



RAM JACK

2014 CASE STUDY

Type: Commercial | Issue: MO201401

SHORING UP THE FOUNDATIONS OF KNOWLEDGE

MID - CONTINENT PUBLIC LIBRARY
RED BRIDGE BRANCH

11140

LIBRARY HOURS

MON	9-1
TUE	9-1
WED	9-1
THUR	9-1
FRI	9-1
SAT	9-1

**26 Exterior Driven Piles Used
to Achieve Maximum Practical
Recovery of Settled Areas**

RAM JACK LOCATION:

KC Ram Jack

www.kcramjack.com | 816-505-9990

Kansas City, MO

CASE STUDY 2014

Part of the largest library system in the Kansas City metropolitan area, the Mid-Continent Public Library provides learning experiences, educational resources, and books to the local community. And while the historic, brick structure looks as solid as a rock, over time the foundation below settled, and the structure's walls were beginning to show some wear. Public officials in charge of the structure called KC Ram Jack to take a look.



PROBLEM

A Ram Jack professional detected severe settlement in the southeast corner of the building. The southeast part of the library is an older portion of the structure, making it more susceptible to Father Time. In addition, settlement was discovered around the south and west walls. Despite the fact that these walls were part of a newer addition to the building, these walls were in serious need of repair.

PROPOSED SOLUTION

KC Ram Jack proposed installing 28 piles to raise and support the settling portions of the library. Each of the piles would be strategically placed 7 ft. apart, with four piles on the interior of the structure and the remaining piles outside. The piles would not only lift the building, but they would stabilize the structure and ensure prevention of further damage.





OUTCOME

After making some slight modifications to the original plan, the Ram Jack professionals installed 26 exterior piers to an average depth of 16 ft., lifting the southeast corner of the structure a full 1.5 in. and stabilizing the south and west walls to prevent further damage. The Mid-Continent Public Library was able to remain open and operational during the entire project, and the job was finished in a timely manner despite rainy weather. When the project was completed, the structural integrity of the Mid-Continent Public Library was restored, and it was fortified from the shifting soil and settling dirt below.

*The Structural Integrity
of the Mid-Continent Public
Library was restored.*





- Engineered Foundation Solutions
- Products Manufactured in the USA
- 50+ Locations Nationwide



Recognized as Code Compliant to Meet International Building Codes



HELICAL PILE DESIGN SOFTWARE: FOUNDATION SOLUTIONS™

Create Profiles

- Simulate soil profiles, including peat
- Anchors with varying diameter and helix configurations
- Vertical/battered/tie-back pile design
- Custom pile design

Mobile-friendly

- Web-based software
- Use anywhere, anytime
- Tablet and PC-friendly

Share & Report

- PDF output for submittals
- Share projects with other registered users

RAMJACK FOUNDATION SOLUTIONS™

Helical Pile/Anchor

Estimated Pile Capacity:

Compression Results

Allowable Frictional Resistance:	9.08	kip
Allowable End Bearing Capacity:	25.92	kip
Allowable Pile Capacity:	35.0	kip
Appr. Pile Embedment Depth:	42	ft
Required Min. Installation Torque:	7800	ft-lbs

NOTE: The reported "Appr. Pile Embedment Depth" value to realize the required capacity is based on the assumed soil conditions. The user is responsible for verifying the required embedment depth is approved otherwise by a licensed professional.

www.ramjack.com/FoundationSolutions

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