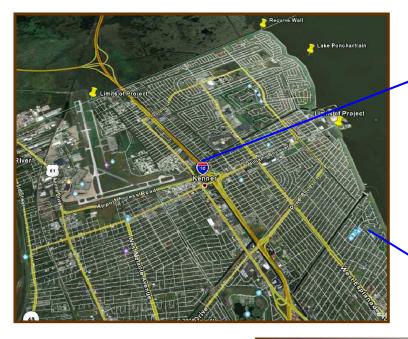


# U.S. Army Corps of Engineers

# JEFFERSON LAKEFRONT & WEST RETURN CANAL FLOODWALL & STRUCTURES IMPROVEMENTS





I-10 Bridge



<u>Williams Boulevard</u> <u>Gate</u>

### Client USACE, New Orleans

Craig Waugaman (504) 862-2673

#### Location

Jefferson Parish, LA

## Service(s)

Geotechnical Engineering

#### Project Engineer(s)

- Bruce Khosrozadeh, PE
- Carlos Cepero, PE

The project consisted of the preparation of Plans & Specifications (P&S) and Engineering during Construction for flood protection enhancements along the West Return Canal and Lake Pontchartrain. Work was located in Jefferson Parish, LA and was part of the USACE Hurricane Protection Project. The designs brought the hurricane protection to a Phase II 100 year level. As a partner of the Hurricane Protection Alliance (HPA) Joint Venture, CSI Geo staff was tasked with performing geotechnical engineering analysis for various project components.

The components of the project include:

- A. Floodwall & Gate at Williams Blvd Boat Launch: The Williams Blvd. floodwall segment consisted of an I-wall, T-wall and a vehicular gate monolith. A new T-wall (pile supported cantilever concrete wall) section and roller gate was designed to replace the existing features.
- B. Kenner West Return Floodwall: Approximate floodwall length: 3.47 miles.

  This segment consisted of various T-wall and I-wall monoliths with a levee tie-in sheet pile (south end) and a Re-curve Floodwall tie-in (north end). The team developed P&S for a new T-wall section to replace the existing floodwalls. Also, geotechnical services were provided in the execution of six full scale pile load tests. Special exceptions were taken at the I-10 Overpass and Parish Line Canal Pump Station:
  - I-10 Overpass This included a steel diaphragm between the existing I-wall and I-10 overpass structure. A new T-wall section was placed between the two overpasses, with a wall top elev. of 14.5 ft. The A-E coordinated bridge and diaphragm interaction with LaDOTD and other entities. A breakwater was designed to minimize wave loading on the structure.
  - Parish Line Canal Pump Station The P&S included a new T-wall section to replace the existing floodwalls. The new constructed top of wall increased to elev. 17.5 ft.
  - West Esplanade Ave. The P&S included a new pedestrian access gate within the T-wall monolith located at the end of West Esplanade Ave.
- C. Re-Curve Floodwall in Northwest Kenner. Approx. Floodwall Length: 850 ft. This segment in N.W. Kenner consisted of I-wall monoliths, wave buffers, and a vehicular gate. The A-E developed P&S for a new T-wall section and swing gate to replace the existing features.