





**US Army Corps
of Engineers**
New Orleans District

***Individual Environmental Reports (IERs)
8, 9, 10 and 11 Tier 2 Borgne and borrow***

***Chalmette Loop
Hurricane Protection System
and
Improved Protection on the
Inner Harbor Navigation Canal***

July 17, 2008



US Army Corps
of Engineers
New Orleans District

Why are we here tonight?

To discuss the status of completed, in-progress and proposed projects to the Lake Pontchartrain and Vicinity portion of the Hurricane Storm Damage Risk Reduction System that will provide 100-year level of protection for the surrounding communities.



US Army Corps
of Engineers
New Orleans District

National Environmental Policy Act (NEPA)

- Required for all major Federal actions
- Analyze potential impacts to the human and natural environment and investigate reasonable alternatives
- Analyses documented in Individual Environmental Reports (IER)
- Public Involvement is KEY! We want to hear from you!
- Goal: more informed decision making through public involvement



US Army Corps
of Engineers
New Orleans District

NEPA Process and Path Ahead

- The NEPA process began with public scoping meetings for IERs 8,9,10 and 11 in March 2007
- From March 2007 through today project alternatives have been developed, impacts are being analyzed, and public input is being solicited
- Tentative timeframe of draft IER 30-Day public review period:
 - IER 8: August 08
 - IER 9: September 08
 - IER 10: September 08
 - IER 11: Tier 2 Borgne: July 08
- Final decisions will be made approximately 45 days later



US Army Corps
of Engineers
New Orleans District

Mississippi River Gulf Outlet Closure Status

Closure Report submitted to Congress, June 2008

- Corps and state are negotiating a Memorandum of Agreement
- Plans & Specifications for Closure Structure at Bayou La Loutre are complete

Complete Environmental Clearance for Closure Structure

- Record of Decision on LEIS signed by the Assistant Secretary of the Army for Civil Works, June 2008

Construct the Closure Structure

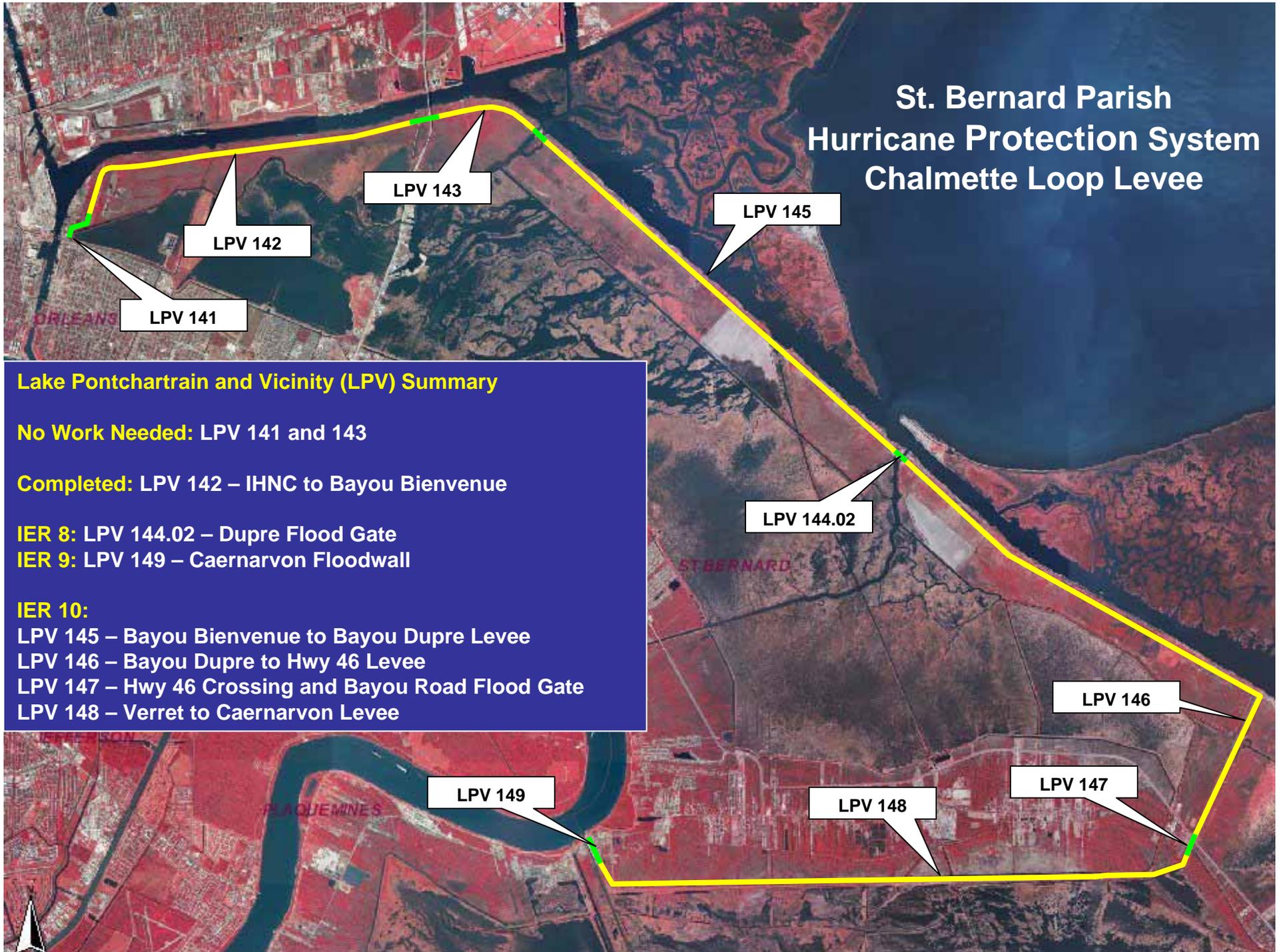
- Target contract award – late summer/early fall 2008
- Target completion – June 1, 2009



The closure will be:

- 950' across channel
- 12' wide
- 7' above water level
- Consist of 391,500 tons of rock

St. Bernard Parish Hurricane Protection System Chalmette Loop Levee





US Army Corps
of Engineers
New Orleans District

Current Status

LPV 148.01: Verret to Caernarvon (Phase I)

- Contract awarded 31 Oct 07
- Notice to proceed issued 14 Jan 08
- To date project is 38% complete
 - Project requires 1.2 million cubic yards of borrow
 - To date 360,000 cubic yards placed
 - Ten (10) cubic yards per truck = 36,000 truck loads
- Completion date: February 2009

LPV 144 - 149: Chalmette Loop Levee System

- Investigating various options to provide 100-yr level of protection
- LPV 144 is currently in the design process
- LPV 145 - 149 is scheduled to initiate design August 2008

St. Bernard Back Levee

- Currently investigating the feasibility of incorporating the back levee into the Federal system



US Army Corps
of Engineers
New Orleans District

IER 8: Bayou Dupre Flood Control Structure



**Bayou Dupre (LPV 144.02) in
St. Bernard Parish, Louisiana**

Alternatives

- Modify existing control structure in place
- Reconstruct a new control structure at the existing location
- Construct a new control structure at any practical adjacent location (floodside, protected side, or adjacent to existing gate)



US Army Corps
of Engineers
New Orleans District

IER 9: Caernarvon Floodwall

Draft IER anticipated for public release in September 08

Once proposed action is selected and IER is complete, Plans and Specifications (P&S) will begin

Construction scheduled to begin Spring 2009



Existing Floodwall



US Army Corps
of Engineers
New Orleans District

Caernarvon Floodwall: Alternative 1





US Army Corps
of Engineers
New Orleans District

Caernarvon Floodwall: Alternative 2





US Army Corps
of Engineers
New Orleans District

Caernarvon Floodwall: Alternative 3





US Army Corps
of Engineers
New Orleans District

Caernarvon Floodwall: Alternative 4





US Army Corps
of Engineers
New Orleans District

Caernarvon Floodwall: Alternative 5





US Army Corps
of Engineers
New Orleans District

Caernarvon Floodwall: Alternative 6



St. Bernard Parish Hurricane Protection System Chalmette Loop Levee

LPV 145

Lake Pontchartrain and Vicinity (LPV) Summary

IER 10:

LPV 145 – Bayou Bienvenue to Bayou Dupre Levee

LPV 146 – Bayou Dupre to Hwy 46 Levee

LPV 147 – Hwy 46 Crossing and Bayou Road Flood Gate

LPV 148.02 – Verret to Caernarvon Levee

LPV 146

LPV 147

LPV 148.02



US Army Corps
of Engineers
New Orleans District

IER 10: Chalmette Loop Levee

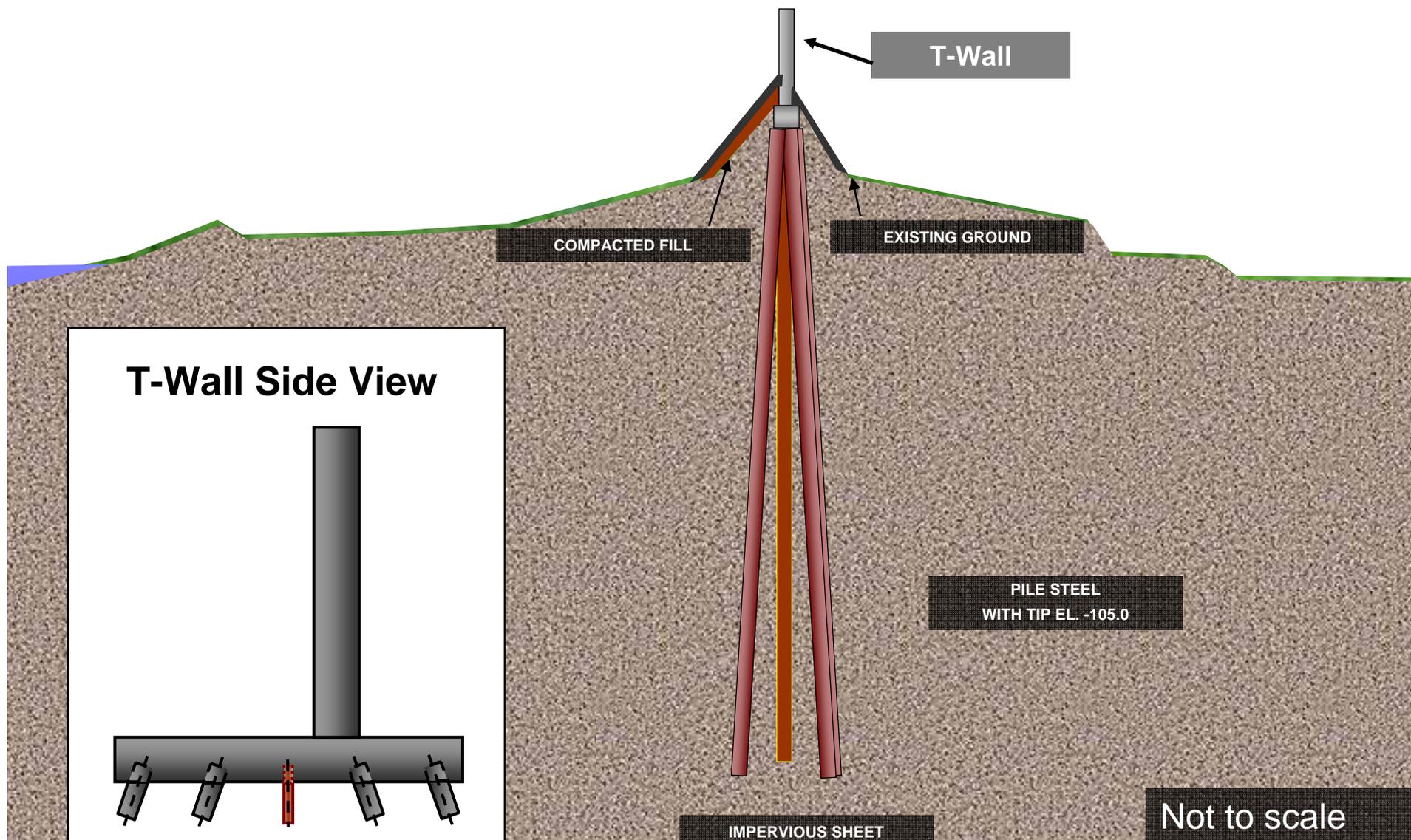
Engineering Alternatives for LPV 145, 146, 148.02

- T-wall
- Levee with wave berm and stability berms
- Levee with wick drains
- Deep Soil Mixing (DSM) with landside shift



US Army Corps
of Engineers
New Orleans District

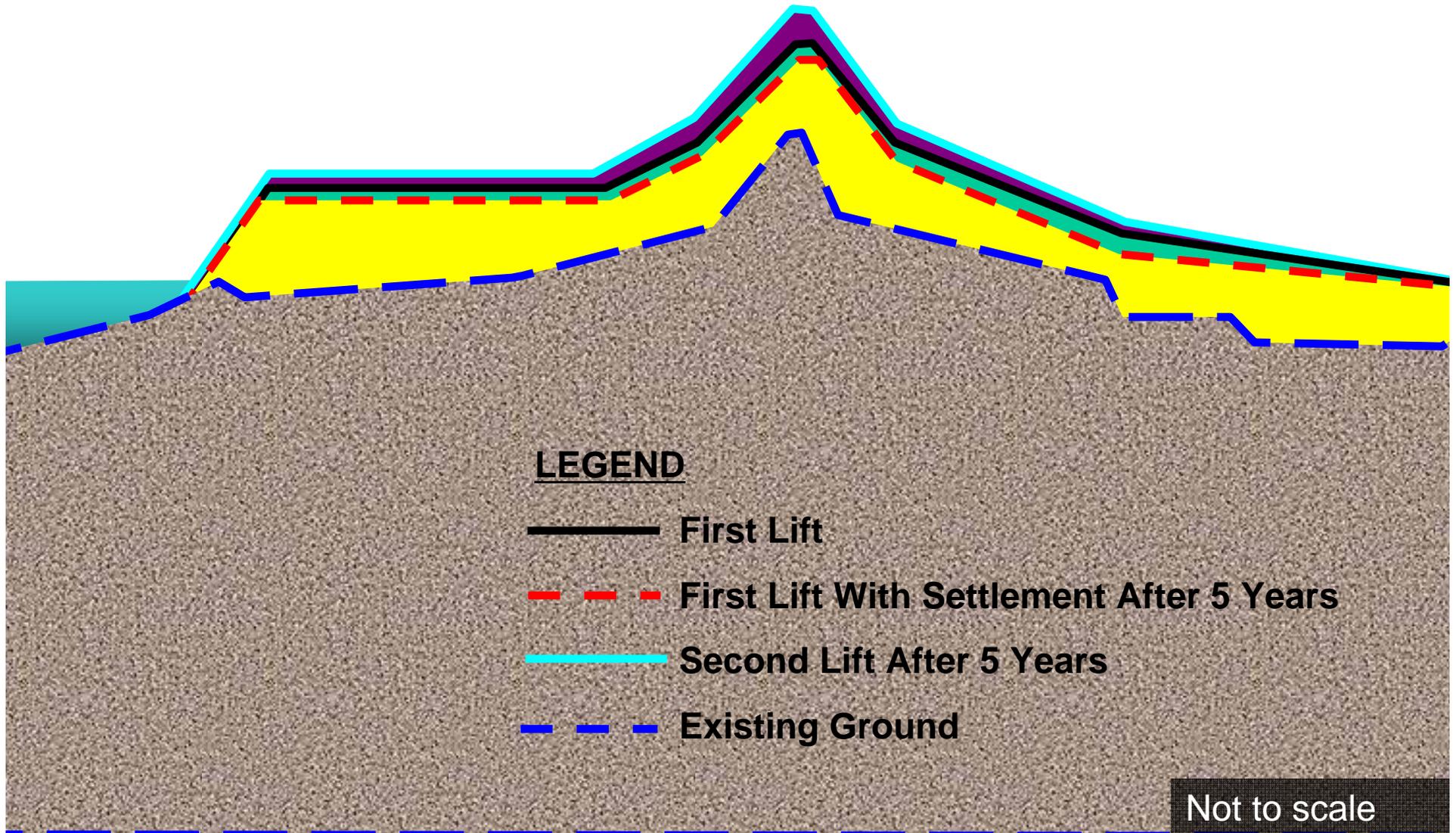
Chalmette Loop Levee T-Wall Alternative





US Army Corps
of Engineers
New Orleans District

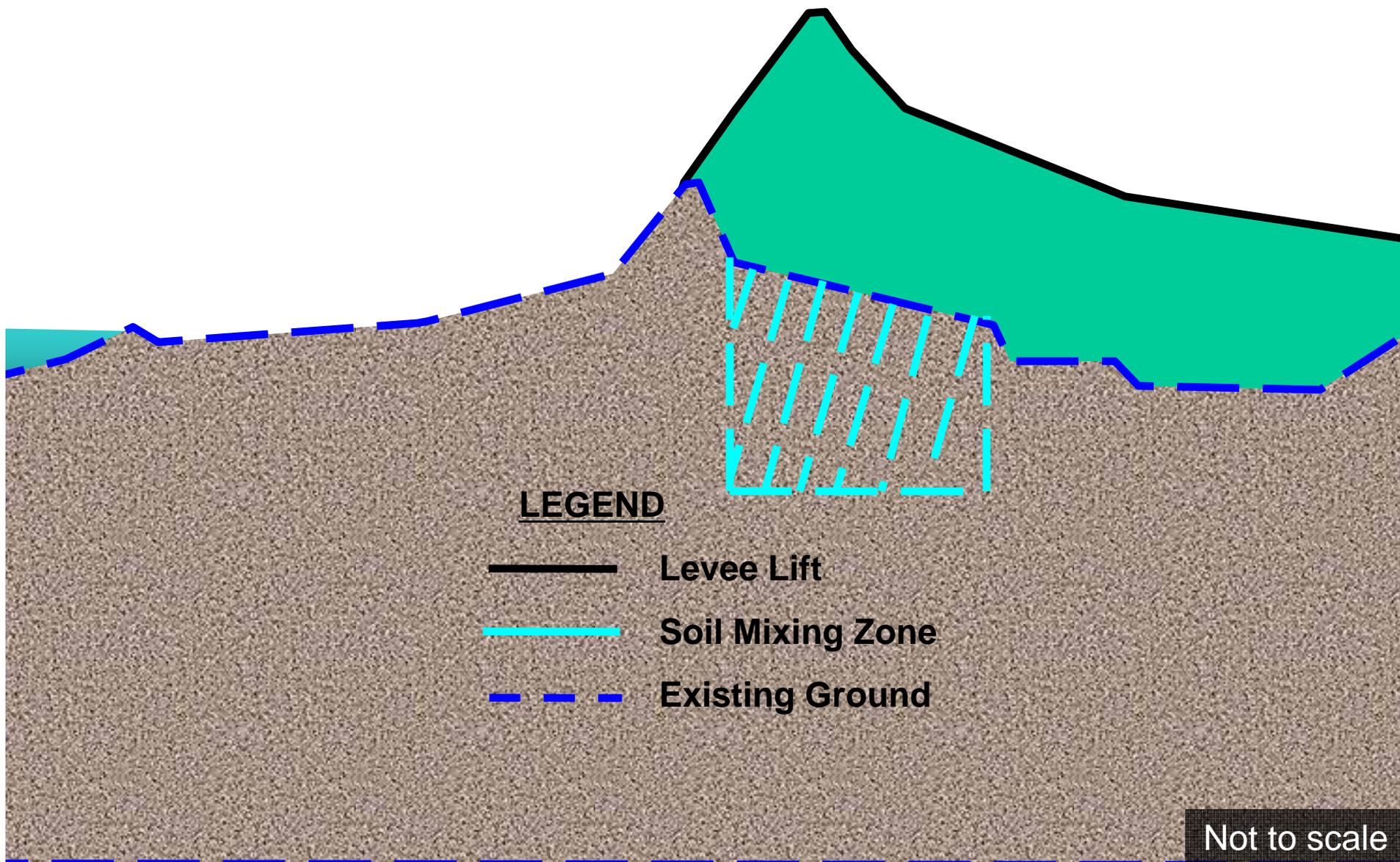
Chalmette Loop Levee Levee Alternative





US Army Corps
of Engineers
New Orleans District

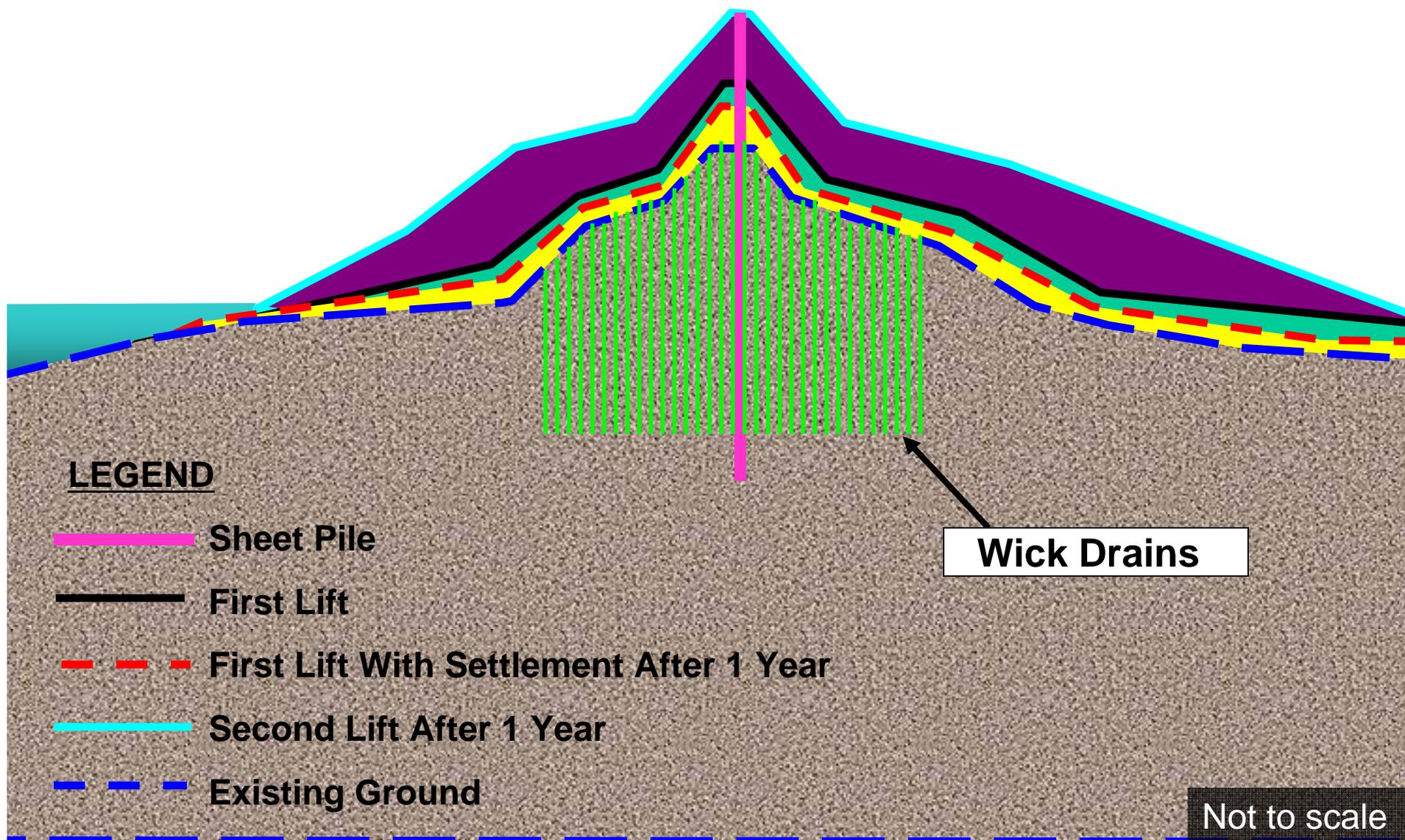
Chalmette Loop Levee Levee with Deep Soil Mixing Alternative





US Army Corps
of Engineers
New Orleans District

Chalmette Loop Levee Levee with Wick Drains Alternative



LPV 145, 146 and 148.02 Alternatives

Alternative	Advantages	Disadvantages
<p>T-wall on Exiting Levee</p>	<ul style="list-style-type: none"> ▪ Construction within Existing ROW ▪ No stability berms required ▪ Materials more readily available ▪ Reduced environmental impacts ▪ Reduced life cycle cost ▪ Additional levee lifts not required 	<ul style="list-style-type: none"> ▪ Hard to modify in future and major reconstruction if altered ▪ Political / public perception ▪ Aesthetically unpleasing ▪ Routine Inspections ▪ Additional gates & openings
<p>Earthen Levee with Stability Berms</p>	<ul style="list-style-type: none"> ▪ Can easily modify for future lifts ▪ Public perception ▪ Greater vehicular access ▪ Aesthetically pleasing 	<ul style="list-style-type: none"> ▪ Source of Borrow ▪ Additional ROW required ▪ Fill in Canals for LPV 148.02 ▪ Mitigation would be required ▪ Requires additional appropriations for future lifts

LPV 145, 146 and 148.02 Alternatives

Alternative	Advantages	Disadvantages
Earthen Levee with Deep Soil Mixing	<ul style="list-style-type: none"> ▪ Improved subgrade / foundation for future lifts ▪ Public perception ▪ Greater vehicular access ▪ Aesthetically pleasing ▪ No to very little new ROW ▪ No canal relocations ▪ Less borrow required ▪ Can easily modify for future lifts 	<ul style="list-style-type: none"> ▪ Landside Shift ▪ Difficult to future excavate foundation ▪ Cost may be more significant ▪ Specialty contractors ▪ Unknown production rates on for DSM of this quantity
Earthen Levee using Staged Construction & Wick Drains	<ul style="list-style-type: none"> ▪ Can easily modify for future lifts ▪ Public perception ▪ Greater vehicular access ▪ Aesthetically pleasing ▪ Improved foundation strength with less time 	<ul style="list-style-type: none"> ▪ Source of Borrow ▪ Additional ROW required ▪ Seepage cutoff required ▪ Installation of Wick Drains ▪ Fill in Canals for LPV 148.02 ▪ Specialty contractors ▪ Unknown production rates ▪ Requires additional appropriations for future lifts



US Army Corps
of Engineers
New Orleans District

LPV 147: Chalmette Loop Levee

Highway 46 Crossing

- 4 Lane Divided Highway
- Asphalt with gravel shoulders
- Crosses over Hurricane Protection



Bayou Road Floodgate

- Appx 400 feet from Hwy 46
- Existing steel swing gate with tie-in T-walls & uncapped I-walls
- Fire Station & residences located on protected side
- Heavily vegetated marsh on flood side



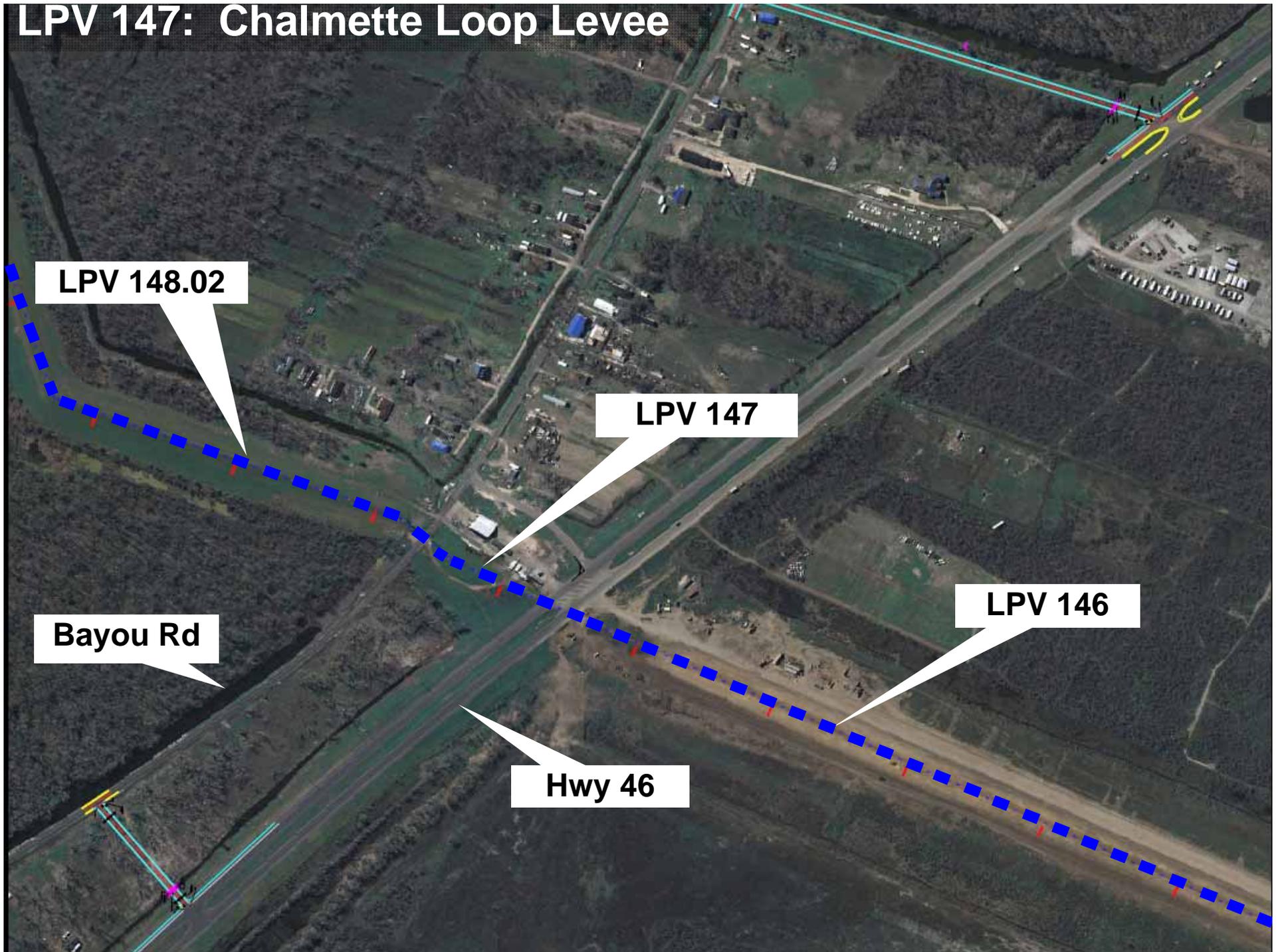


US Army Corps
of Engineers
New Orleans District

LPV 147: Chalmette Loop Levee Alternatives

- **Earthen Ramp Alternative**
 - Raise existing levee
 - Add pavement section to top of levee
 - Close Bayou Road floodgate
 - Provide access to Hwy 46 and Bayou Road
- **T-wall Alternative**
 - Construct T-wall atop existing levee
 - Requires bridge crossing over T-wall
 - Close Bayou Road floodgate
 - Provide access to Hwy 46 and Bayou Road

LPV 147: Chalmette Loop Levee



LPV 148.02

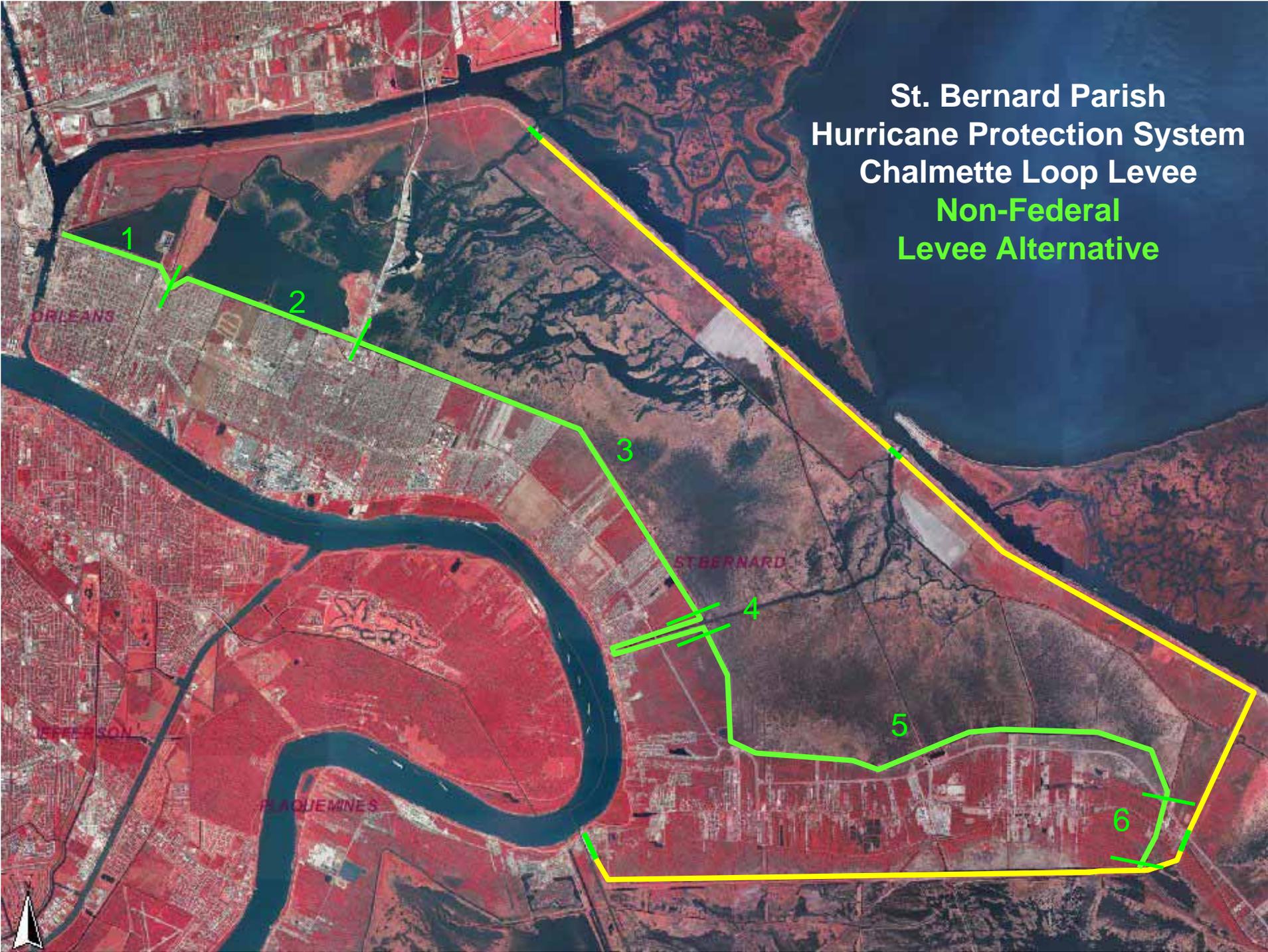
LPV 147

LPV 146

Bayou Rd

Hwy 46

**St. Bernard Parish
Hurricane Protection System
Chalmette Loop Levee
Non-Federal
Levee Alternative**





US Army Corps
of Engineers
New Orleans District

Improving Hurricane Protection on the Inner Harbor Navigation Canal IER 11 Tier 2 Borgne





US Army Corps
of Engineers
New Orleans District

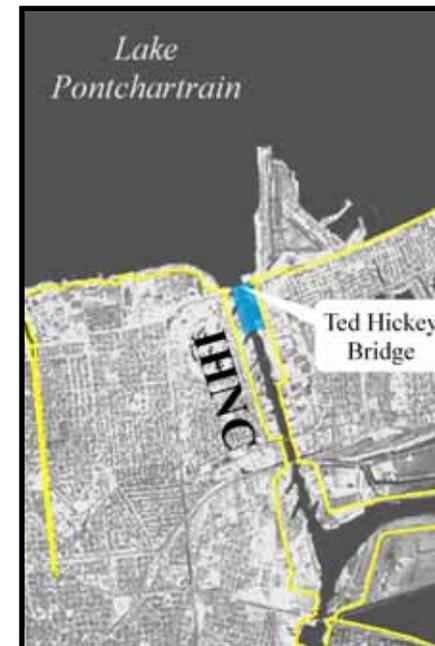
Where we've been

Awarded largest design-build, civil works construction contract on April 3, 2008 for the amount of \$695,489,766. Contract includes providing advance measures by hurricane season 2009.

IER 11 Tier 1 Decision Record signed March 14, 2008 for Borgne 1 and Pontchartrain 2



Borgne 1



Pontchartrain 2



US Army Corps
of Engineers
New Orleans District

IER 11 Tier 2: Where we're going

Two Tier 2 IERs

- IER 11 Tier 2 Borgne:

Alignment and design alternatives within “Borgne 1”

Public Release of Draft IER 11 Tier 2 – July '08

- IER 11 Tier 2 Pontchartrain:

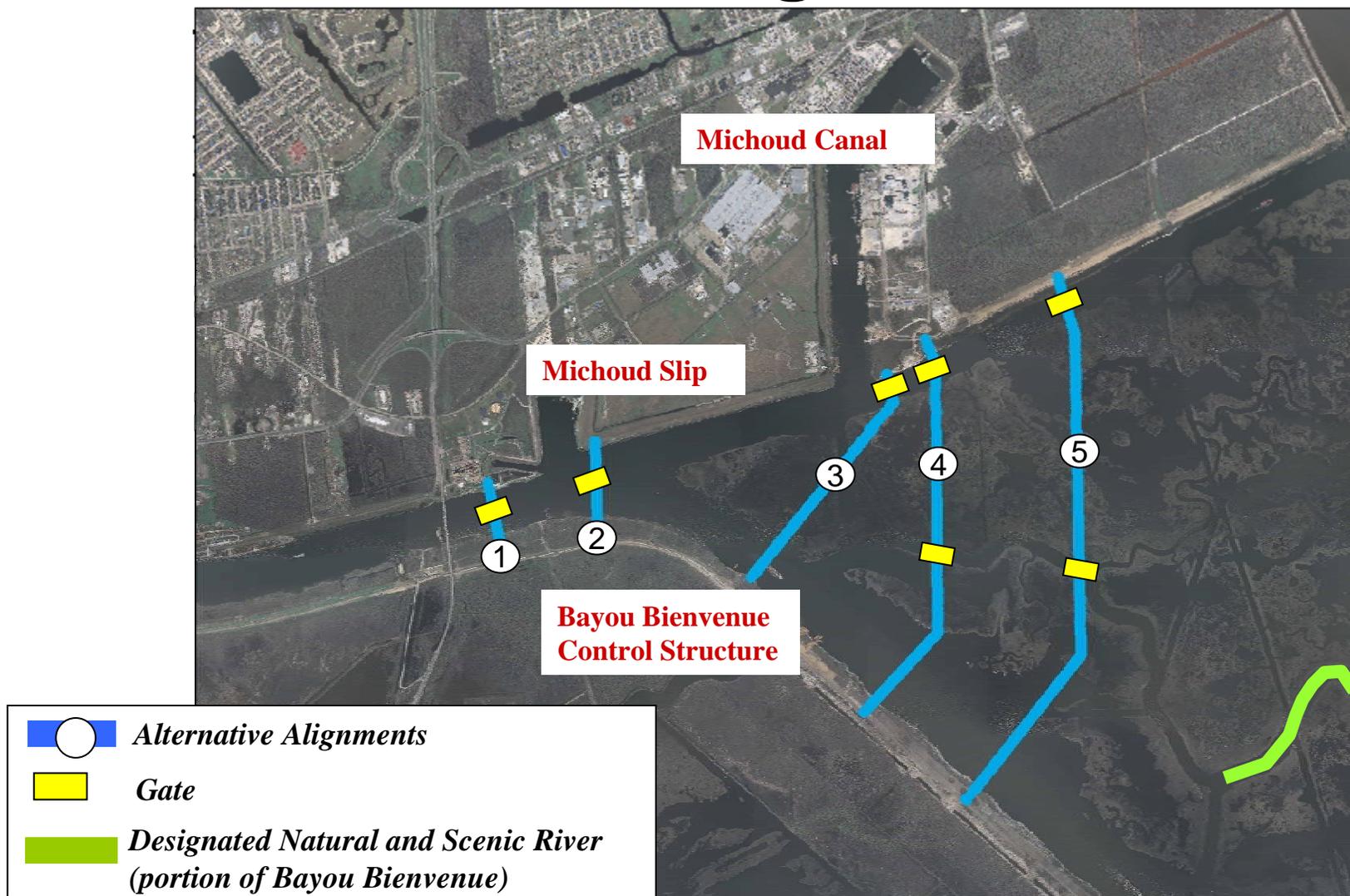
**Alignment and design alternatives within
“Pontchartrain 2”**

(alternatives to be developed this summer)



US Army Corps
of Engineers
New Orleans District

IER 11 Tier 2 Borgne Alternative Alignments Overview



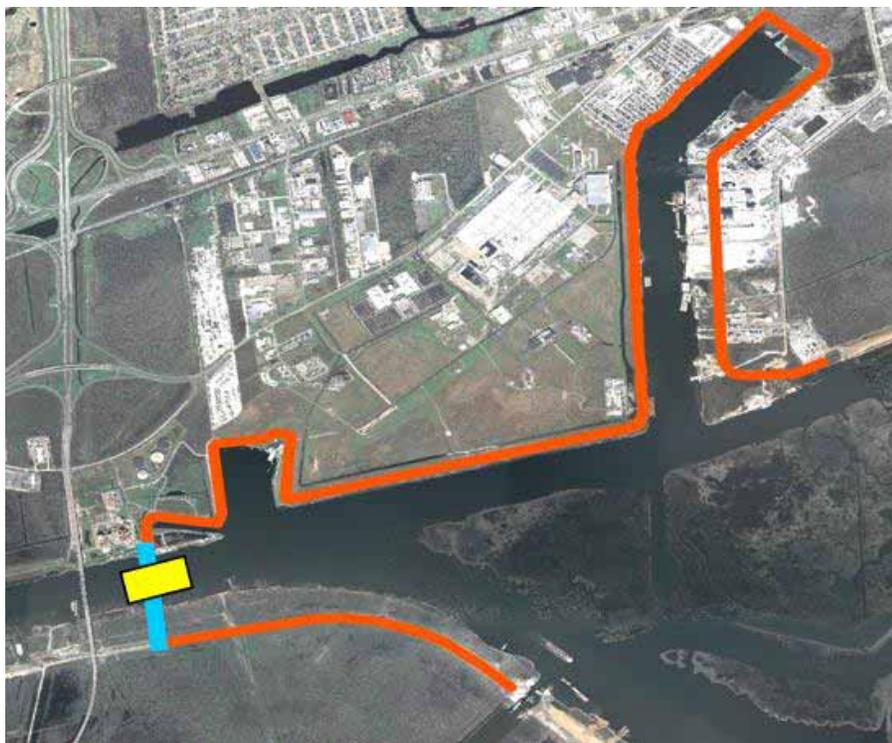
One Team: Relevant, Ready, Responsive and Reliable



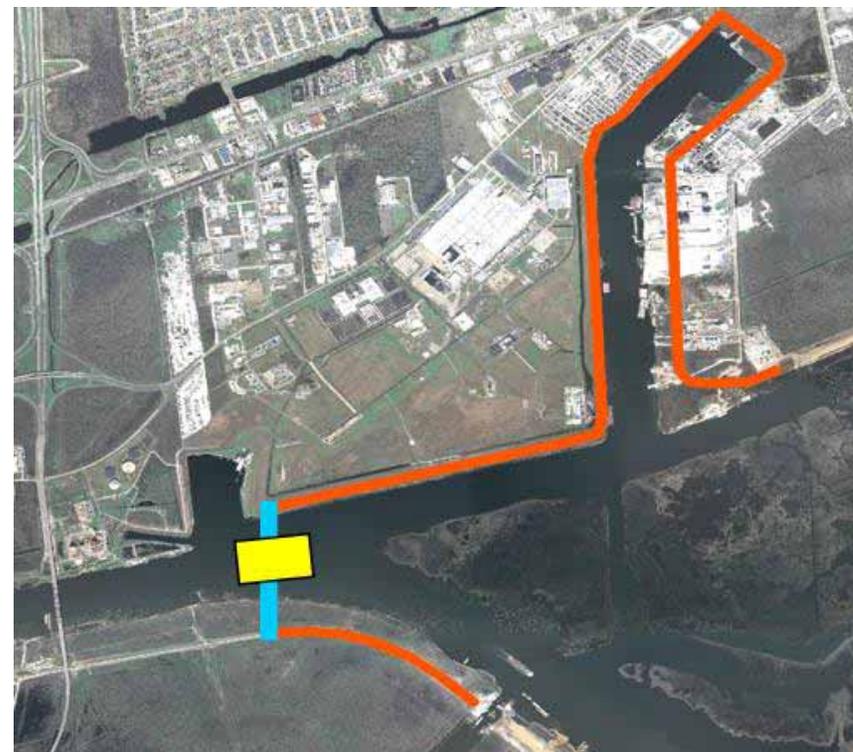
US Army Corps
of Engineers
New Orleans District

IER 11 Tier 2 Borgne Alternative Alignments

Alignment 1



Alignment 2



-  Levees & Floodwalls to be Raised
-  Alternative Alignments
-  Gate



US Army Corps
of Engineers
New Orleans District

IER #11 Tier 2 Borgne Alternative Alignments

Alignment 3



Alignment 4 & 5



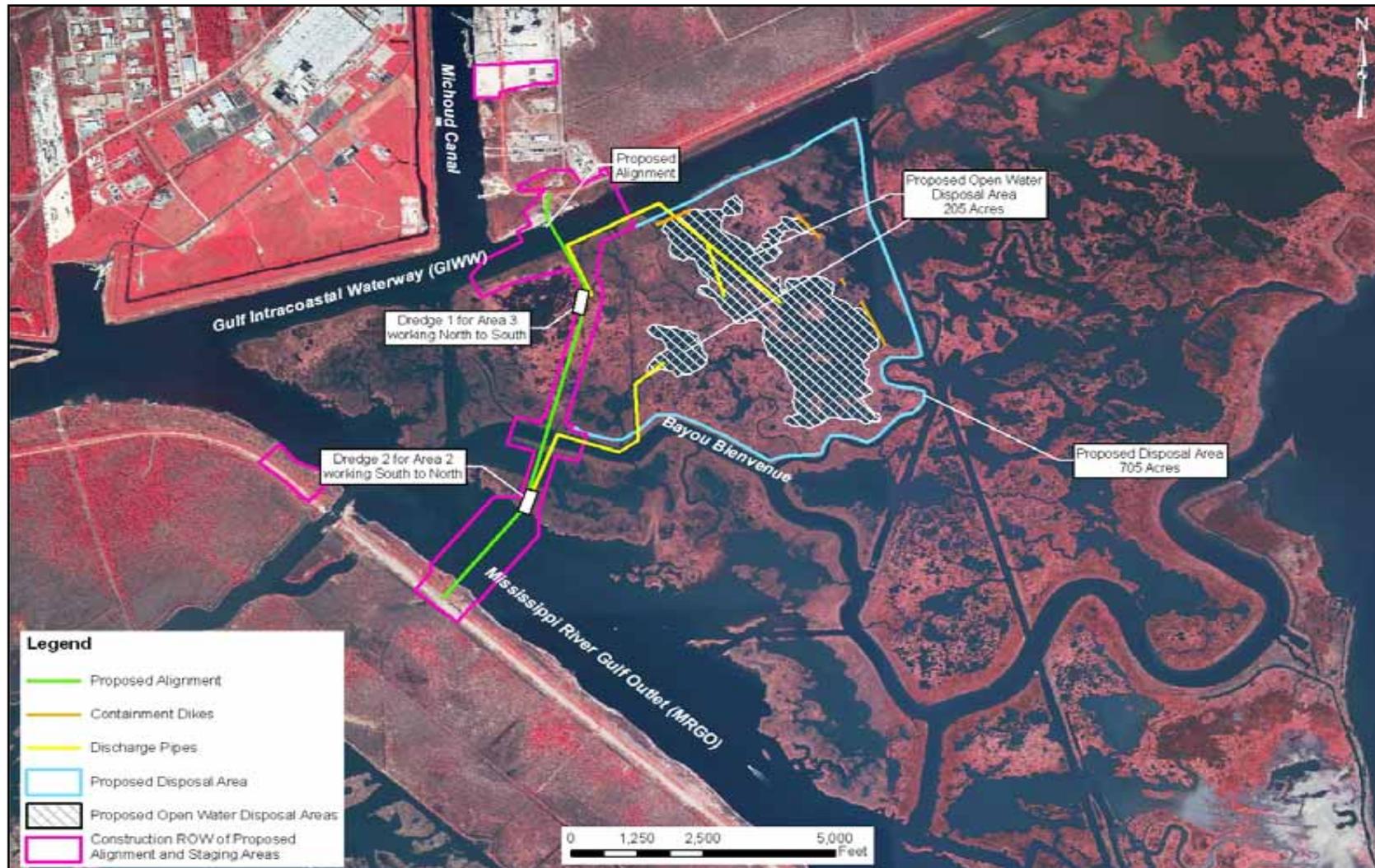
- | | |
|---|----------------------------------|
|  | Levees & Floodwalls to be Raised |
|  | Alternative Alignments |
|  | Gate |

One Team: Relevant, Ready, Responsive and Reliable



US Army Corps
of Engineers
New Orleans District

Proposed Alignment with Beneficial Use Disposal Areas and Dredge Pipes

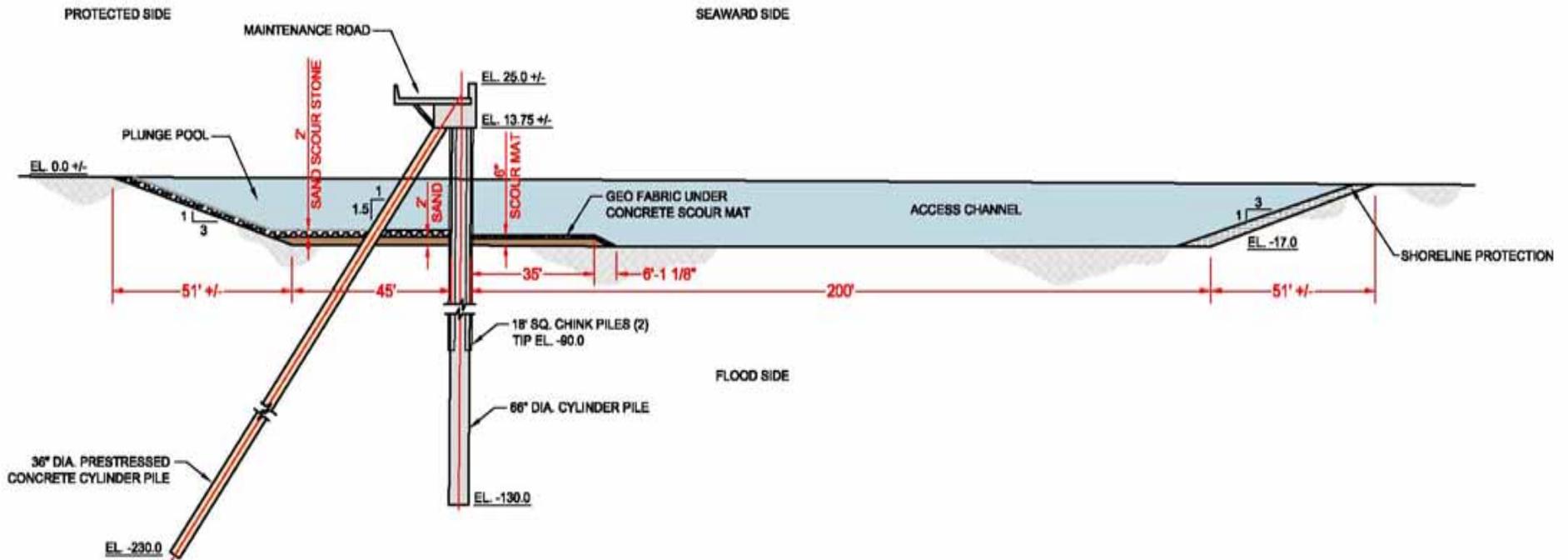


One Team: Relevant, Ready, Responsive and Reliable



US Army Corps
of Engineers
New Orleans District

Floodwall

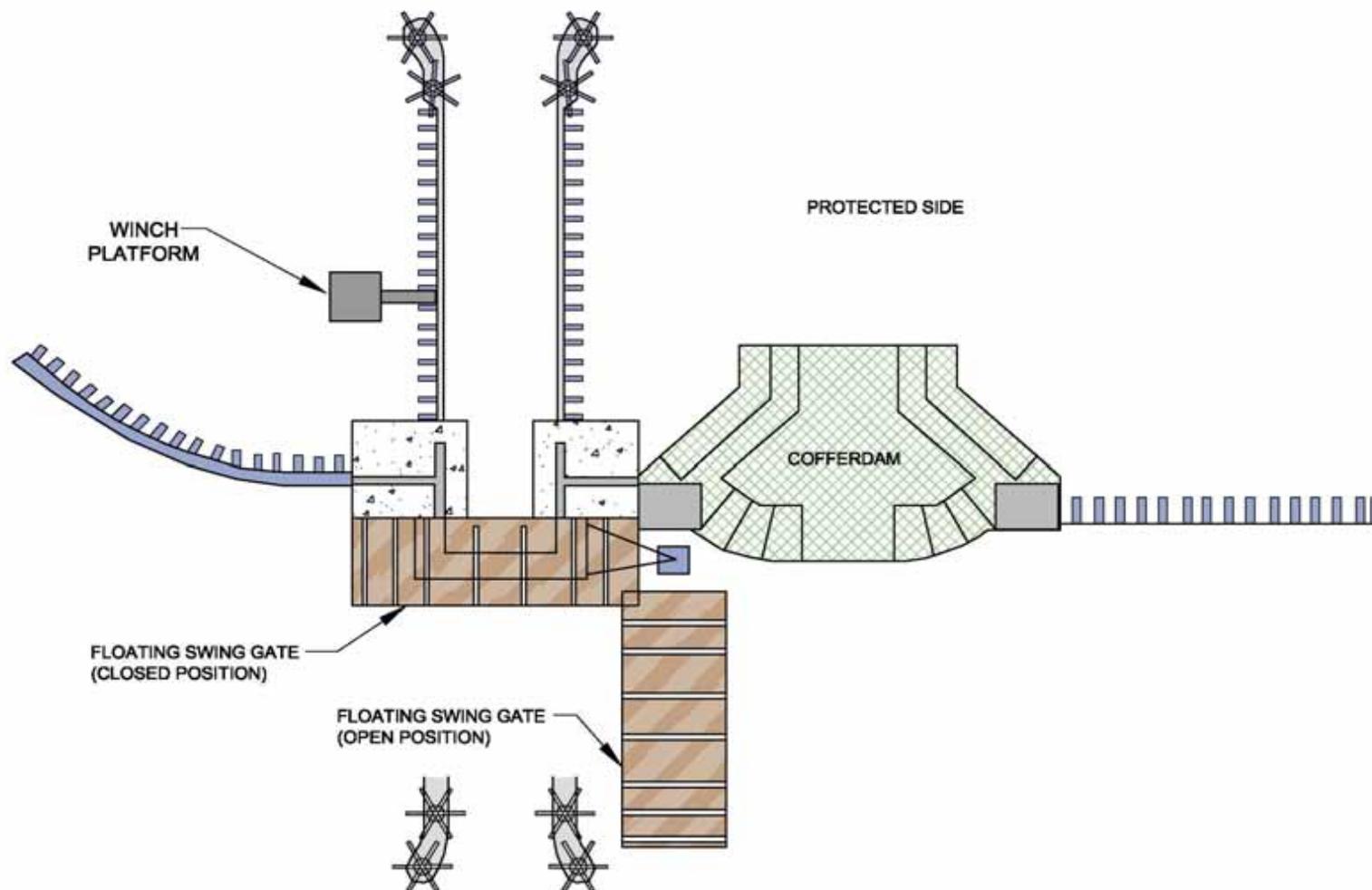


One Team: Relevant, Ready, Responsive and Reliable



US Army Corps
of Engineers
New Orleans District

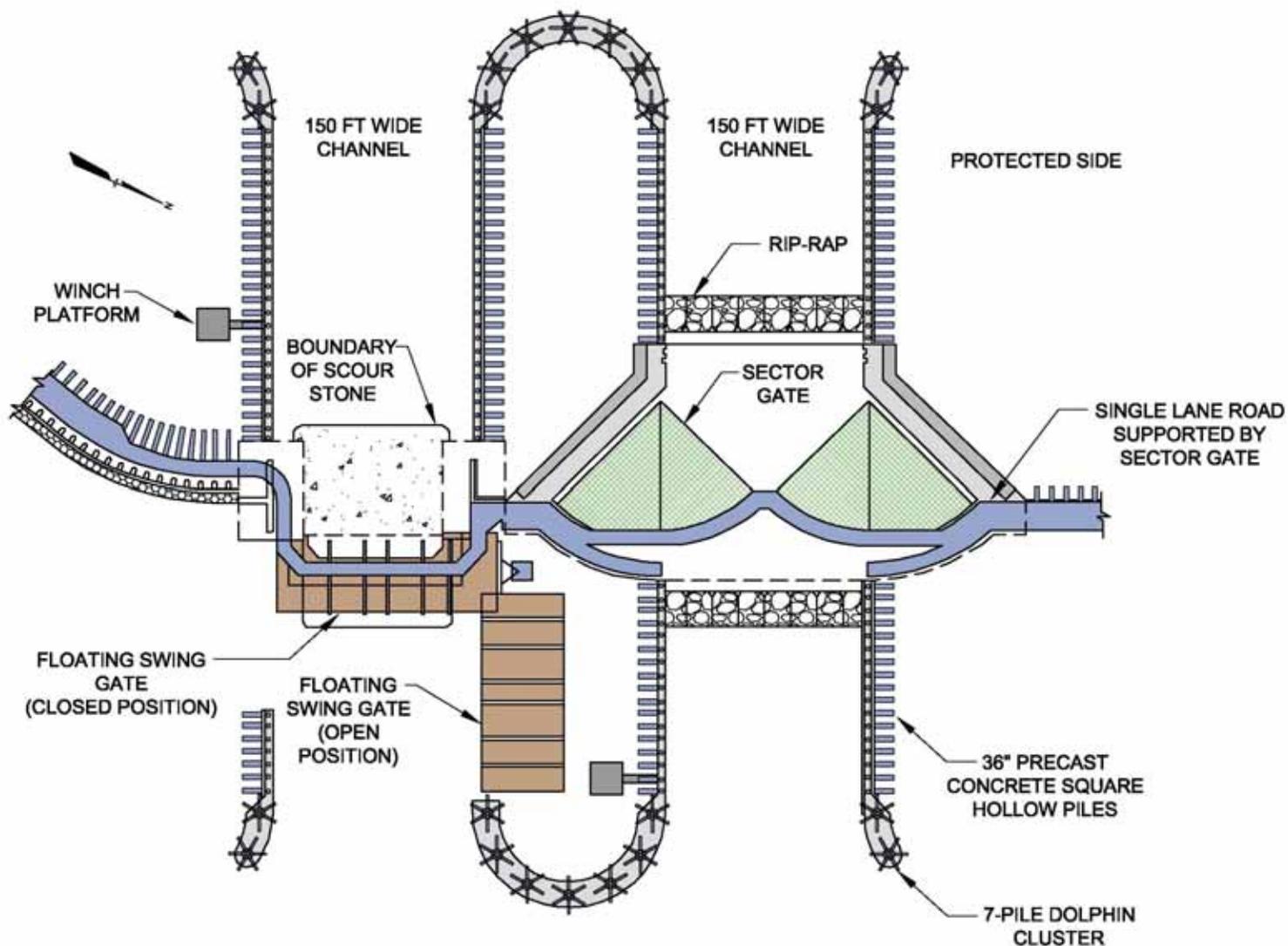
Advanced Measure Cofferdam & Swing Gate Design on the GIWW





US Army Corps
of Engineers
New Orleans District

GIWW Sector and Swing Gate

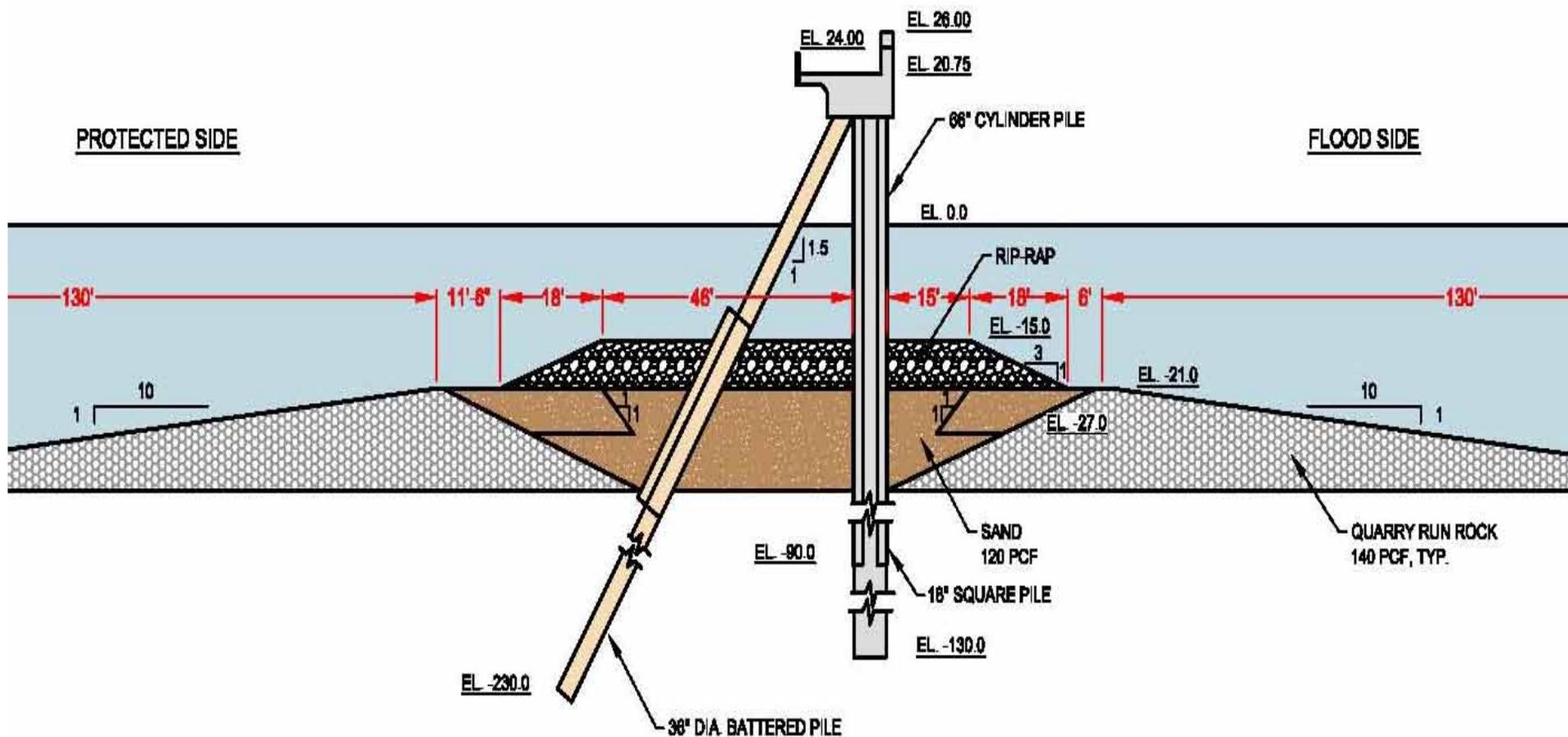


One Team: Relevant, Ready, Responsive and Reliable



US Army Corps
of Engineers
New Orleans District

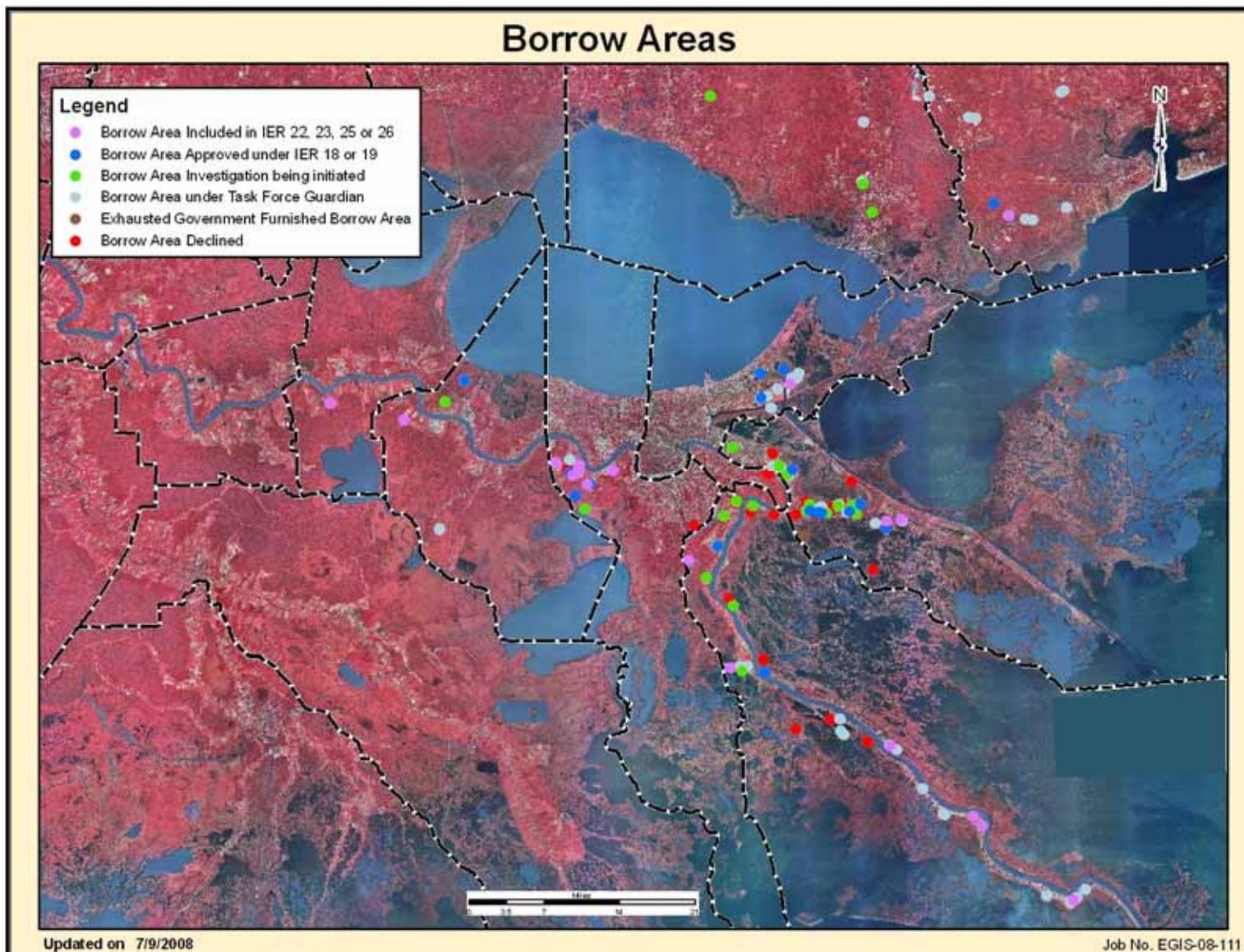
MRGO Closure





US Army Corps
of Engineers
New Orleans District

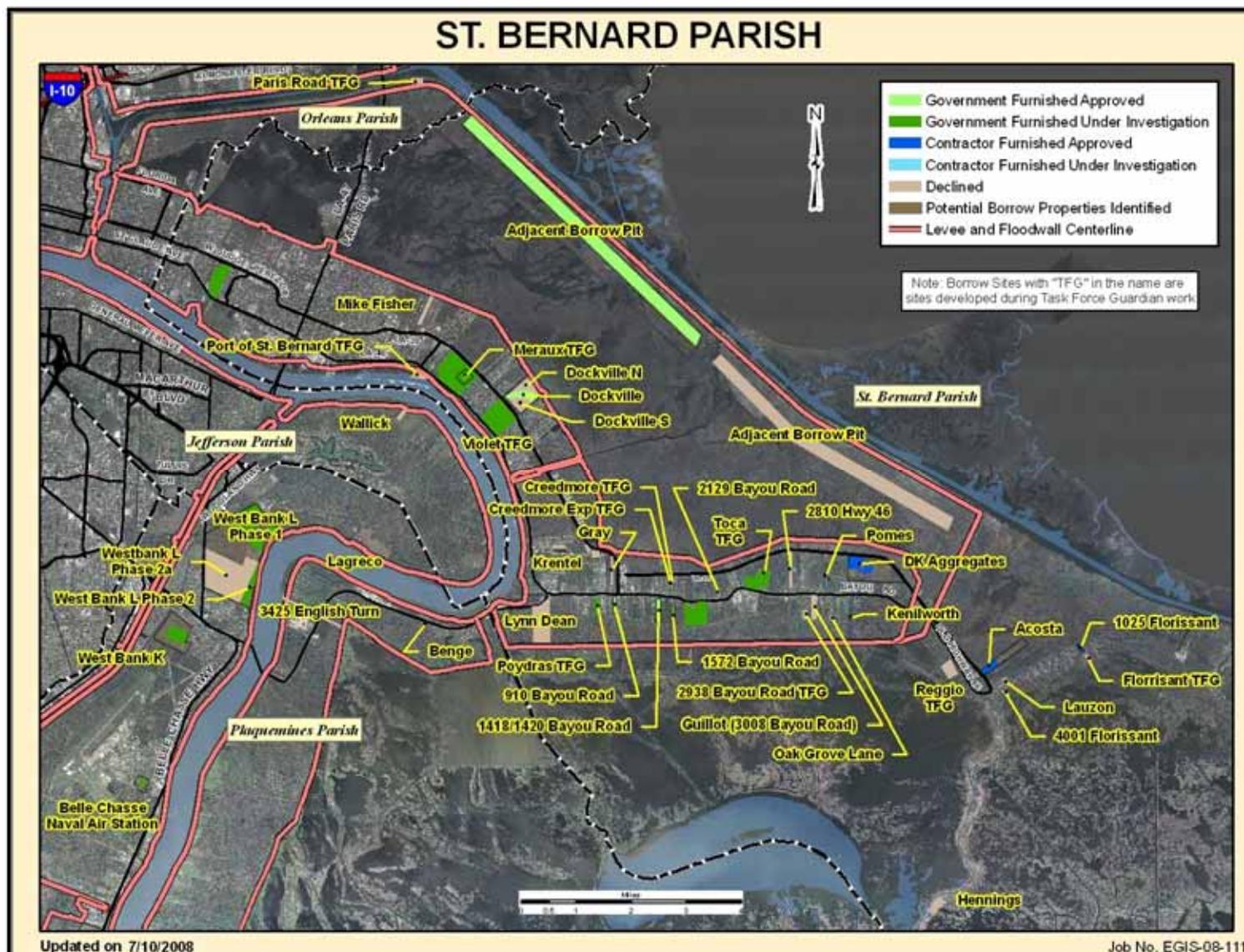
Investigated Borrow-Site – System Wide





US Army Corps
of Engineers
New Orleans District

St. Bernard Borrow Map





US Army Corps
of Engineers
New Orleans District

Opportunities for Public Input

Monthly Public Meetings throughout New Orleans Metro Area

- Make sure to sign in tonight to get on our meeting notification mailing list

Comments can be submitted at any time at www.nolaenvironmental.gov

Individual Environmental Reports (IER) 30-day Public Review

**Questions and comments regarding Hurricane Protection Projects
should be addressed to:**

Gib Owen

PM-RS

P.O. Box 60267

New Orleans, LA 70160-0267

Telephone: 504-862-1337

E-mail: mynenvironmental@usace.army.mil