

Chapter 4 Temporary Traffic Control

TTC is the control of traffic for road construction, utility work, maintenance operations, and incidents on or adjacent to the road.

4.1 Temporary Traffic Control

Temporary traffic control (TTC) is the control of traffic when road construction, utility work, maintenance operations, planned major events, and the management of incidents such as traffic accidents, wildfires, floods, and hazardous material spills, take place on or adjacent to the road and the normal use of the road is temporarily interrupted.

Follow the standards and principles contained in the *Manual on Uniform Traffic Control Devices* (MUTCD), Part 6, Temporary Traffic Control for all aspects of TTC. For TTC on low-volume roads—those with seasonal annual daily traffic (SADT) less than 400—refer also to the MUTCD, Part 5, Traffic Control Devices for Low-Volume Roads.

This chapter provides Forest Service specific information for TTC zones. Chapter 4A contains information on construction and maintenance signing and operations. Chapter 4B addresses incident management signing and operations.

4.2 Temporary Traffic Control Zones

TTC zones provide for the safe flow of traffic while reasonably protecting workers, responders to traffic incidents, and equipment. They are a necessary inconvenience for the traveling public. There are potential dangers and distractions, and road users may encounter unexpected or unusual situations, including reduced speed limits, road closures, travel delays, detours, heavy traffic, workers and incident responders on or adjacent to the road, and flagger stations.

According to national statistics, TTC zones are a dangerous place for workers and the traveling public. TTC zone crashes typically:

- Are more severe than other crashes.
- Kill drivers or their passengers, not road workers.
- Are rear-end crashes in the transition zone before the work area.
- Occur in the daytime on dry roads and in good weather.

The most common reasons for TTC zone crashes are:

- Inattentive and careless driving
- Driving too fast for conditions
- Failure to yield
- Following too closely

4.3 Workers in Temporary Traffic Control Zones

All personnel working in or adjacent to traffic should have proper safety training and wear required high-visibility safety apparel. TTC zone workers should keep in mind that, while they have an important job to do, they must ensure their own safety, the safety of the public, and the safety of their coworkers. Refer to the MUTCD, Chapter 6D, Pedestrian and Worker Safety, for additional information.

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4.4 Flaggers

Use flaggers when engineering judgment determines there is a need. Flaggers shall be certified and properly equipped. (Refer to AASHTO [American Association of State Highway and Transportation Officials] “Green Book,” *A Policy on Geometric Design of Highways and Streets*, Chapter 3, Elements of Design.)

Use flaggers when engineering judgment determines a need.

Flagging traffic is a critical and potentially hazardous part of providing a safe TTC zone. When workers are killed, it is often the construction traffic-control supervisor and the flagger who are the work zone casualties. Without question, flagging is one of the most dangerous traffic control jobs.

Flaggers have the responsibility of protecting themselves and their fellow workers as well as the motorists traveling through the TTC zone.

Training for flaggers should be a priority concern. In most states, flaggers are required to be certified before being allowed to perform flagging operations on roads. Flaggers must meet established minimum qualifications before being certified. The Web site www.flagger.com provides state-by-state information on flagging qualifications.

Flaggers working on any Forest Service project, event, or incident shall be certified. FLAGGER signs shall be used whenever flaggers are present on a road except in short-term, emergency situations, such as a traffic accident.

Memorandums of Understanding (MOUs) or other agreements with state Departments of Transportation may grant reciprocity to flaggers certified in other states to perform flagging duties when assigned to incident management activities.

A single flagger may be used if:

- Flaggers are required for short-length and short-duration projects, such as culvert or cattleguard cleaning on a low-volume road.
- The flagger is visible to traffic approaching in all directions.

Refer to the MUTCD, Chapter 6E, Flagger Control, for specific information on flagger qualifications, advance warning signs, methods and equipment, and required high-visibility safety apparel.

4.5 Advance Temporary Traffic Control Warning Sign Spacing

Advance warning signs, whether placed for construction and maintenance work or incidents, must precede the TTC location by sufficient distance to warn traffic and allow for perception and reaction of the driver. See Table 4-1.

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Table 4-1—Advance warning sign spacing for temporary traffic control

Speed (<i>mph</i>)	Distance from restriction to first sign and between subsequent signs (<i>feet</i>)
25 or less	100
30 to 45	350
More than 45	500

These distances are the distances in TTC zones such as Figure 4A-1 and 4B-1 through 4B-11 as well as in the MUTCD, Figures 6H-1 thru 6H-46, where they apply to NFSRs. For state and county highways, expressways, and freeways, refer to the MUTCD.

4.6 Sign Supports for Temporary Traffic Control

Crashworthy permanent or portable sign supports are required for all unshielded TTC signs located within the clear zone. Typically, signs needed in one location for longer than 3 days should be mounted on posts or other approved sign stands. See the MUTCD, Figure 6.F-1, for sign support exceptions. If the duration or scope of an incident is unknown and can change rapidly, (e.g., wildfires), approved portable devices may be used for the duration of the incident.

Lateral and vertical distances and crashworthy post requirements for mounting TTC signs are the same as for regulatory and warning signs and are detailed in Chapter 3C of these Guidelines.

Portable supports for temporary use must also be crashworthy. Several methods of mounting portable signs are shown in the MUTCD, Chapter 6F—Temporary Traffic Control Devices.

4.7 Channelizing Devices

Channelizing devices typically include drums, cones, tubular markers, vertical panels, and barricades. Detailed information on the use of these devices is found in the MUTCD, Chapter 6F—Temporary Traffic Control Devices.

4.8 Slow-Moving Vehicle Emblem

The slow-moving vehicle emblem (see Figure 4-1) consists of a fluorescent yellow-orange triangle with a dark red retroreflective border. The yellow-orange fluorescent color is highly visible in daylight. The retroreflective border defines the shape of the triangle in the daylight and creates a hollow red triangle in vehicle headlights at night.

The emblem is intended as a unique identification for, and should only be used on, vehicles that by design move slowly (25 miles per hour or less) on public roads. The emblem is not a clearance marker for wide machinery nor is it intended to replace the required lighting or marking of slow-moving vehicles. Neither the triangle nor its backing shall be altered to permit use of advertising or other markings.

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The material, location, and mounting of the emblem must be in accord with the American Society of Agricultural Engineers emblem for identifying slow-moving vehicles, ASAE R276,1967 or ASAE S276.2 9 (ANSI B114.1-1971). Refer to the United States Department of Labor Occupational Safety and Health Administration (OSHA) for more information (29 CFR 1910.145(d)(10)).

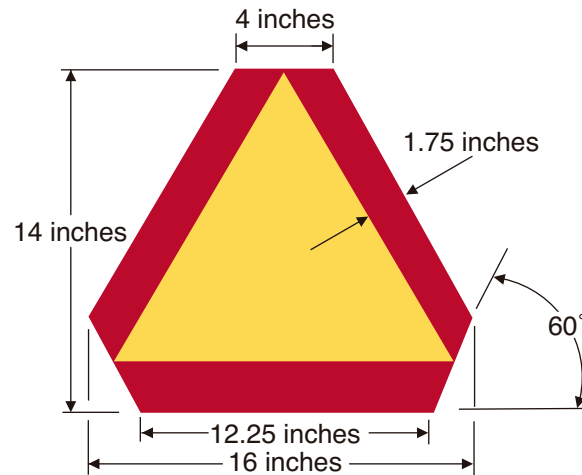


Figure 4-1—
Slow-moving vehicle
emblem.