

East Side Access Monitoring

Client:

URS Corporation

Location:

New York City, NY

Service Provided:

- Efficient access to data and reports for 13,000+ instruments using *iSiteCentral*™

Value Provided:

- 24/7 monitoring and reporting provided essential data during critical and sensitive phases of construction
- Real-time monitoring automatically generated email alerts identifying instrument movements exceeding set thresholds

Background & Project Challenges

The East Side Access (ESA) project in New York City will connect the Long Island Rail Road's (LIRR) Main and Port Washington lines in Queens to a new LIRR terminal beneath Grand Central Terminal (GCT) in Manhattan. The new connection will increase the LIRR's capacity into Manhattan, dramatically shorten travel time for Long Island and eastern Queens commuters traveling to the East Side of Manhattan, provide a new commuter rail station in Sunnyside, Queens and much more.



Prior to starting construction, geotechnical instruments are being installed above ground and in the subway tunnels to measure any movement, settlement, tilt, strain and induced vibrations from tunneling, excavation and construction activities.

Instruments include robotic total stations (RTS) with reflective prismatic targets, manual survey points, inclinometers, extensometers, observation wells, tilt meters, seismographs, dynamic strain gages, and liquid level settlement systems (LLSS). Most of the instruments are designed to be read remotely and automatically.

Geocomp Role & Accomplishments

Geocomp collected and managed the vast amount of data from these instruments, and provided a web-based data management system allowing data to be processed, presented and reported in a timely, accessible and understandable manner.

Geocomp is:

- Providing professional staff in support of the geotechnical instrumentation aspects of this project as part of the ESA project team,
- Providing *iSiteCentral*™, the firm's web-based data management system,
- Integrating and connecting all specified instrumentation, data handling, communication and computer equipment, and furnishing and installing application software, and
- Collecting readings from instruments which need to be read manually.

By monitoring all instruments and conducting continuous review of data collected and processed by Geocomp's team and *iSiteCentral*™ technology, the ESA Project Team will be able to determine whether excavation, tunneling or construction activities may have an adverse effect on surrounding structures.

With its highly qualified and experienced site personnel, backed by specialized staff based at the company's head office, Geocomp is meeting the client's needs for a complete geotechnical data management solution.