

John Paul Jones Arena

University of Virginia
Charlottesville, VA



John Paul Jones Arena
at the University of Virginia



Project Description: Project consists of a multipurpose arena facility on the campus of University of Virginia in Charlottesville, VA. Foundation column loads ranged from 63 kips to 2268 kips. A total of 1,028 Geopier elements were installed.

Soil Conditions: Geotechnical explorations revealed residual silt soils extending to depths ranging from 4 to 50 feet below the existing ground surface. SPT N-values in the silt soils ranged from 6 to 38 blows per foot. Weathered (disintegrated) rock was encountered beneath the residual silt stratum. Groundwater ranged from depths of 24 to 48 feet below ground as evidenced in the boring logs.



Design Details: Geopier soil reinforcement was selected by the project team to avoid the potential costs associated with cost-overruns often encountered with drilled shaft foundations. The Geopier solution featured the support of footings designed for a maximum bearing pressure of 7,000 psf. Geopier elements varied in length from 8 to 15 feet to support the design foundation loads. Considerable cost and schedule savings were realized using the Geopier soil reinforcement solution.

THE GEOPIER ADVANTAGE

- Geopier elements saved 50% compared to other foundation systems or ground improvement options considered for the project.
- All of the Geopier elements were installed within the project schedule.
- Geopier elements provided ground improvement and footing support in residual silty soils.

General Contractor: Barton Malow Company, Charlottesville, VA

Earthwork Subcontractor: Faulconer Construction Company, Charlottesville, VA

Architect: VMDO Architects, P.C., Charlottesville, VA

Structural Engineer: Ellerbe Becket, Kansas City, MO

Geotechnical Engineer: Schnabel Engineering, Charlottesville, VA

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