

Bridge Inspection Technology



Traditional

NON INSPECTED AREAS

WORKERS EXPOSED TO TRAFFIC

SUBJECTIVE CONCLUSIONS

LANE CLOSURES

WALKING SPEED OR SLOWER

SUBSTANTIAL ON-SITE LABOR

INACCESSIBILITY OF STRUCTURES



NEXCO Technology

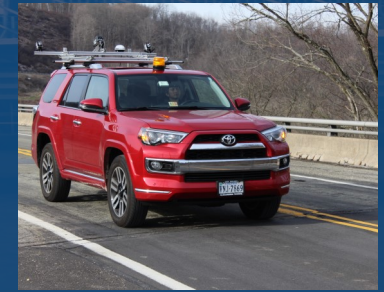
NO TRAFFIC PROBLEMS
FROM 10 MPH TO HIGHWAY SPEED
ANALYSIS PROCESS OFF-SITE

EASY VIRTUAL ACCESS

COMPREHENSIVE VIRTUAL IMAGE

AS SAFE AS DRIVING YOUR CAR

OBJECTIVE RESULTS

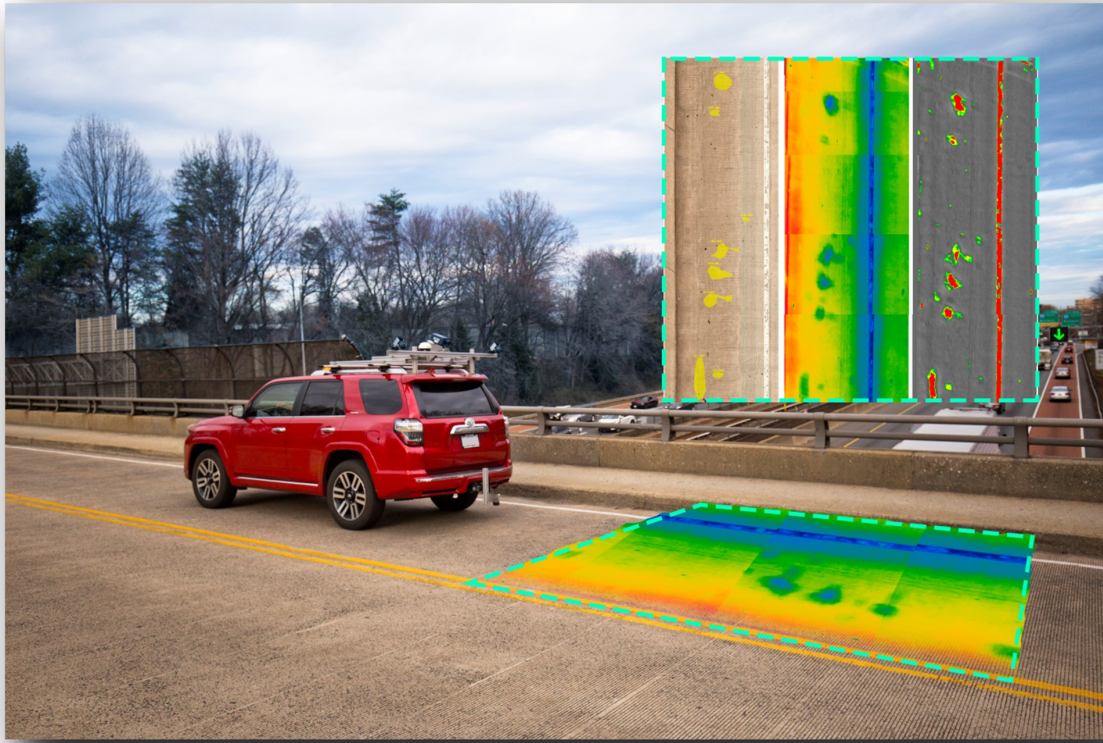


Benefits

The operating speeds of DTSS (10 - 70mph) rule out the necessity of lane closures even in times of heavy traffic, while U3S provides virtual access to the sub-structures of the bridge regardless of its location (over water and/or above ground).

The analyzing process is conducted off-site allowing for a reduction of about 20-30% of labor time and money, as well as an increase in safety for the inspectors.

The deficiency map generated provides the amount of area in need of repair used to accurately estimate total cost for rehabilitation bids.



The Technology

NEXCO-West USA's Bridge Inspection Technology combines two systems to provide a comprehensive evaluation of the entire bridge structure. Both the Deck Top Scanning System (DTSS) and Underside Structure Scanning System (U3S) combine visual and Infrared imaging systems to generate a dual image of the bridge. This combination provides a comprehensive display of superficial cracks and subsurface delaminations that allows for data-driven, objective decision making for structural maintenance.

Applications

NEXCO-West USA's Bridge Inspection Technology already satisfies major requirements and recommendations laid out by the Federal Highway Authority (FHWA), FTA, AASHTO element condition inspection, USDOT, and state DOTs. Our technology is determined by SHRP2 and other research plans to be one of the most effective and reliable NDT methods. Our exclusive cooled sensor IRT cameras enable high-speed data acquisition, reduce noise, and increase resolution generating a high-definition and high degree of accuracy imagery that enables long-term asset monitoring. Our system also helps track changes in deterioration, expedite allocation of repair efforts, and become a powerful tool for forensic inspection progressive studies or comparative studies over time.

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