

RAM JACK CASE STUDY:

Columbus, Ohio: Vineyard Church

RAM JACK/B-LEVEL, OHIO

The church needed to expand but could not increase their geographic “footprint”; therefore a one story building had to be removed to make room for a multi-story structure. B-Level LTD of Baltimore, Ohio bid the job for the McKnight Company, as the site required extensive pre-construction preparation to accommodate the weight of the new building. Ram Jack’s helical pier solutions were guaranteed to prevent foundation issues that were certain to occur upon completion, given the composition of the soil beneath the church. The following is a summary of the procedures that were followed.



Three loads of Ram Jack 4-1/2” helical piers were delivered in preparation for this job. Locations on the pad were marked where each pier was to be installed. Load bearing columns with multiple piers were placed strategically: eight groups of two columns and 14 groups of three columns were positioned beneath the building.



The piers were driven in with the use of a skid loader and a 10-ton driver. Piers were attached to the driver with three bolts and driven. A second driver, a John Deere 120C, was used to finish the driving. Two workers stood at 90 degree angles to communicate with the skid loader operator, ensuring piers are placed in the ground straight.



Once Driver One installed the piers to capacity, the 20-ton driver finished the job, using three bolts and ending the driving at 150,000 pounds. Pressure was recorded on each pier driven. Work continued throughout the rainy season with no negative effect on the installation process.



Once the piers were driven, they were cut before the footer crew started their dig. This allowed the piers to be out of the way of the backhoe tractor. Pipes were cut to ground level, and the excess steel was removed from the job site.

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Pre-construction brackets were then placed on each pier. After the installation of the piers, the pad was ready for the remainder of the construction crew to get to work.



Steel rebar was then placed over the top of the piers in the footer; concrete was poured in the footer trench to ground level.



Once the footer crew dug the trench, the piers were cut for the second time. All piers were filled with concrete. Where piers had a final cut at a pipe junction, bolts were installed in the concrete and the bracket was attached to the pier.

