

## PROJECT DESCRIPTION

**PROJECT:** Level 3 Communications

**LOCATION:** Salem, OR; Oakridge, OR; Modoc Point, OR

**DESIGN TEAM:** *Structural Engineer:* Parsons Brinkerhoff Network Services, Inc.: Vancouver, WA  
*Geotechnical Engineer:* GeoEngineers: Portland, OR

**CONTRACTOR:** Kiewit Pacific Company

**OWNER:** Level 3 Communications



### DESCRIPTION:

- Single story generator and equipment shelter structures on three separate sites
- Shelter weight of approximately 80 kips each
- Groundwater at 4.5' to 12' below grade
- Undocumented fills overlaying silty clays and sands

The sites in Oakridge and Salem were both abandoned lumberyards with up to 12' of undocumented fills consisting of sawdust and other organic materials. Groundwater was encountered between 7' and 12'. The Modoc Point site consisted of up to 10' of undocumented fill with organic materials and groundwater between 4.5' and 6'.

The project geotechnical report initially recommended overexcavation of the undocumented fills and replacement with engineered fill, drilled piers or caissons. The Geopier® Intermediate Foundations System was selected as a Value Engineering alternative.

A total of 50 Rammed Aggregate Pier® (RAP) elements were installed in Salem, 41 RAP elements were installed in Oakridge and 27 RAP elements were installed in Modoc Point. Each installation took only one working day on-site.

**REFERENCES:** Douglas C. Roberts  
Parsons Brinkerhoff Network Services, Inc.  
(360) 885-4349

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(503) 624-9274