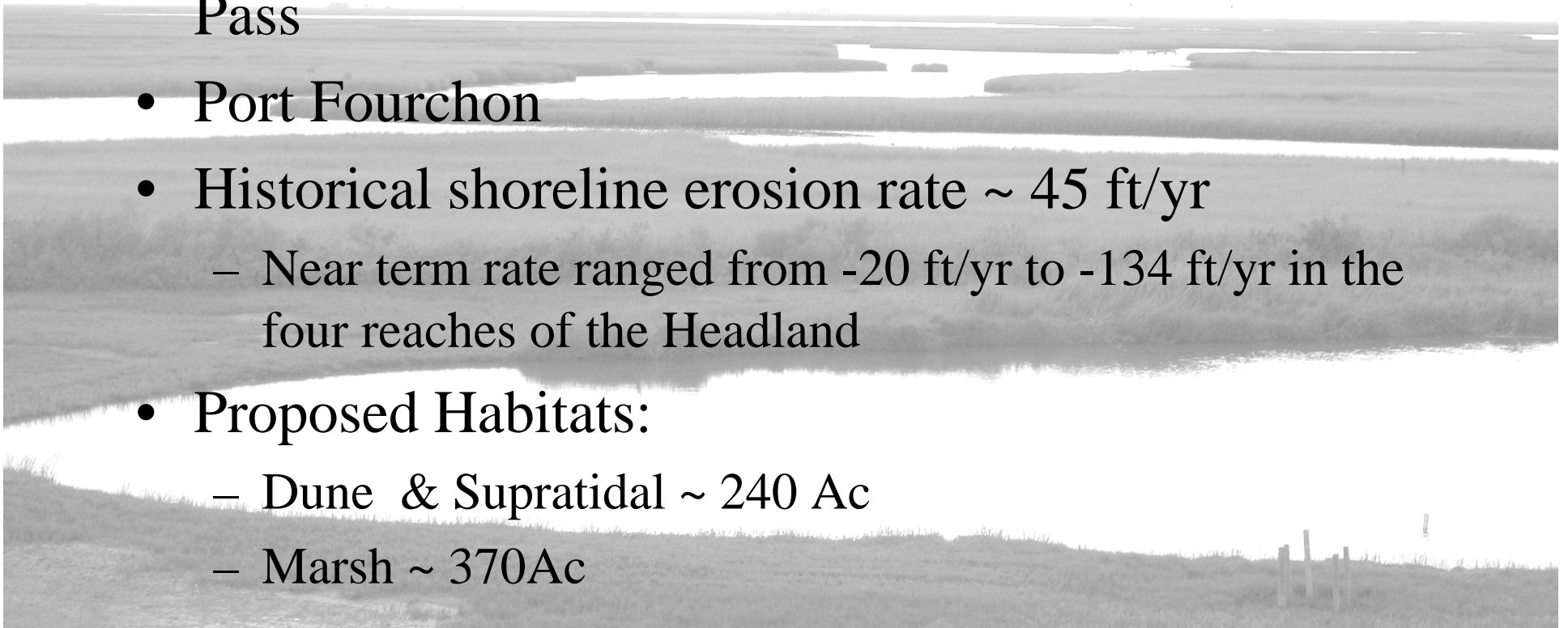
- **Project Introduction**
- Project Overview
- Flexibility During Design
- Flexibility During Permitting
- Flexibility During Bid Process
- Lessons Learned





# *Project Introduction*

- 13 mile long barrier headland – critical component of State's Master Plan
- Lafourche Parish
- Located between West Belle Pass and Caminada Pass
- Port Fourchon
- Historical shoreline erosion rate ~ 45 ft/yr
  - Near term rate ranged from -20 ft/yr to -134 ft/yr in the four reaches of the Headland
- Proposed Habitats:
  - Dune & Supratidal ~ 240 Ac
  - Marsh ~ 370Ac



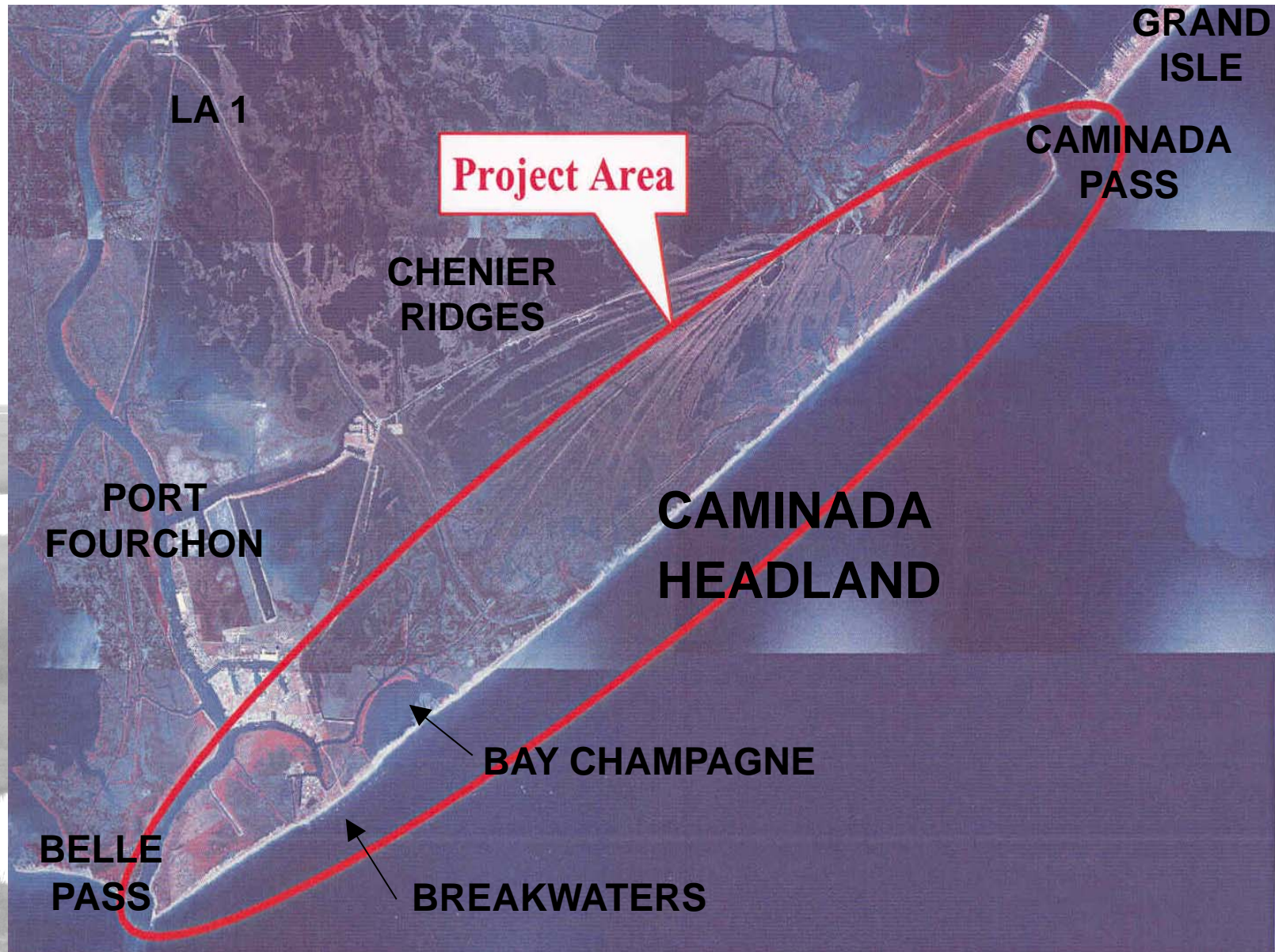


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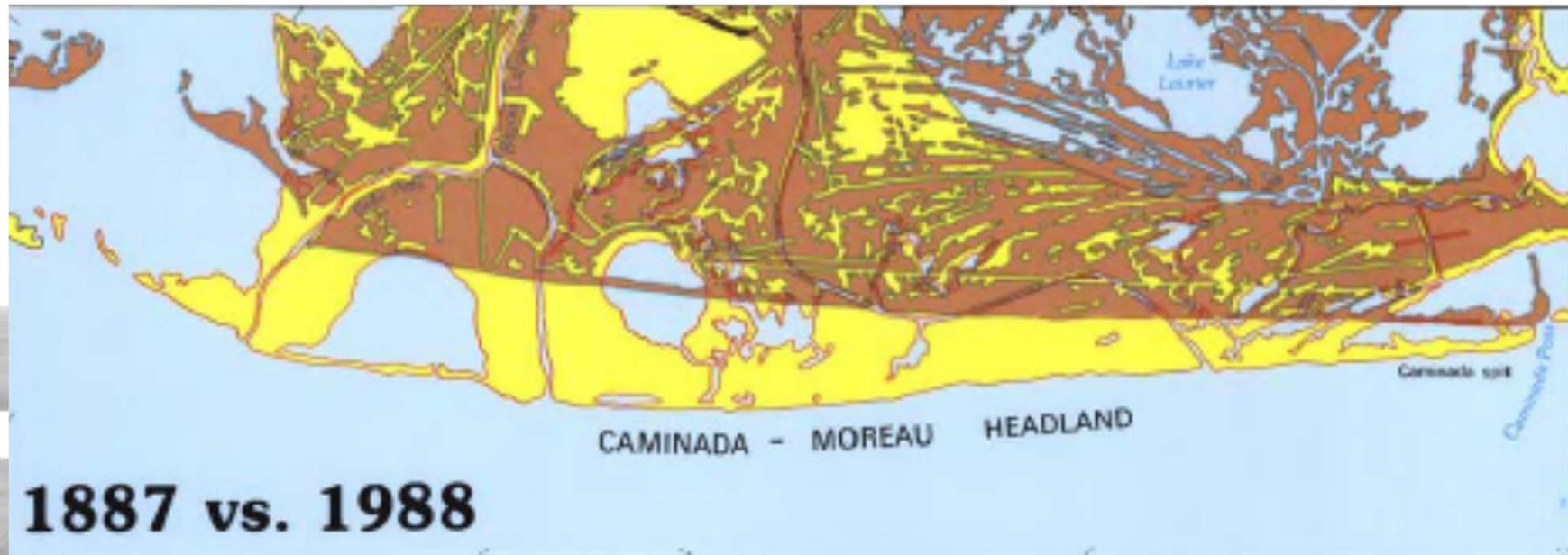


# *General Location Map*





# *Shoreline Change Map*



*Louisiana Barrier Island Erosion Study*  
*Atlas of Shoreline Changes*







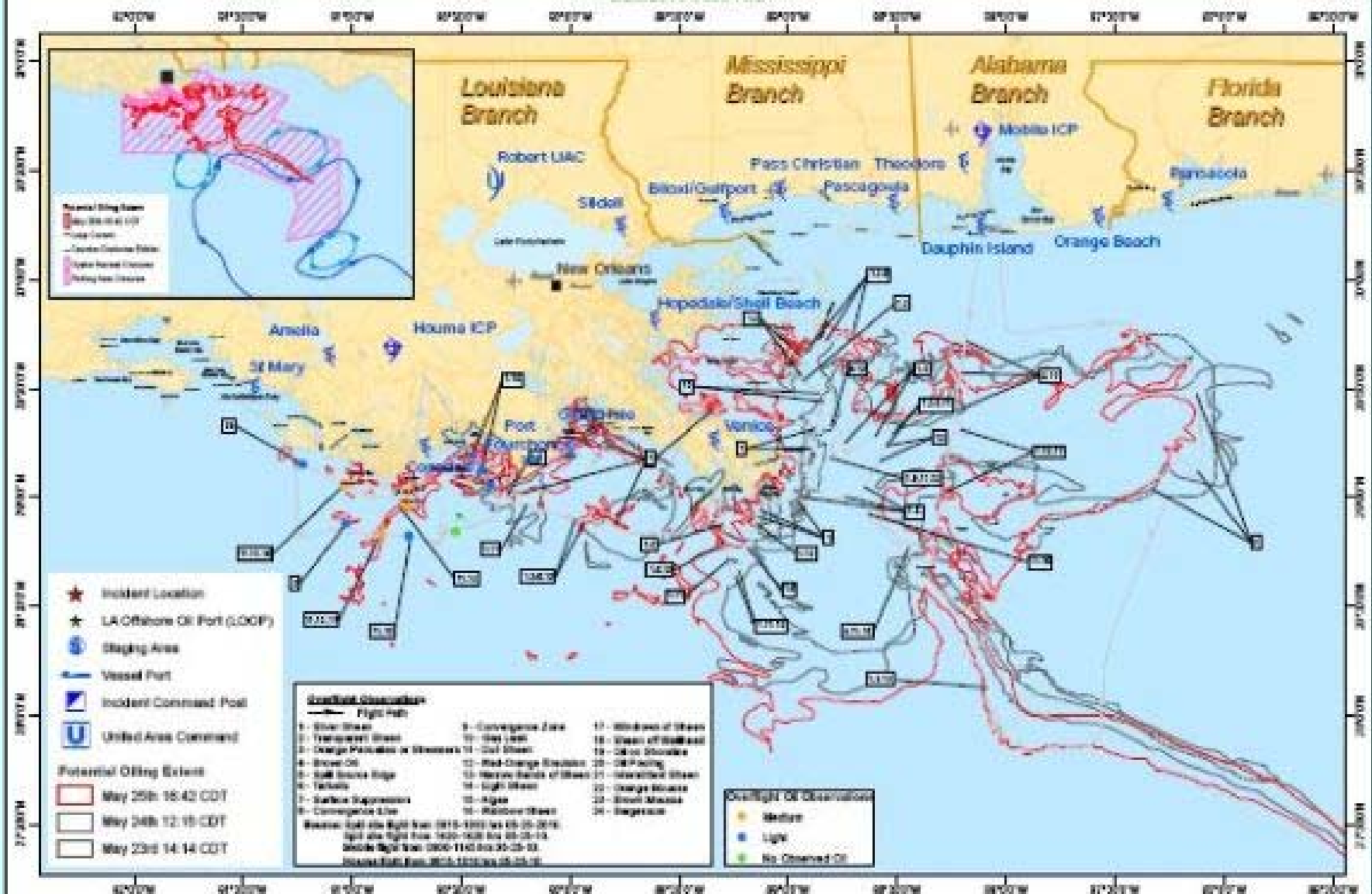






# Deepwater Horizon MC252 - Situation Status Map

5/26/2010 0600 Hrs











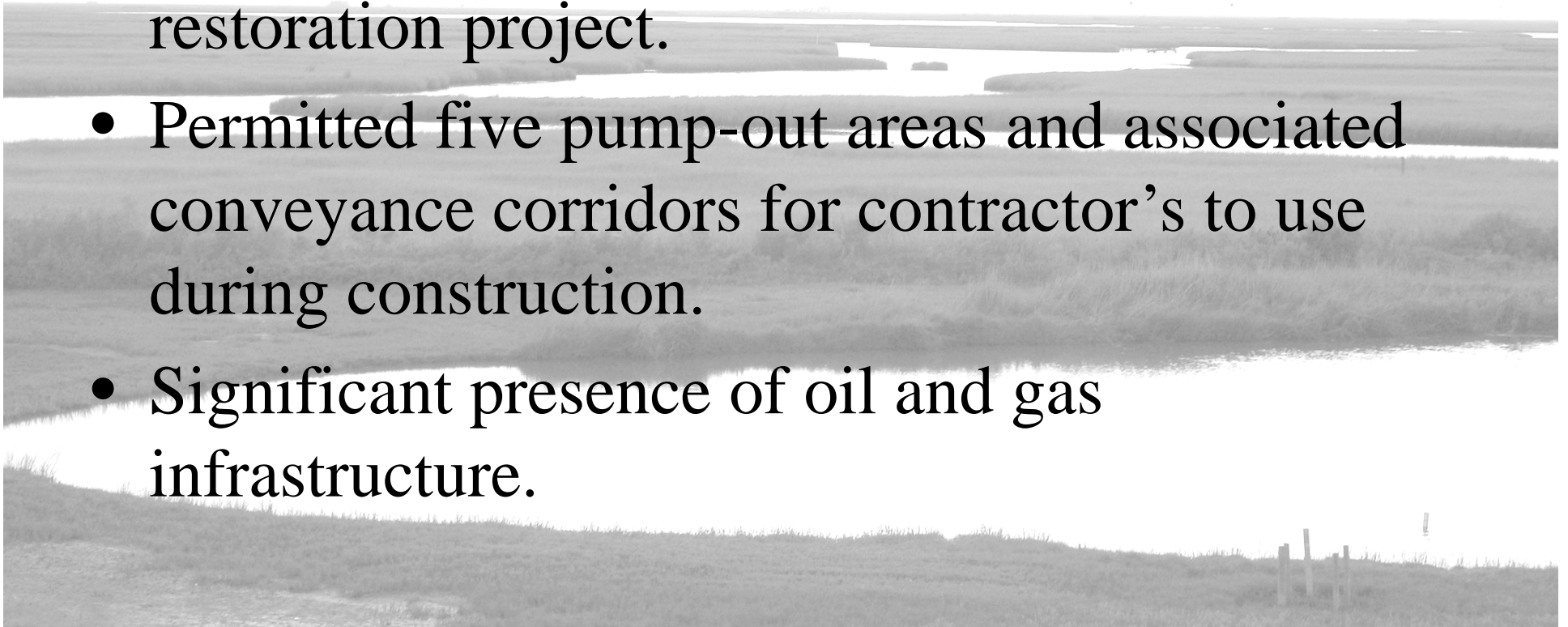




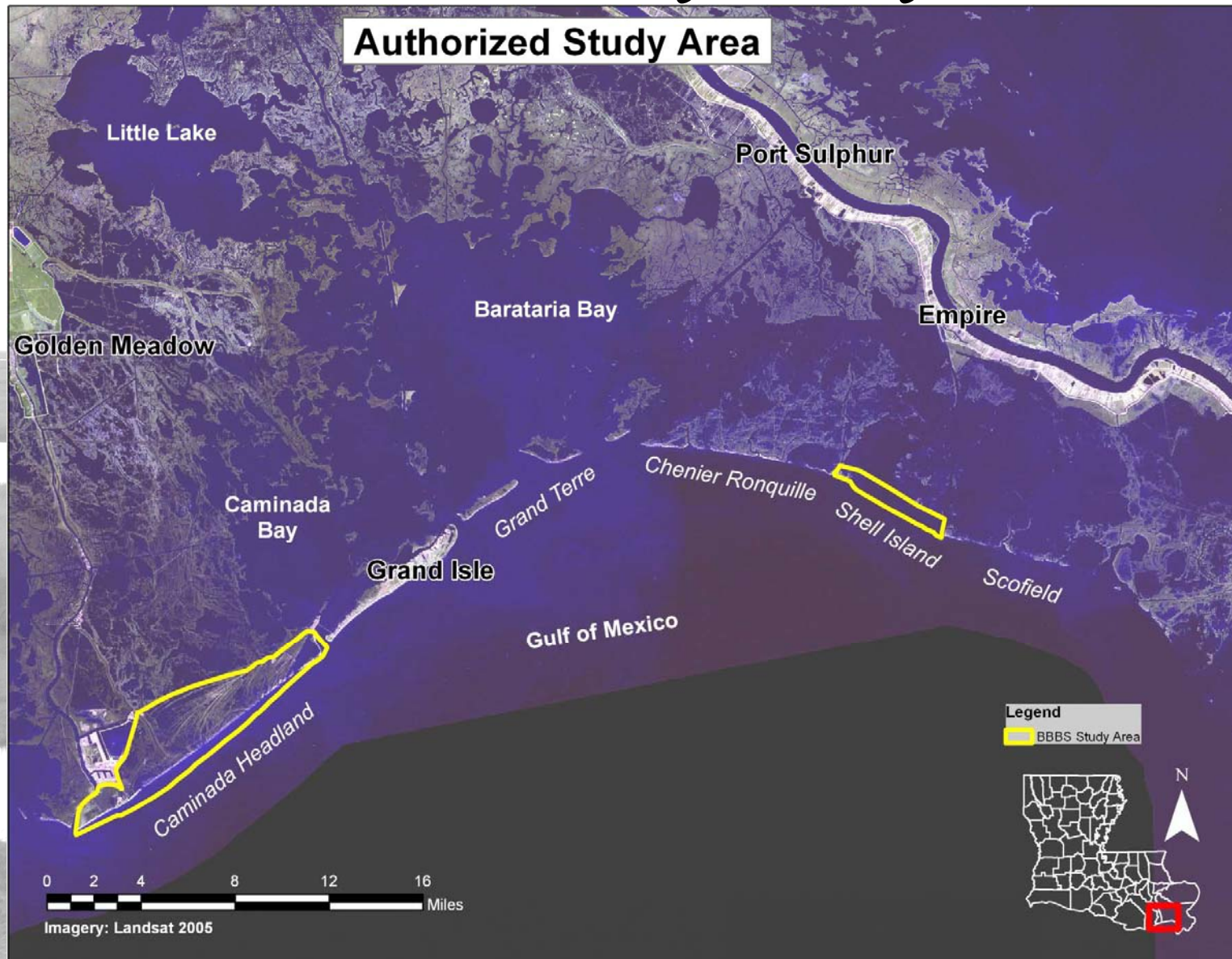


## *Project Unique Aspects*

- Excavation of sand from Ship Shoal, a significant Offshore Continental Shelf Sand Resource, approximately 27 miles away from the Caminada Headland for the first time for a restoration project.
- Permitted five pump-out areas and associated conveyance corridors for contractor's to use during construction.
- Significant presence of oil and gas infrastructure.

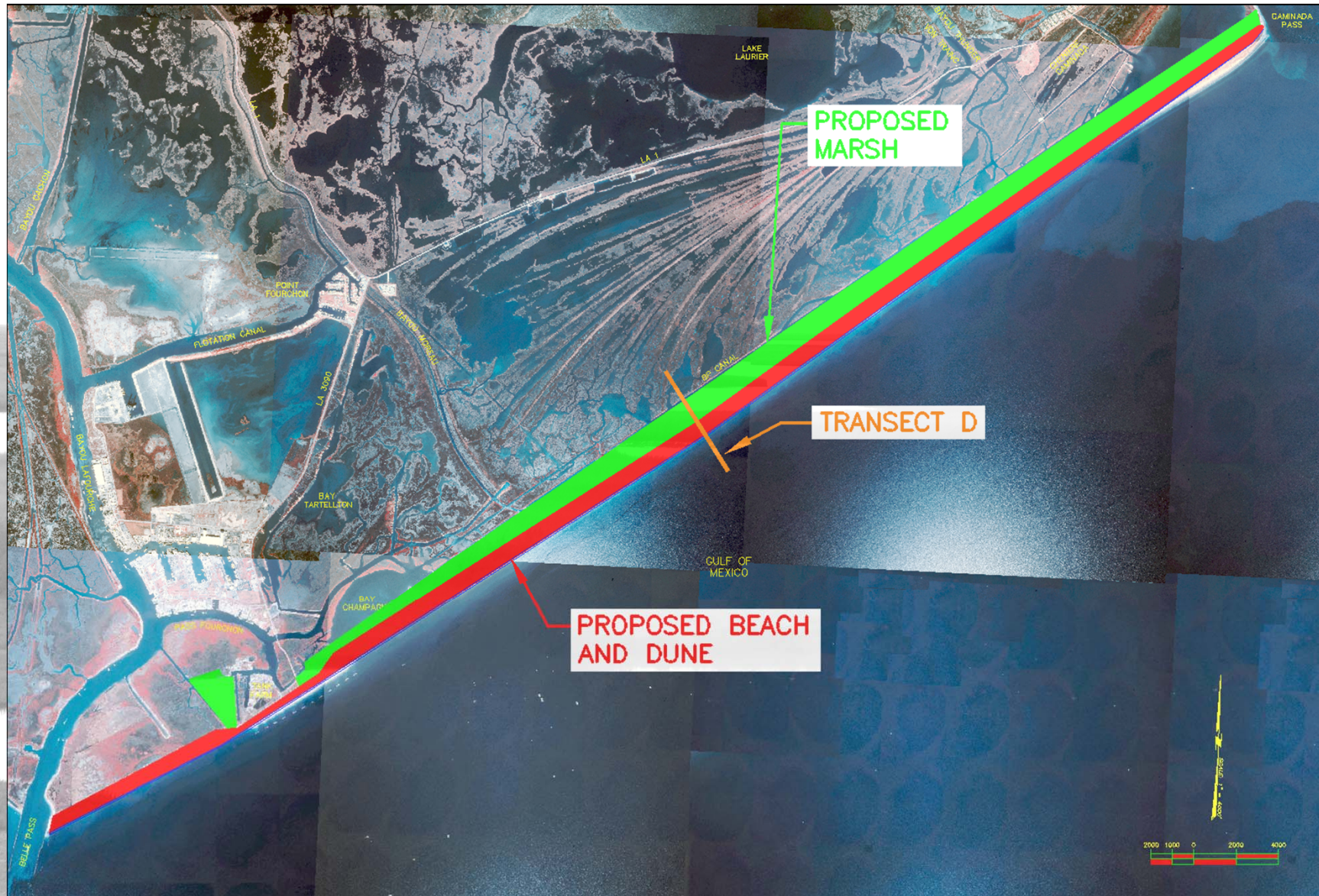


# *LCA Barataria Basin Barrier Shoreline Feasibility Study*

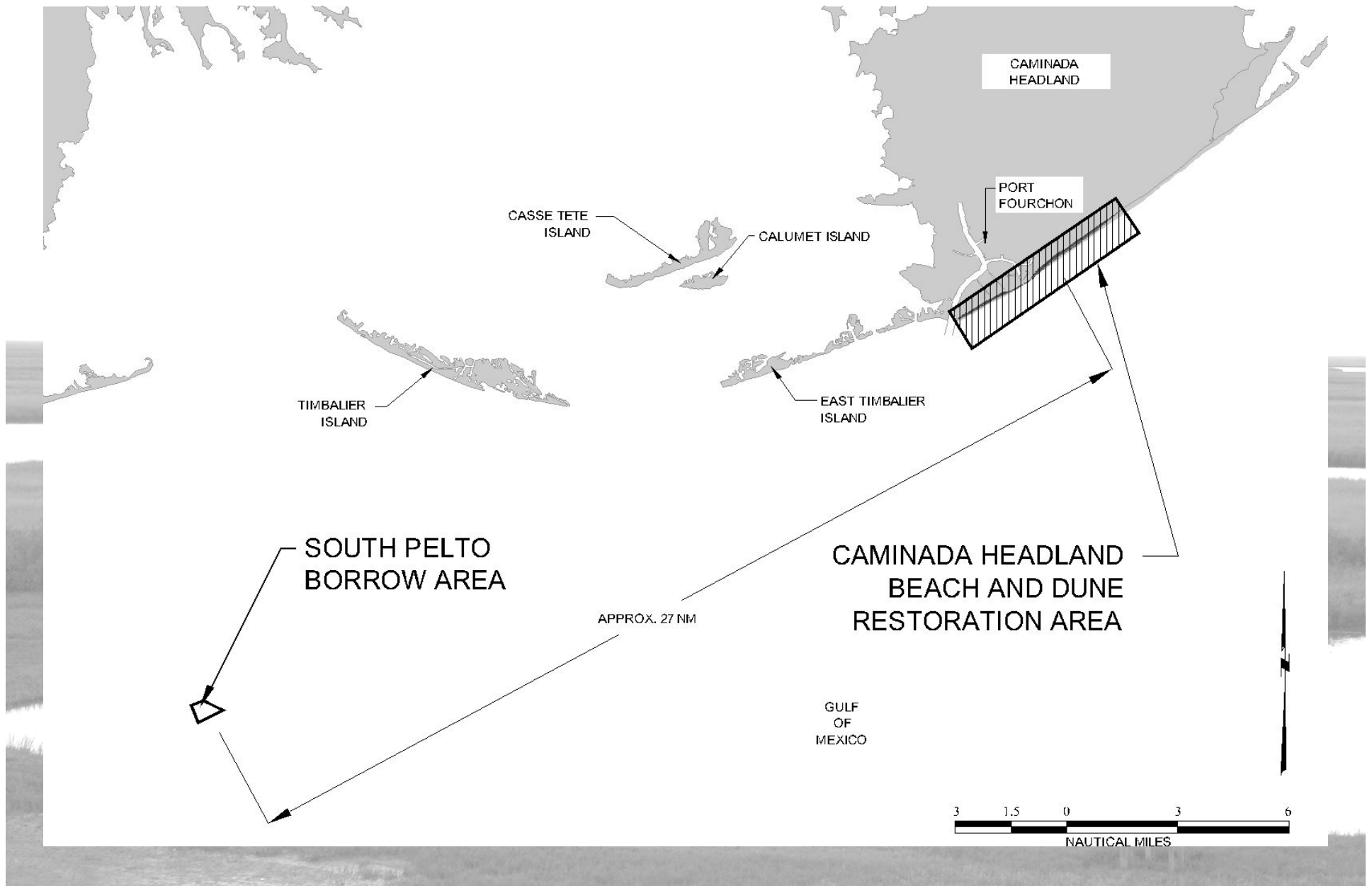




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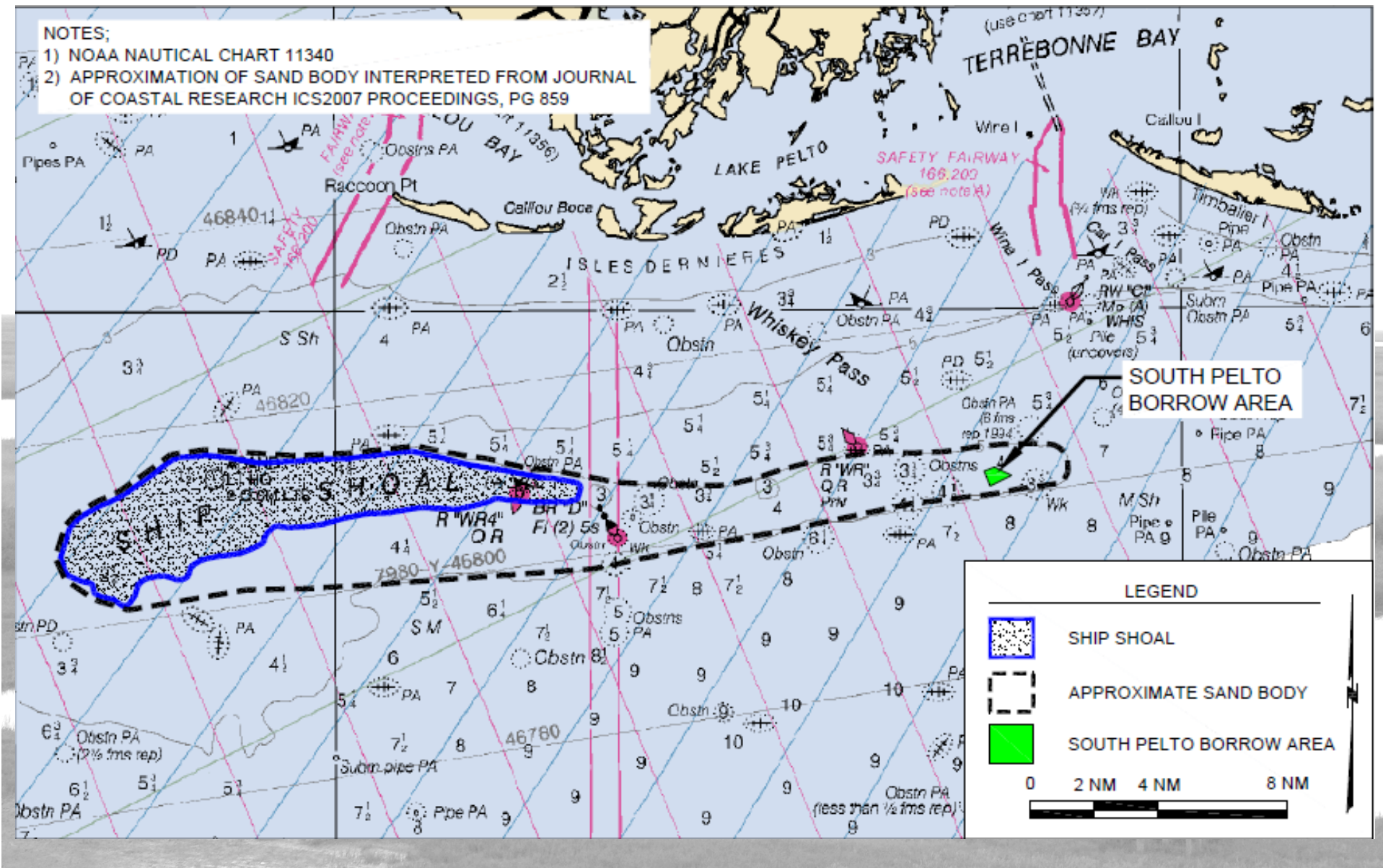


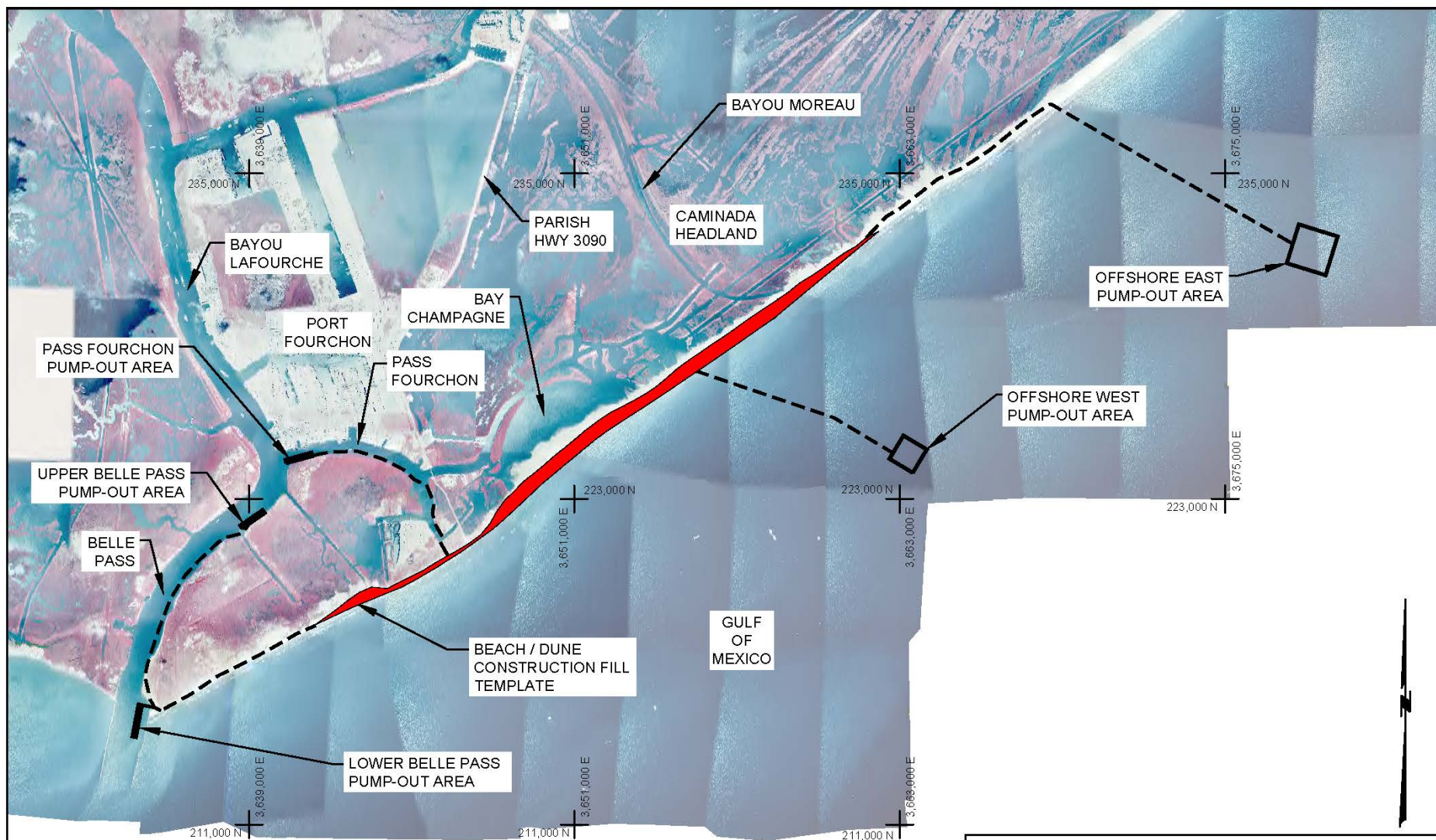
# *Project Overview Map*





# Ship Shoal Overview Map





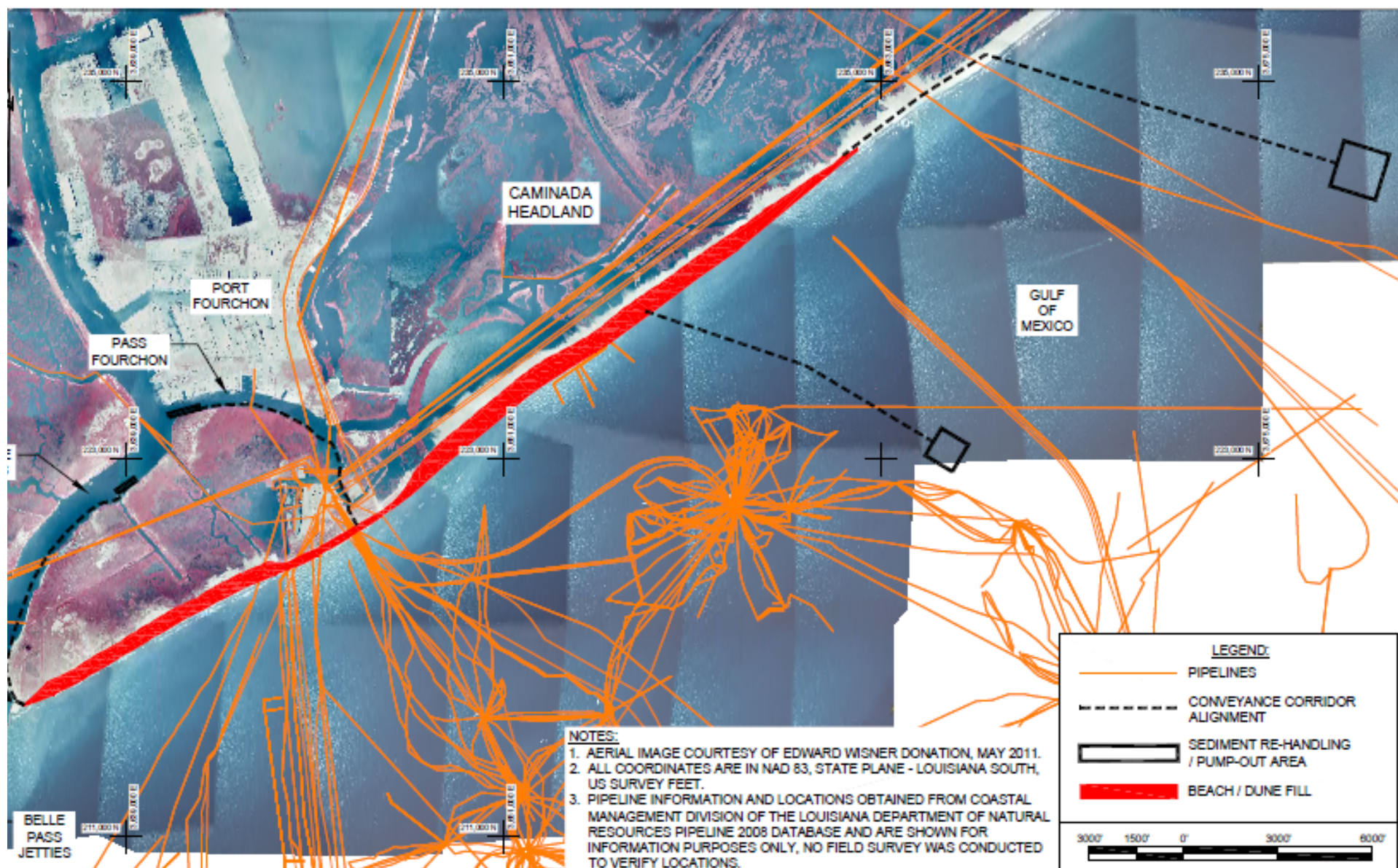
**COASTAL  
ENGINEERING  
CONSULTANTS, INC**

CAMINADA HEADLAND BEACH AND  
DUNE RESTORATION (BA-45)

PUMP-OUT AREAS AND  
CONVEYANCE CORRIDORS  
OVERVIEW

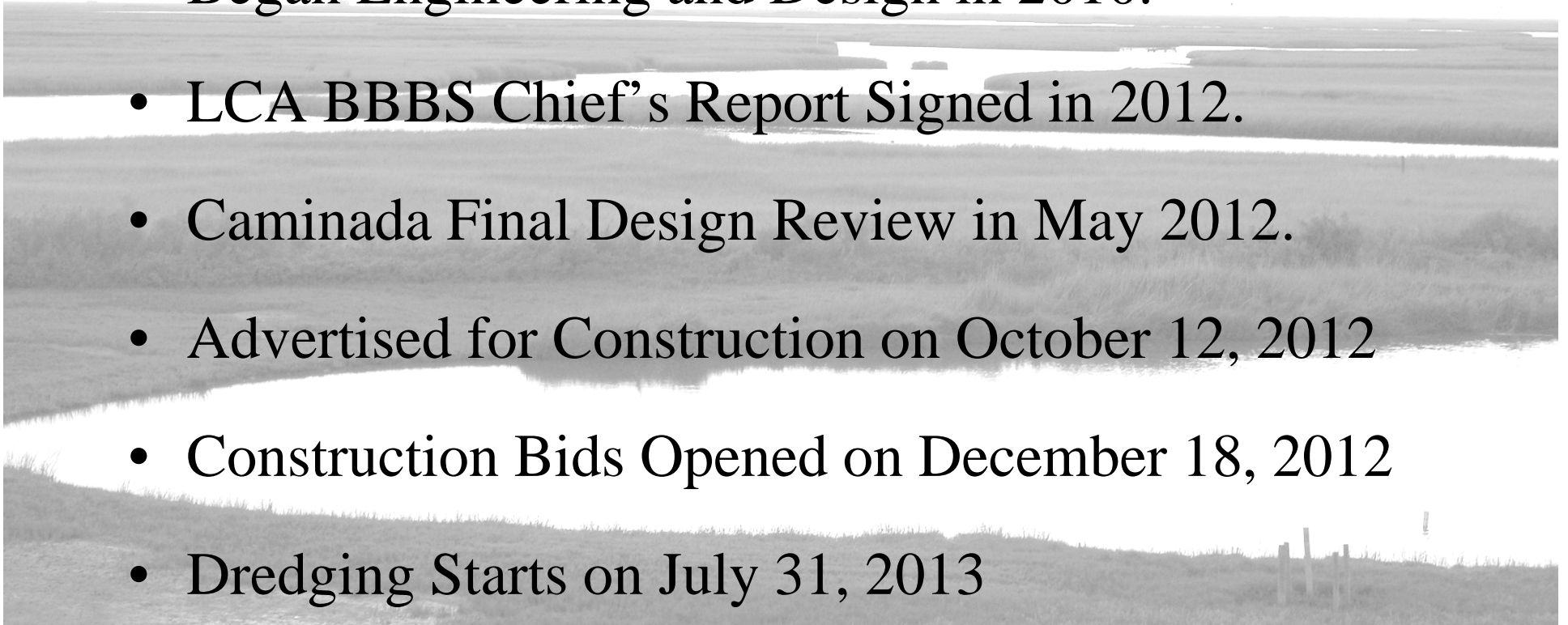
FIGURE 5-1





# *Project Timeline*

- Louisiana Coastal Area (LCA) Barataria Basin Barrier Shoreline (BBBS) Restoration Feasibility Study (USACE Federal Sponsor) Began in 2005.
- Caminada Headland Increment I (State Effort) Began Engineering and Design in 2010.
- LCA BBBS Chief's Report Signed in 2012.
- Caminada Final Design Review in May 2012.
- Advertised for Construction on October 12, 2012
- Construction Bids Opened on December 18, 2012
- Dredging Starts on July 31, 2013





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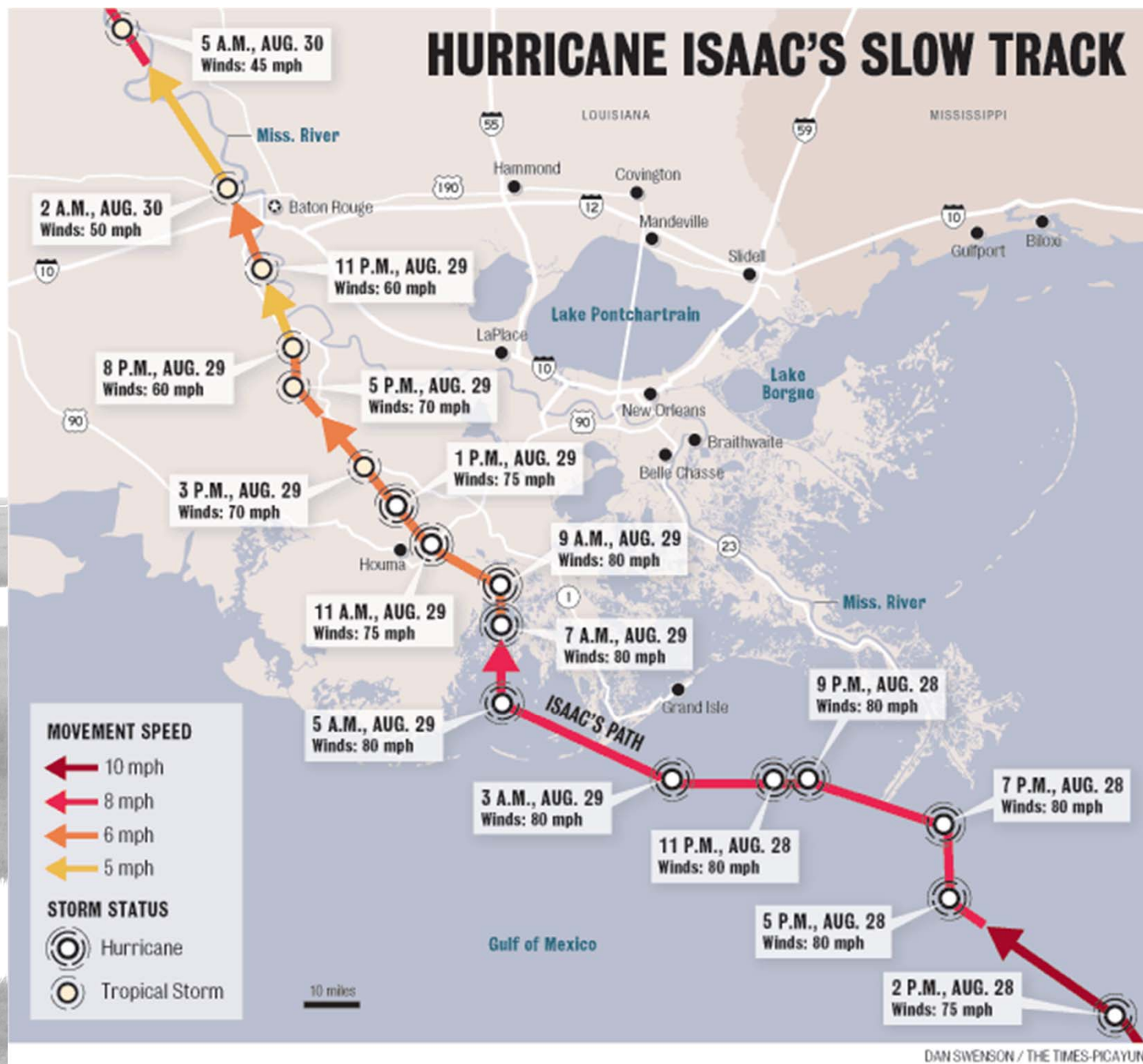
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# HURRICANE ISAAC'S SLOW TRACK

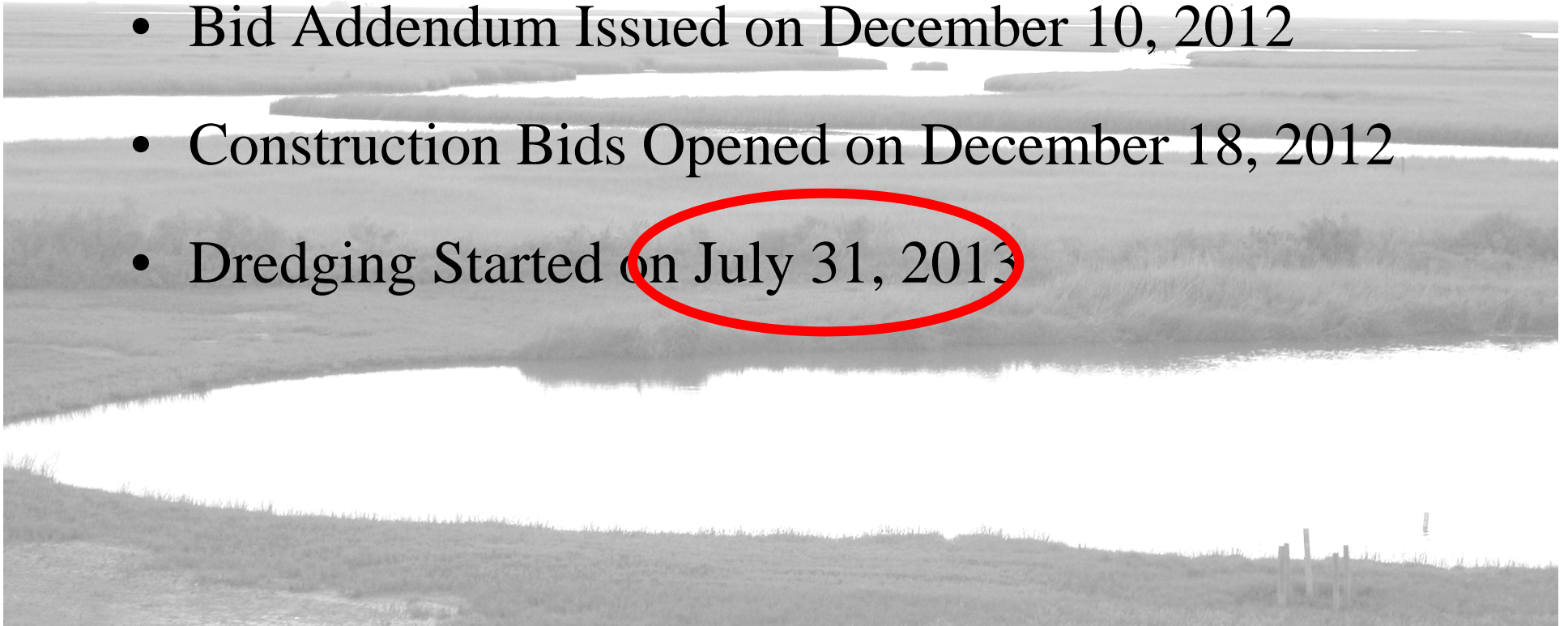






# *Project Timeline*

- Final Design Review in May 2012
- Advertised for Construction on October 12, 2012
- Pre-Bid Meeting on November 8, 2012
- Bid Addendum Issued on December 10, 2012
- Construction Bids Opened on December 18, 2012
- Dredging Started on July 31, 2013





# *Jetty Maintenance*

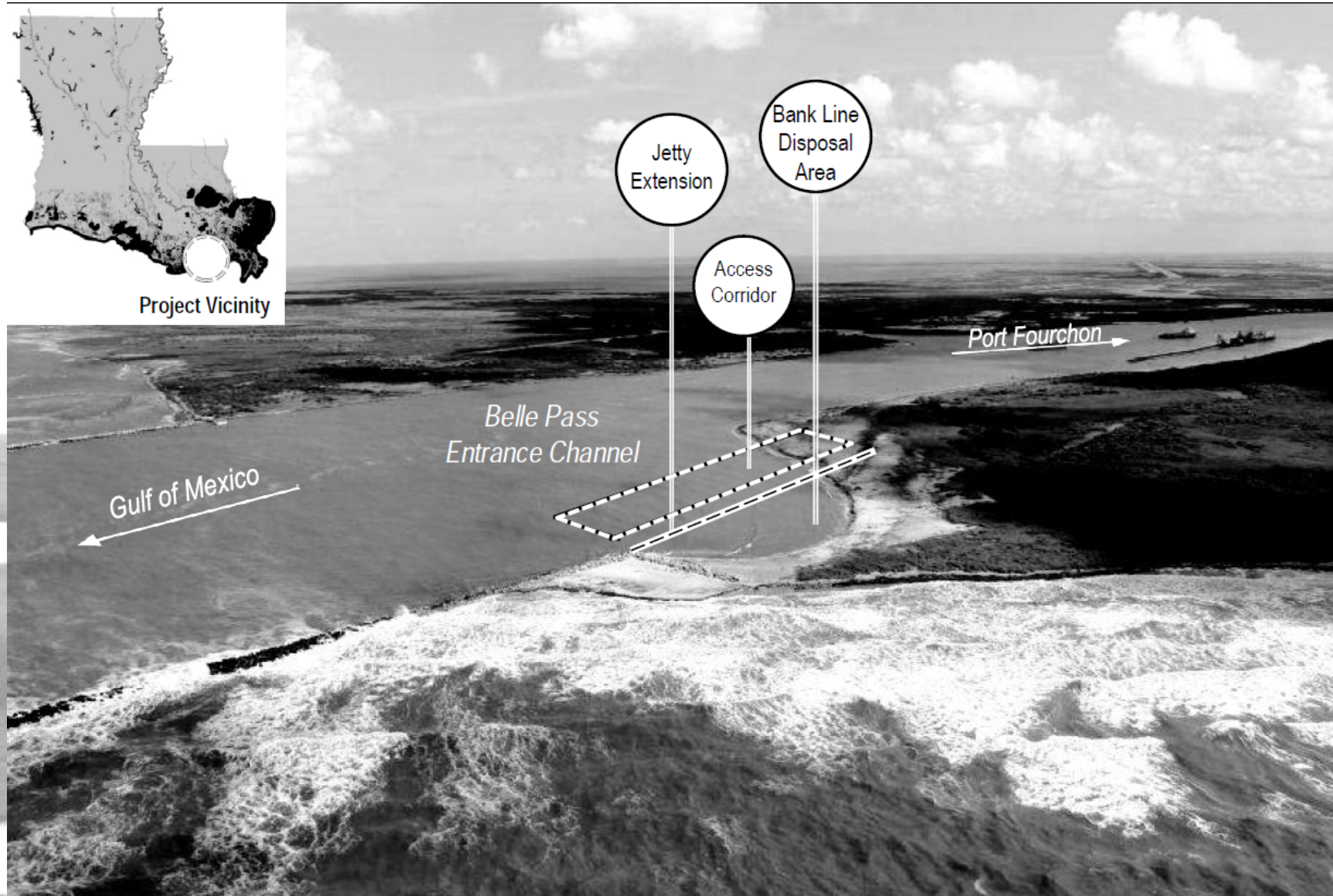
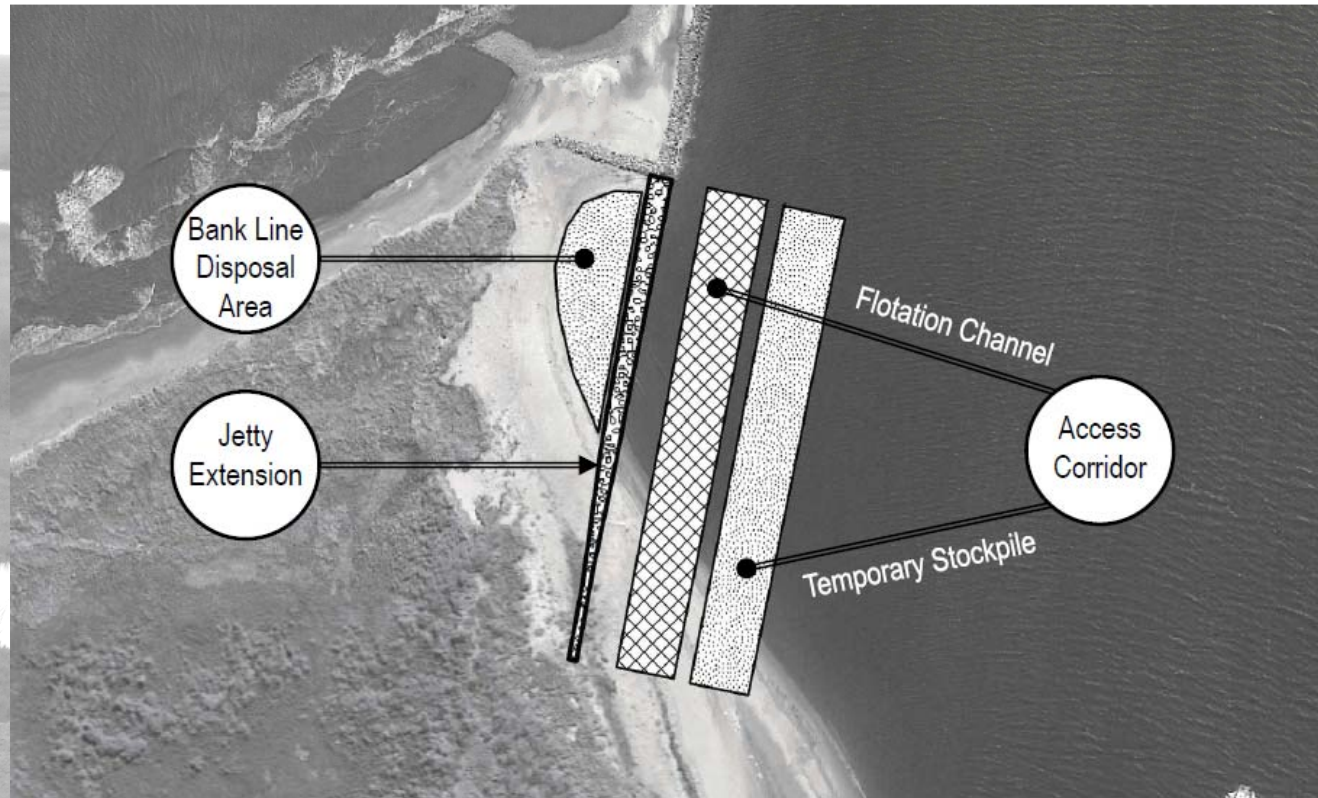
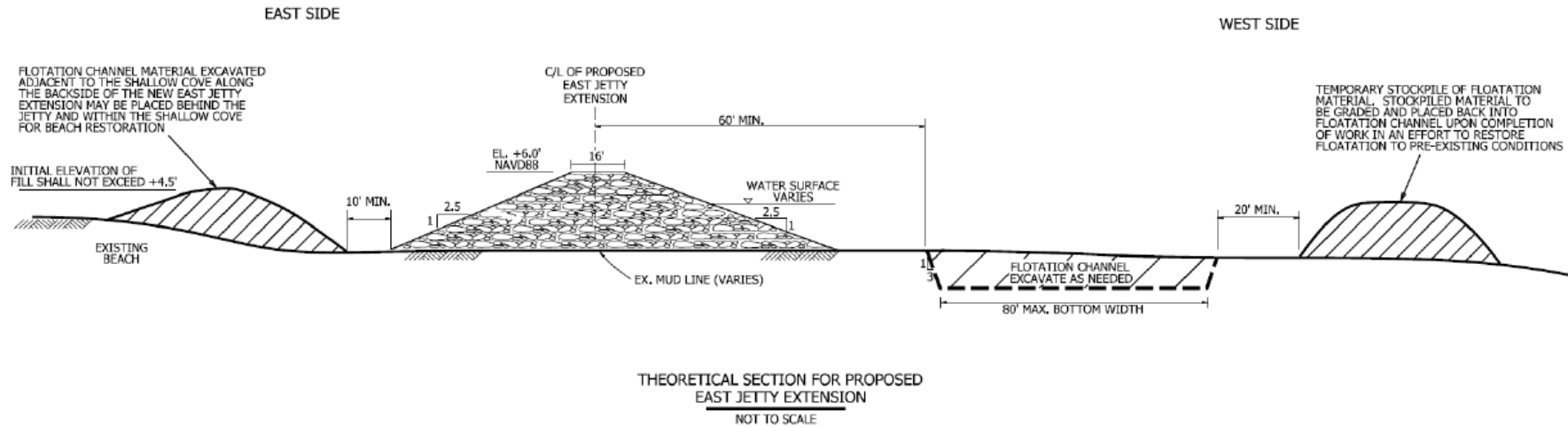


Figure 1. Project vicinity & overview. The jetty extension would tie the existing jetty to a natural high ridge along the bank line, crossing an area of shallow open water and beach. Equipment would access the construction site from Belle Pass. Dredged material excavated to provide equipment access would be temporarily stockpiled within the access corridor for later use as construction backfill, and/or placed beneficially in a shallow cove to rebuild a portion of the eroded bank line.

# Jetty Maintenance



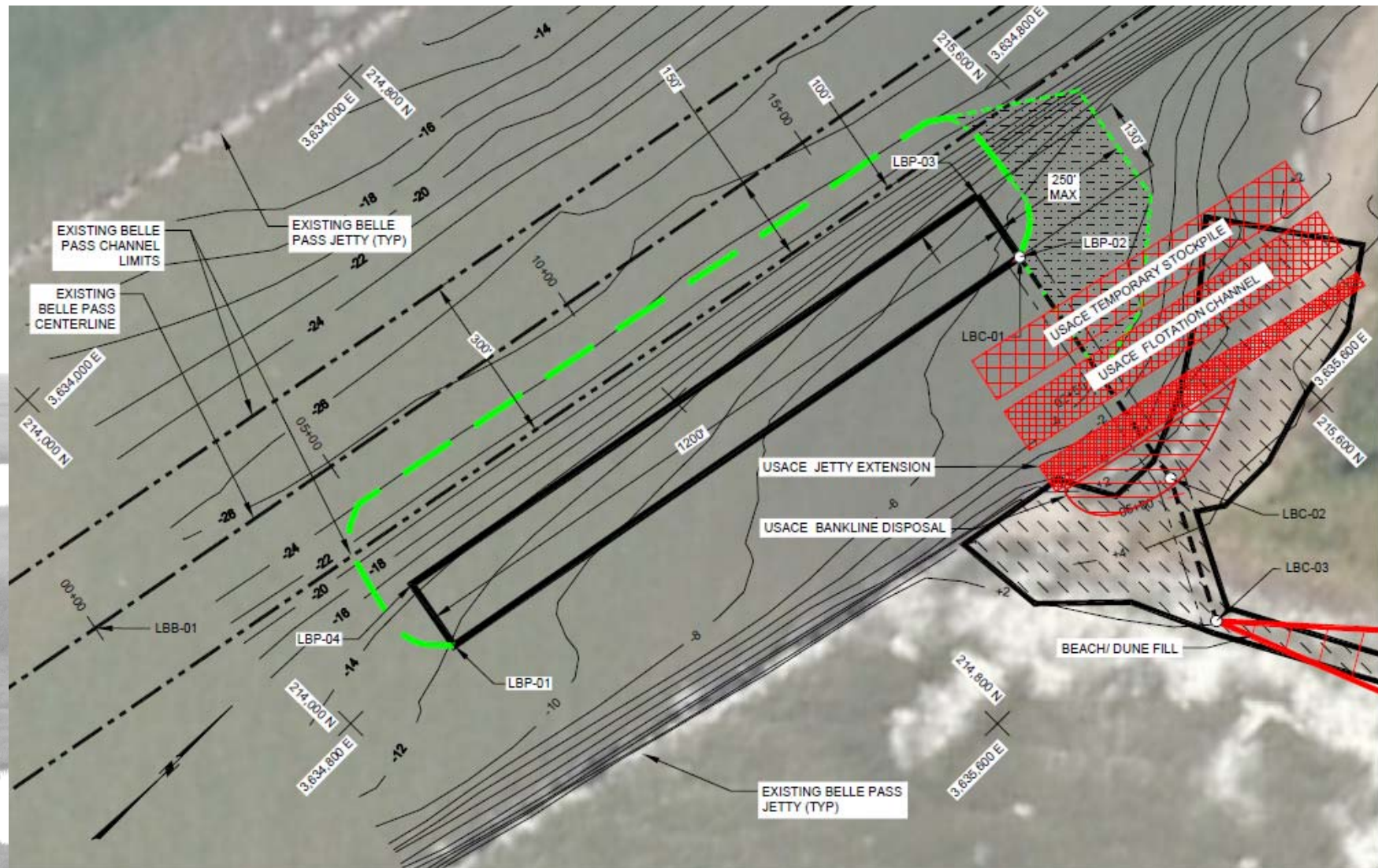
Figures 2 and 3. Theoretical cross-section (above) and plan view (left) of the jetty extension, flotation channel, temporary stockpile area, and bank line disposal area.

The jetty extension would tie the existing jetty to a natural high ridge along the bank line.

A flotation channel would be excavated to provide equipment access for construction of the jetty extension. Dredged material would be temporarily stockpiled adjacent to the channel for later use as backfill, and placed beneficially in the bank line disposal area to restore an eroded section of the bank line.

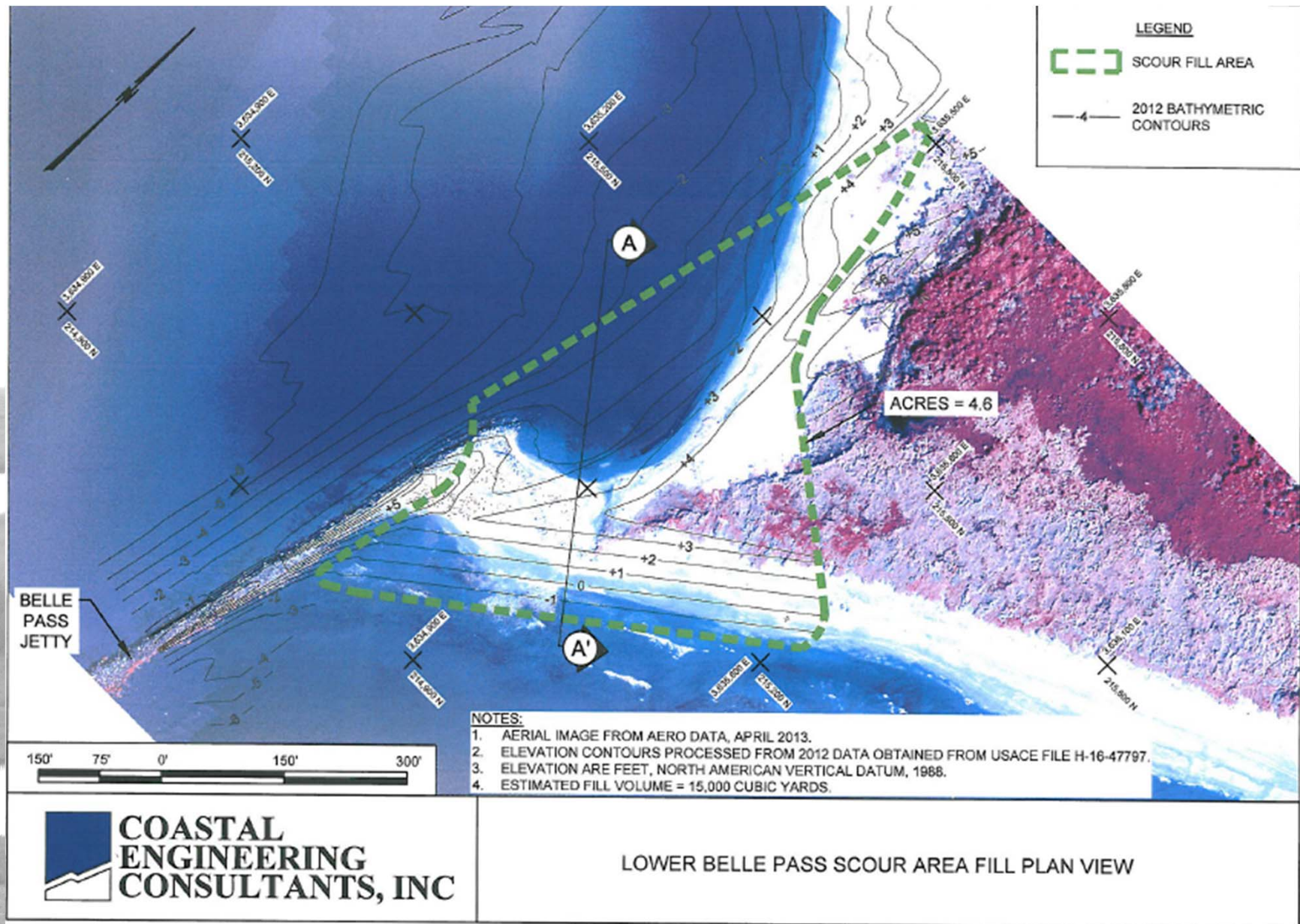


# *Jetty Maintenance and Caminada Headland Project Areas*



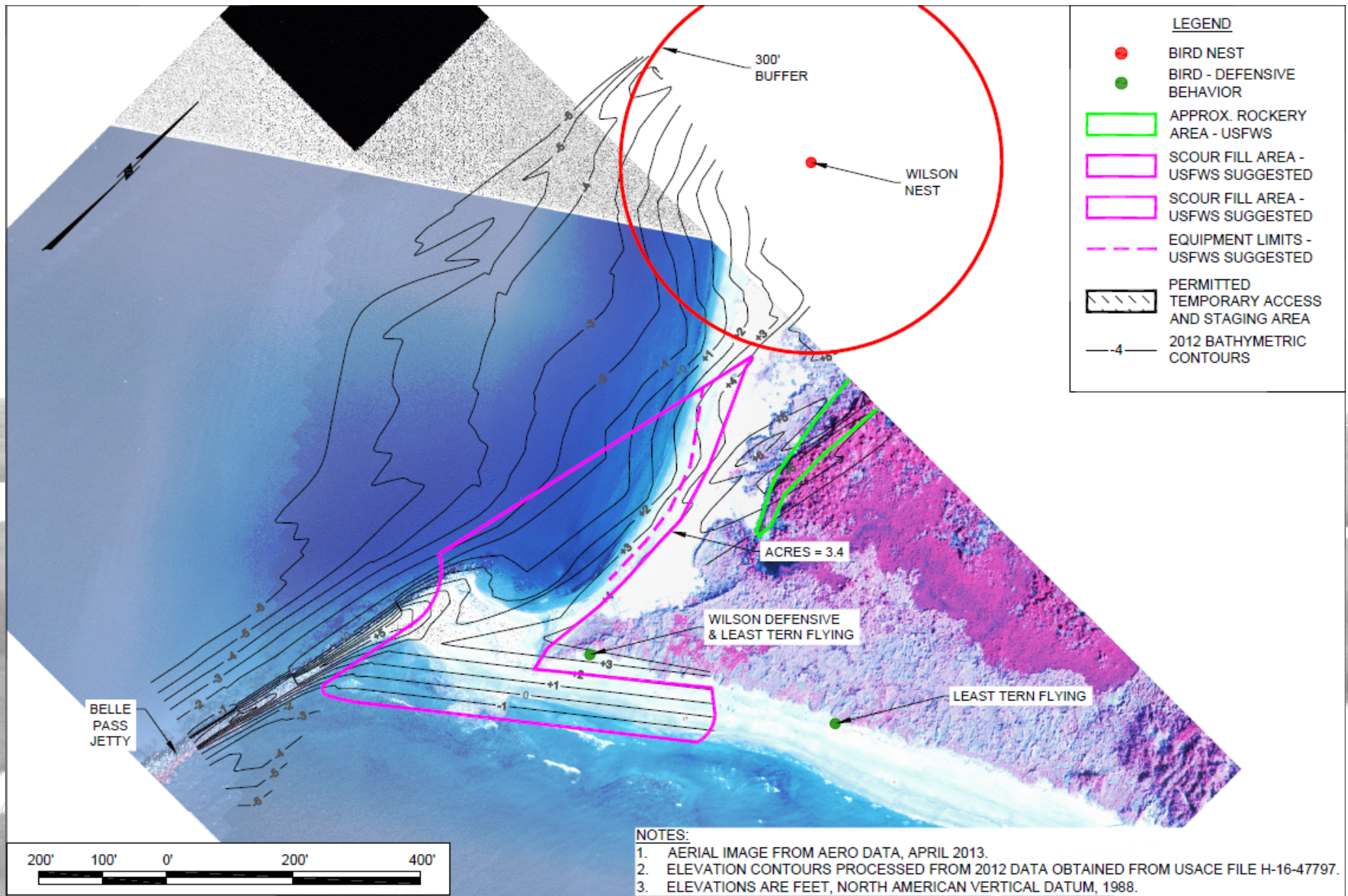


# Scour Fill Area Solution





# Scout Fill Area – Regulatory Coordination





# *Cutterhead Suction Dredge and 'Spider' Barge*



Patrick M. Quigley  
www.gulfcoastairphoto.com  
Slidell, LA 985.788.345



# *Cutterhead Suction Dredge and 'Spider' Barge*



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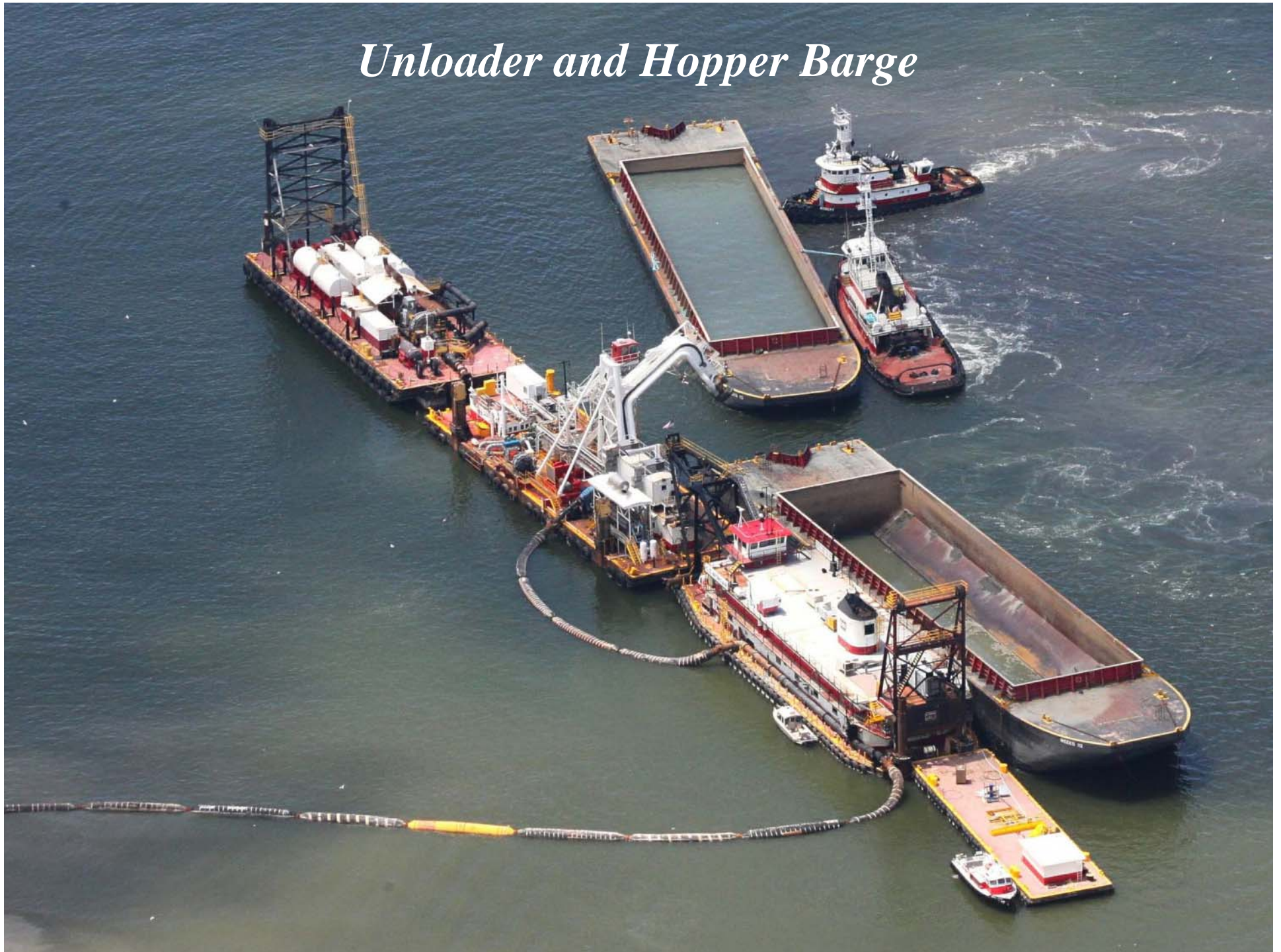


# *Barge in Tow*





# *Unloader and Hopper Barge*





# *Discharge Into Project Template*





# *Lessons Learned*

- Reduce contractors risk by providing the most updated site information possible.
- If possible, permit multiple points of access such that contractor's can bid projects utilizing their available dredging equipment.
- Reach out to project stakeholders and have an open dialogue with regulatory officials.
- Expect the unexpected.

