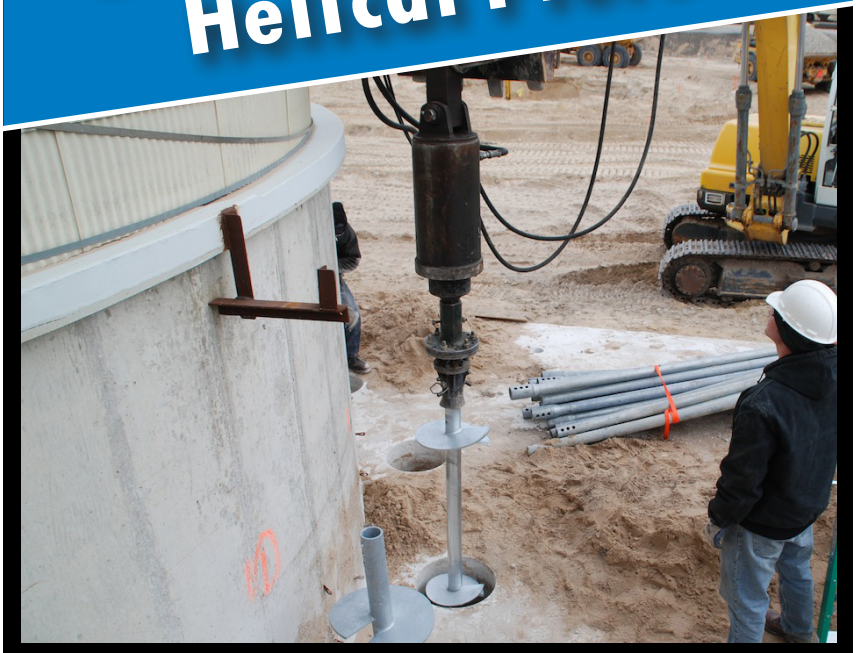
# Martin Marietta: Helical Piers



**Project: Excavation for new facility**

**Challenge:Tight schedule**

**Solution: Used helical piers instead of grouted tiebacks**

**Customer: Tridonn Construction**

**Location: Martin Marietta, Manistee, Michigan**

**Timing: April - May 2009**

**Value: $150,656**

Martin Marietta, a leading producer of high purity magnesium oxide and magnesium hydroxide products, was adding a new facility next to their existing vertical storage tank. The plans called for a 17-foot excavation at the face of the vertical storage tank to make room for the new construction.

Team Elmer's was enlisted to excavate the space, while maintaining stable ground for the vertical storage tank. We accomplished this by underpinning the tank with 12 helical piers 30' in depth to support 70 kip per pile. This ensured that potential movement in the tangent auger cast wall would not settle the tank vertically. Great thinking, guys!

The tight schedule and time frame kept Team Elmer's eye on the ball. A template was built to keep piles in line and assisted in the wall staying true. We also opted for helical piers instead of grouted tiebacks, which easily would have taken an additional four to seven days for the grout to cure.

The result? A solid ACP wall consisting of 46-16" piles 32' in depth with six #7 bars and #3 ties every foot. Six tiebacks were installed using 1 ¾" square shaft material installed to 90 kip per pile. Depths ranged from 50-80' using 6-14" flights on each pile. The tiebacks were preloaded to 45 kip per pier before full excavation was performed. The excavation was dug to depth and the piling was true. When finished, the wall and piling performed AND looked good.

"Scott and his crew performed the work safely, accurately and timely, working overtime when necessary to maintain the project schedule," said Brian LaCross, Director of Field Operations at Tridonn Construction.

TEAM Elmer's

www.TeamElmers.com

Esphalt™ • Excavation • Concrete • Cranes