

PROJECT BRIEF

Clough Undergraduate Learning Commons Vibration Monitoring

PROJECT PROFILE

CLIENT:
Georgia Institute of Technology

LOCATION:
Atlanta, GA

VALUE:

- Monitoring alerted project team of unacceptable performance during excavation, protecting historical and sensitive neighboring structures

SERVICES PROVIDED:

- Installation of automated motorized total stations
- Essential data for assessing deformation/movement

“Data were collected around the clock and relayed into Geocomp’s *iSiteCentral*® system which enabled the foundation contractor access to reports of movements recorded during excavation via the web.”



INSTALLATION OF GEOTECHNICAL INSTRUMENTS & DATA AUTOMATION

Geocomp monitored the excavation system during the construction and installed automated motorized total stations (AMTS) with reflective prism targets to monitor the deflection and settlement of the foundation piles and existing historical library building adjacent to the site. Data were collected around the clock and relayed into Geocomp’s *iSiteCentral*® system which enabled the foundation contractor access to reports of movements recorded during excavation via the web. Geocomp’s real-time performance monitoring included quick notification to site personnel of movement. In this way, the project team was able to manage the risk associated with excavating below existing shallow foundations, and allayed Georgia Tech’s concerns of adjacent building settlement.



BACKGROUND

In response to the rapid growth of its student body, Georgia Institute of Technology (Georgia Tech) added the Clough Undergraduate Learning Commons (CULC), a 220,000-square-foot sustainably designed academic building, in the heart of its Atlanta, Georgia campus. The construction of the 5-story building was over an excavation adjacent to the historic Price Gilbert Memorial Library. Since excavation for the CULC building foundation had to extend below the shallow foundations of the library, the shoring and foundation contractor required the existing structure and temporary shoring to be monitored during the excavation.