

## **Infrasense Wraps Up Another Year of Infrastructure Scanning**

*Infrasense enjoyed a productive 2014, working in 13 states across the country to scan and map subsurface conditions of bridge decks, pavements, and other structures. In total, Infrasense scanned more than 500 lane miles of pavements and more than 2.2 million square feet of bridge decks.*

Boston, MA ([PRWEB](#)) December 31, 2014 -- Infrasense, Inc., a national leader in subsurface scanning and mapping, has enjoyed a productive year in 2014, completing many successful nondestructive testing projects across the United States. In total, Infrasense scanned more than 2.2 million square feet of bridge decks and over 500 lane miles of pavement in 13 states. These projects included deck evaluations throughout Ohio, Connecticut, Illinois, and Colorado, and pavement surveys in Idaho, Indiana, Washington, and Maryland. Infrasense performed the data collection using high-speed Ground Penetrating Radar (GPR) and Infrared Thermography.

Infrasense has played a key role in the development and implementation of GPR, Infrared Thermography, and other NDT methods for evaluating transportation infrastructure over the past 27 years. One of the most common applications of the ground penetrating radar technology is the determination of pavement structure layer thicknesses because, unlike traditional coring, GPR requires no lane closures and provides a timely and cost-effective means of obtaining continuous thickness data. This data is accurate, (within 10% of core values), and may be used for network-level pavement management or project-level rehabilitation design, and provides the necessary information in FWD analyses to calculate the remaining lifespan of an existing pavement. GPR data also reveals patterns and anomalies in pavement structure that often go unnoticed using traditional coring techniques.

Infrasense surveys have covered over thousands of lane miles of pavement. Projects range in size from our recent 4 mile section in Connecticut, to over 1,500 lane miles of county roads in North Dakota working with the North Dakota State University's Upper Great Plains Transportation Institute.

Nondestructive scanning data is also collected on bridge decks. Ground Penetrating Radar data is used to identify corrosion induced delamination, and to estimate rebar depth. Decks in good condition consist of strong and uniform radar reflections from the rebar, whereas weak and inconsistent reflections indicate rebar-level bridge deck deterioration.

Infrared Thermography data is collected to directly identify and locate delaminations in the concrete at the reinforcing steel. Infrared data is collected in a series of passes across each deck, with each pass covering a deck width of between 12 and 15 feet. The survey produces a series of infrared images collected every foot of vehicle travel. During the survey, delaminations that heat unevenly due to thin voids at the reinforcing steel appear in the IR image as brighter "hotspots". Because many of these decks have overlays, the reinforcing can be 4-5 inches from the surface, and sounding is not always capable of detecting delamination at this depth. Deck surface conditions, such as patching and spalling, are mapped and quantified using a high-resolution video system operated concurrently with the infrared survey.

About Infrasense, Inc.

Since 1987, Infrasense, Inc. has applied the most current technologies to the most difficult challenges in subsurface scanning. Infrasense's engineers are able to nondestructively extract critical information from a



diverse range of structures. The firm has conducted research to advance the field of subsurface detection, while also providing valuable information to clients across the country. Learn more about Infrasense, Inc. and its services at <http://www.infrasense.com>.



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