

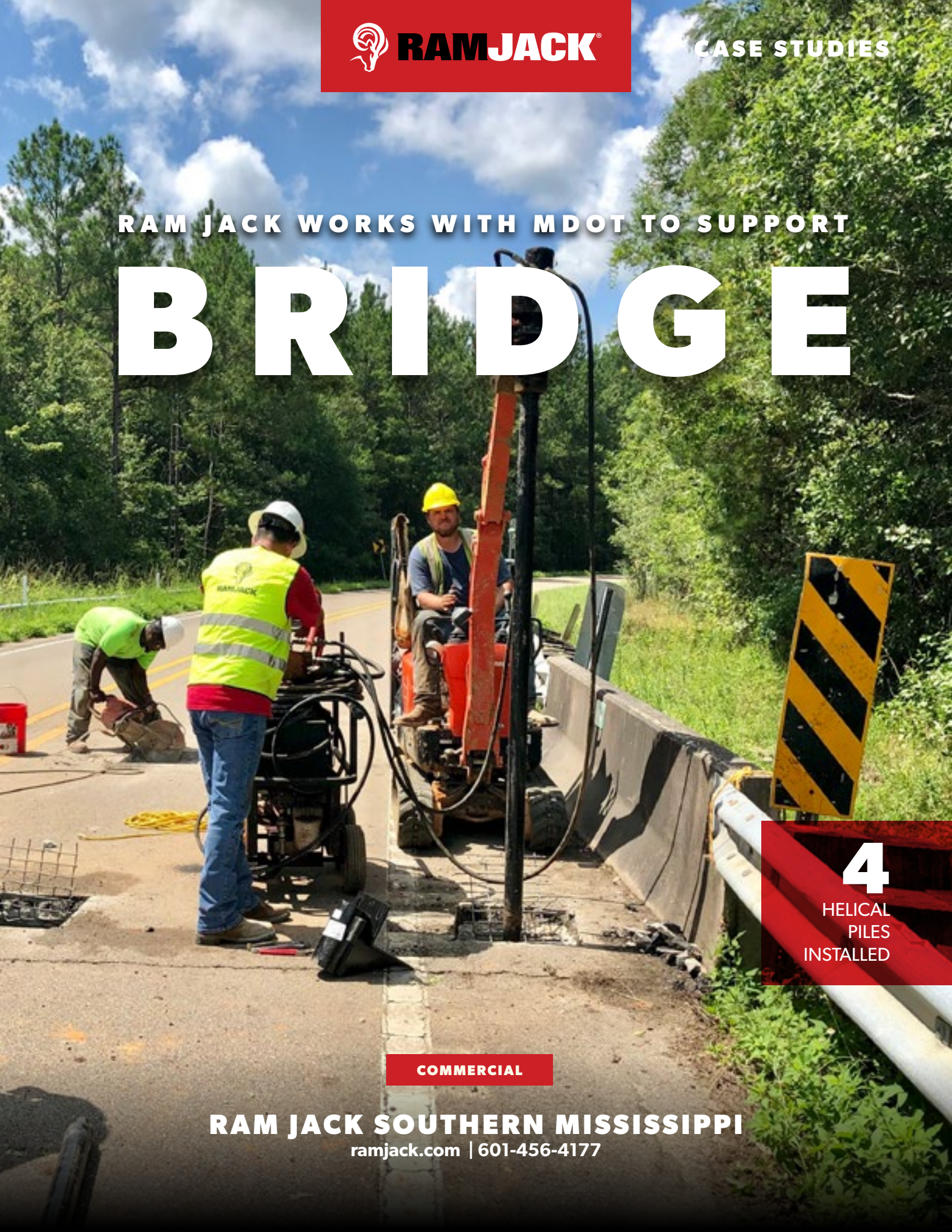


RAMJACK®

CASE STUDIES

RAM JACK WORKS WITH MDOT TO SUPPORT

BRIDGE



4

**HELICAL
PILES
INSTALLED**

COMMERCIAL

RAM JACK SOUTHERN MISSISSIPPI

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FAILING TIMBER PILES SUPPORTED WITH HELICAL PILES

The supporting piles of a bridge in Pearlinton, Mississippi were decaying, spelling disaster if the MDOT had not called in the experts at Ram Jack Southern Mississippi quickly.

PROBLEM:

During a routine inspection of Mississippi's Bridge SR604 4.6, timber piles exposed significant decay. This decay affected four of the timber piles supporting the bridge. MDOT bridge inspection engineers found the decay reached 30% to 45% on the piles and asked Ram Jack Southern Mississippi to examine the situation and provide them with an engineered solution to repair the Pearlinton bridge.

PROPOSED SOLUTION:

Ram Jack Engineering reviewed the conditions of the problem and compiled a plan to alleviate the loads on the decayed timber piles. The plan was to be achieved by installing four Ram Jack 2.875 in. dia. 10"/12" helical piles with threaded connections and side-load brackets with 3.5x10-0" external sleeves. Installation was to be completed with a minimum torque of 4,500 ft-lbs. to provide a maximum allowable capacity of 20 kips and a safety factor of 2:1.

This installation required demolition as well as using saws to cut through an asphalt overlay and concrete deck. New piles were to be installed next to the decayed timber piles and embedded an estimated 35 feet to match the depth of the timber piles. Once the installation was complete, the plan would be to form the bottom side of



the deck and dowel in with rebar before re-pouring with a Set 45 type concrete on the deck. Finally, they would place a cold mix asphalt patch to the existing grade, once again putting the bridge in working order.

OUTCOME:

Working efficiently, Ram Jack Southern Mississippi installed the four new piles next to the decaying piles. The crew completed the work to specifications, reaching 20 kip capacities per pile in only two days. This speed of work minimized road closure for those using the Pearlington bridge. To help this Mississippi community get back to normal traffic flows, the Ram Jack crew took minimal downtime.

INSTALLATION OVERVIEW

Total Number of Piles

4

Product Used

2 7/8" Helical Piles

Product Type

Remedial - Helical

Additional Pile Information

Ram Jack's 2 7/8" diameter helical piles are typically used in compression and tension applications.



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At Ram Jack®, we are focused on providing custom-engineered solutions that meet the unique needs of our commercial clients. You can move forward with confidence knowing we maintain code compliance, providing piles and brackets that reach the highest rating among competitors' products recognized by ESR-1854. Our company has the most products recognized by the ICC and boast an ISO 9001:2015 certified manufacturing facility.

We have the facility to design and fabricate custom products—we are the one-stop solution for engineers and even offer our own in-house engineers for assistance with your project. If you need assistance with foundation designs, we also provide engineer tools and resources and our engineers can work with the project's EOR to develop a custom-designed solution.



Everything an Engineer Needs

The Ram Jack Technical Manual provides engineers with the information that you will need to understand, design, and specify Ram Jack's helical and driven piles. It also provides information verifying compliance with current building codes and ICC-approved acceptance criteria.

Everything an engineer could ever want and need to know about Ram Jack Helicals and Driven Piles in one book. If you or your firm would be interested in a Ram Jack Technical Manual, please contact your local Ram Jack dealer by emailing info@ramjack.com.



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