Airports

Louis Armstrong International Airport

UNITED STATES

New Orleans, LA

Owner
New Orleans Regional Planning Commission

Engineer
PSI Engineering

General contractor
Kolb Grading, LLC

Dates of work
2016/04 2017/06

Main figures

Wick drains
17000000 LF

Description

At famed Louis Armstrong International Airport in New Orleans, the North Terminal Project was proposed to increase the airport's service for passengers to national and international destinations. The $650 million project, which broke ground in 2016, was also expected to have a positive impact on the regional economy. The terminal would feature 35 airline gates and offer an improvement in passenger experience. This would include efficiency in passing through security and a concourse with a distinct New Orleans flair.

Due to the very soft nature of the soils at this site, excessive long-term settlement was predicted from the placement of several feet of fill.

Ground conditions

The Kenner region, where the airport is located, was originally a cypress swamp and marshland traversed by several bayous and streams, particularly near the shores of Lake Pontchartrain. The sediments encountered in the region were influenced by the historical migration of the Mississippi River delta over the past 5,000 years. In subsequent years, the land underwent both improved development and drainage.

The condition of the soils prior to construction of the North Terminal featured roughly 2 to 5 ft of desiccated dark gray fat clay with organic materials and sand, followed by approximately 10 ft of very soft dark gray to black fat clay with moderate to high organic content. This was underlain by approximately a 34 ft thick stratum of very soft to soft gray fat clay and then by about 31 ft to firm to stiff fat clay.

A deep stratum of dense to very dense sand and silty sand averaging approximately 30 ft in thickness was encountered in the borings at an average depth of approximately 85 ft below the existing ground surface.

Solution

Given the scope of the project, which included additional taxiways and roadways for the new terminal, US Wick Drain installed 17 million ft of wick drains at depths of 90 ft installed at 196,00 points. It marked the second-largest contract ever for US Wick Drain.

The 14-month undertaking went smoothly throughout, with the wick drain installation meeting the client's schedule.

To support fills placed in association with the construction of the new terminal at Louis Armstrong International Airport in New Orleans, US Wick Drain installed millions of feet of wick drains to enhance stability and reduce long-term settlement.