Geocomp
Trusted to help mitigate risk

PROJECT BRIEF

Fitchburg State University Science Facility Modernization

PROJECT PROFILE

CLIENT:
Massachusetts Division of Captial Asset Management

LOCATION:
Fitchburg, MA

VALUE:
- Reduced risk and enhanced safety
- Ability to see impacts immediately to help manage the demolition
- Real-time monitoring for less cost than traditional survey methods and much more data

SERVICES PROVIDED:
- Real-time instrumentation and monitoring to prevent hazards
- Vibration and deformation readings hourly
- Data management collection and ongoing monitoring

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INSTALLATION OF GEOTECHNICAL INSTRUMENTS & DATA AUTOMATION

Geocomp's challenge was fulfilling vibration and structural monitoring requirements set forth by the Massachusetts Division of Capital Asset Management during the demolition activities of Phase One. Monitoring was particularly important on this project considering the close proximity of the 250-ft-tall Dupont smokestack just feet from the Parkinson Gym foundation. The demolition work had the potential to cause settlement of the smokestack and other surrounding structures. Geocomp designed and implemented an instrumentation program that could monitor these hazards in real time, allowing project engineers to see potential problems and initiate remedial action quickly. Continuous vibration readings and hourly deformation readings were taken and made available on Geocomp's *i*SiteCentral®. Any movement of these structures could be monitored in real time with sub-millimeter precision. Geocomp was able to provide real-time monitoring for less than half the price of traditional survey methods that involve manual data collection.

Additionally, displacement and vibration threshold limits were also used. The system was configured to send text and email messages to the project team within five minutes of exceeding these limits. In the event of an alert, project engineers had the ability to analyze data and decipher whether or not a threshold event existed.

BACKGROUND

Fitchburg State University in Massachusetts developed a two-phase, $57.3 million plan to modernize its science facility. Phase One consisted of demolishing the outdated Parkinson Gymnasium and replacing it with a 57,300-square-foot science facility. Phase Two included the renovation and modernization of the existing Condike Science Building next door. The result is a state-of-the-art 100,000-squarefoot science complex.