

ROCKY MOUNTAIN STEEL PIERING INCORPORATED

CASE STUDY

Project: Holm Residence, Lone Tree, Colorado

Underpinning Contractor: Rocky Mountain Steel Piering, Inc.

Structural Engineer: Hayes Consulting Company, LLC



Project Description:

The home consists of a two-story structure with a fully unfinished basement encompassing a structural steel floor system. The foundation system supporting the foundation walls and interior steel columns consisted of isolated spread footings. The central portions of the home experienced differential vertical foundation movement, which caused drywall distress to the home.

Repair Description:

The repair to the affected interior footings consisted of installing a pair of helical steel piers at each structural steel column location and a tubular steel member to span between the piers and support the steel support beams below the structural steel floor system. The helical steel piers were installed by Rocky Mountain Steel Piering, Inc., utilizing a portable torque head to advance the piers into the ground. The helical steel piers consisted of 1-1/2-inch rounded corner square steel shafts with a single 8-inch helix near the base of each lead section. The piers were advanced to an average depth of 20 feet into the ground to support the design load of 25,000 lbs. The tops of the piers were fastened to threaded pier attachments, which were fastened to the ends of the tubular steel members. After the piers and tubular steel members were installed, the attachments were adjusted and the steel support beams were stabilized to prevent further movement.