

Hidden Brook Condominiums

COMPACTION GROUT AND UNDERPINNING PROJECT

Project

The project is a residential condominium complex that experienced sinkhole activity. The Geotechnical Engineer of Record recommended a solution of low mobility and high mobility compaction grout and underpinning to improve the load bearing capacity of the existing soils at the site.

The intent of grouting operations was to seal the surface of the limestone, fill voids and stabilize weakened soils that underlie the building footprint. Due to a ground cover collapse that occurred in front of one of the buildings, underpinning needed to be utilized for preventative purposes prior to compaction grouting at this building.

Challenge

- Sandy/Silty soil conditions
- Ground Collapse
- Deep sinkhole conditions in various areas



Solution

Helicon worked alongside the geotechnical design team to develop a compaction grout and underpinning program designed to meet the building code load criteria. The underpinning system was installed to a competent bearing stratum as defined by the engineer. An added benefit of the underpinning system was that the loose soils near the surface were bypassed, negating the need for additional near-surface soil improvement such as chemical grouting.

A program of low mobility displacement grout was utilized to stabilize the sinkhole conditions at the structure. In instances where competent limestone and/or sinkhole conditions were encountered at depths shallower than 20 feet below ground surface, specifications were met to implement a high mobility subsurface grouting program. Efficient planning & coordination was key to overcoming the challenges & limitations.

Owner: Hidden Brook Condo Association

Engineer: SEI Inc.

Market: Residential

Solution: Ground Improvement

Services: Compaction Grout and Underpinning