



St. Paul River Front Apartments



Ground Improvement – Installing Vibratory Stone Columns

PROJECT OVERVIEW

The River Front Apartments in St. Paul, MN, was one of the latest worksites for CNC Foundations. It is the site of a multi-family building project. There was up to 12 feet of fill found below the finished floor elevation. Due to a deep, undocumented fill and other layers of loose sand at the site, there was a substantial need for ground improvement. The characteristics of the soil and surface play a vital role in selecting what type of ground improvement technique is best for the long-term stability of the proposed building.

REQUIREMENTS AND CHALLENGES

CNC Foundations installed vibratory stone columns (VSC) below the River Front Apartment building in St. Paul, Minnesota. The VSCs extended through all existing fill and loose sand and into the dense sand below. The installation went as deep as 30 feet to improve the ground conditions on the site. We performed this task to minimize settlements and provide 4,500 psf bearing capacity. To minimize the need for over-excavation and replacement below the slab, we also installed slab support vibratory stone columns through the existing fill using the DeepFeed System to cut time off of the overall project, saving the customer money and resources.

SOLUTION AND RESULTS

On the jobsite, we used CNC Foundations' DeepFeed™ System. It is a combination of a proprietary installation process and equipment. The DeepFeed™ System is a direct-push, bottom-feed installation method that allows vibratory stone columns to be pushed to depths of over 40 feet. The system also does not require us to pre-drill the VSCs through the fill. That advantage reduces any excess spoils that could have developed during the project.

Thanks to our innovative practices and years of expertise, CNC Foundations improved the soil conditions for the River Front Apartments and ensured the long-term stability of the project. We continually update our technology and equipment to keep up with the pace of our changing industry.

Project Details

SECTOR

River Front Apartments

LOCATION

St. Paul, MN

APPLICATION(S)

Vibratory Stone Columns

