

Wilkinson County Slope Failure Remote *iSiteCentral*™ Automated Monitoring

Client:

Massana Construction

Location:

Wilkinson County, GA

Service Provided:

- Instrument and monitor roadway movement during construction

Value Provided:

- Real-time performance monitoring provided essential data for assessing deformation

Background & Project Challenges

A roadway embankment in rural Wilkinson County, Georgia had failed and been moving for years. As part of the design/build repair contract, the construction team wanted to know the depths and extent of movement of the slope in four areas in and around the massive slope movement.



The monitoring locations were selected by the designer of the remedial work brought on board to fix the slope. Inclinator casings were installed in soil test borings to depths of about 60 feet.

Geocomp Role & Accomplishments

Geocomp provided initial manual readings of the inclinometers to measure horizontal movement with depth, and automated readings using in-place inclinometers to monitor horizontal movement over a period of two months. Geocomp provided the data on the *iSiteCentral*™ website using two *iSite*™ loggers that transmitted data via radios and cell phones.

During several heavy rain events in September 2009, the team was able to observe significant movement within one day. The automated inclinometer readings were taken each hour and a large amount of data was provided over the two months of monitoring. Using the automated *iSite*™ loggers and software was less expensive than providing manual readings once a week and it provided as many as 24 readings per day at each of the four locations.

The design-build team chose the most cost-effective approach to monitoring slope movement by using Geocomp's *iSiteCentral*™ real-time monitoring program. The inclinometers captured the slip plane of the slope failure so that the design and depth of the embedment of the tieback anchors would be adequate to support the slope repair. The system provided early warnings of increases in movement and allowed the designers to relate slope movements to weather events.