

GEOPIER®



Geopier X1® System Supports an 8-Story Residential Structure with Parking Garage



CLIENT'S CHALLENGE

The White Oak development consists of an 8+ story residential building with multiple parking levels located in the historical Houston Heights neighborhood. The structure is heavily loaded with typical column loads ranging between 600 and 1,200 kips. The client's challenge on this project was developing a cost-effective foundation solution that could limit settlements to 1 inch or less under the heavy column loads.

White Oak

 Houston, Texas

SUBSURFACE CONDITIONS

Subsurface conditions at the project site consist of interbedded and intermixed layers of clayey soils (CL and CH) and silty/clayey sands (SC, SM). The problem soils were mainly encountered in the upper 10 to 20 feet, where undocumented fills and soft/loose native soils were encountered. Soil become significantly stiffer/denser with depth.

Jaxon Hill Build, LLC

Owner

Jaxon Hill Build, LLC

General Contractor

QC Laboratories

Geotechnical Engineer

MTS Engineering & Design

Structural Engineer

GEOPIER® SOLUTION

The Geopier Rammed Aggregate Pier® (RAP) solution was recommended by the structural engineer and geotechnical engineer as an alternative to deep foundations. Geopier® developed an engineered solution that reinforced the undocumented fills and soft/loose native soils, limiting total settlements to 1 inch or less. Over 500 Geopier X1® piers were installed to depths of about 10 to 20 feet below grade. The Geopier solution added tremendous value to the project including significant cost savings, significant reduction in schedule, and high design bearing pressures (8 ksf).

GEOPIER IS GROUND IMPROVEMENT®

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“I am a big fan of the Geopier Rammed Aggregate system. We utilized it at our White Oak High-rise project in Houston, TX. It was less than half of the alternative methods available. Equally important, it was completed in half the time.”

- Mike Davis, Project Manager, Jaxon Hill Build, LLC