



## UNITED STATES

## The Gallery Albany, NY


**Owner**

Holland Ave OZ, LLC

**Engineer**

United Structural Consultants, LLC

**General contractor**

Richbell Capital Construction, LLC

**Dates of work**

August 2022 August 2022

### Main figures

Controlled Modulus Columns

210 EA.



### Description

Located within the capital city of Albany, NY and within walking distance of Washington Park, Albany Medical Center and the State Capital Plaza, a proposed multifamily high rise -- The Gallery on Holland -- would be a welcome addition to the area. The 68,256 sq-ft, 60-unit building would serve as the city's first high-end residential apartment complex in more than 50 years. The location makes it walkable to a movie house, small shops and a grocery store. The four-story, wood-frame luxury apartment building would include spacious floor plans with state-of-the-art features and amenities.

Menard USA provided a ground-improvement proposal of Controlled Modulus Column (CMC)<sup>®</sup> rigid inclusions to treat loose/soft silt and clay soils that existed below grade. Menard was subsequently awarded a contract to install the CMC elements to support the spread and strip footings.

### Ground conditions

The soils at the site consisted of fill material ranging from 6 ft. to 29 ft. below the working surface, comprised primarily with silt and clay with varying amounts of brick, organic matter, sand, and gravel. The fill layer was underlain with silt and clay that is mostly weight of hammer material from approximately 73 ft. to 85 ft. below grade. At this depth glacial till soils were found which was suitable as our termination layer for CMCs. The water table was found around 6-12ft below grade.

### Solution

The Geotechnical Investigation determined that the existing fills were not suitable for the support of conventional shallow spread or mat foundations. An alternative to remove all existing fills and replace them with engineered fill would not meet the project budget. The cost analysis determined that CMCs would be the most economical and technically feasible given the soil conditions.

Menard installed 210 CMCs that were terminated at an average depth of 84 ft. Column footing loads ranged from 30 to 80 kips. Continuous strip footings ranged from 2.5 to 6.5 kips/ft. The spread footing foundations were designed for a 2.5 ksf bearing capacity. Project challenges included having four different FFEs and working from three working platform benches at varying elevations. This required the site contractor to regrade the working pad during production to allow the rig to move safely from one bench to another. Another challenge was a power line and telecom line that went directly over the Southeast corner of the site, obstructing 11 CMCs. This required National Grid and Spectrum (utility owners) to move the lines prior to installation of the CMCs in that area.

To confirm the CMCs met the performance standards of the project, load testing was successfully performed to 108 kips and 126 kips.

Despite challenging working conditions, Menard successfully completed installation of 210 CMCs to support a new apartment building in Albany.

