

Client:

Walsh/Shea Corridor  
Constructors

Location:

Los Angeles, CA

Services Provided:

Instrumentation,  
monitoring, and data  
management system

Value Provided:

- Real-time data to evaluate construction effects on underground tunnels and excavations
- Risk mitigation for surrounding structures throughout construction

## Background & Project Challenges

Los Angeles Metro awarded the \$1.272 billion contract to Walsh/Shea Corridor Constructors (WSCC) to build the Crenshaw/LAX Transit Corridor Project, an 8.5-mile light rail that will run between the Expo Line on Exposition Boulevard and the Metro Green Line at LAX Airport. It includes eight new stations, five at grade level and three cut-and-cover braced excavations.



## Geocomp Role & Accomplishments

Geocomp's contract includes instrumentation and monitoring for over one mile of twin bored tunnel, three cut-and-cover/station excavations, and one low excavation location using our *iSiteCentral*<sup>TM</sup> GIS web-based software to provide real-time assessment of construction related activity. Geocomp's *iSiteCentral*<sup>TM</sup> will integrate data from more than 2,000 sensors, including automated MPBXs, inclinometers, strain gages, and tilt meters with settlement measurements and performance data from the Contractor's Tunnel Boring Machine (TBM). Geocomp's *iSiteCentral*<sup>TM</sup> will also incorporate installation documentation and photos into the database to better centralize all instrumentation information and make it readily accessible for reporting and review by the WSCC and Metro. Work began in early spring of 2014 and will continue through late 2017.

The open cut excavations are directly adjacent to heavy commercial activity and are interconnected with twin-bored 20-ft diameter tunnels, which run 60-ft directly below Crenshaw Boulevard. The construction activity will be monitored continuously to help the contractor control excavation/tunneling work and to mitigate risk of unexpected movement to adjacent buildings and utilities.

As part of the Design Build Contract, Geocomp is also preparing the final Geotechnical and Structural Instrumentation Monitoring Specification and Drawings, and Utility Monitoring Plan as it pertains to the WSCC Team's design and methods of construction. This work is the preliminary phase that must be completed and approved by Metro prior to the installation of instrumentation which must precede construction