

## PROJECT DESCRIPTION

<b>PROJECT:</b>	Marriott Residence Inn	
<b>LOCATION:</b>	Irvine, California	
<b>DESIGN TEAM:</b>	<i>Architect:</i>	Cornoyer-Hendrick, Inc. (Phoenix, AZ)
	<i>Structural Engineer:</i>	Paul-Koehler (Phoenix, AZ)
	<i>Geotechnical Engineer:</i>	Testing Engineers – Los Angeles, Inc.
<b>CONTRACTOR:</b>	R. D. Olson Construction	



### DESCRIPTION:

- 8-story, reinforced concrete
- Shear wall loads = 5800 kips
- Interior column loads = 400-500 kips

The project geotechnical report initially recommended 50'-60' long precast concrete piles for foundation support. The Geopier® System was selected as a Value Engineering alternative due to the significant time and cost savings.

Subsurface conditions at the site consist of compressible, alluvial silty clay and clayey silt to depths of 16'-20'. These clayey soils are underlain by alternating layers of medium dense sand, silt and clay to inferred depths of as much as 200'. Groundwater occurs at a depth of about 15' below finish floor grade.

Rammed Aggregate Pier® (RAP) elements were 30" diameter and extended to depths ranging from 9'-17' below bottom of footing.

By reinforcing the subgrade soils with RAP elements, a design bearing pressure of 7000 psf was allowed for proportioning the footings (as compared to 1800 psf allowable on the unreinforced native soils). A maximum edge pressure of 9000 psf was allowed on the interior shear wall footings

A total of 461 RAP elements were constructed in only 16 working days on-site.

### REFERENCES:

Frank Bohls  
R. D. Olson Construction  
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