

Pasco Hernando State College

COMPACTION GROUT PROJECT

Project

The project is a pre-construction soil stabilization project for a Pasco Hernando State College building. The purpose of the grouting operation was to fill any voids that may be present near the limestone / soil interface as well as displacing soft, subsurface deposits that may be present near this interface and in the overburdened soils.

Challenge

- A subsurface exploration of the proposed new administrative building located within the Pasco Hernando State College West Campus, in Port Richey indicated that evidence of sinkhole activity was documented at the property.



Solution

The engineer of record recommended a remediation program consisting of low slump compaction grouting for the proposed building area.

The subsurface stabilization program consisted of treating the deep soils within the footprint of the proposed building area. The program included advancing one hundred forty-one (141) grout injection points within the proposed new building location.

One-hundred forty-one (141) grout injection points (GIPs) were completed for the grouting operations. The GIP installation depths varied from 23 to 100 feet with an average installation depth of approximately 33 feet. The rotary wash method was used to install the grout injection points. Sand, water, cement, and fly-ash grout mixture were pumped through a 3-inch steel pipe at selected depths. The ground surface in the vicinity of injection points was monitored for any uplift during the grouting operation by Helicon. Upon initial pumping at the maximum depth of each grout injection point, the pipe was raised in approximately 5-foot increments once pumping criteria (set forth in the site-specific grout recommendations) were met.

A total of 780.0 cubic yards of the grout was delivered onsite. 763.9 cubic yards were used for the grouting operations and 7.2 cubic yards of grout were returned throughout the project. The average volume of grout injected into each GIP was 5.4 cubic yards.