



RAM JACK

2014 CASE STUDY

Volume: 2014 | Issue: Concrete Pier Failure

RAM JACK TO THE RESCUE

90+ Piles Required
to Secure Home
From Further
Damage on Hillside

Ram Jack of Oklahoma & Arkansas

www.ram-jack.com | 800-522-3656

Ada, OK



AFTER: 90% recovery of cracks in exterior brick

CONCRETE PIER FAILURE

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Having a “newly constructed home” does not necessarily mean it will be free from foundation issues. A beautiful new home perched on a hillside on the outskirts of a small urban area in southern Oklahoma was purchased by a young family ready to grow. What they didn’t know was that this new purchase would have significant issues within the year.

Situation

During the building phases, the hillside which afforded beautiful views from the back patio had to be leveled using a process called “cut and fill.” Drilled concrete piers were placed around the perimeter; however, with no soils information or monitoring tools, the preventative measures taken were improperly prepared and poorly executed. Only a few months after moving into the home cracks began appearing in the sheetrock and brick exterior. Doors no longer worked, causing issues for emergency exits and daylight could be seen through the walls. Over the course of the next two years the settling would become severe enough to compromise the structure causing the home to become unlivable. Displaced from their home and fighting a legal battle, the owners turned to Ram Jack for support.

Proposed Solution

After close monitoring, Ram Jack of Oklahoma & Arkansas identified the entire

home to have experienced structural damage due to foundation settlement — over 11” in some areas. The entire perimeter of the home needed to be stabilized by driven steel piling, and the interior slab needed helical slab stabilization. Before installation could occur, all existing concrete piers had to be disconnected from the structure, then 60 interior helical piles and 39 exterior driven steel piles could be installed to a proper load-bearing strata to support the home for the lifetime of the structure.

Outcome

The Ram Jack foundation system went more than 30’ deep, a stark contrast to the 10’ depth reached in the preventative concrete pilings. By the end of the project, 10” of lift and more than a 90% recovery was achieved, allowing the family to return to their home and have peace of mind that the problems wouldn’t return.

BEFORE: (left) crack in exterior brick; (right) interior sheet rock crack



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