MORTON PLANT HOSPITAL DOYLE TOWER

CLEARWATER, FLORIDA, USA

Morton Plant Hospital celebrated its 100th anniversary with the addition of a $200 million multi-story patient and surgical tower.

The Doyle Tower added more than 200,000 square feet to the existing hospital which include new patient rooms and clinics, a second main hospital entrance and separate all-inclusive floors for surgery, women's care and orthopedics.

Since the Doyle Tower directly connects to five existing buildings, disruption to the busy working hospital had to be minimized. Noise and vibration mitigation, inherent in the O-Cell® load testing method, allowed for minimal construction impact during this early construction phase of the new tower.

Case Atlantic excavated the 36-in. diameter, 76-ft. deep test shaft into typical Florida subsurface conditions consisting mainly of sand and clay layers underlain by limestone.

The excavation was inspected with SONICaliper™ to generate precise 360-degree profiles of the shaft excavation sidewalls, alignment and verticality prior to installation of the O-Cell assembly. This accurate profile is very germane to proper interpretation of load test results for foundation design optimization. The loading assembly consisted of two single-level 13-in. diameter O-Cells located 25 feet above the shaft base, along with corresponding instrumentation. After concrete placement and curing, the loads were applied in 24 nominally equal increments, resulting in a maximum bi-directional load of 2,596 kips applied to the shaft above and below the O-Cell assembly. Loadtest technology was used to prove foundation design optimization, efficiently reducing uncertainty and potential cost, while simultaneously limiting disruption.

PROJECT INFORMATION

- Owner: BayCare Health System
- Prime: JE Dunn Construction Company
- Client: Case Atlantic Company
- Engineer: Driggers Engineering
- Completion date: 2016
- Project cost: $200 million
- Maximum load: 2,596 kips

SERVICES PROVIDED

- Single level O-Cell® load test
- SONICaliper™ shaft profile

info@loadtest.com
LOADTEST.COM