US Army Corps of Engineers
New Orleans District

# IERs 4, 5, 6 and 7

## New Orleans Hurricane Protection System and Permanent Protection System for Outfall Canals

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New Orleans District

# *Meeting Purpose*

- **Provide the public with up to date project information so that they can be an informed participant in the decision making process.**
- **Public involvement is KEY to the success of this process.**

***We want to hear from you!***

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# *Current Construction: Raising system to originally authorized grade*


- LPV 102-Topaz Street to Orleans Avenue: Notice to Proceed issued October 12th
  - Topaz Gate to be replaced with levee
  - Picnic Shelter #3 west of Bayou St. John to be removed
- LPV 103-Orleans Avenue Canal to London Avenue Canal: proceeding to advertisement
- LPV 104-London Avenue Canal to IHNC: Contract Awarded July 13th, 26% Complete

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# *IER 4: New Orleans Lakefront Levee*
# *100-year Level of Protection*


- Raise or replace floodwalls
- Levees at or near 100-year height; additional work to meet new design criteria
- Alternatives are currently being formulated
- Work could include:
  - Scour protection at transitions wall to levee
  - Widened berms
  - Restoration of foreshore protection
- Raise 9 ramps; Raise or replace 14 gates

# LPV-103.01/103.02 - Lakefront Levee OEB - Orleans Canal to London Ave.


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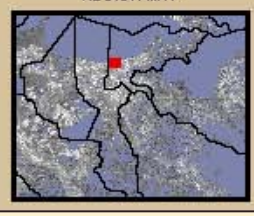
CORPS OF ENGINEERS
MISSISSIPPI VALLEY DIVISION

Map Legend

PROJECT STATISTICS
Total Length: 7721'
Federal Hurricane Levee: 6479'
Federal Levee and Floodwall: 668'
Structure Gaps (5): 573'
Authorized Grade: 18.0'
100-Year Grade 18.5'-20.5'
Existing Elevation 16.5'-20.0'
Est. Cost (Millions): Phase 1 - $9.1,
Phase 2 - $45.0

AREA MAP

REGION MAP



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# New Orleans East Levees
# IER #6 and IER #7

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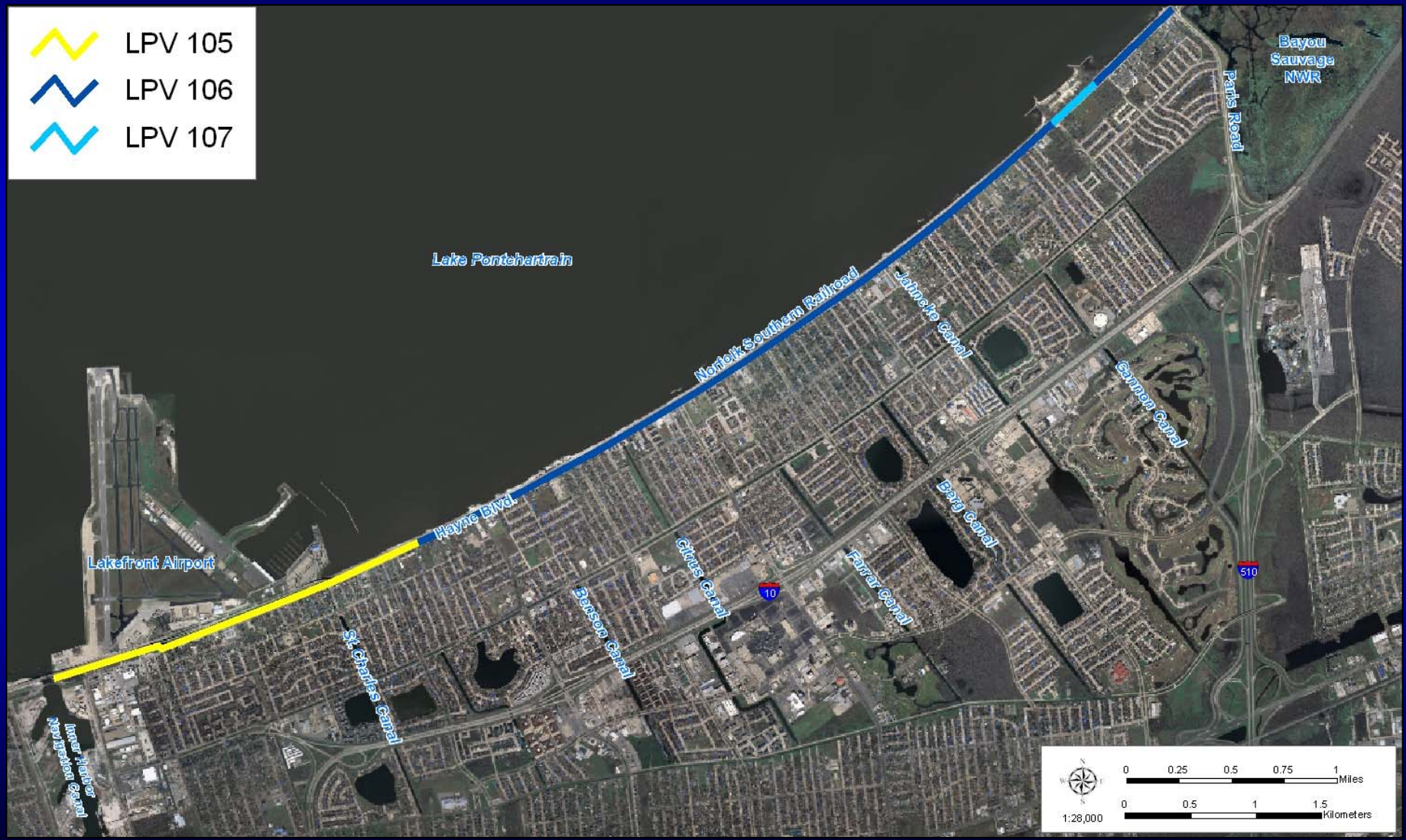
# IER#6 – Proposed Action Alignment



# IER#6 - Summary of Proposed Action and Alternatives

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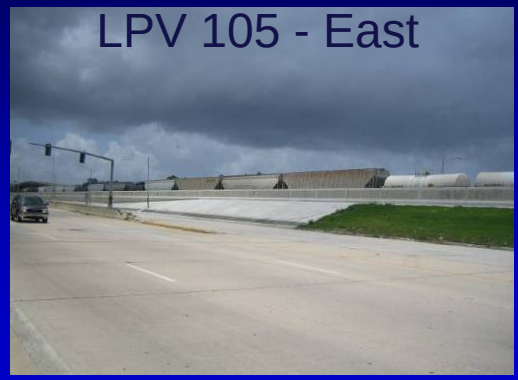
## LPV 105 - West

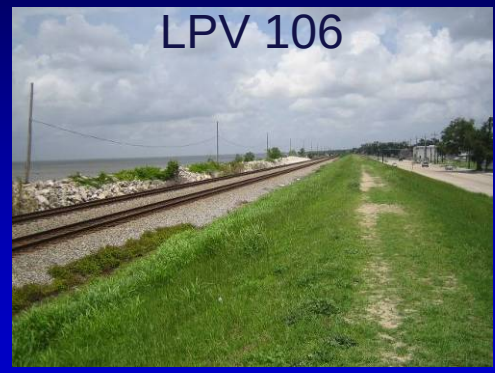
- Proposed Action: Construct new T-wall or levee 300 ft south of existing alignment; floodgate at Downman Rd.
- Alternative 1: Construct new T-wall on current alignment
- Alternative 2: retrofit existing wall on current alignment

## LPV 105 - East



- Proposed Action: Replace floodwall and levee with T-wall following existing alignment
- Alternative 1: Replace existing levee and floodwall with earthen levee

## LPV 106

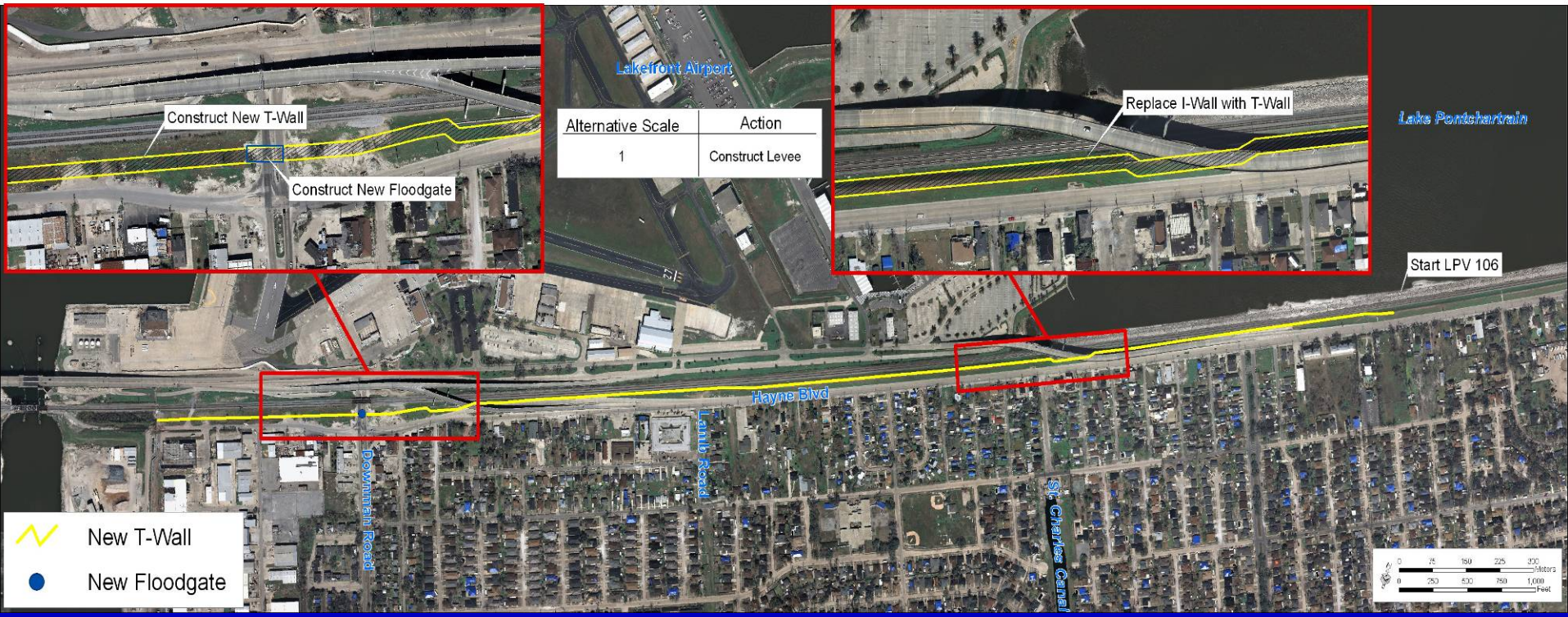


- Proposed Action: Replace levee with T-wall and additional foreshore protection
- Alternative 1: Raise levee and additional foreshore protection

## LPV 107

- Proposed Action: Construct new T-wall and floodgate 12 ft north of existing alignment
- Alternative 1: Construct new T-wall and floodgate in current alignment
- Alternative 2: Construct new T-wall in current alignment; no floodgate
- Alternative 3: Modify/retrofit existing floodwall and floodgate
- Alternative 4: Replace floodwall and floodgate with levee

# IER #6: LPV 105 Proposed Action



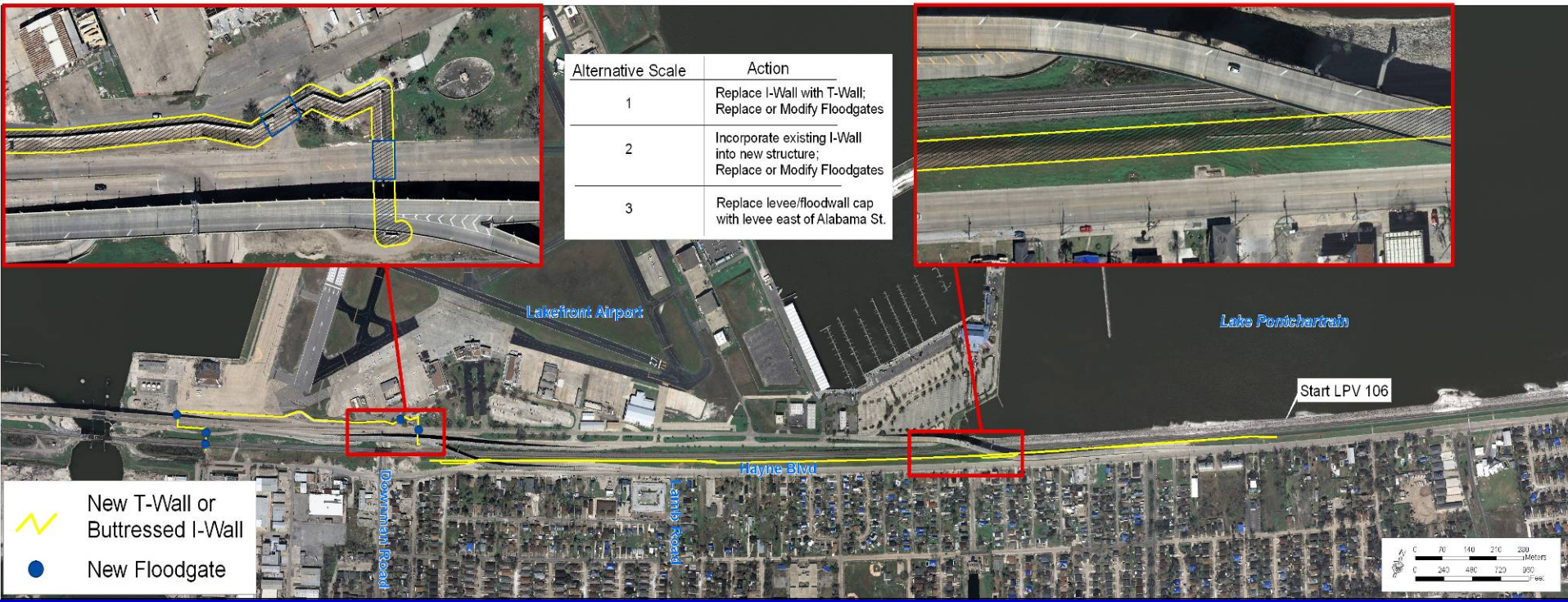

## West of Downman Road

♦Proposed Action: Construct new T-wall or levee 300 ft south of existing alignment; floodgate at Downman Rd.

## East of Downman Road

♦Proposed Action: Replace floodwall and levee with T-wall

# IER #6: LPV 105 Alternatives




## West of Downman Road

- Alternative 1: Construct new T-wall on current alignment
- Alternative 2: Retrofit existing wall on current alignment

## East of Downman Road

- Alternative 3: Replace existing levee and floodwall with earthen levee east of Alabama Street

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# IER #6: LPV 106 Proposed Action


- Proposed Action: Replace levee with T-wall and additional foreshore protection
- Alternative 1: Raise levee and additional foreshore protection

# Example of Temporary Access Channel and Rock Placement

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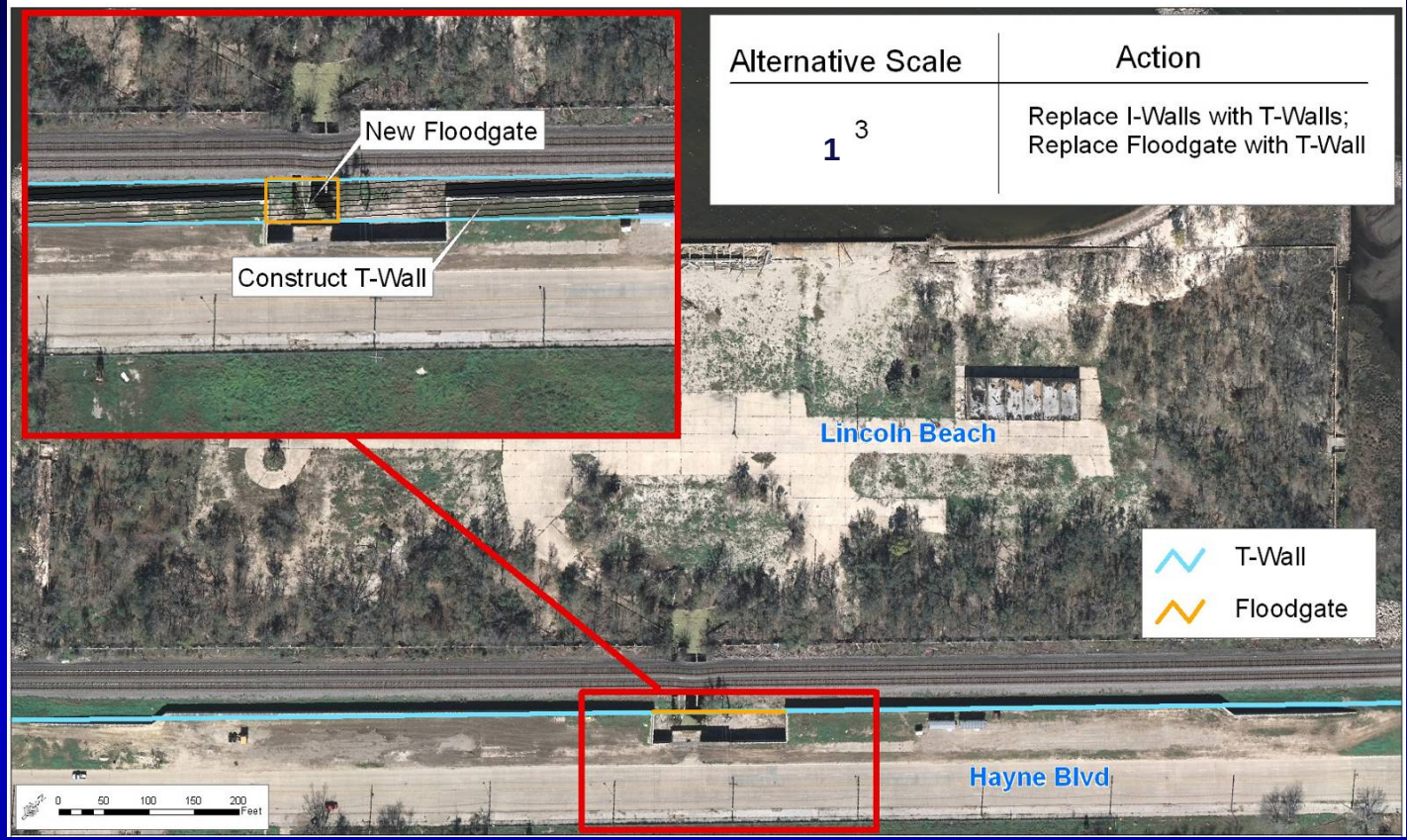
# IER #6: LPV 107 Proposed Action




| Alternative Scale | Action |
|---|---|
| 1 [3] | Replace I-Walls with T-Walls; Replace Floodgate with T-Wall |

- Proposed Action: Construct new T-wall and floodgate 12 ft north of existing alignment
- Alternative 1: Construct new T-wall in current alignment; no floodgate

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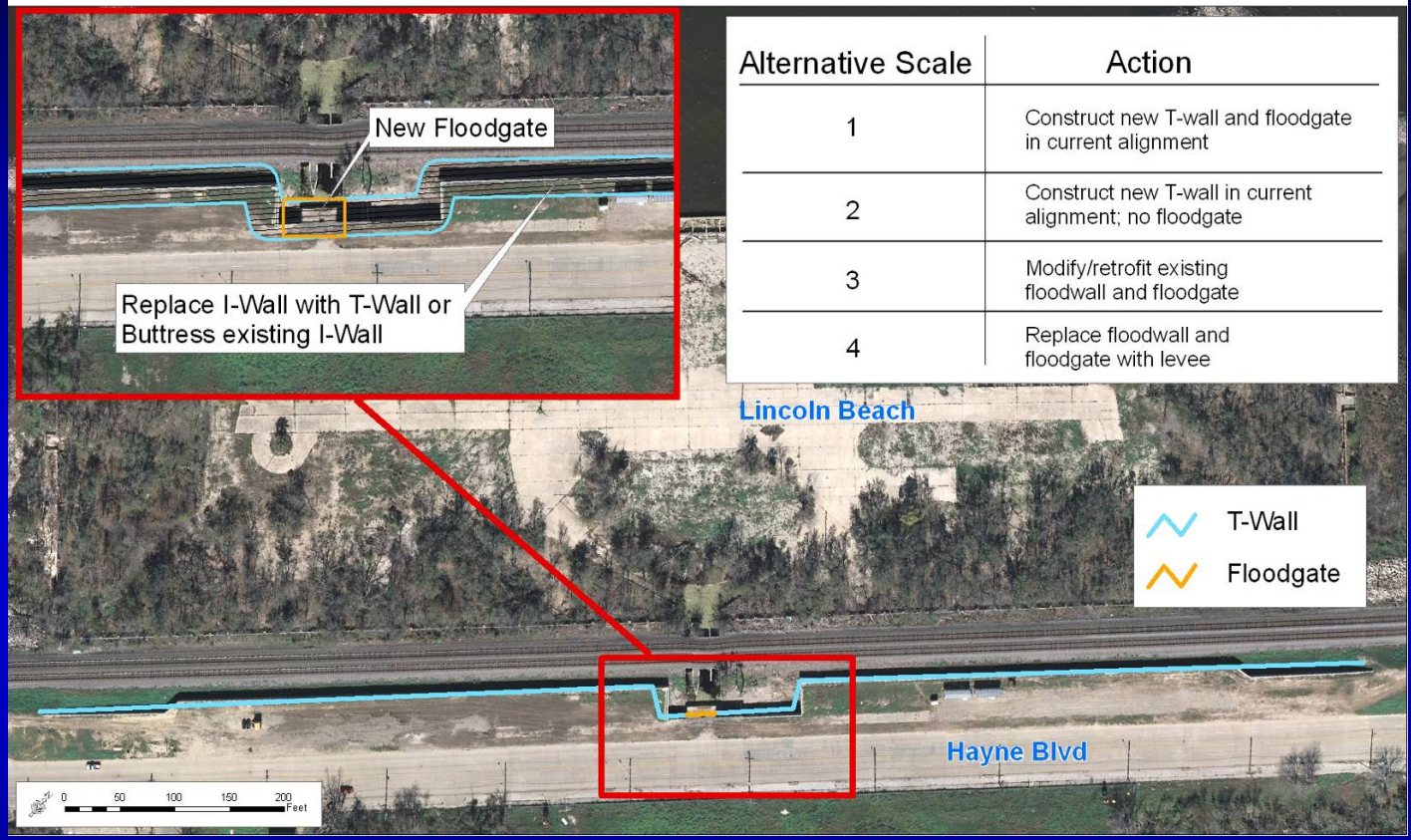
# IER #6: LPV 107 Alternative Alignment




| Alternative Scale | Action |
|---|---|
| 1 | Construct new T-wall and floodgate in current alignment |
| 2 | Construct new T-wall in current alignment; no floodgate |
| 3 | Modify/retrofit existing floodwall and floodgate |
| 4 | Replace floodwall and floodgate with levee |

- Alternative 1: Construct new T-wall and floodgate in current alignment
- Alternative 2: Construct new T-wall in current alignment; no floodgate
- Alternative 3: Modify/retrofit existing floodwall and floodgate
- Alternative 4: Replace floodwall and floodgate with levee

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# Impacts to the Natural Environment

- Geology
  - Localized vibration effects
- Vegetation
  - Loss of maintained turf grasses
- Wetlands
  - Temporary impacts to intertidal ma
- Lake Pontchartrain
  - Increased suspended sediments and sediment oxygen demand
  - Disturbance to submerged aquatic vegetation
- Air
  - Increased emissions
- Fisheries
  - Disturbance to Essential Fish Habitat
  - Loss of less motile fish and invertebrate species
- Threatened and Endangered Species
  - Modification to Gulf Sturgeon Critical Habitat

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# Impacts to the Human Environment


- Aesthetics
  - Loss of green space associated with levee
- Recreation
  - Loss of levee access
- Noise
  - Greater than 65 decibels within 1000 ft of construction
- Transportation
  - Temporary closures to westbound lanes of Hayne Boulevard
  - Temporary penetration of runway protection zone of Lakefront Airport
- Social and Economic
  - Temporary increase in local spending, income and employment
  - Permanent protection of properties and infrastructure

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# IER7 - Proposed Action Alignment


- LPV 108
  - Raise Levee
  - Remove I-wall at Collins Pipeline
  - Additional Foreshore Protection
- LPV 109
  - Raise Levee
  - Reconstruct US 90 and US 11 Floodgates
  - Raise I-10
- LPV 110
  - Reconstruct CSX Railroad Floodgate
- LPV 111

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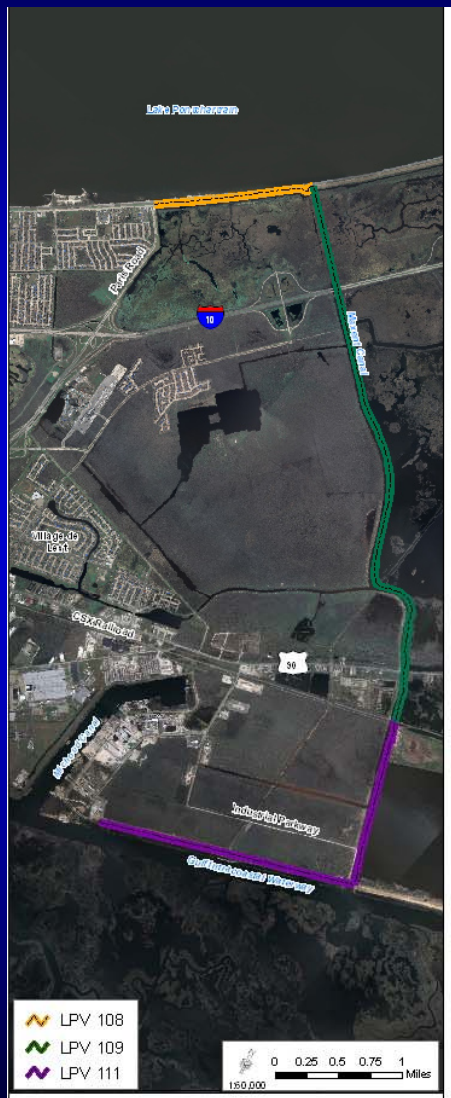
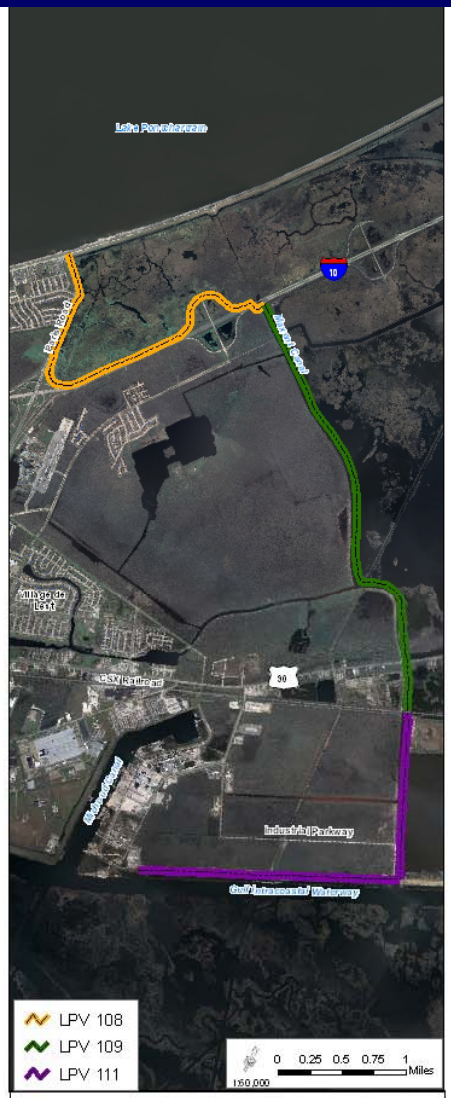
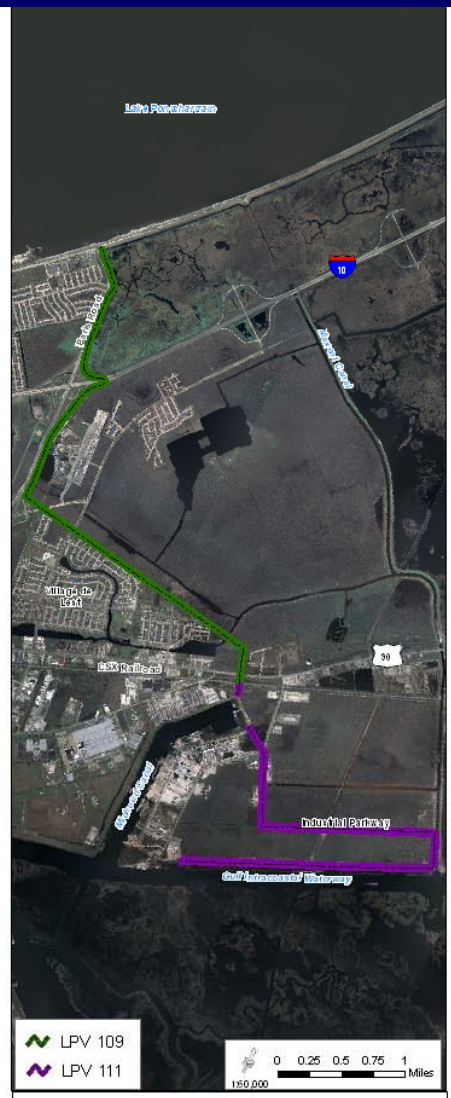
# IER7 - Alternative Alignments



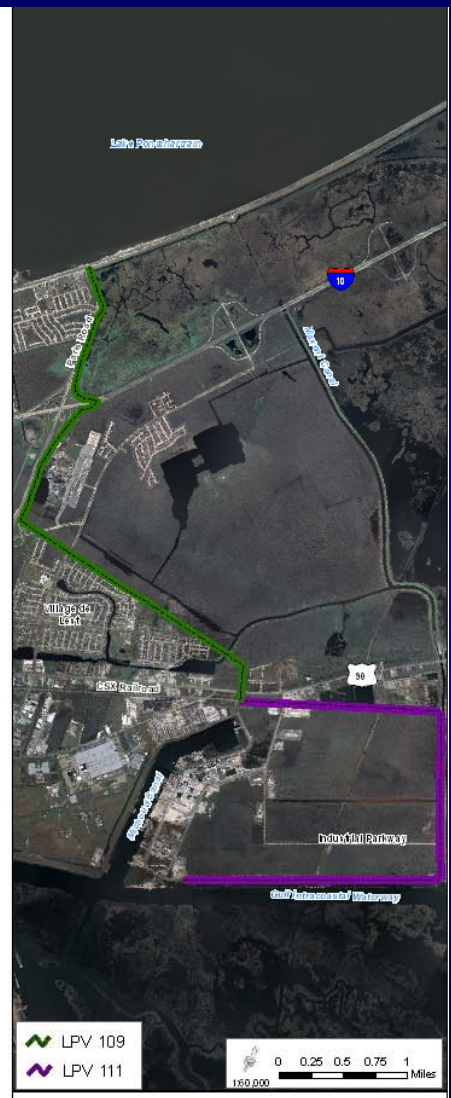

Lake Pontchartrain - Maxent Canal - GIWW




Paris Road - I-10 - Maxent Canal - GIWW




Paris Road - Village de Lest - Industrial Parkway - GIWW




Paris Road - Village de Lest - CSX Railroad - GIWW

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# Impacts to the Natural Environment

- Geology
  - Localized vibration effects
- Vegetation
  - Temporary impact to maintained turf grasses on levee slopes
- Wetlands
  - Loss of freshwater and brackish marsh within Bayou Sauvage NWR
- Lake Pontchartrain
  - Increased suspended sediments and sediment oxygen demand
  - Disturbance to submerged aquatic vegetation
- Air
  - Increased emissions
- Fisheries
  - Disturbance to Essential Fish Habita
  - Loss of less motile fish and invertebrate species
- Threatened and Endangered Species
  - Modification to Gulf Sturgeon Critical Habitat

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# *ERDC Benthic Study Preliminary Results*

- Moderately sorted fine and very fine sand; negligible organic content.
- Benthic assemblages were dominated by bivalvle molluscs (*Macoma mitchelli)*, amphipods (*Lepidactylus dytiscus)*, and mysid shrimp.


- Based on the existing spatial extent of the sandy habitat it seems unlikely that sturgeon would find it difficult to obtain prey, assuming they are either limited to or especially attracted to this habitat.

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# Impacts to the Human Environment

- Aesthetics
  - Temporary impacts from construction activity
- Recreation
  - Temporary disturbance during construction
- Noise
  - Greater than 65 decibels within 1000 ft of construction
- Transportation
  - Equipment and vehicular access to construction areas from I-10, US 90, US 11 and Industrial Parkway
- Social and Economic
  - Temporary increase in local spending, income and employment
  - Permanent protection of properties and infrastructure

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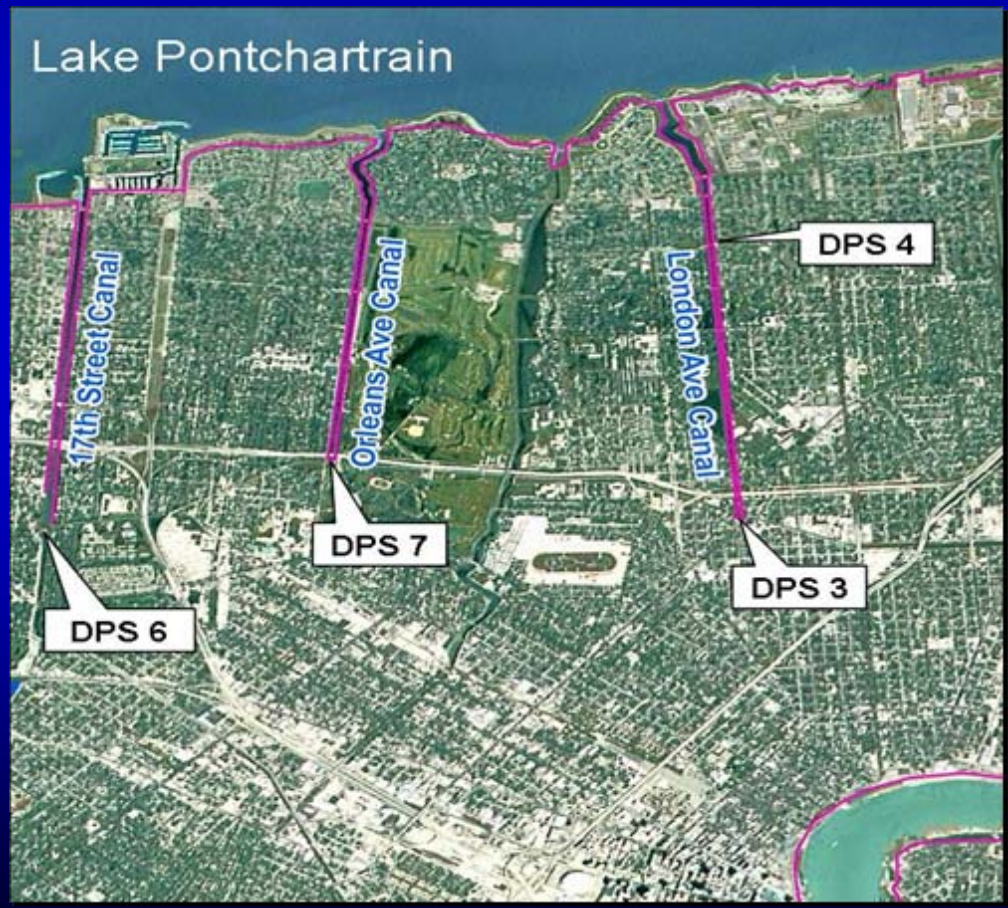
# Permanent Protection System for the Outfall Canals IER #5



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# Purpose and Need

To protect the City of New Orleans and Jefferson Parish from storm surge-induced flooding through the 17th Street, Orleans Avenue, and London Avenue Canals, while not impeding the ability to remove stormwater from the city.

# Alternatives

1) No Action
2) Elevate homes and businesses according to FEMA guidelines
3) Pontchartrain Barrier System
4) Improve Parallel Protection
5) Canal Closure and Pumps

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# Alternative 4: Improve Parallel Protection

- Upgrade floodwalls along canals to provide 100-year flood protection
- Variations of this alternative include:
  - Concrete-lined canals and removal of Interim Control Structures (ICS)
  - Improved existing drainage pump station capacity to pump against storm surge
  - Improved parallel protection and add closure structure
    - Could be existing ICS gates, one-directional flow gates or new manual gates

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# Alternative 5: Canal Closure and Pumps

- Provides pumps and closure structures at or near the lakefront
- Possible variations of this alternative include:
  - Pressurized system/Box culvert
  - Convert Interim Control Structures to permanent facility
  - New permanent pump stations to operate in series with existing S&WB pump stations
  - New permanent pump stations and lowered canals; existing S&WB pump stations removed or bypassed
- Could also include various interior drainage system improvements to reduce required pumping capacity at permanent pump stations (example: Hoey's Basin "Pump to the River")

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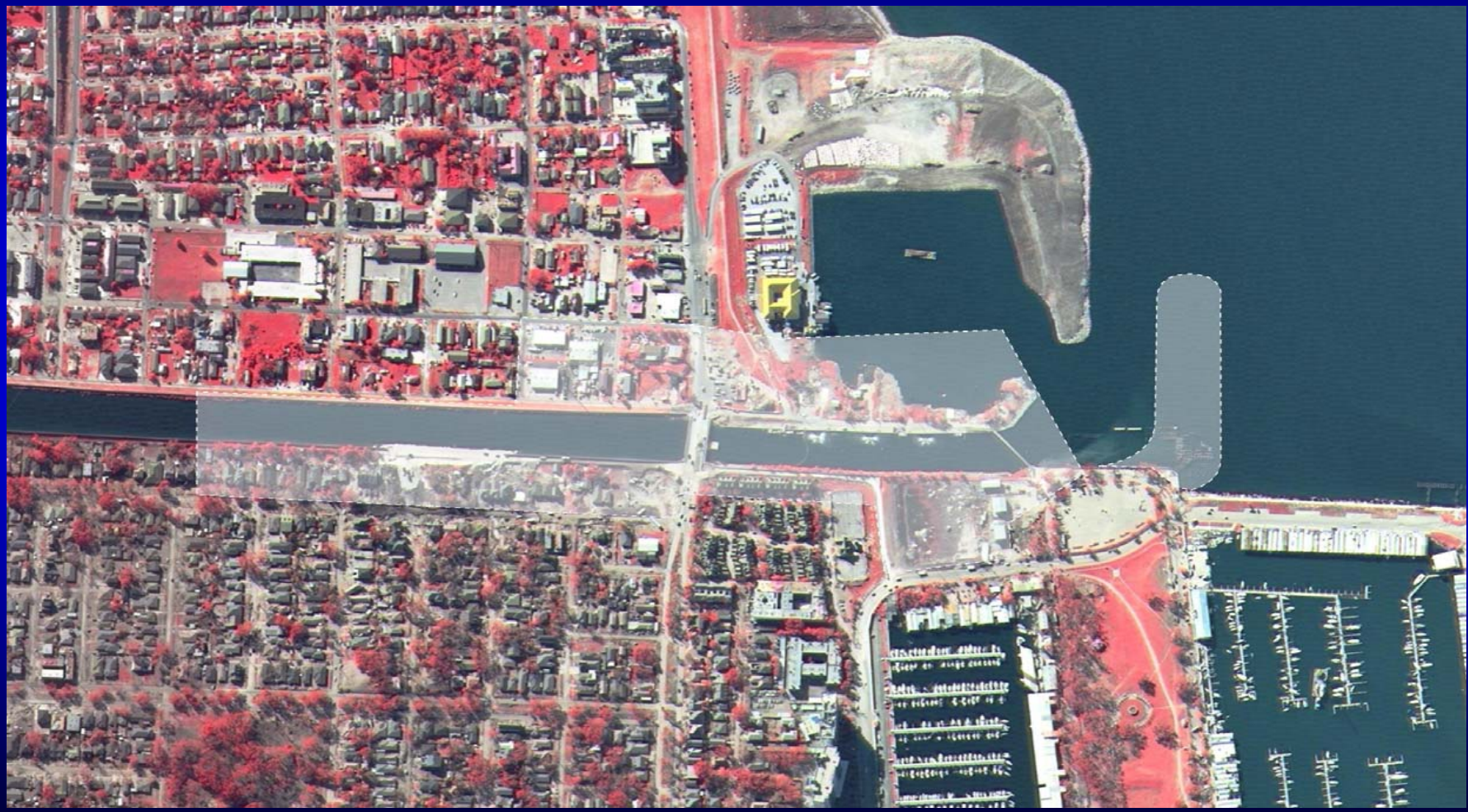
# Individual Environmental Report (IER) #5
## Outfall Canal Closures and Permanent Pump Stations Alternative

## Range of Possible Permanent Pump Station Locations
## 17th Street Canal



*One Team: Relevant, Ready, Responsive and Reliable*

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New Orleans District

# Individual Environmental Report (IER) #5
# Outfall Canal Closures and Permanent Pump Stations Alternative

## 17th Street Canal Conceptual Alternative Site Locations

### Alternative A


### Alternative B


### Alternative C

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# Individual Environmental Report (IER) #5
## Outfall Canal Closures and Permanent Pump Stations Alternative

### Range of Possible Permanent Pump Station Locations
### Orleans Avenue Canal

# Individual Environmental Report (IER) #5
# Outfall Canal Closures and Permanent Pump Stations Alternative

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## Orleans Avenue Canal Conceptual Alternative Site Locations

### Alternative A


### Alternative B


### Alternative C

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# Individual Environmental Report (IER) #5
## Outfall Canal Closures and Permanent Pump Stations Alternative

### Range of Possible Permanent Pump Station Locations
### London Avenue Canal

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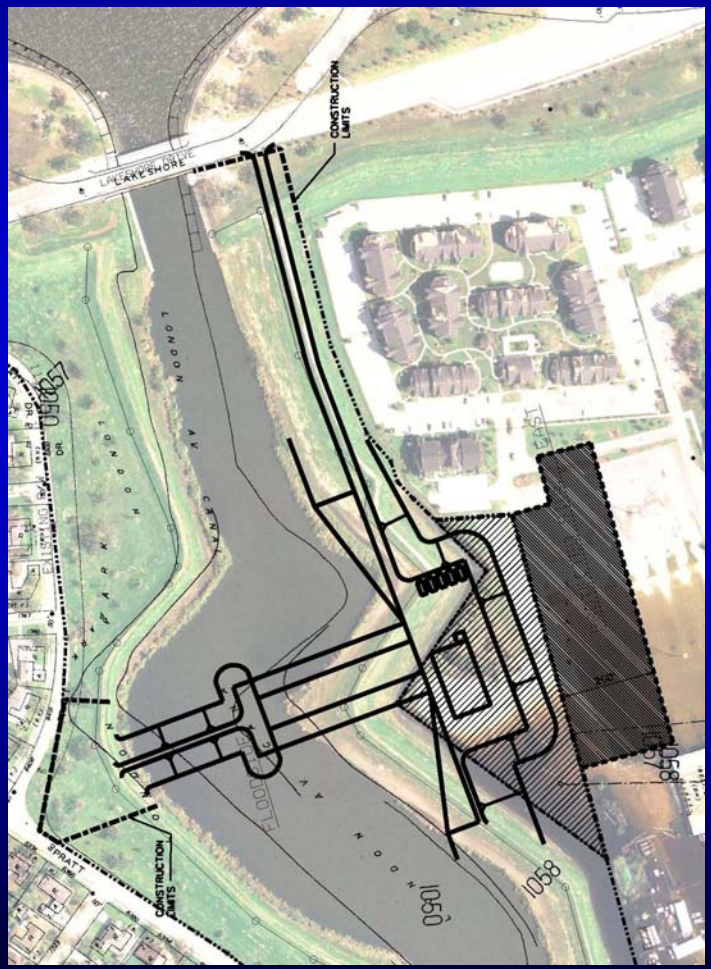
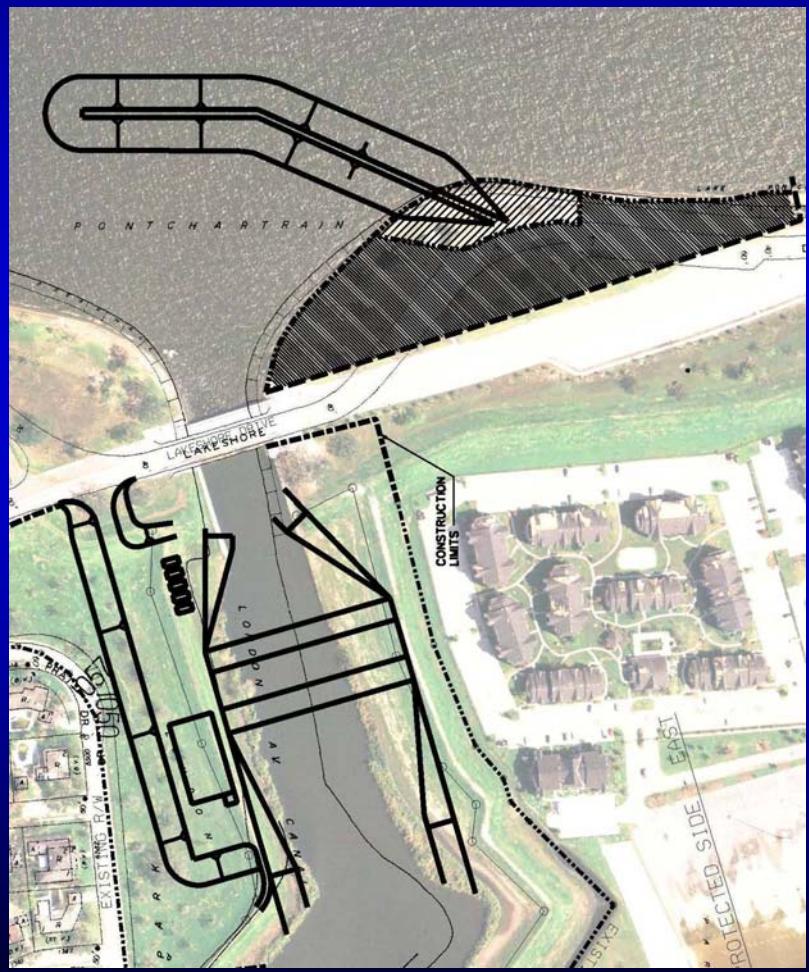
# Individual Environmental Report (IER) #5
## Outfall Canal Closures and Permanent Pump Stations Alternative

## London Avenue Canal Conceptual Alternative Site Locations

### Alternative A




### Alternative B



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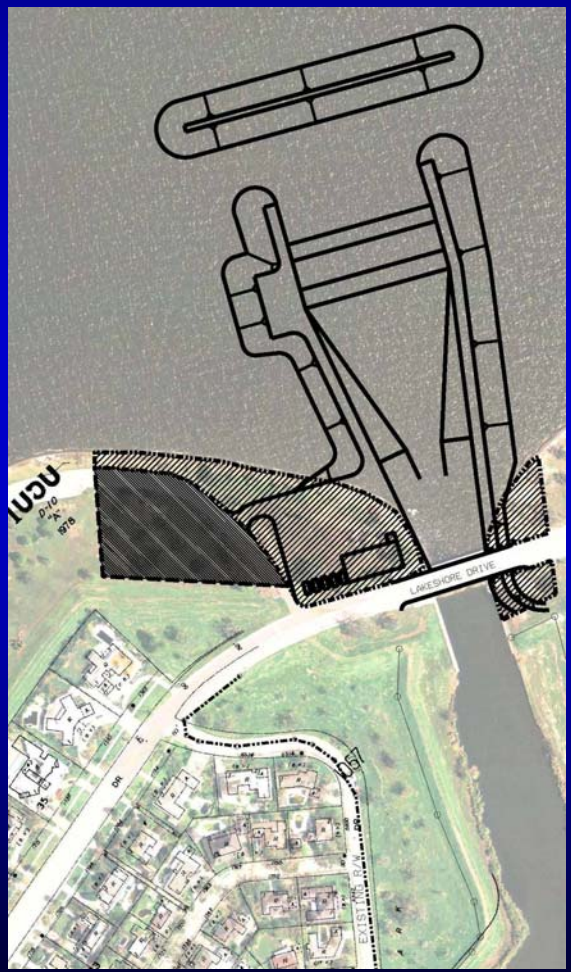
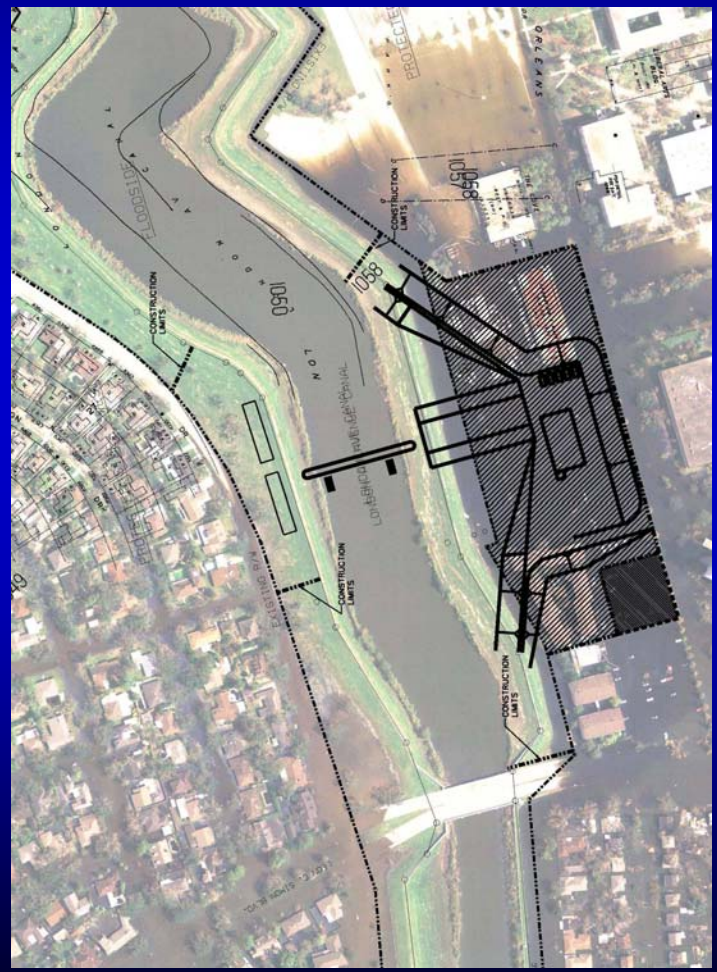
# Individual Environmental Report (IER) #5
## Outfall Canal Closures and Permanent Pump Stations Alternative

## London Avenue Canal Conceptual Alternative Site Locations

### Alternative C




### Alternative D



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


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**PM-RS**
**P.O. Box 60267**
**New Orleans, LA 70160-0267**
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**nolaenvironmental.gov.gov**
**Telephone: 504-862-1337**


**Your comments are welcome anytime now until the close of the IER Public Review Period**

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# NOLA Environmental

NEW ORLEANS, LOUISIANA
Environmental Compliance Data Bank
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## Environmental Processes and NEPA Compliance

What is NEPA?

### FEATURED PROJECT

USACE-MVN Emergency Alternative Arrangements
West Bank & Vicinity & Lake Pontchartrain & Vicinity
Hurricane Protection Projects

USACE NEPA Questions & Answers
USACE Alternative Arrangements NEPA Process
USACE Alternative Arrangements NEPA Process Appendix

Welcome to NOLA Environmental! This site has been set up to share with the public the efforts being made by the U.S. Army Corps of Engineers and other Federal and state agencies in south Louisiana regarding the environmental compliance for proposed Federal and state Hurricane Protection Projects. Additional information pertaining to other Federal and state agencies' hurricane recovery efforts in southeast Louisiana will also be posted on the site as it becomes available.

The U.S. Army Corps of Engineers, Mississippi Valley Division, New Orleans District implemented Alternative Arrangements on March 13, 2007 under the provisions of the Council on Environmental Quality Regulations for Implementing the National Environmental Policy Act (40 CFR § 1506.11). This process was implemented in order to expeditiously complete environmental analysis for the 100-year level of Hurricane and Storm Damage Reduction effort authorized and funded by the Administration and the Congress. The proposed actions are located in southern Louisiana area and relate to the Federal effort to rebuild the Hurricane and Storm Damage Reduction system in the New Orleans Metropolitan area as a result of Hurricanes Katrina and Rita. (Learn More)

**UPCOMING EVENTS:**

Public Meeting: July 26, 2007 7:00 pm, St. Charles Sub Basin ~ Ramada Inn 100 James Drive St. Rose, LA 70087

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USGS