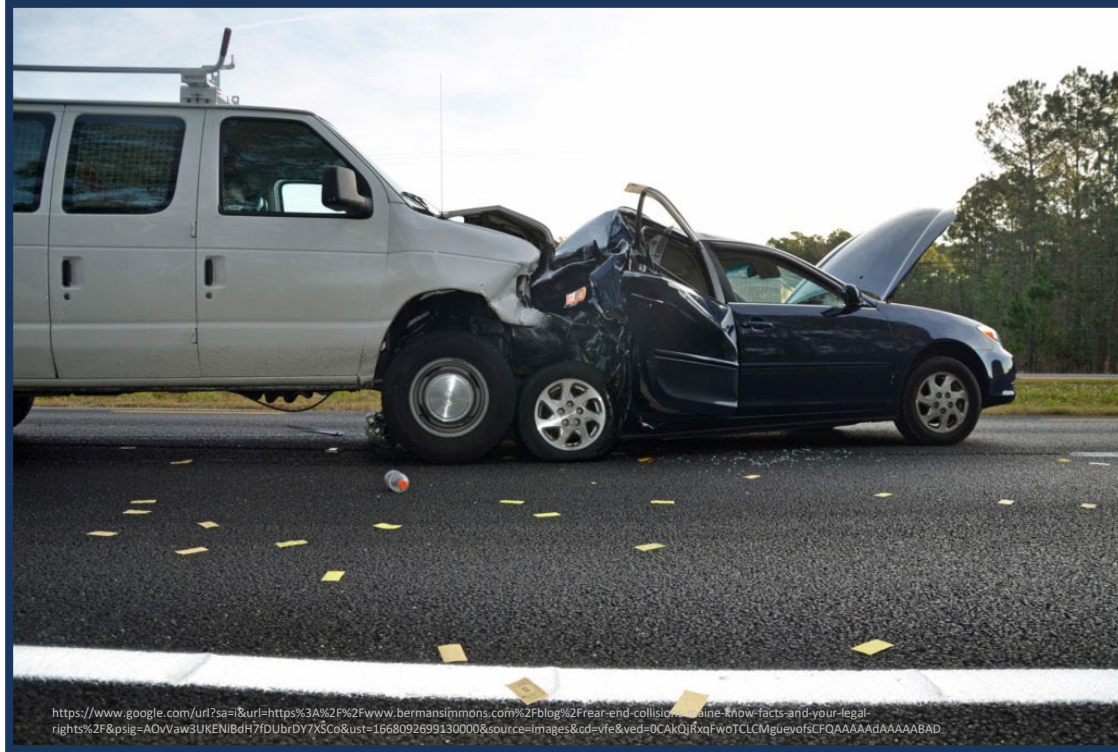




Work Zone Awareness

Christopher Schneider E.I.T.

Roads are Dangerous



<https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.bermansimmons.com%2Fblog%2Frear-end-collision-claim-how-facts-and-your-legal-rights%2F&psig=AOvWaw3UKENIBdH7FDUbrDY7Y5Co&ust=1668092699130000&source=images&cd=vfe&ved=0CAkQjRxfwoTCLMguevofSCFOAAAAAAdAAAAABAD>

**1,327 Fatalities in TN in
2021**

**42,915 Fatalities in the US
in 2021**

How can TDOT Improve Work Zone Awareness?



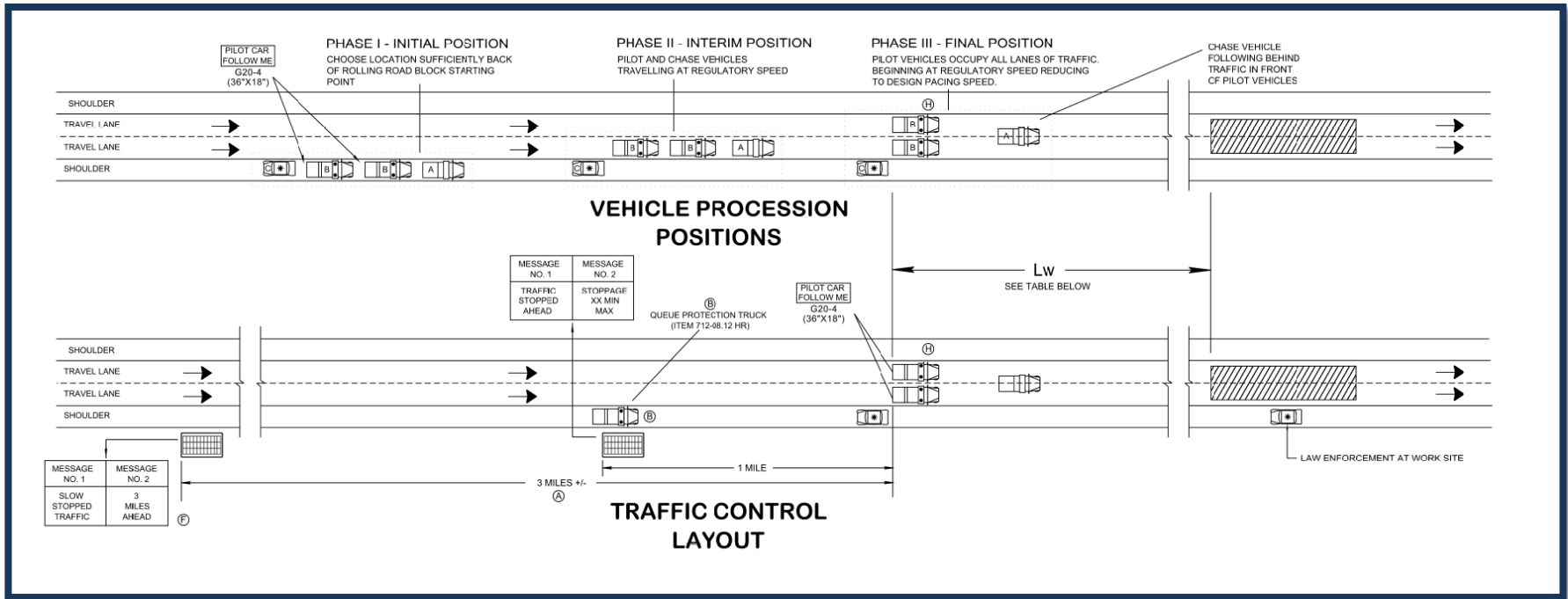
Updated Standards
and Policies

Utilize new Technology

Improved WZ Design

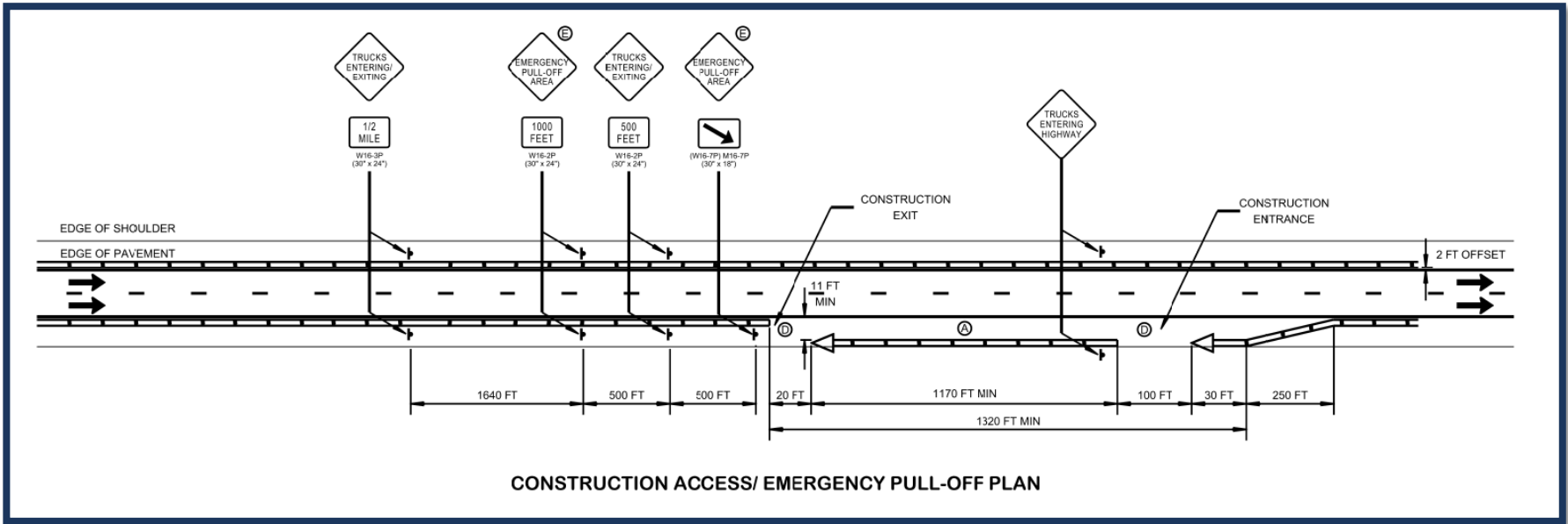
New Standard Drawings

T-WZ-61 Rolling Roadblock



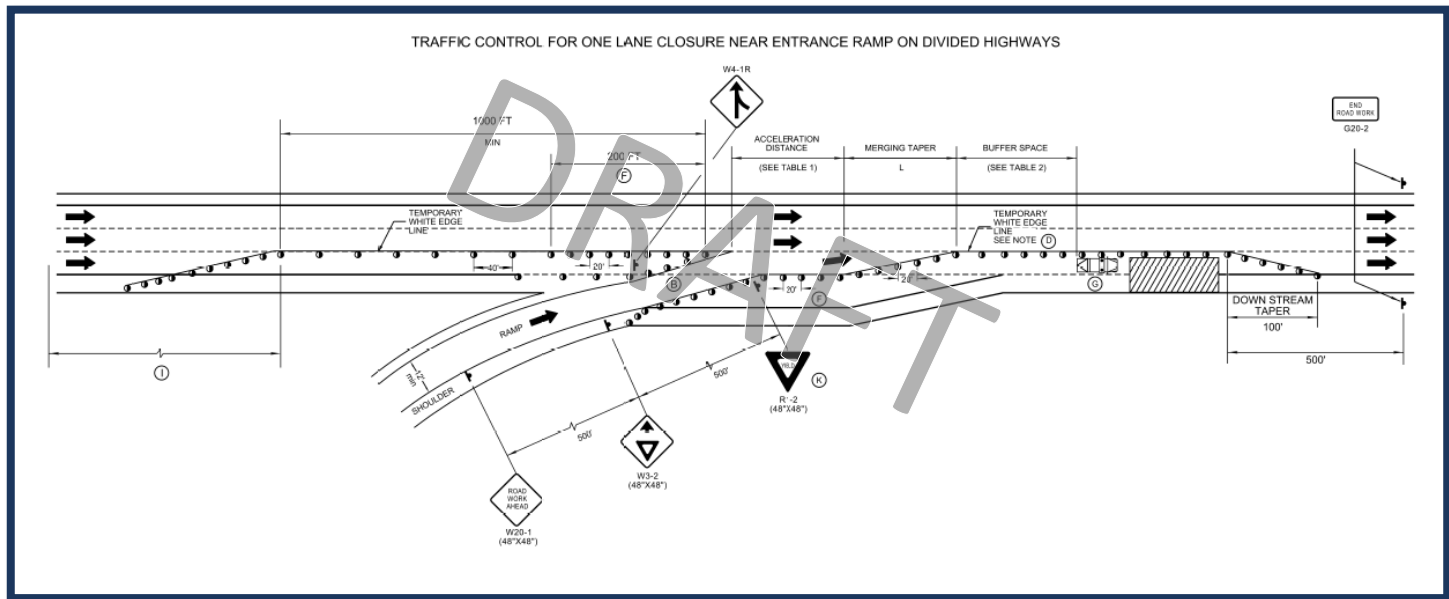
New Standard Drawings

T-WZ-62 Construction Access



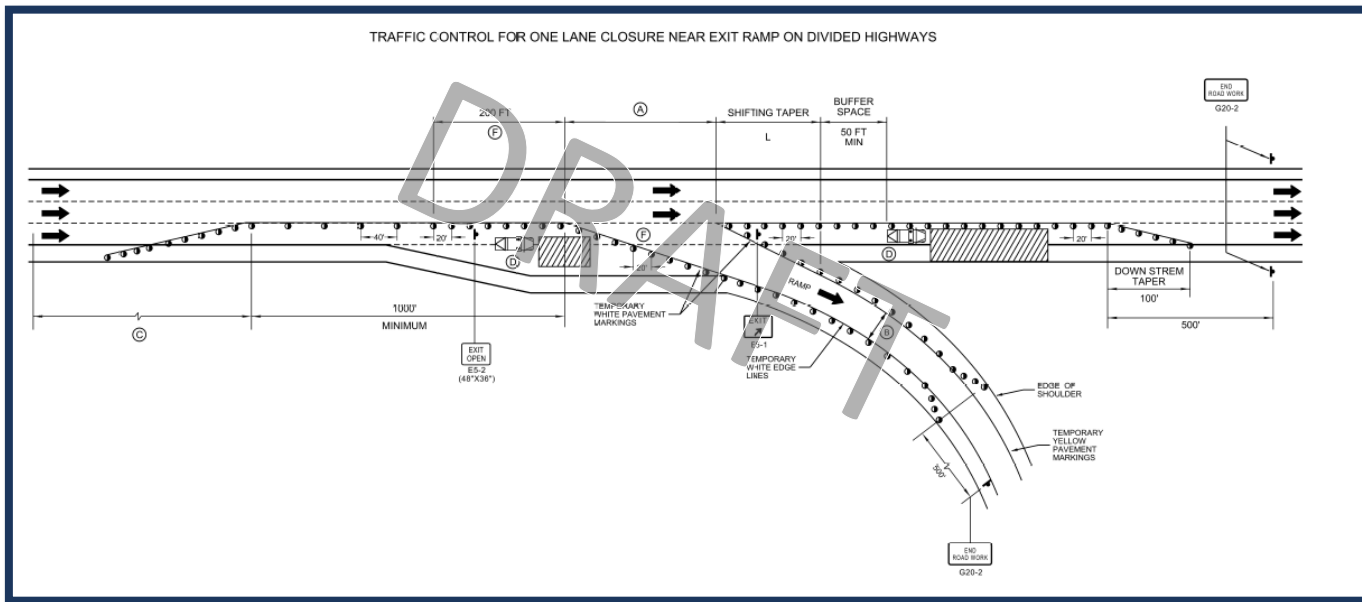
New Standard Drawings

T-WZ-63 Work Zone in the Vicinity of an Entrance Ramp



New Standard Drawings

T-WZ-64 Work Zone in the Vicinity of an Exit Ramp



Memorandums



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
DESIGN DIVISION
Suite 1200, James K. Polk Building
505 Deaderick Street
Nashville, Tennessee 37243-1402
(615) 741-5835

BUTCH ELEY
COMMISSIONER

BILL LEE
GOVERNOR

MEMORANDUM

TO: Brian Egan
Construction Division Director

FROM: Jason Quicksall Nathan Vatter
State Work Zone Engineer State Traffic Engineer

DATE: September 8th, 2022

UPDATE: Use of Drums in Work Zones

This Memorandum is to clarify the use of channelizing devices within work zones on Freeways and Multi-lane Roadways.

Per TDOT's 2021 Standard Specifications 712.04-12-1G "Use drums in all transition tapers for lane closures on multi-lane roads" which includes freeways. The Department views drums as a superior channelizing device compared to cones and tubular markers, as they are more sturdy, contain more reflective surface area, and are generally more conspicuous than the alternatives. Further, our Standard Drawings T-WZ-11, 12, 16, etc. all specify the use of drums. This requirement applies for any work duration category as described in MUTCD Part 6 - 6G.02 with the exception of Mobile Operations.

All work occurring on our multi-lane (including controlled access) roadways should be adhering to this standard, including TDOT personnel, contractors on TDOT projects, as well as private utility companies.

Any questions on this subject may be sent to the Roadway Design and Traffic Operations Division.

cc: Jennifer Lloyd
Will Reid Ali Hangul
Jeff Jones Ben Price
Clay Culwell Lee Smith
Tim Colvett Estel Hagewood
Brian Egan Regional Directors

1 of 1



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
OCCUPATIONAL HEALTH & SAFETY DIVISION
SUITE 1800, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-0380
(615) 253-1122

BUTCH ELEY
DEPUTY GOVERNOR &
COMMISSIONER OF TRANSPORTATION

BILL LEE
GOVERNOR

MEMORANDUM

TO: All TDOT Employees

FROM: Commissioner Eley *Butch Eley*

DATE: October 3, 2022

SUBJECT: Employees Crossing Multi-Lane Roadways On Foot

Effective immediately, TDOT employees shall not be permitted to cross multiple, same-direction lanes of a controlled access roadway on foot if the lanes are in an unprotected, free-flow condition. The crossing of single lanes of controlled access roadways (e.g., ramps) is allowable only when traffic is such that there is a gap between moving vehicles that is sufficient for the employee to safely traverse the lane at an average walking pace (approximately 2.5-4.0 MPH according to the CDC). Debris removal from a lane should be accomplished from the adjacent shoulder or by occupying the lane with a suitable vehicle in accordance with the TDOT Work Zone Field Manual for Maintenance Operations. Exceptions to this may only be made in the event of emergencies. Additional information will be provided as detailed operational guidance is developed. All questions should be routed to either the Headquarters or Regional Safety Office for clarification.

New Technology and Devices

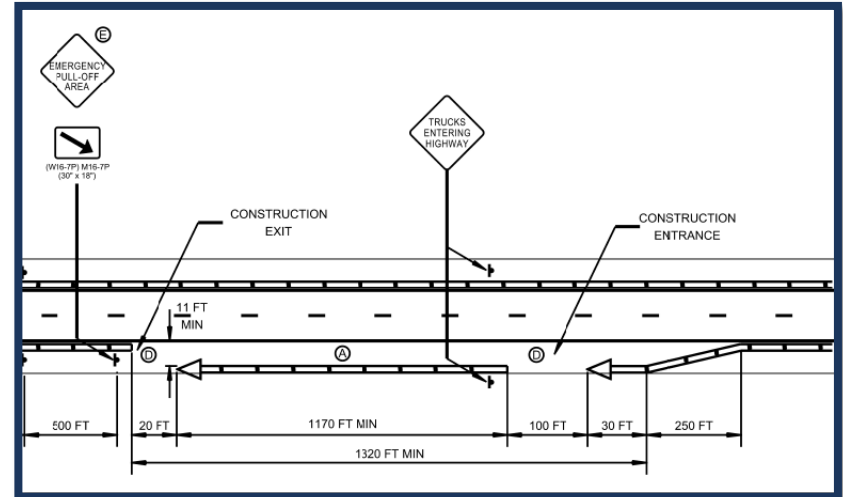
**Solar Advanced Warning System
(SAWS)**

**Portable Queue Warning System
(PQWS)**

**Historical crash data and queue
analysis**

Solar Advanced Warning System

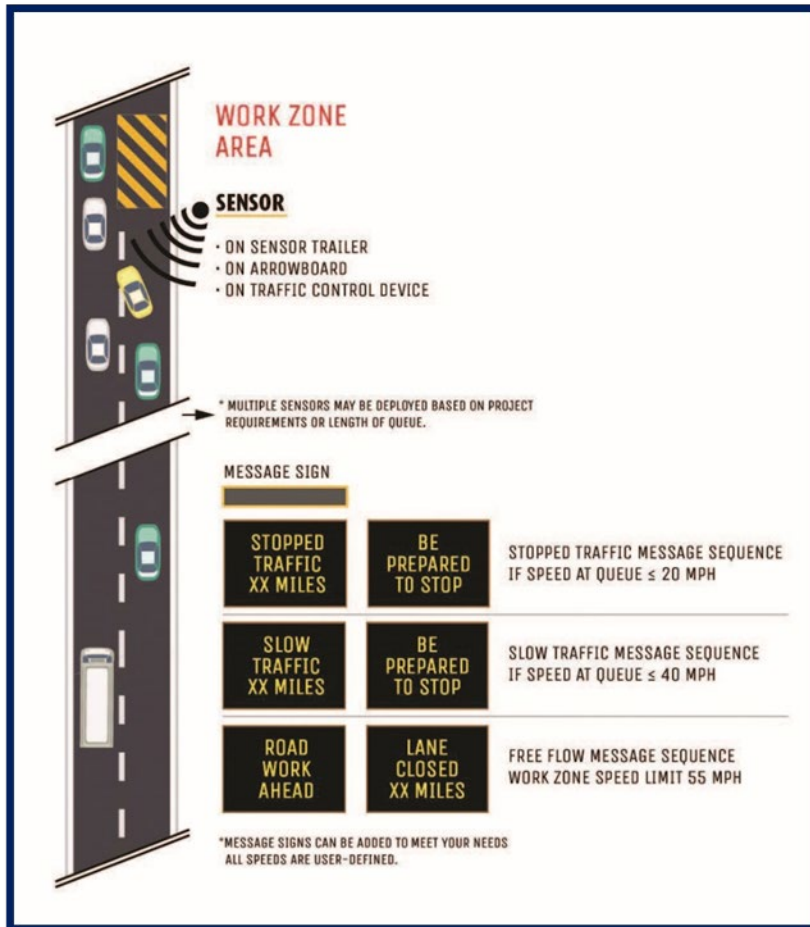
Solar Advanced Warning System (SAWS)



Can be used with the new
Construction Access standard

Warns drivers when trucks enter
the roadway

PQWS: Smart Work Zones

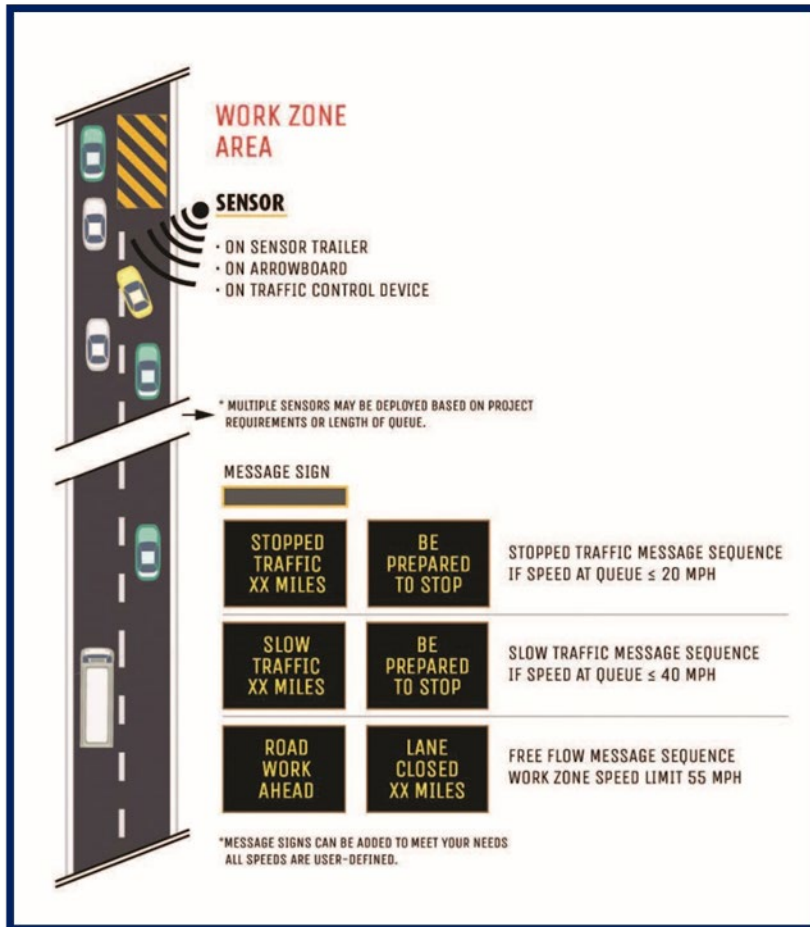


Combination of Speed Sensors and Message Boards

Downstream traffic sensors trigger dynamic messages to upstream message boards

Drivers are alerted to either a Slowed or Stopped traffic condition as well as accurate distance to the slowed or stopped condition

PQWS: Smart Work Zones

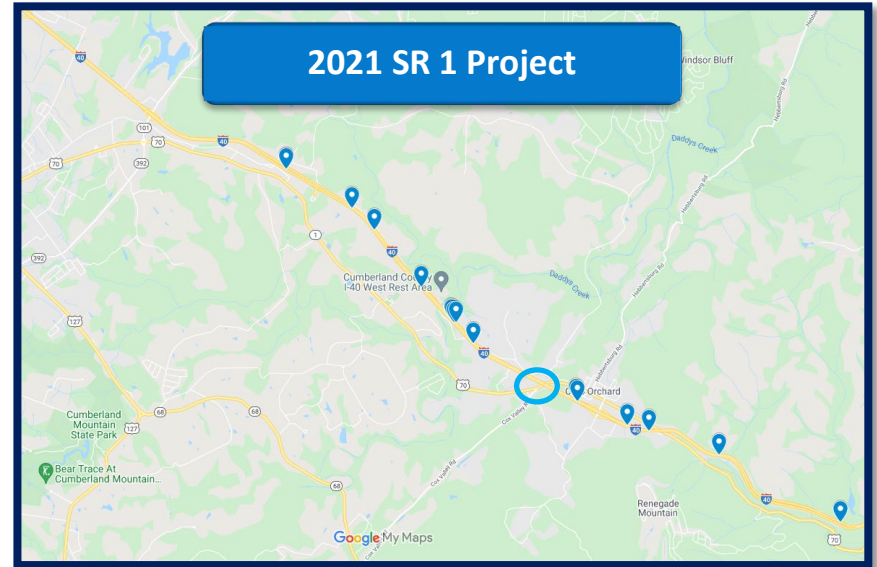


More reliable than Queue Trucks

Multiple Warnings for Drivers

Drivers receive accurate real time information

Smart Work Zone Project Comparison



393 crashes per 100 million vehicle miles

208 crashes per 100 million vehicle miles

26 crashes and 10 injuries over
43 days

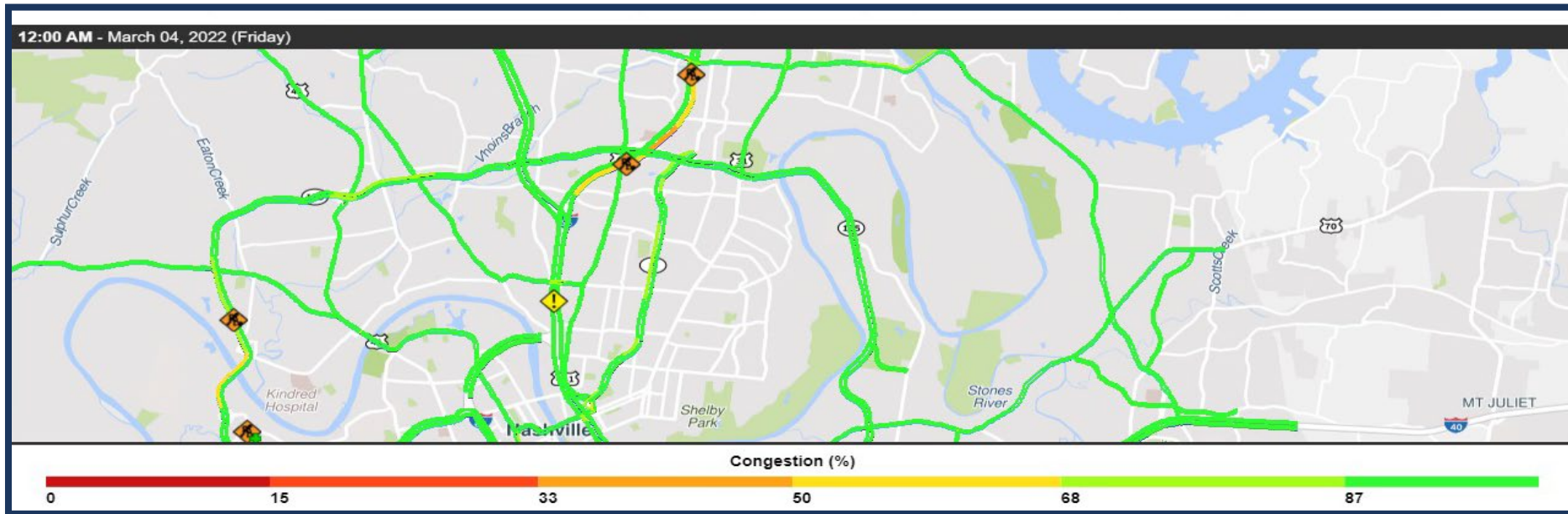
16 crashes and 2 injuries over
100 days

Historic Traffic Data

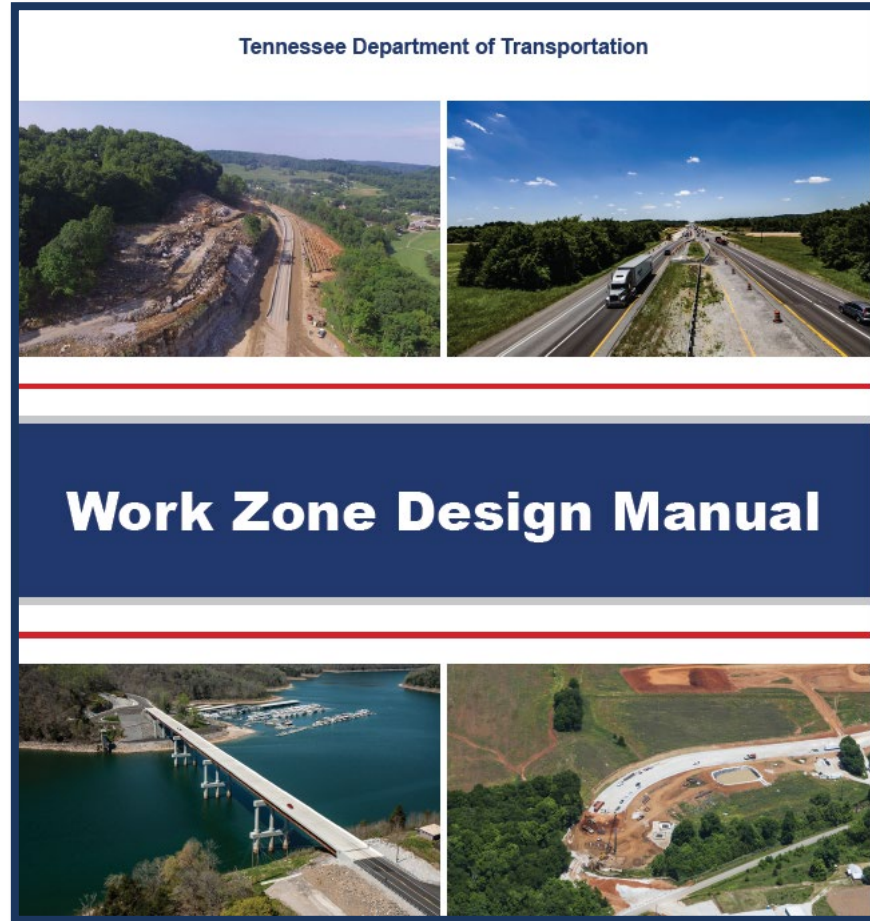


Crash Reports

Queue Analysis



Work Zone Design Manual



Work Zone Design Manual

Designing a safe work zone is a process

Document the TDOT work zone design practices, standards, devices, and technologies

Impacts to road users should be considered early in the design process

