



PROJECT BRIEF

I-69 Pavement Instrumentation

PROJECT PROFILE

CLIENT:
Reith-Riley Construction Co., Inc.

Walsh Construction

Indiana Department of
Transportation

LOCATION:
Indianapolis, IN

VALUE:

- Long term monitoring captured vital data of bridge responses to stress and temperature

SERVICES PROVIDED:

- Installation oversight of pavement sensors
- Training to DOT and Purdue University in system operation and data collection

“Geocomp provided the instrument selection and onsite installation oversight for all of the installed pavement instrumentation for the 22 test sections [...] The INDOT has the ability to perform long-term testing comparing the performance of each of the test sections under ambient trafficking or load testing.”



INSTALLATION OF PAVEMENT SENSORS

Geocomp provided the instrument selection and onsite installation oversight for all of the installed pavement instrumentation for the 22 test sections. This included: 188 Geocomp Horizontal Asphalt Strain Gages to measure flexural pavement strains, 4 Geocomp Vertical Asphalt Strain Gages to measure compressive pavement strains, 48 Thermocouples to measure pavement temperature, 78 Earth Pressure Cells to measure soil pressures, 10 Embedment Strain Gages to measure flexural strain in chemically treated subgrades, and 44 Moisture Gages to measure soil moisture at subgrade interface. All of the pavement sensors at each of the test sections were routed to a road-side Nema enclosure with terminal strips with ready connection to a portable data logger for the subsequent field testing. The INDOT has the ability to perform long-term testing comparing the performance of each of the test sections under ambient trafficking or load testing.



BACKGROUND

The I-69 Interstate, just northwest of Indianapolis, is undergoing a reconstruction and widening of both the Northbound and Southbound lanes over a 14.5 mile stretch. As part of this re-construction, 22 different pavement test sections have been instrumented to measure the performance of the various design changes in the composition of subgrade, subgrade treatment, drainage layers, and pavement layers that make up the full pavement section. The Indiana Department of Transportation (INDOT) wants to evaluate the performance of these full test sections by measuring the structural response to pavement loading from vehicles under controlled conditions.