

PROJECT DESCRIPTION

PROJECT: Westfield Shoppingtown
LOCATION: Palm Desert, CA
DESIGN TEAM: *Architect:* Westfield Corporation, Inc.—Los Angeles CA
Structural Engineer: Ficcadenti & Waggoner Consulting Structural Engineers, Inc.—Irvine CA
Geotechnical Engineer: Geotechnical Professionals, Inc.—Cypress CA
CONTRACTOR: Tidwell Concrete Construction, Inc.—Palm Desert CA
OWNER: Westfield Corporation, Inc.—Palm Desert CA
DESCRIPTION:

- Two, 3-story parking structures with shear walls
- Foundation compression loads up to 960 kips
- Foundation uplift loads up to 450 kips tension

The site consisted of up to 9 feet of undocumented fill. The geotechnical report recommended three alternatives for foundation support:



- (1) A Geopier® System
- (2) A deep foundation system consisting of 24" drilled concrete piles
- (3) Removal and recompaction to a depth of 10' below footings

The Geopier® System was selected based on time, cost, and site issues relating to working in a busy shopping center. Due to the project being truly fast-tracked, architectural design issues still being finalized while the Geopier installation was in progress, the need resulted for extremely close coordination between Geopier Foundation Company-West, the project structural engineer, and the contractor.

The Geopier System provided a safe bearing capacity in excess of 9000 psf. The load test confirmed that the 8' Rammed Aggregate Pier® (RAP) elements could support a safe working load of at least 140 kips per cell, almost double the allowable capacity for 30' long drilled concrete piles; and a safe seismic uplift capacity of about 80 kips per cell, again twice that of 30' long drilled concrete piles.

REFERENCES: Gary Landingham, P.E. Raul Gonzales Don Lawson, Vice President
Ficcadenti & Waggoner, Inc. Westfield Corporation, Inc. Tidwell Concrete Construction, Inc.
(949) 474-0502 (760) 836-0035 (760) 772-2544