GeoTech Foundation Company - West®
214 SE Walnut Street • Hillsboro, Oregon 97123
Phone: 503-640-1340 • Fax: 503-648-6706

PROJECT DESCRIPTION

PROJECT: Collins Circle Apartments

LOCATION: Portland, Oregon

DESIGN TEAM:

Architect:	Michael / Kuhns Architects
Structural Engineer:	Kramer Gehlen Associates, Inc.
Geotechnical Engineer:	Fujitani Hilts & Associates, Inc.

CONTRACTOR: R & H Construction Co.

DESCRIPTION:

- 6-stories above grade with one basement parking level below grade
- Lower 2 stories are post tension concrete. Upper 5 levels wood frame
- Interior column loads of 250 to 550 kips

The project geotechnical report recommended 50’ long driven pipe piles supporting 70 tons each for foundation support. The Engineered Aggregate Pier System was suggested in the report as a viable option, and was selected due to significant time and cost savings.

Site constraints included a very limited working area with 10’-20’ shored excavation walls on all sides, very soft subgrade soils, and high groundwater. The general contractor installed a 24” thick rock working blanket in the bottom of the excavation and removed drill spoils as they were generated.

Engineered Aggregate Pier (EAP) elements were 30” diameter and extended to depths of 10’-12’ below bottom of footing. A design bearing pressure of 6000 psf was allowed on the Engineered Aggregate Pier-reinforced soils; whereas, the geotechnical report allowed only 2000 psf on the native, unreinforced soils. Individual Pier cell loads ranged from 70-75 kips per pier. Tension EAP were included beneath shear walls, and were designed to resist uplift loads up to 30 kips each.

A total of 262 EAP elements were constructed in only 11 working days on-site.

REFERENCES:

R & H Construction Co. 503-228-7177	Kramer Gehlen Associates, Inc. 503-693-1621
Michael Kuhns Architects 503-224-4610	Fujitani Hilts & Associates 503-223-6147