

Project: **Providence Medical Center**
(hospital, medical office bldg., and administration bldg.)
Newberg, Oregon

Design Team: **Degenkolb** - Structural Engineer
GeoDesign - Geotechnical Engineer

Contractor: **Skanska USA Building, Inc**



Description:

- 2-3 story hospital, medical office building, and administration buildings
- Foundation loads range from 95-595 kips, braced-frame footings loaded up to 1,252 kips
- Willamette Silt Formation over silty clay layer

The project site consisted of typical Willamette Silt Formation soils with 10'-23' of soft to medium soft silt with some clay and fine sands. Underlying this layer was a mottled gray silty clay. Ground water was generally between the silt and clay layers at about 11'.

Initial recommendations were to over-excavate and replace with engineered fill. Spread footings could then be designed for a 2500 psf bearing capacity.

The Geopier® system was selected as a cost effective alternative to the over-excavation and replacement filling and allowed for additional footing savings by providing 6000 psf bearing capacity.

Each Rammed Aggregate Pier® element reached the clay layer, and the piers averaged 11' in length. A total of 900 Rammed Aggregate Pier® elements were installed in 32 working days on-site.