



RAM JACK[®]

2016

CASE STUDY

Type: Residential | Issue: TX201601

**New Construction
Helical Piles
Provide Stable
Foundations for
Modern Townhouses**

RAM JACK LOCATION:

Ram Jack Texas

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Houston, TX



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Installation of helical piles to support new foundation

SUPPORTING NEW FOUNDATIONS

INSTALLATION OVERVIEW

Total # of Piles: 18 to 21 per Townhouse

Products Used:

- #5810 3 1/2" dia. Pile, Threaded Connection
- #4076 New Construction Bracket

Product Type: New Construction Helical

Typical Applications: Ram Jack's 3 1/2" dia. helical lead sections can be used in either tension or compression due to its specialty made solid steel internal core connection.



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It's rare that a large construction job doesn't run into some unplanned obstacles. While this may be the case, it doesn't make these obstacles any more welcome, and the last thing a builder or contractor wants to do is spend more money while adding to the time it will take to finish a job. The builders of the Perry Homes East End on the Bayou Townhomes in Houston, Texas ran into one such problem early in the project.

Situation

While preparing to build a new community of 37 modern, beautiful townhouses, Perry Homes' contractors appropriately analyzed the soil of the build site. What they found was unpredictable soil with over 30 borings in just two acres of land. Perry Homes contacted Ram Jack Texas for help, hoping to build the homes without having to install drilled concrete piers.

Proposed Solution

Using the foundation designs provided by Perry Homes, Ram Jack engineers came up with a solution that incorporated helical piles into the foundation as a deep foundation element. By using helical piles, the compression, tension, and lateral loads exerted into the foundation system by the

structure was transferred into more stable soil deep within the ground. Helical piles, considered an instant pile, can immediately bear loads after installation which reduces construction time. Additionally, the capacity of each pile can be independently field verified by monitoring the torque during installation. This helps ensure the pile has penetrated a soil strong enough to support the structural loads.

Outcome

With phase one of this ongoing project, each building needed 18 to 21 piles. In total, more than 700 helical piles will be used to complete the project. Perry Homes typically releases three townhouses for helical pile installation at a time. In just one day, Ram Jack Texas installed 21 piles for a single townhome. The helical piles were installed on all three townhouses in three working days. The embedment depths of the helical piles averaged 35 ft. Due to the efficiency of the Ram Jack team, Perry Homes was able to immediately place the concrete for the foundations for the East End on the Bayou Townhomes project. After choosing Ram Jack Texas because of its strong reputation and ability to work in even the poorest soil conditions, Perry Homes was more than satisfied with the job and extremely pleased with the extended warranty provided on the work.



BEFORE: Installation of Helical Pile



AFTER: Piles installed with minimal disruption to surrounding area