Infrasense, Inc. uses Ground Penetrating Radar to evaluate the pavement structure of 12.8 miles of Interstate I-84 in Idaho.

Infrasense, Inc. has completed the evaluation of 12.8 miles of pavement structure along Interstate I-84 between SH-50 and SH-25 near Hazelton, Idaho. A combination of air-coupled and ground-coupled ground penetrating radar (GPR) were carried out to determine the thickness and types of pavement layers, locate anomalies in the pavement structure, map areas of moisture intrusion, identify a cinder fill layer below the asphalt base, and locate buried refuse below the subbase: Results included graphical representation of the changing pavement, base and sub-base structures.

Hazelton, Idaho ([PRWEB](#)) March 23, 2016 -- Infrasense, Inc., a national leader in infrastructure nondestructive evaluations, has recently completed the evaluation of 12.8 miles of pavement structure along interstate I-84, between SH-50 and SH-25 near Hazelton, Idaho. The survey was carried out using a combination of air-coupled and ground-coupled ground penetrating radar (GPR) antennas mounted behind a survey vehicle.

Data collection was performed in each of the eastbound and westbound lanes of the two lane highway, moving at high speed using a shadow vehicle for safety with the air-launched antennas. Conversely, the 400-MHz ground-coupled antennas were collected in the eastbound and westbound travel lanes at a lower speed, utilizing a rolling road block as protection for the survey crew.

Following data collection, the air-coupled GPR data was analyzed visually to assess the observed layer structures vs. what is expected from as-built plans. The layers were "picked" and analyzed to determine layer thickness, zones of non-homogeneity, and the presence of a cinder layer below the asphalt base. Amplitude analysis between the existing pavement layers revealed a predominantly uniform base composition, absent of "bright" spots that would indicate the presence of cinders in the base material.

The ground-couple data was then reviewed to determine layer thickness, moisture intrusion, and the presence of buried refuse in the underlying base material. Qualitative analysis did not reveal any significant anomalies within the 6-7 foot depth range of detection that could be attributed to subsurface refuse or debris. More quantitative analysis identified specific regions of higher moisture content, appearing in both directions at similar milepost positions.

Detailed layer thickness and amplitude plots were provided to the client, providing spatial information useful for targeting additional exploratory work and future rehabilitation efforts.

Ground penetrating radar (GPR) data is collected at moderate and highway speeds, making it the fastest NDE technology for measuring pavement layers, construction depth, moisture intrusion and subsurface anomalies in pavement. GPR is a versatile tool that can be executed in a variety of ways; including single lane, double wheel-path, or complete full width analysis. The GPR data is collected using project specific frequencies, tailored for the desired resolution and depth penetration.

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

diverse range of structures. In addition to providing ongoing subsurface evaluation services to clients across the country, the firm has also conducted numerous research programs to advance the field of subsurface detection and non-destructive evaluation.

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