



Work Zone ITS



In Texas, **queue warning systems reduced crashes by 44 percent.**

Source: [Transportation Research Board \(2016\)](#)

Truck-mounted radar speed signs in work zones **reduced traffic speeds between 1 and 15 percent.**

Source: [Oregon DOT \(2016\)](#)

With **drone remote sensing**, bridge inspections can be done in **25 percent of the time at 5 percent of the cost.**

Source: [AASHTO \(2016\)](#)

Freeway construction work zones, although necessary for maintaining the transportation system, give rise to many safety and efficiency issues. From the motorist perspective, bottlenecks formed by work zones decrease efficiency and increase delays. From the worker perspective, work zones pose a risk to safety and can even result in fatalities. In 2019, an estimated 38,900 injuries and 115,000 crashes occurred due to work zones. ([Workzonesafety.org](#))

Work zone ITS systems encompass a range of technologies that aim to inform motorists of work zones and alternate routes, reduce freeway congestion, and enhance safety of workers and motorists. ([FHWA-OPS](#))

Work Zone ITS Technology Examples

- Queue warning systems (QWS) are installed ahead of work zones to provide warning to approaching drivers of stopped or slowed traffic conditions due to the work zone. ([MnDOT](#))
- Automated Speed Enforcement (ASE) systems that capture license plate numbers for vehicles exceeding the speed limit to enhance enforcement of work zone speed limits. ([FHWA-OPS](#))
- Drone remote sensing accomplishes advanced surveying using airborne sensors to collect environmental and structural data. Workers can use aerial drones to survey work zones more quickly and safely than in the past. ([AASHTO](#))

Highlighted ITS Benefits

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