A. James Clark Hall

College Park, Maryland

Drilled shaft excavation.

O-cell® Testing at the University of Maryland

Set to open in 2017, the A. James Clark Hall at the University of Maryland is the new six-story, 187,000 square-foot building that will serve as home to the advancement of engineering and biomedical research. A combination of cutting edge laboratories, research facilities, classrooms and office space, the new building will bring together students, faculty and scientists from many disciplines with the common goal of health advancement through teaching, research and development.

A. James Clark and Dr. Robert E. Fishcell, both graduates of the University of Maryland, respectively donated $15 million and $6 million to make the $120 million project possible.

Project Info	
Owner:	University of Maryland
Client:	Seaboard Foundations, Inc.
Prime:	Clark Construction Group
Designer:	Ballinger
Ground Breaking:	Nov. 2014
Est. Opening:	2017

Services Provided

- O-cell test design
- Assembly and Installation of O-cell and Instrumentation and Integration into Drilled Shaft
- Testing, Analysis and Reporting of Load Test Results

Loadtest was utilized to provide testing experience and equipment to Seaboard Foundations, Inc. to optimize the design parameters for the new A. James Clark Hall. Testing was performed prior to the ground breaking ceremony on a 94 foot deep drilled shaft. Construction of the shaft included multiple casings in the overburden soils and a 7 foot long socket into bedrock.

The goal of the load test was to prove the redefined design parameters in the rock socket. Strain gages were installed at five locations along the length of the shaft to determine the load transfer through the varying soil layers. The O-cell was placed near the tip of the shaft to ensure the end bearing would be fully mobilized. A combined end-bearing and side shear resistance of 2,798 kips was mobilized during the test. The test results proved a unit end-bearing resistance of 211 ksf at just over an inch of displacement. Strain gage data showed an average unit side shear of 16.7 ksf in the rock socket at just 0.05 inches of displacement.