

## DPR ABD OFFICE BUILDING

2480 Natomas Park Drive, Suite 100  
Sacramento, CA



- First privately-owned LEED™ certified building in Sacramento - LEED (Leadership in Energy and Environmental Design).
- “Green Building Construction” using locally produced aggregate materials in Geopier foundation elements and using recycled concrete and aggregate when available.
- The use of Geopier foundation elements contributed to the LEED™ certification.

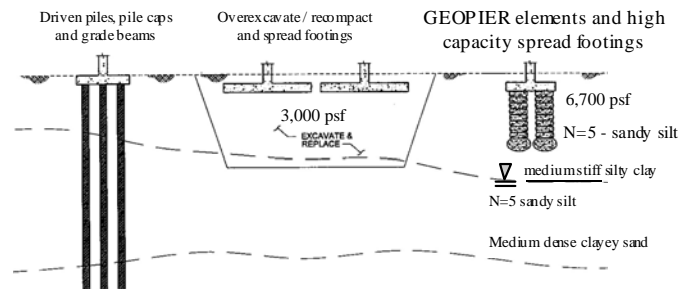
**Project Description:** New construction of a 2-story, 52,300 square foot, class A office building in Sacramento, CA.

**Subsurface Conditions:** Loose sandy silt and soft silty clay extend to depths greater than 25 feet below site grades and are underlain by inter-bedded, dense, alluvial, silty sand and stiff clay layers. SPT “n-values” averaged 4 to 5 blows per foot in the upper silt and clay soil. Ground water was encountered about 12 feet below pad grade.

**Design Details:** Geopier soil reinforcement was selected as a cost-effective alternate to an 8 foot excavation and replace with engineered fill. Geopier elements were installed to support conventional high bearing capacity spread footings. The allowable bearing capacity was increased from 3,000 psf to 6,700 psf and the risks of a wet bottom in the overexcavated areas was eliminated.

Geopier elements equipped with structural steel anchors were used to control seismic overturning forces at the shearwall footings.

Full-scale load tests showed a Geopier stiffness modulus of 334 pci for one 30-inch diameter by 12 foot long Geopier bearing element. Full scale uplift load tests showed an allowable uplift capacity of 60 kips with a factor of safety greater than 2.



### Project Team:

DPR Construction Inc.  
LPA Sacramento Inc.  
Culp + Tanner Structural Engineers Inc.  
Wallace-Kuhl & Associates Inc.  
Farrell Design-Build Companies Inc.

### Advantages:

- Lowered overall foundation costs, so DPR could put more money into finishes.
- Helped qualify the project for the LEED™ Certification silver medal award for “Green and Sustainable Construction” using of locally produced rock materials.
- Eliminated risky excavation during winter.

Geopier rammed aggregate pier support of conventional high bearing capacity spread footings and Geopier uplift elements have been used throughout California and the United States. For more information regarding Geopier and its use please contact us at (530) 621-4867 or visit us at [www.farrellinc.com](http://www.farrellinc.com).

**Build your next project on a Rock Solid Foundation ... Build it on GEOPIER<sup>®</sup>!**