



## New Owensboro Hospital Owensboro, Kentucky

**Owner:** Owensboro Medical Health System

**Designer:** HGA Architects  
SSR Engineers

**General Contractor:** Turner Construction

**Foundation Contractor:**  
Berkel and Company Contractors, Inc.

**Years of Project:** 2010—2012

**Total Project Cost:** \$385 Million

**Client Reference:** Terry Butler  
(Berkel—502-225-0053)

### **Project Highlights:**

The new Owensboro Hospital is designed from the ground up as a state of the art full service hospital facility with an emphasis on efficiency and patient experience. Upon completion, the 9-story main building will house 477 patient beds. The soil conditions on site are alluvial deposits of interbedded silt and clay overlying layers sand and silty sand. The hospital structure was founded on shallow foundations overlying lightly reinforced cast-in-place piles (known commercially as Cast-in-place Ground improvement Elements or CGEs) as part of a composite ground system. To reduce settlement, the ground improvement system was developed by the design build team of Berkel and DBA.

- Structures founded on a composite ground system consisting of shallow spread footing underlain by a layer of compacted gravel above a group of CGEs.
- Compacted gravel layer serves as a cushion to reduce demand on spread footings due to stress concentrations and distribute load to both the CGEs and the soil between the CGEs.
- Plate load tests were conducted to confirm the design principles.
- Groups of 12 and 16 inch diameter CGEs, 50 feet deep, were used at each column footing.

### **Technical Publications:**

Siegel, T.C. and NeSmith, W.M. (2011). "Confirmation of Composite Ground Design Using Field Plate Test" DFI Annual Conference.

*Photo Credits: Owensboro Medical Health System; Dan Brown and Associates, PC.*

