



# COLUMBUS HILTON DOWNTOWN

COLUMBUS, OHIO, USA

The Hilton Hotel in downtown Columbus is expanding its capacity by adding a 28-story tower across N. High Street next to the Greater Columbus Convention Center. The new 450-room tower also improves the previous Convention Center pedestrian bridge and access to the Nationwide Arena.

Construction of the tower was challenging due to the site being located on a tight footprint between the Convention Center, North High Street and Convention Center Drive. The new foundations would reach into the site's subsurface of brown silty sand with gravel and a silty gravel with sand.

The drilling contractor, Geottle, constructed 24 and 18 inch diameter test piles with an auger-cast drill rig to an approximate 50-foot depth. Fugro provided O-Cell® testing on the test piles. Placement of the O-Cell and instrumentation was managed with a structural member that centered the assembly in the constructed auger cast pile. Strain

gauges and O-Cell were strategically located to provide subsurface response characteristics to allow for design optimization. Goettle maintained schedule even with unseasonal heavy rains and flooding which allowed the testing to occur as planned.

O-Cell testing reduced deep foundation uncertainty by providing valuable information on end bearing and side shear characteristics. The design calibration and measured performance allowed the designers to optimize the foundation design with shafts of shorter lengths which delivered project savings in construction effort, time and materials.

## PROJECT INFORMATION

- Owner: Hilton Hotels
- Prime: Turner
- Drilling Contractor: Goettle
- Completion Date: January 2022
- Project Cost: \$220 million
- Maximum Load: 2,560 kips

## SERVICES PROVIDED

- Two single level O-Cell load tests
- Assisted in the load test program design and test shaft design



info@loadtest.com  
**LOADTEST.COM**