

# Smart Work Zones



Smart work zones (SWZ) aim to improve safety and efficiency in freeway construction areas by providing real-time information to motorists about travel times, delays, and speeds through advanced technology ([FHWA-OPS](#)).

## HOW IT WORKS

SWZ systems use computers, communications, and sensor technology to gather and share real-time traffic data with motorists, enabling dynamic driving and routing decisions. These portable and automated systems aim to provide accurate information that reduces congestion, alleviates driver frustration, and enhances safety for both motorists and construction workers ([FHWA-OPS](#)).

## BENEFITS

SWZs inform motorists about conditions ahead, encourage alternate route use to ease congestion, expedite incident clearance to improve traffic flow, and enhance safety for highway workers by preventing unexpected vehicle entries. Overall, they contribute to safer, more efficient freeway operations, benefiting all road users ([FHWA-OPS](#)).



Source: iStock

- ▶ In Kansas, SWZ systems can detect congestion, display travel times, and recommend alternate routes, with benefit-to-cost ratios ranging from 10:1 to 12:1 ([2019-B01398](#)).
- ▶ In Missouri, field testing of an Automated Flagger Assistant Device showed a reduction in vehicle approach speeds by 4 miles per hour and an increase in stopping distance by 11 feet ([2021-B01584](#)).
- ▶ In Nebraska, an advanced queue detection system using portable dynamic message signs reduced speeds of vehicles approaching interstate work zones by up to 7 miles per hour ([2023-B01763](#)).

**Essential Intelligent Transportation Systems (ITS)**

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