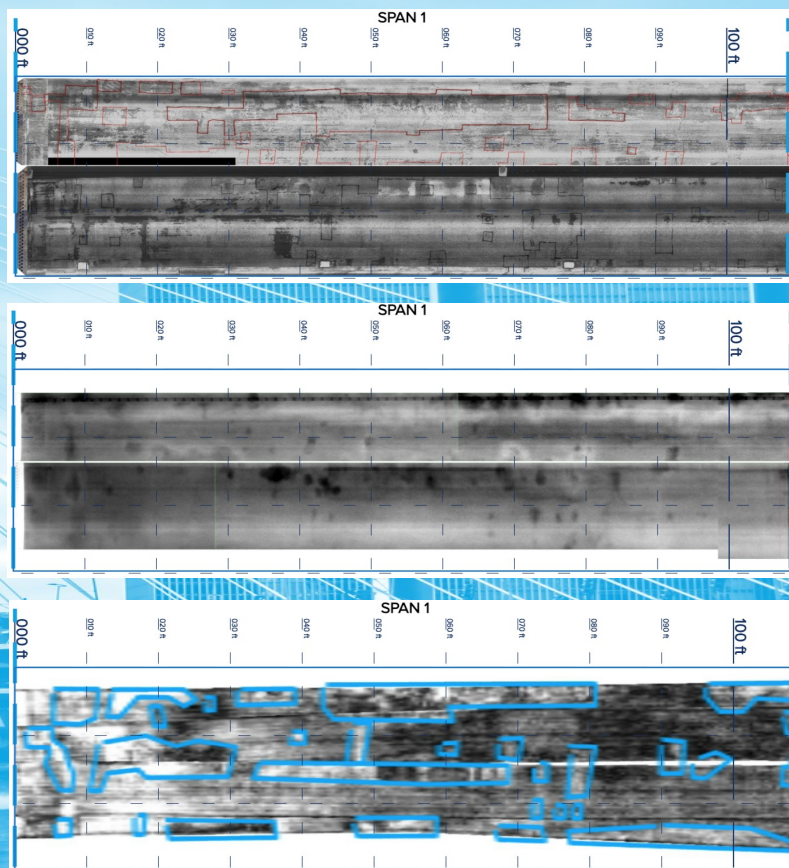


## Asphalt-covered Bridge Deck

This project featured a unique opportunity to directly validate infrared and ground-penetrating radar data taken by a mobile system. The target bridge deck had an asphalt overlay, but the condition of the concrete slab was of concern. A hands-on inspection could not be performed without a milling of the overlay.

The owner of the bridge decided to perform a detailed, multi-phase inspection of the bridge while also validating NEXCO's mobile IRT and GPR analysis capabilities. First, IRT and GPR data was collected at 50-60mph. Second, the asphalt surface was removed and the concrete condition was diagnosed by hammer sounding/visual notation. Third, all datasets were compared.



### Project Details

Client	[Owner in Southeast Japan]
Reference	Kansai Engineering
Target Area	32,500 ft <sup>2</sup>
Target Length	1,110 ft
Project Period	Sep to Oct, 2023

### Impression

Each dataset was found to be highly correlative, and the owner resolved to further request the use of IRT and GPR analysis for asphalt-covered bridge decks.

NEXCO recommended the use of both IRT and GPR not as comparative tools, but complementary tools, since each NDE method has different objectives and capabilities. The total quantities detected by sounding, IRT, and GPR all amounted to very similar totals in this evaluation, but this is not always the case.