research development & technology transfer
HAWAII DEPARTMENT OF TRANSPORTATION

State of Hawaii Department of Transportation Highways Division
Materials Testing & Research Branch • 2530 Likelike Highway • Honolulu, Hawaii 96819-2928

Characterization of Voids and Other Subsurface Deficiencies by Geophysical Methods

Principal Investigator:
Professor Horst Brandes.

Co-Principal Investigator:
Professor Peter Nicholson

Project Sponsor:
Arnold Fukumoto

Need:
Economical and non-invasive method to locate subsurface voids and other buried anomalies.

Objective:
Identify the optimum geophysical measurement technique for detecting subsurface flaws, purchase a system based on this technique, and calibrate it for local use.

Duration:
Started November 15, 2006

Cost:
$288,839

Update:
- A literature search has been initiated that is focusing on experiences by FHWA and other agencies with geophysical survey procedures. Past work in Hawaii using some of these methods is being reviewed to identify the three or four most promising techniques.

- Planning has begun on designing a test bed with buried cavities of different characteristics for surveying by a contractor using a variety of geophysical systems.