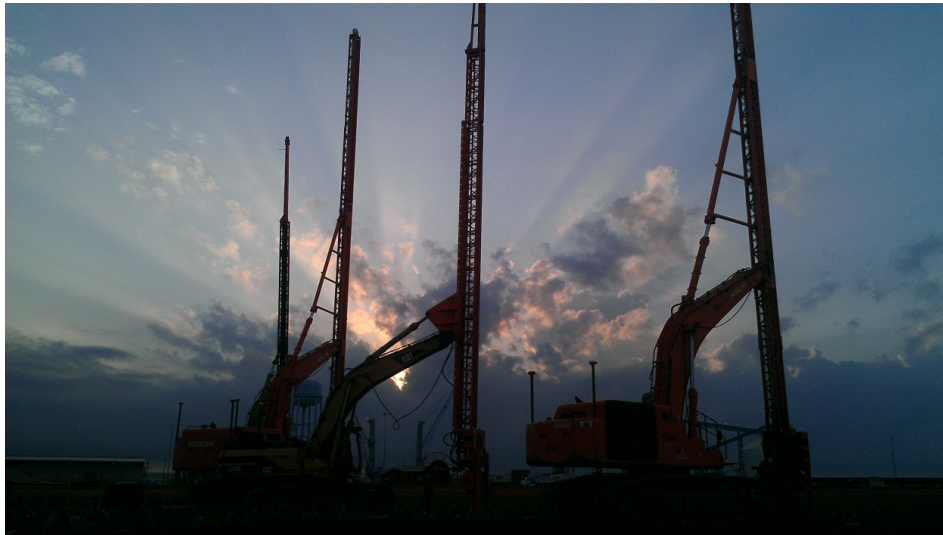


Port of Gulfport

UNITED STATES



Port of Gulfport

Owner
Mississippi Port Authority

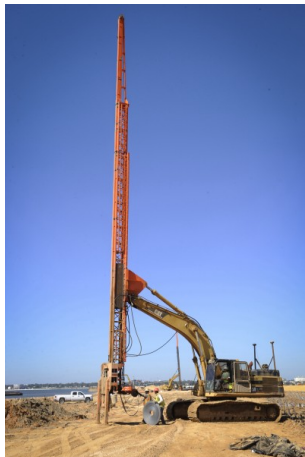
Engineer
Neel-Schafer, Inc.

General contractor
W.C. Fore Trucking, Inc.

Dates of work
2012/07 2012/11

Main figures

Wick drains
28500 EA.



Port of Gulfport

Description

The Mississippi State Port Authority (MSPA) at Gulfport is rebuilding and restoring its facilities damaged during Hurricane Katrina in 2005. The initial phase of the project, West Pier +25 Fill – Phase I, involves elevating the West Terminal to 25 feet above sea level to protect from future storm damage. The restoration program also includes an 84 acre addition to the West Pier built with dredged fill. To accelerate consolidation of the fill in order to expedite construction and limit long-term settlement, USW installed close to 16 million lf of vertical wick drains.

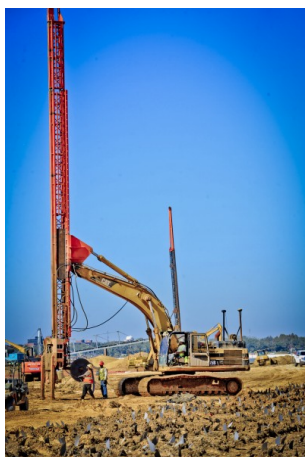
Ground conditions

The dredge fill used to expand the surface area of the site was very soft, and highly susceptible to long-term settlement. In addition, the site contained several areas with significant debris from the clean-up effort following the hurricane.

Solution

Wick drains were installed to evacuate pore water from the dredge fill to induce consolidation and settlement. Using wick drains as a drainage path to reduce the water content also strengthened the underlying soil to accommodate superimposed loads.

To meet the tight schedule, USW operated up to 6 stitchers and 4 pre-drills in extended shifts. Each rig was equipped with a sophisticated system of GPS devices, inclinometers and sensors to capture a real-time record of each wick drain installed. In less than four months, approximately 28,500 individual wick drains were successfully installed, helping to restore and revitalize the port and position it for future expansion.



Port of Gulfport