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PROJECT BRIEF

Bayou Lafourche Bridge Instrumentation Program

PROJECT PROFILE

CLIENT:
Louisiana DOT
WL Bass Construction

LOCATION:
Houma, LA

VALUE:

- Provided value added changes to instrumentation specification
- Installed and commissioned remotely positioned Structural Monitoring System for innovative bridge design
- Performed load test of bridge structure prior to bridge opening
- Developed system operation manual and provided team with training

SERVICES PROVIDED:

- Performance monitoring during construction of new bridge

"The monitoring system was set-up to evaluate the performance of the bridge during the innovative construction sequencing and methods. After the construction was complete, a load test was performed on instrumented spans to verify the design response of the bridge."

INSTALLATION OF GEOTECHNICAL INSTRUMENTS & DATA MANAGEMENT COLLECTION

As part of the instrumentation plan, Geocomp installed strain gages on girders and slabs at the pre-cast facility and tie-down anchors and splice plates in the field. The monitoring system was set-up temporarily to evaluate the performance of the bridge during the innovative construction sequencing and methods. After the construction was complete and prior to the bridge opening, a load test was performed on instrumented spans to verify the design response of the bridge. A permanant monitoring system was designed and installed using remote power from solar panels with remote communication provided for data access to Louisiana Technical Research Center in Baton Rouge. Geocomp provided a system operation manual and training to LADOTD staff.

BACKGROUND

The Bayou Lafourche Bridge is an AccelBridge that utilizes the simple method of compressing the deck by pre-stressed bridge girders. The bridge is located near Monroe, LA. and was constructed in 2016-2017. The project was sponsored by the Federal Highway Administration (FHWA) Innovative Research Deployment Program. As part of the program, a detailed instrumentation sytems was implemented to verify design assumptions and construction methods.