



ITS for Work Zone Safety

11% Work Zone Traffic Fatalities

12% Work Zone Fatal Traffic Crashes

A Federal Highway Administration (FHWA) analysis of National Highway Traffic Safety Administration (NHTSA) Fatality Analysis Reporting System (FARS) data shows that work zone traffic fatalities increased by 11% from 2020 to 2021, and work zone fatal traffic crashes increased by 12% from 2020 to 2021.¹ Read on about how Intelligent Transportation Systems (ITS) can create safer work zones.

The featured benefits, costs, and lessons learned are based on ITS project evaluations contained in the ITS Databases at: www.itsknowledgeresources.its.dot.gov. *Click on each example to learn more.*

BENEFITS

Portable Variable Speed Limit (PVSL) System in Utah

Use of a PVSL system led average vehicle speeds near work zones to decrease 15 to 25 miles per hour (mph).

Automated Flagger Assistant Device (AFAD) in Missouri

Field testing of an AFAD reduced vehicle approach speeds by 4 mph and improved stopping distance by 11 feet.

Smart Work Zone (SWZ) System in Kansas

SWZ systems are proven to detect congestion, display travel times, and recommend alternate routes. The results of this deployment indicated a benefit-to-cost ratio between 10:1 and 12:1.

End-of-Queue Warning System in Texas

An end-of-queue warning system was implemented on a 96-mile section of I-35. Modelled results showed a reduction in potential by 18% to 45%.

COSTS

Intelligent Work Zone (IWZ) Motorist Advisory System Rental in Minnesota:
\$75K (per system)

Equipment Rental Cost for PVSL System in Utah: \$173 - \$329 (per day)

LESSONS LEARNED

Work Zone Intrusion Alert Systems in Oregon

Field testing demonstrated that sound alarms should be distinctive and long in duration with a level of at least 110 dB when located 50 feet away from workers.