



Multi-Family Residences



Ground Improvement – Installing Stone Columns

PROJECT OVERVIEW

The existing fill on the jobsite consisted of loose silt, sand, clay, and gravel. It could not successfully sustain the weight of the proposed structure. Without intervention, it ran the risk of significant future settlement. Settlement, to some degree, is a natural part of a building's life cycle within the first few years following construction. Excessive settling can become an issue that weakens the foundation, causing cracks, and impacting building services like plumbing.

One of the leading causes of significant settlement is a weak bearing soil like the conditions that were present for the Multi-Family Residences Project. Issues with settlement can be resolved later in the life of a building, but it is always best to be proactive about these issues.

REQUIREMENTS AND CHALLENGES

To help prevent future ground settlement, CNC Foundations installed vibratory stone columns (VSC) through 20 feet of the fill. The VSCs were extended through the existing soil into the more dense sand and gravel layer. This particular installation provided 5,000 pounds per square foot (psf) bearing capacity and limited total settlements to less than 1 inch. Also, to help minimize the number of vibrations from the VSC installation process, we also pre-drilled along the existing neighboring theatre.

SOLUTION AND RESULTS

Resident Project now has firmer and more stable ground to stand on for the future. Through our many years of service, we have earned a reputation for more than just success. We have become known for helping clients win bids, lower costs, and meet the demands of challenging projects.

Our safety record is another point of pride for us. We always make safety our first priority. All of our personnel are trained and certified for HAZMAT (hazardous materials), Occupational Safety and Health Administration (OSHA), and Mine Safety and Health Administration (MSHA).

Project Details

SECTOR

Multi-Family Residences

LOCATION

Washington, D.C.

APPLICATION(S)

Vibratory Stone Columns

