

Harvard Allston Science Complex

Client:

Harvard University

Location:

Allston, MA

Services Provided:

- Installation
- Remote monitoring using *iSiteCentral*™

Value Provided:

- Near real-time monitoring data
- Automated monitoring of slurry walls during excavation
- Monitoring alerted construction of potential effects on adjacent properties

Background & Project Challenges

The Harvard Allston Science Complex is a new, four-building research facility in Allston, Massachusetts, that will be the future home of a number of Harvard interdisciplinary scientific initiatives.



Construction for the complex began in early 2008 with the installation of deep, reinforced slurry walls to provide retaining support for a nearly 6-acre area, 48-ft-deep excavation into Boston blue clay. Excavation began in May 2008 and an extensive program of tie-back installation at 4 different depths was performed in concert as the excavation progressed. The bulk of the excavation was completed in January 2009, along with a significant portion of the 5-ft-thick reinforced concrete-base slab.

Geocomp Role & Accomplishments

Geocomp's challenge was to oversee the installation, operation and maintenance of a robust and automated system for monitoring the slurry walls during excavation and to detect effects on the surrounding buildings and services. Per project specifications, Geocomp implemented a mixture of automated and manual monitoring systems.

All of the monitoring data from these different systems were collected and reported through Geocomp's *iSiteCentral*™ web-based data management and reporting system and were available to all authorized users, including the construction contractors. The majority of data were posted within 20 minutes of being recorded. The system was also capable of issuing emails/alerts if any of the project threshold values were reached or exceeded.

During the excavation and tie-back installation works, the recorded observations were closely monitored by all parties. The geotechnical engineer and project construction teams worked together to evaluate the observed performance of the excavation support, and to manage the excavation/construction activities where appropriate to minimize the potential effects of construction on adjacent properties and services.