



RAM JACK

2005 CASE STUDY

Type: Commercial | Issue: UT200501

**Multi-Unit
Apartment
Facility Settles
on Weak Canyon
Fill Soils**

RAM JACK LOCATION:

Ram Jack Utah

www.fixfoundation.com | 877-452-2587

New Harmony, UT

LA VERKIN APARTMENTS | STRUCTURE STABILIZATION

La Verkin, UT

CASE STUDY 2005

As a property manager for multiple units, repairs are never welcome. But fixing multiple repairs at once is always an ideal course of action. Severe damage due to foundation settlement was one issue for The La Verkin Apartments in La Verkin, Utah, and the owner was looking for the type of solution that could take care of multiple units all at once.

SITUATION

The back corner of the structure was built on a compacted fill pad atop loosely compacted canyon fill soil. Over time, the weight of the new fill along with the structure compressed the canyon fill soil, resulting in foundation settlement and movement of the apartment building. Throughout the structure, signs of foundation settlement and damage were evident, including cracks in the walls and ceiling, ill-fitting doors and windows, and a concrete barrier behind the building that had cracked completely through.

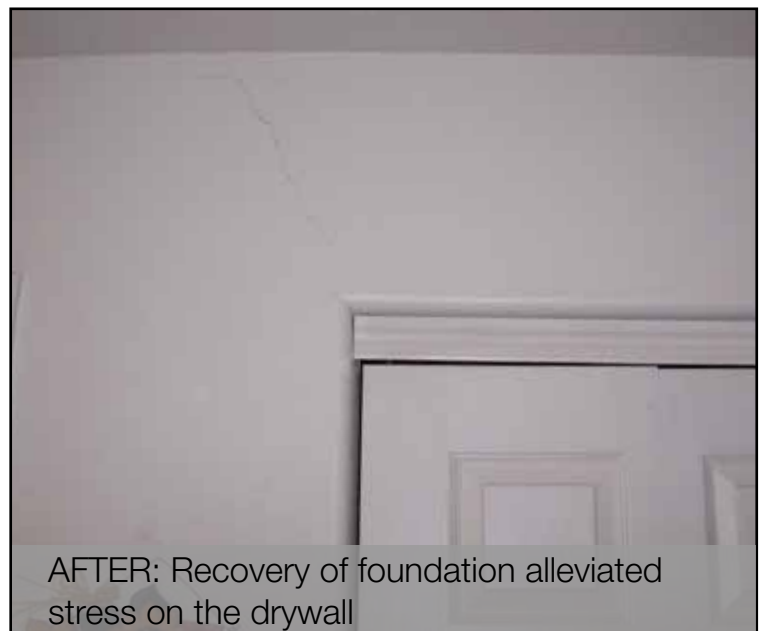


PROPOSED SOLUTION

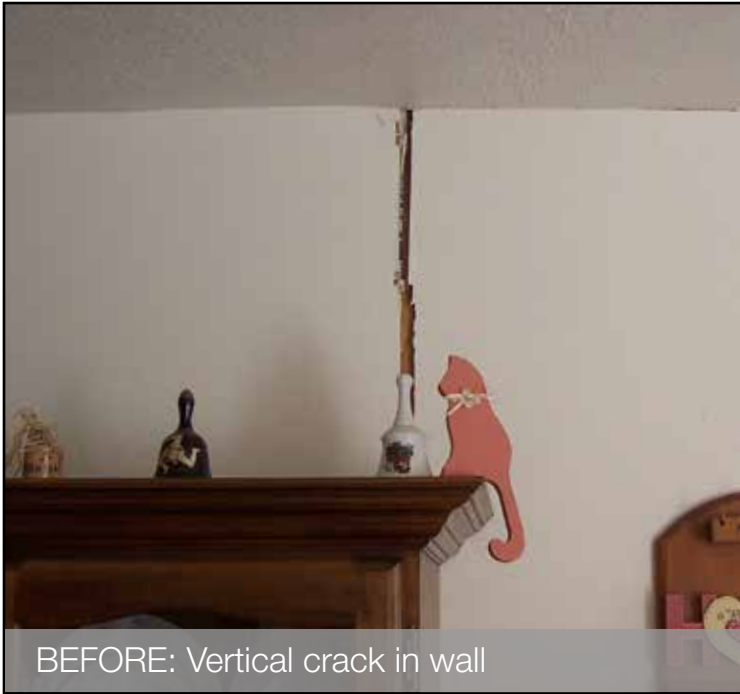
Ram Jack Utah proposed the use of driven piles to penetrate the compacted fill soil which included cobbles. The piles would be installed along the border of the existing foundation and spaced 6-7 ft. apart to maximize lift and support the weight of the structure.



BEFORE: Severe foundation settlement caused cracks in walls



AFTER: Recovery of foundation alleviated stress on the drywall



BEFORE: Vertical crack in wall



AFTER: Maximum practical recovery

OUTCOME

Over the course of two days, Ram Jack Utah installed nine 2 7/8 in. driven piles to a design load of 24.5 kips. The piles and standard brackets reached an average depth of 37 ft., lifting the structure as much as 4.5 in. for complete restoration of the structure to its original position. The depth of each pile varied along with the original canyon bottom below and were extended to a suitable load bearing strata. After raising the slab, the void created was filled using the slab jack method, in which a specialized material is force-injected under the slab lifting it back to its original placement. After Ram Jack was finished, the owner was impressed with the work. The owner expressed excitement seeing that the large cracks throughout the building had closed. He was also very pleased to find that the doors and windows now operated smoothly.

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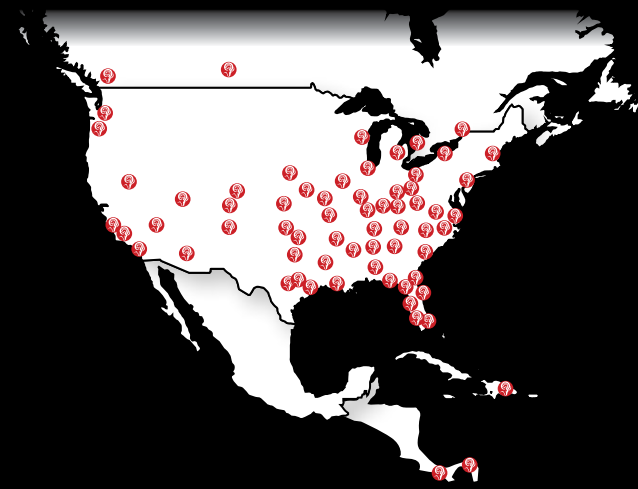




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