

USF Research Building Project

COMPACTION GROUT PROJECT

Project

The project is a research building located on the University of South Florida campus in Tampa, FL. The research lab had wall cracks appearing and doors not opening properly. It was determined that there were voids underneath the research lab foundation.

Challenge

- Over 8 ft deep voids found underneath the research lab concrete slab foundation.

Solution



Fill the voids and cavities while stabilizing the granular material and improving the physical properties of the soil.

The engineer of record recommended a ground improvement plan that consisted of approximately 100+ cubic yards of compaction grout injected at varying depths. A mixture of cement, fly ash, sand, water, and other admixtures were injected into the loose soils and voids in the limestone and overlying sand strata.

Pumping continued until a grout pressure of 200 to 400 psi was achieved. Injection pins were installed throughout the research lab section of the building per site plan specifications. Each pin pile was hydraulically driven into the soil until enough pressure was reached for refusal.

All operations were performed under the observation of the engineer of record. Efficient planning & coordination was key to overcoming the challenges & limitations.

Client: University of South Florida
Engineer: FGE Engineering
Market: Institutional
Solution: Ground Improvement
Services: Compaction Grout