

ROCKY MOUNTAIN STEEL PIERING INCORPORATED

CASE STUDY

Project: Bensaid Residence, Littleton, Colorado

Underpinning Contractor: Rocky Mountain Steel Piering, Inc.

Structural Engineer: National Home Insurance Company



Project Description:

The home consists of a two-story structure with partial basement and partial crawlspace, supported on a drilled concrete pier foundation system. The front and central portions of the home experienced differential vertical foundation movement, which has caused foundation wall cracks, door operation problems and drywall distress to the home.

Repair Description:

The repair to the affected foundation system consisted of installing helical steel piers along the foundation walls, clipping and detaching the existing concrete piers from the foundation, re-voiding the foundation walls and repairing the foundation wall cracks. The helical steel piers were installed by Rocky Mountain Steel Piering, Inc., utilizing a portable torque head in order 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 the lead sections. 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 attached to standard underpinning brackets, which were fastened to the base of the foundation walls. After the piers were installed and fastened to the foundation walls, the tops of the existing concrete piers were clipped and the base of the foundation walls were re-voided.