

# GeoStructures Scores With Stadium Expansion at Univ. North Carolina

## Construction Began with Micropile Support System at Storied Stadium

PURCELLVILLE, Va., March 11, 2011 – Nearly 3,000 more fans will be able to attend football games in 2011 now that construction is nearly complete on the expansion at University of North Carolina's Kenan stadium, a project that started with a deep foundation system from design-build contractor GeoStructures.

Known as the [Carolina Student-Athlete Center for Excellence](#), the addition was built on a parcel with a knotty mix of fill soils, subsurface boulders and varying depths to rock. To achieve uniform foundation support, GeoStructures designed a Micropile system which could be drilled into the variable ground conditions.

After an pre-production load testing program that provided an optimized design, GeoStructures proceeded with installation of 265 micropiles ranging in capacity from 80 tons (160 kips) to 175 tons (350 kips) each. Although most were designed for compression loading only, designs in some areas called for tension resistance due to lateral loading. All of the micropiles were cased to rock with internal reinforcement and socketed into hard bedrock present at the site.

"The construction schedule is always critical on a project like this because the arena has to be completed in time for the first game of the season," says Jon Bennett, GeoStructures' Earth Support Division Chief Engineer. "Between this, the need for minimal impact to the stadium's adjoining sections, and having to get through the soft soils and boulders on the site, micropiles were the best solution."

Considered Phase II of the Master Plan for 84 year-old Kenan Stadium, the project represents the latest of several expansions. Upgrades include strength and conditioning rooms, bays for satellite TV trucks and additional seating that brings total capacity to 63,000.

In addition to GeoStructures, key participants on the project are:

- General contractor [T.A. Loving](#)
- Geotechnical engineer [Froehling and Robertson](#)
- Structural engineer [LHC Structural Engineers](#)
- Architects [Corley Redfoot Zack](#) and [Heery International](#).

### About GeoStructures

[GeoStructures](#) is a design-build contractor with solutions for integrated foundation support, earth retention, and wall construction for commercial, industrial and transportation projects. By deploying its engineering expertise at the design stage, the company efficiently addresses unique site-development challenges and makes the best use of construction schedules and budgets. For further information about micropile design and construction, see Jon Bennett's blog at [micropile.org](#).