Subsurface Constructors

Ground Improvement

Bryan Health Cancer Center

Large Medical Facility Supported By Aggregate Piers in Nebraska

Subsurface Constructors recently completed the design and installation of approximately 1,400 aggregate piers (vibro stone columns) for the new Bryan Health Cancer Center and Linear Accelerator in Lincoln, NE. The building is a single-story structure with a 45,500 sq ft lower level and a 87,500 sq ft first floor. Soils across the site are generally lean to fat clays (Peorian loess) with varying amounts of sand and are mostly firm to stiff in consistency. The loess graded to glacial till across the site and the borings generally encountered weathered shale at approximately 30ft.

The purpose of the aggregate pier ground improvement system was to provide a uniform bearing pressure of 5,000psf in the native cohesive soils and new fills that were necessary in some areas of the building footprint. Spread footing sizes ranged from 5ft x 5ft up to 15ft x 15ft and all were supported by the aggregate piers.

The installation for this project was completed concurrently with another Lincoln area project, where Subsurface installed 520 aggregate piers for an addition to an existing retirement center.

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Project details:

Year: 2022
Location: Lincoln, Nebraska