



PROJECT BRIEF

Sherman Minton Bridge

Emergency Monitoring for Bridge Repairs

PROJECT PROFILE

CLIENT:

Kokosing Construction Company, Inc.

LOCATION:

Louisville, KY

BACKGROUND:

The Sherman Minton Bridge connects Indiana and Kentucky via Interstate 64 over the Ohio River. During recent renovations, the bridge experienced a bearing connection failure causing major distress to the bridge deck. As a result, Kentucky and Indiana Departments of Transportation ordered the bridge to be closed to all traffic in both directions until the bridge deck was moved back into place and a displacement monitoring system was installed.

SERVICES:

- Developed a monitoring plan to monitor the new bearing and bridge girders
- Continued monitoring post repairs to determine effectiveness of newly installed bearing anchors and concrete piers



PROJECT NEED

With the bearing connection failure causing major distress to the bridge deck, the bridge needed to be immediately closed to all traffic, impacting the public for commuting and commerce for the major interstate highway. The client was in immediate need of experts to devise a quick monitoring program so the bridge could be back up and running as soon as possible.



SOLUTION PROVIDED

Kentucky DOT referred the bridge contractor to Geocomp to develop and install a monitoring system.

Geocomp was able to utilize its technologies and expertise to quickly develop a monitoring plan consisting of string potentiometers and tiltmeters to monitor the bearing and the bridge girders. The plan was approved by both DOTs and Geocomp agreed to be “on-call” to install the monitoring system as soon as the repairs were completed.

The contractor installed a temporary restraining system to hold the bridge deck in place while repair plans were finalized and bearing restraints were fabricated. Geocomp installed the monitoring system ahead of the final repairs to monitor the functionality of the temporary restraining system and allow for I-64 to be re-opened. Real-time monitoring provided through iSiteCentral© allowed the contractor, both DOT’s, and the engineer of record to monitor the temporary restraints on the bridge for two weeks before the final repairs were completed on the bearing.

After final repairs to the bearing, Geocomp continued monitoring for one month to determine the repairs were effective and that there were no remaining stability concerns with the newly installed bearing anchors and concrete piers.



VALUE

Geocomp was able to quickly spring into action and design an instrumentation plan upon emergency request and begin work to mobilize a monitoring system upon completion of the repair. The quick efforts allowed the bridge to re-open to the public in a timely fashion and prevent delays for the clients.