

# Asheville Christian Academy

Swannanoa, NC



**Project Description:** Geopier® Rammed Aggregate Piers™ were used to support the footings for the one and two-story buildings of the new campus of the Asheville Christian Academy in Swannanoa, North Carolina. Column loads at the foundations ranged from 13 kips to 214 kips. The subsurface profile consisted of alluvial soils to the termination depth of the test borings (20 feet). The soils in the upper 6 to 8 feet below bottom of footing (BOF) consisted of very loose to loose silty to clayey sands and very soft to soft sandy silt and clay. Groundwater was observed at 5 feet from BOF. Prior to utilizing Geopier soil improvement, the initial foundation design utilized low bearing pressure spread footings with undercutting as required. Undercutting with shallow groundwater became problematic and the project was redesigned utilizing Geopier-supported spread footings sized for a bearing pressure of up to 5000 psf.

## THE GEOPIER ADVANTAGE

- Geopier soil improvement eliminated costly and time-consuming undercutting of unsuitable saturated soils.
- Over 450 Geopier elements were installed in December 2000 and January 2001, thereby permitting the GC to proceed immediately with spread footing construction and minimize the delay in construction during the winter months.

**General Contractor:** Payne Construction, Inc., Asheville, NC 28815

**Structural Engineer:** Day Engineering Services, P.A.

**Geotechnical Engineer:** Terra Consultants, Inc., Asheville, NC