

Iowa is Improving Concrete Sensor Testing - And It's Impacting Drivers Across America

New analysis explains how outdated concrete testing slows road and bridge projects, and what Iowa's specification update means for the rest of the country.

CAROL STREAM, IL, UNITED STATES, June 12, 2026 /EINPresswire.com/ -- American drivers lose an



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estimated 4 billion hours each year sitting in construction-related traffic. As Congress debates the next federal transportation bill ahead of the Infrastructure Investment and Jobs Act's September 2026 expiration, [Wavelogix](#) is calling attention to an overlooked source of road construction delays: waiting for concrete strength test results.

In a new analysis, Wavelogix explains how traditional

concrete cylinder testing, a 180-year-old method, can delay decisions on when roads, bridges, and pavement repairs safely reopen.

The analysis comes as Iowa DOT formally updated Matls. IM 383 on April 21, 2026, approving acoustical resonance sensing as an accepted method for concrete strength certification on Iowa DOT projects. Under the update, real-time, in-place sensor data can be used to determine when pavement can open to traffic and when payment can be authorized, in accordance with AASHTO T412.

Key findings from the analysis include:

- * Road construction delays waste an estimated 3 billion gallons of fuel annually
- * A single day of highway disruption can produce between \$8 million and \$256 million in economic losses
- * In an Indiana DOT trial with Purdue University, patched roads that typically remained closed for three days reached target strength in approximately four to five and a half hours using real-time concrete sensors
- * In one documented case, sensor data showed concrete had reached required strength 44 hours before cylinder results confirmed the same
- * More than 1,500 sensors have been deployed across more than 60 projects, including highways, bridges, and pavement repairs
- * Across state DOT testing, real-time sensor measurement variability came in at 12.2 percent,

compared with 27.9 percent for cylinders across the same projects

"With true in-place data, you can make earlier, safer calls and document every decision for compliance and owner review," said Dr. Luna Lu, founder of Wavelogix and developer of the REBEL concrete sensing system.

"Iowa was the first state to actually approve the use of our acoustic sensor as a replacement for cylinder breaks, completely replacing cylinder breaks and maturity. That's really, really great," said Joe Turek, CEO of Wavelogix.

The full report, "Why That Road Construction Project Is Taking So Long And What It's Costing You Every Day It Does," is available at <https://wavelogix.tech/blog/road-construction-project>.

Availability for Interviews: Joe Turek, CEO of Wavelogix, and Dr. Luna Lu, Wavelogix founder and the Purdue University engineer who developed the REBEL concrete sensing technology, are available for interviews to discuss road construction delays, real-time concrete strength monitoring, Iowa DOT's IM 383 update, AASHTO T412, and the future of infrastructure project delivery.

To schedule an interview, contact Suzanne Florek at sales@wavelogix.tech.

About Wavelogix:

Wavelogix develops real-time concrete strength sensing technology for infrastructure, transportation, precast, and commercial construction projects. Its REBEL system measures concrete strength development in place, helping teams make faster, data-informed decisions around road openings, form removal, sequencing, and compliance.

The technology has been recognized as an ASCE GameChanger, named to TIME's Best Inventions of 2023, received a gold Edison Award, and earned the Alfred Noble Prize from the American Society of Civil Engineers. Learn more at <https://wavelogix.tech>.

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