

## EDISON LAKES MEDICAL CAMPUS Mishawaka, IN



- **Owner:**  
St. Joseph Regional Medical Center, South Bend, IN
- **Construction Manager:**  
Mortenson/Tonn & Blank JV, South Bend, IN
- **Sitework Contractor:**  
R&R Excavating, Mishawaka, IN
- **Technique(s) Utilized:**  
Vibro-Compaction, Augercast Piles

In late 2006, construction began on a new 670,000-square-foot hospital. When completed in the fall of 2009, it will provide 254 private inpatient rooms in two towers that are anchored by a diagnostic and treatment platform. Multiple-story medical office buildings will also connect to the hospital. To prepare the site, Nicholson was contracted to perform vibro-compaction to improve the ground which consists of poorly graded loose fine sand and poorly graded medium dense sand.

Nicholson completed ground improvement for three structures, the main hospital building, a central utility plant, and a medical office building. For the main building, Nicholson performed vibro-compaction to depths of 41 feet for a 210,600-square-foot area. The utility building required vibro-compaction to depths of 26 feet over a 44,400-square-foot area and the medical office building required isolated treatment.

According to the contract, the allowable soil bearing pressures were 10,000 psf for the main hospital building and 8,000 psf for the utility plant. The maximum allowable post-treatment settlement was one inch. To ensure quality during vibro operations, Nicholson used the Jean Lutz real-time monitoring system to measure column depth and amperage.

Nicholson also installed 44 augercast piles to resist tension on individual pile caps. The piles are 20 inches in diameter and 50 feet long.