TDOT/TRBA WZ Safety Committee:

Moving Safety Forward Together

Clay Culwell, TDOT Safety Director
Justin Wilson, Executive VP, Wilson & Associates, P.C.

What is the purpose?

For TDOT and TRBA to collaboratively review and discuss programs and processes of how we conduct business through the consistent use of traffic control plans, devices, specifications, standards, and employee safety.

Who is the Committee?

TDOT Side

Clay Culwell; TDOT Director of Safety
Andy Barlow, TDOT Director of Traffic Design
Michelle Nickerson, TDOT Traffic Design Manager
Jason Quicksall, TDOT State Work Zone Engineer
Amy Fiscor, TDOT Traffic Safety Enginer
Lee Bogle, TDOT State Safety Engineer
Lance Mcdonald, TDOT Safety Operations Manager
Ali Hangul, TDOT Design
Chuck Graves, TDOT Construction
Jamie Fitzpatrick, TDOT Construction
Danny Lane, TDOT Materials & Tests

Others

Industry Side

Alan Scobey, C & D Striping
Sherry Miller, SDM Construction
Michael Shirk, Wright Bros. Construction
Matt Smith, Stansell Electric
Brian Browning, RoadSafe
Scott Staggs, Talley Construction
Justin Jackson, Ford Construction
Randy Allen, Wilson & Associates
Justin Wilson, Wilson & Associates
Jon Wallace, Rogers Group
Matt Stubblefield, Horizon Signal
Adam Cooley, Superior Traffic Control
Nick Davis, Mid-State Construction
Jeremy Ramberg, Lehman Roberts
Eric Allen, Lehman Roberts
Kent Starwalt, TRBA
Others

When do we meet?

When do we meet?

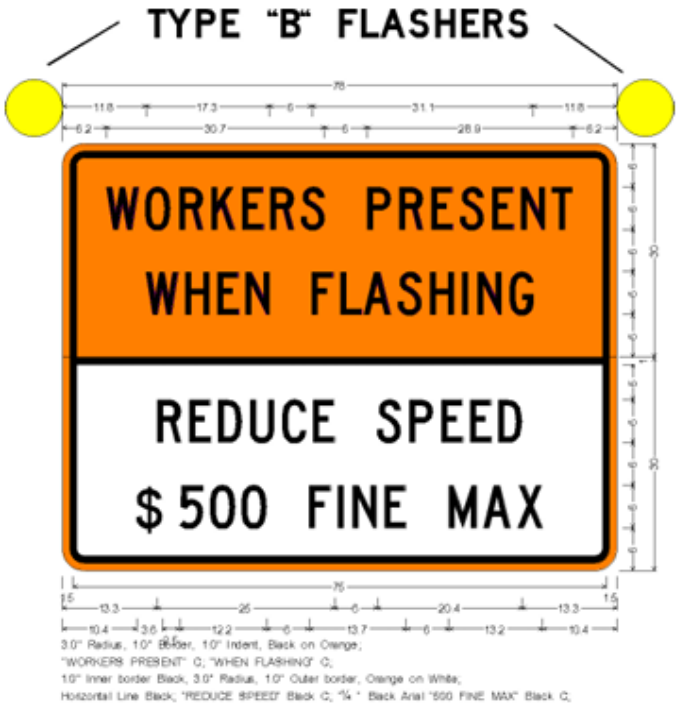
- In-person meetings to coincide with the TN Quality Asphalt Initiative conference in January and the TRBA mid-year meeting in July.
- Two virtual meetings in-between the two in-person meetings to basically make a quarterly schedule.
- Various smaller/task group meetings as-needed.

Current Committee Topics:

- Reminder to TDOT Designers to include
- Now permitting lights that can be activated remotely
- Possible changes to sign placement and frequency in the future

Workers Present Sign (TN-44)

The WORKERS PRESENT sign is to be used on all interstate construction projects in the event that reduced speed limits are requested and established by the contractor. All reductions must be approved by the Department. This sign is to be placed 1000' in advance of the active construction work zone. These signs shall be located on the right side and on the median side of the roadway (except on concrete median barrier wall sections).



TN-44
78" x 60"

Current Committee Topics:

Acceptable

Marginal

Unacceptable

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
CONSTRUCTION DIVISION
SUITE 700, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-1402
(615) 741-2414

BUTCH ELEY
DEPUTY GOVERNOR &
COMMISSIONER OF TRANSPORTATION

BILL LEE
GOVERNOR

MEMORANDUM

TO: **Regional Operations Staff, Contractors and Sub-contractors**

FROM: **Brian Egan, Director of Construction**

DATE: **January 13, 2025**

SUBJECT: **Condition and Maintenance of Work Zone Temporary Traffic Control Devices**

Federal regulations state that each agency shall develop guidelines to maintain the quality and adequacy of work zone temporary traffic control devices (TTCD) for the duration of a project. Section 712.07 of TDOT Standard Specifications requires the contractor to assume full responsibility to provide TTCDs that meet the "acceptable" category as described in the "*Quality Guidelines for Temporary Traffic Control Devices and Features*" published by ATSSA.

It is essential for the safety of the workers, inspectors, and the motoring public that all work zone TTCD's are correctly installed and maintained for proper visibility and to convey the intended message to the driver.

TDOT Circular Letter 712.07-01, provides some guidance and an inspection form for assuring the work zone TTCDs are properly installed and are in either a "Good" or "Poor" condition.

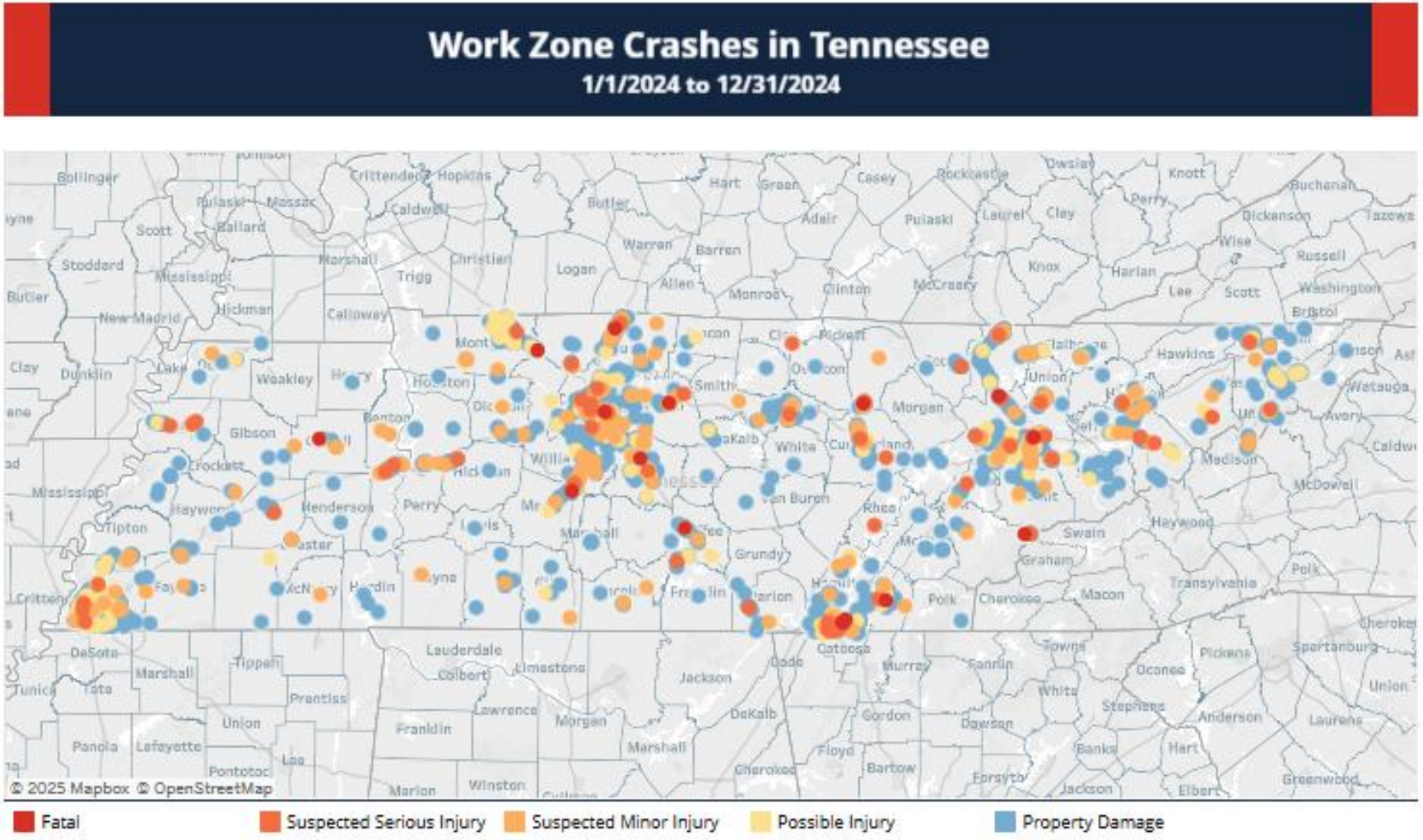
Unacceptable TTCD's have been observed recently throughout the state including drums, cones, arrow boards, changeable messages signs, and particularity, interconnected portable barrier rail (IPBR). TTCD's that are not in acceptable condition shall not be installed initially, and shall be removed and replaced (or cleaned, maintained, repaired, etc. if possible) if they

Current Committee Topics:

Issue: No formal list of approved Portable Signals.

Solution: Develop evaluation specifications for systems AND individual components to be added to QPL.

TN Work Zone Crash Stats

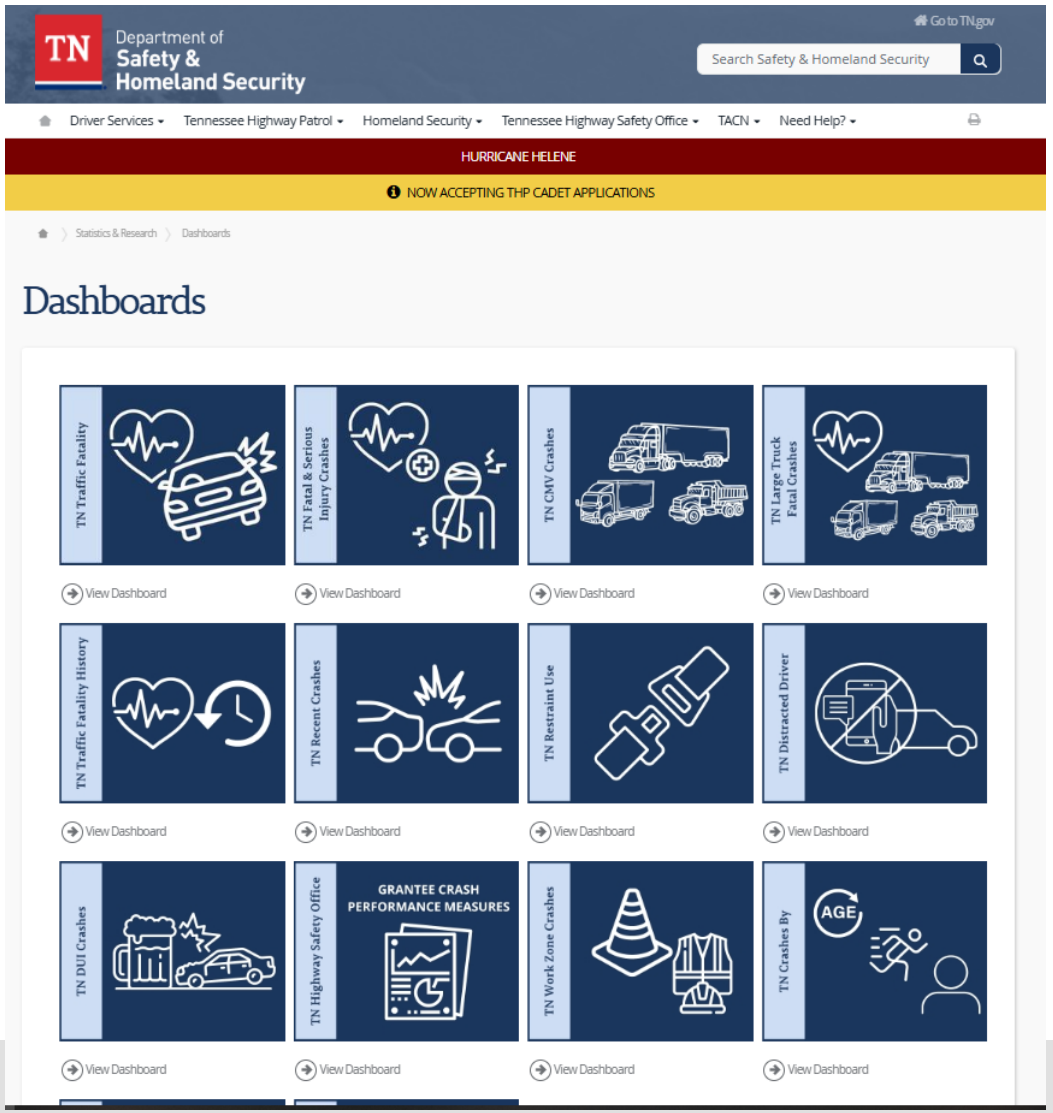


TN TDOT Department of Transportation

TRBA Tennessee Road Builders Association

TN Work Zone Crash Stats

Search: “TN Crash Data”



National Safety Initiatives:
Speed Safety Cameras in Work Zones

National Safety Initiatives:
Speed Safety Cameras in Work Zones

U.S. Department of Transportation
Federal Highway Administration

OFFICE OF SAFETY
Proven Safety Countermeasures

Speed Safety Cameras

Safe Speeds is a core principle of the Safe System Approach since humans are less likely to survive high-speed crashes. Enforcing safe speeds has been challenging; however, with more information and tools communities can make progress in reducing speeds. Agencies can use speed safety cameras (SSCs) as an effective and reliable technology to supplement more traditional methods of enforcement, engineering measures, and education to alter the social norms of speeding. SSCs use speed measurement devices to detect speeding and capture photographic or video evidence of vehicles that are violating a set speed threshold.

Safety Benefits:
Fixed units can reduce crashes on urban principal arterials up to:
54% for all crashes.[4]
48% for injury crashes.[4]

P2P units can reduce crashes on urban expressways, freeways, and principal arterials up to:
37% for fatal and injury crashes.[2]

Mobile units can reduce crashes on urban principal arterials up to:
20% for fatal and injury crashes.[5]

In New York City, fixed units reduced speeding in school zones up to 63% during school hours.[6]

For more information on this and other FHWA Proven Safety Countermeasures, please reference the: Speed Safety Camera Program Planning and Operations Guide.

The contents of this Fact Sheet do not have the force and effect of law and are not meant to bind the public in any way. This Fact Sheet is intended only to provide clarity regarding existing requirements under the law or agency policies.

FHWA-SA-21-070

Applications

Agencies should conduct a network analysis of speeding-related crashes to identify locations to implement SSCs. The analysis can include scope (e.g., widespread, localized), location types (e.g., urban/suburban/rural, work zones, residential, school zones), roadway types (e.g., expressways, arterials, local streets), times of day, and road users most affected by speed-related crashes (e.g., pedestrians, bicyclists).

SSCs can be deployed as:

- **Fixed units**—a single, stationary camera targeting one location.
- **Point-to-Point (P2P) units**—multiple cameras to capture average speed over a certain distance.
- **Mobile units**—a portable camera, generally in a vehicle or trailer.

The table below describes suitable circumstances for SSC deployment.[1]

Considerations

- SSCs can produce a crash reduction upstream and downstream, thus generating a spillover effect.[2]
- Public trust is essential for any type of enforcement. With proper controls in place, SSCs can offer fair and equitable enforcement of speeding, regardless of driver age, race, gender, or socio-economic status. SSCs should be planned with community input and equity impacts in mind.
- Using both overt (i.e., highly visible) and covert (i.e., hidden) enforcement may encourage drivers to comply with limits everywhere, not only at sites they are aware are enforced.
- Agencies should conduct evaluations regularly to determine if SSCs are accomplishing safety goals and whether changes in strategy, scheduling, communications, or public engagement are necessary.
- Agencies should conduct a legal and policy review to determine if SSCs are authorized within a jurisdiction and how the authorization and other traffic laws will affect a SSC program.
- Agencies should develop an SSC program plan with consideration of the USDOT SSC guidelines for planning, public involvement, stakeholder coordination, implementation, maintenance, evaluation, etc.[3]

Considerations for Selection	Fixed	P2P	Mobile
Problems are long-term and site-specific.	X	X	—
Problems are network-wide, and shift based on enforcement efforts.	—	—	X
Speeds at enforcement site vary largely from downstream sites.	—	X	X
Overt enforcement is legally required.	X	X	X
Sight distance for the enforcement unit is limited.	X	X	—
Enforcement sites are multilane facilities.	X	X	—

1 Speed Safety Camera Program Planning and Operations Guide. FHWA, (2023).
2 (CMF ID: 7218) Montella et al. "Effects on speed and safety of point-to-point speed enforcement systems". Accident Analysis and Prevention, Vol. 75, (2015). Note that this is an international study.
3 Speed Enforcement Camera Systems Operational Guidelines. NHTSA, (2008).
4 (CMF ID: 2915,2921) Shin et al. "Evaluation of the Scottsdale Loop 101 automated speed enforcement demonstration program." Accident Analysis and Prevention, Vol. 41, (2009).
5 (CMF ID: 7582) Li et al. "A Before-and-After Empirical Bayes Evaluation of Automated Mobile Speed Enforcement on Urban Arterial Roads." Presented at the 94th Annual Meeting of the Transportation Research Board, Paper No. 15-1563, Washington, D.C., (2015). Note that this is an international study.
6 Automated Speed Enforcement Program Report 2014-2017. New York City DOT, (2018).

ZERO IS OUR GOAL

- Now permitted in 18 states (including here).
- Federal funding available.
- TDOT recently participated in peer exchange with several other states.
- Still in the data gathering stage.

TN TDOT Department of Transportation

TRBA Tennessee Road Builders Association

Most Recent Agenda

Agenda/Discussion/Topics

1. **Welcome**

2. **ATSSA KY/TN Chapter** - Clay

3. **Traffic Design Standards Update** – attachments
    a. WZ Standard Drawing updates
    b. Lighting review and approval process for shop drawings
    c. DADs approved for use
    d. Surveillance Camera (Non-Hwy Use), new procedures for approval

4. **LPRs & Speed Cameras** (WZ specific)
    a. Updates and info.

5. **TDOT Roadside Safety Hardware Identification, Installation, and Inspection Handbook**
    a. Engineering Division leading development of guide – Barriers, crash cushions, end terminals,

6. **Construction WZ Training development**
    a. ATSSA Course Development for Construction Inspectors (part of ProPath Training)

7. **Revisions to TDOT inter-Agency Agreement with THP for the use of State Troopers in work zones.**

Questions/Comments/Contacts

Lee Bogle – TDOT
State Safety Engineer
Lee.Bogle@tn.gov
615.741.0908 Mobile: 931.675.3520

Justin Wilson – Wilson & Associates
Executive Vice President
jrwilson@wilsonpc.com
615.794.2275 Mobile: 615.347.4118

Clay Culwell – TDOT
Safety Director
Clay.culwell@tn.gov
615.253.3023 Mobile: 615.418.3351