

## 17th Street Canal Floodwall Remediation

New Orleans, Louisiana

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## The project

Hurricane Katrina hit the city of New Orleans in August 2005 and caused devastating damage to its infrastructure and tragedy to its people. The U.S. Army Corps of Engineers New Orleans District was tasked with repairing and fortifying its existing levee system to bring it up to 100-year event flood protection standards. The Corps formed the Greater New Orleans Hurricane and Storm Damage Risk Reduction System (HSDRRS), whose \$14.3 billion budgeted goal was to rebuild and strengthen all of the levees and associated facilities by June 1, 2011, to be prepared for the next major event.

## The challenge

The 17th Street Canal floodwalls had failed completely during the storm and caused devastating flooding, as shown on national news. After these floodwalls were replaced, the problem was the levees themselves that were originally built with soft clayey soils and were not designed to withstand the pressures produced by the high water levels. The Corps' solution was to install a series of perpendicular shear panels 30-inch thick, 20-foot wide, and 40-foot deep made from Deep Soil Mixing spaced at 10-foot centers along most of the levee alignment. These panels would provide the necessary strength to protect the levees from failing in future events.

## The solution

The U.S. Army Corps New Orleans District prepared the specifications to allow various techniques besides Deep Soil Mixing as equivalent systems to provide the ground improvement. Keller was awarded the contract at prices that were lower than the Deep Soil Mixing competitors. Keller utilized two triple-axis jet grouting machines that were able to do the entire contract 33% faster than the schedule that had been anticipated. The project was substantially completed ahead of the deadline.

The Corps got the best value by contracting Keller using its advanced multi-axis jet grouting techniques. These machines are unique to this market.

## Project facts

### Owner(s)

U.S. Army Corps of Engineers, New Orleans District

### Keller business unit(s)

Keller

### Main contractor(s)

Bailey CKY JV, Inc.

### Engineer(s)

U.S. Army Corps of Engineers, New Orleans District

### Solutions

Groundwater control

### Markets

Infrastructure  
Dams and levees

### Techniques

Jet grouting

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