



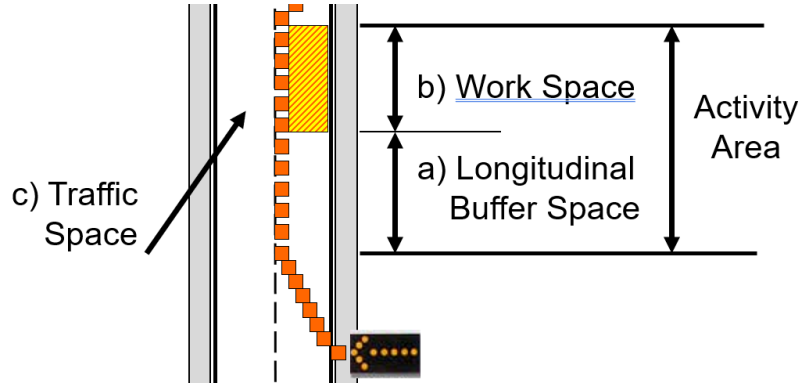
Work Zone Terminology

For New Employees/Traffic Control Technicians



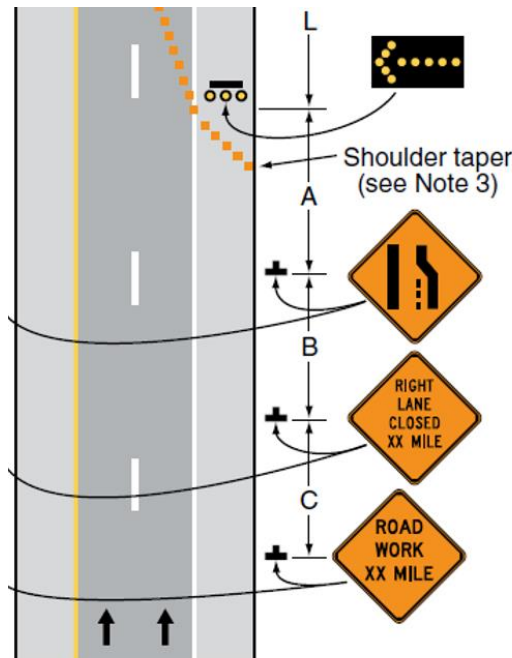
Activity Area

That part of a Temporary Traffic Control (TTC) zone where the work actually takes place. It consists of the work space, traffic space and buffer space(s).



Advance Warning Area

The area of a TTC zone used to inform the motorist what to expect ahead. This area may contain devices ranging from a single sign or vehicle warning light on a vehicle to a series of signs and the use of a portable changeable message sign (PCMS).

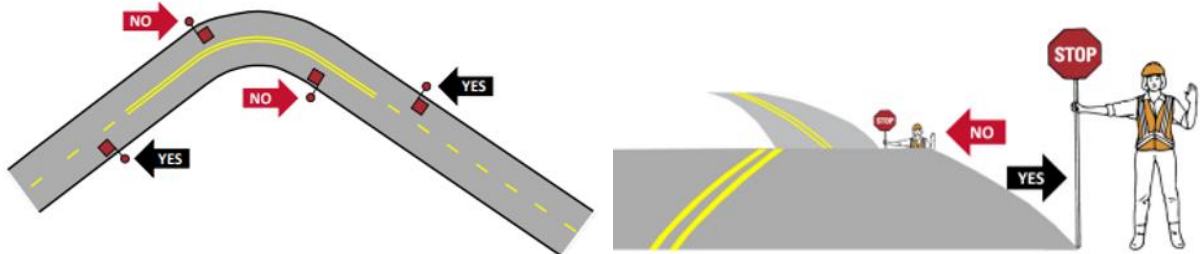


Advisory Speed

The recommended speed for all vehicles operating on a section of highway based on the highway design, operating characteristics and conditions.

Approach Sight Distance

The distance by which a motorist can visually identify a work space. This work space may be a flagger station, a lane closure, a slow moving or stopped vehicle, or any other situation requiring adjustments by the motorist.



(SCDOT FLAGGER HANDBOOK)

Arrow Board

A device with a matrix of elements displaying either flashing or sequential messages, including caution, arrow and chevrons. This provides warning and directional information to assist road users navigating through or around a TTC zone.



Attended Work Space

A work space is considered to be attended when the TTC devices are reviewed for knock-downs or other needed adjustments on an hourly basis.

Average Daily Traffic (ADT)

The average 24-hour volume of traffic during a stated time period divided by the number of days in that period.

Buffer Space

The space which separates traffic flow from a work area providing a margin of safety for both the driver and workers. It is important that the buffer space be free of equipment, workers, material and vehicles. (See diagram above in Activity Area. See also Lateral Buffer Space, Longitudinal Buffer Space.)

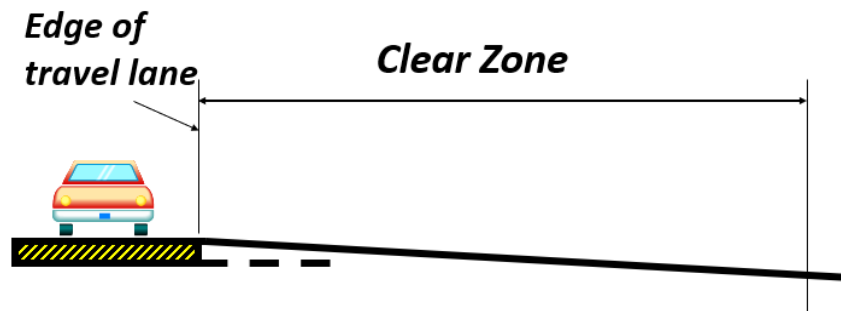
Channelizing Device

Devices such as cones, tubular markers, drums, vertical panels, barricades or longitudinal channelizing devices (LCD) used to separate vehicular traffic from work space, pavement drop-off, pedestrian or shared use paths, or opposing directions of vehicular traffic. They provide for smooth and gradual vehicular traffic flow from one lane to another, onto a bypass or detour or into a narrower traveled way.



Clear Zone

The work zone clear zone is the unobstructed (clear of obstructions, hazards or fixed objects), relatively flat area impacted by construction that extends outward from the edge of the traveled way.



Crash Truck

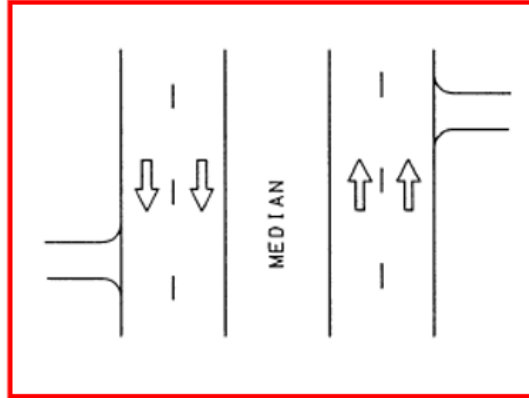
See TMA (Truck-Mounted Attenuator).

Crashworthy

A characteristic of roadside devices that have been successfully crash tested in accordance with the National Cooperative Highway Research Program (NCHRP) Report 350, "Recommended Procedures for the Safety Performance Evaluation of Highway Features" or the American Association of State Highway and Transportation Officials (AASHTO) "Manual for Assessing Safety Hardware (MASH)."

Divided Road

A highway or two roadways where opposing traffic is separated by a median (ditch, barrier, curbing, etc.), and where the median is generally wide enough to place TTC devices.



Downstream Taper

The taper at the end of the activity area which guides traffic back into its original lane. When used, this taper is a minimum length of approximately 100 feet with a 20-foot spacing between channelizing devices. (See diagram for Activity Area, downstream taper is in termination area after activity area.)

Fixed Object

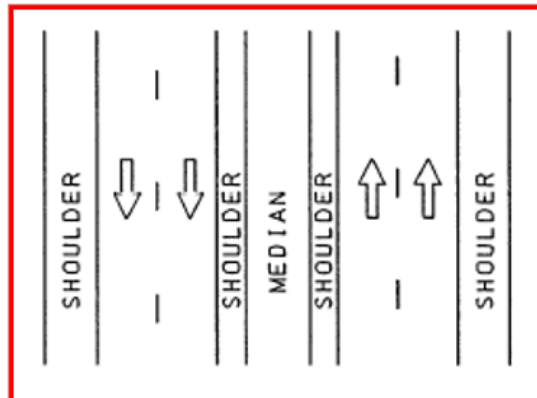
Hazards that are firm, unyielding and greater than 4 inches in height along the roadside such as bridge piers, abutments, footings, walls, posts, trees, construction equipment, supplies, stockpiles and large boulders.

Flagger

A person, other than a uniformed traffic control officer, who actively controls the follow of vehicular traffic into and/or through a temporary traffic control zone using hand-signaling devices or an Automated Flagger Assistance Device (AFAD).

Freeway

A divided highway with limited access (i.e., has ramps and no at-grade intersections).



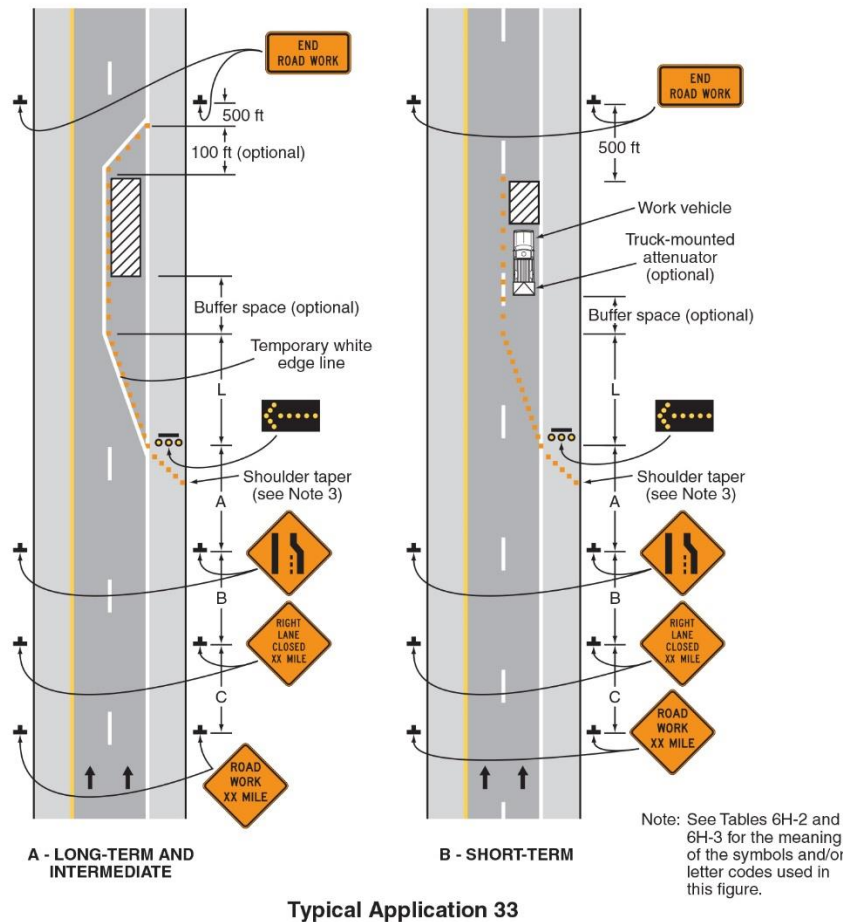
High Speed Road

A roadway where the posted speed limit is 45 miles per hour or greater.

Lane Closure

A closure of one or more lanes of the roadway to traffic. Work operations that restrict adjacent lane width should consider various lane closure alternatives depending upon volume and speeds on the roadway.

Figure 6H-33. Stationary Lane Closure on a Divided Highway (TA-33)



Lane Width

For traffic control purposes, a minimum lane width of 10 feet should be provided. Freeways or limited access roadways may require greater measurements.

Lateral Buffer Space

The space that separates the traffic space from the work space. It is typically the extra space provided between traffic and workers, excavations, pavement edge drop-offs or an opposing lane of traffic.

Longitudinal Buffer Space

The distance between the transition area and the work space. If a driver does not see the advance warning or fails to negotiate the transition area, a buffer space provides room to stop before the work space. Minimum Longitudinal Buffer Spaces are included in the MUTCD. (See Activity Area diagram.)

Low Speed Road

A roadway where the posted speed limit is 40 miles per hour or less.

Low Volume Road

A roadway with volume less than 400 ADT.

Merging Taper (L)

This taper is used on a multi-lane road to close a lane and combine its traffic from that of the adjacent lane. Its length is dependent on the posted speed of the roadway. Higher speeds require a longer distance for traffic to merge lanes. Minimum Merging Tapers Lengths (L) are included in the MUTCD.



MUTCD

Manual on Uniform Traffic Control Devices. Contains minimum standards for traffic control on all roads and streets open to the public in the United States.

Multi-Lane Road

A roadway where two or more lanes of traffic travel in the same direction. A multi-lane roadway may be classified as either undivided or divided.



Motorist

An operator of a motorized vehicle intended to be used on a roadway.

Occupied Work Space

A work space is considered to be occupied when workers are present within the work space. Temporary Traffic Control (TTC) devices should continuously be reviewed by workers and adjustments made as needed.

Off Shoulder

A work space located primarily off of the shoulder, or which causes little or no restrictions on the use of the shoulder. Generally, 15 or more feet from the edge of the travel way, behind a barrier such as guardrail or outside of the clear zone.

One-Lane, Two-way Taper

The taper used on a two-lane, two-way road to change the road into a single lane of two-way traffic. It is primarily used for flagging operations and other traffic control situations. It is typically 50 to 100 feet in length and contains six equally spaced channelizing devices.



Pilot Car

A specially marked vehicle that leads motorists through a work zone.

Portable Changeable Message Sign (PCMS)

A sign either trailer-mounted or vehicle-mounted that is capable of displaying more than one message, changeable by remote or automatic control.

Posted Speed Limit

The speed limit determined by law and shown on regulatory Speed Limit signs. It is used in the Temporary Traffic Control to determine the spacing of TTC devices and the lengths of various tapers on the TTC layouts.

Protection Vehicle

The vehicle that is placed in advance of the work space and equipment to block errant motorists from entering the work space.

Road, Roadway

That portion of a highway improved, designed or ordinarily used for vehicular travel and parking lanes, but exclusive of the sidewalk, berm or shoulder even though such sidewalk, berm or shoulder is used by persons riding bicycles or other human-powered vehicles.

Roll Ahead Distance (R)

The recommended minimum distance from the front of the Protection Vehicle to the beginning of the work space. A Protection Vehicle may be used in a mobile operation to provide extra safety for the workers. Typical Roll Ahead Distances (R) are included in the TTC Distance Charts.

Rural Roadway

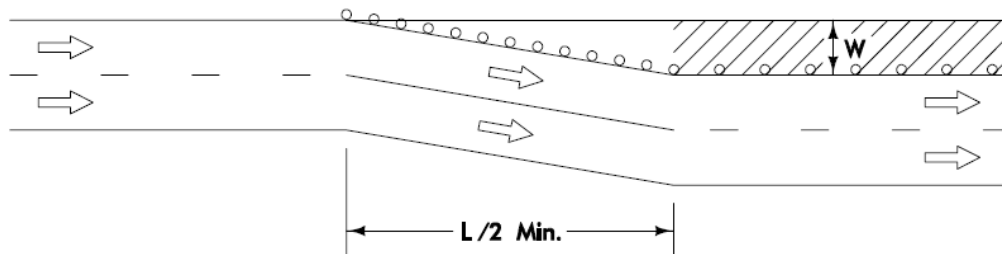
A highway where traffic is normally characterized by lower volume, higher speed, fewer turning conflicts and fewer conflicts with pedestrians.

Shadow Vehicle

Vehicle(s) placed in advance of the work space in a mobile operation to provide advance warning to motorists.

Shifting Taper (L/2)

The taper used to move all traffic lanes from the normal path onto a different part of the roadway such as the shoulder (L/2).



Shoulder Closure

A closure of the roadway shoulder for work operations. The shoulder becomes unusable by traffic for vehicle maneuvers or break-downs. TTC layouts for work operations using or on a shoulder are dependent on the type of shoulder usage and duration.

Shoulder Taper (L/3)

The taper used to close the shoulder to traffic so that shoulder work can be performed or equipment can be placed on the shoulder. Since this taper is used to guide errant traffic back into its normal lane path, it does not require a full merge distance. The taper length is reduced to one-third of a merging taper length (L/3).



Sign Spacing

The distance between signs or between a sign and some other location or device within the TTC zone. This distance is determined by the posted speed limit. Signs should be placed to allow adequate time for a motorist to read the signs and react accordingly.

Spotter

A person on the work crew whose sole duty is to warn the work crew of impending danger. The Spotter is not a Flagger. The Flagger's role is to direct traffic.

TMA (Truck/Trailer Mounted Impact Attenuator)

Energy-absorbing devices attached to the rear of vehicles in work zones that primarily reduce the severity of impacts from errant vehicles.



Temporary Traffic Control (TTC) Plan

A plan describing the traffic controls to be used for facilitating vehicle and pedestrian movements through a TTC zone. May range from a simple plan such as Typical Application (TA) from the MUTCD to a very detailed computer designed plan with a full range of drawings and notes.

Temporary Traffic Control (TTC) Zone

An area of a highway where road user conditions are changed because of a work zone or incident by the use of TTC devices, flaggers, uniformed law enforcement officers or other authorized personnel.

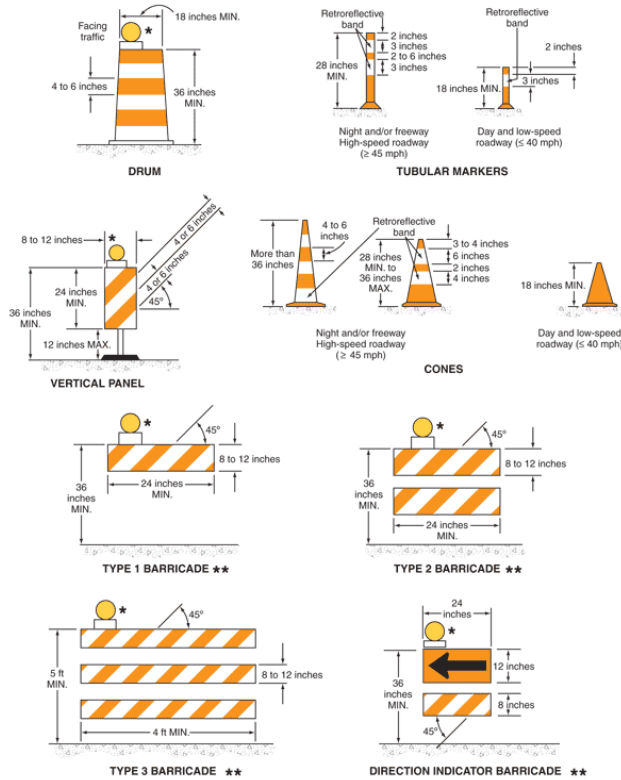
Termination Area

That part of a TTC zone located beyond the work space which guides traffic back into its normal traffic path. A longitudinal buffer space may be used between the end of the work space and the beginning of the downstream taper. (See Activity Area diagram, Termination Area is after Activity Area.)

Traffic Control Device

A sign, signal, marking or other device used to regulate, warn or guide traffic, placed on, over or adjacent to a street, highway, pedestrian facility or shared-use path by authority of a public agency having jurisdiction.

Figure 6F-7. Channelizing Devices



* Warning lights (optional)
** Rail stripe widths shall be 6 inches, except that 4-inch wide stripes may be used if rail lengths are less than 36 inches. The sides of barricades facing traffic shall have retroreflective rail faces.

Traffic Space

That part of the roadway open to traffic that is next to the activity area. Traffic routing is provided with channelizing devices of various sizes and shapes listed in the MUTCD. (See Activity Area Diagram.)

Transition Area

That part of the TTC zone that moves traffic from its normal path or lane into the traffic space. This movement of traffic is done through the use of channelizing devices and directional signing placed in various types of tapers. (See Activity Area diagram, Transition is after Advance Warning Area and before Activity Area.)

Two-Lane, Two-Way Road

A roadway consisting of two opposing lanes of undivided traffic.

Undivided Road

A roadway where opposing traffic lanes have no physical separation barriers except pavement markings (where required).

Urban Roadway

A type of street normally characterized by relatively low speed, wide ranges in traffic volume, narrower roadway lanes, frequent intersections/driveways, significant pedestrian traffic and/or more roadside obstacles.



Work Duration

The length of time any work operation occupies a specific location or causes a traffic obstruction without changing the location. This time is measured from the first disruption to traffic until the total clearing of the area. The following durations are defined in overlapping intervals. TTC layouts for longer durations may always be used for shorter durations, especially when roadway attributes such as traffic volume and speed, and the work space location may warrant higher levels of traffic control.

- Mobile – When an operation is continuously moving or stopped in one location for periods of 15 minutes or less. The TTC devices are typically vehicle-mounted. The work area should change by at least the Decision Sight Distance (D) for it to be considered a change in location.
- Short Duration – When an operation stays in one location during daylight conditions from 15 minutes to one hour.
- Short Term – When an operation stays in one location during daylight conditions from 15 minutes to 12 hours.
- Intermediate Term/Night – When an operation stays in one location during daylight conditions from 15 minutes to no more than three days or stays in one location during hours of darkness.
- Long Term – When an operation stays in one location for more than three days. A project specific traffic control plan is typically required.

Work Space

That part of the TTC zone closed to traffic and set aside for workers, equipment, and materials. The space requirements for a specific TTC zone will determine the type of TTC layout that is appropriate for the project. The layout will specify the appropriate sign locations, flagger stations, and tapers depending on the type of work space. (See Activity Area Diagram.)

Work Zone

An area of a roadway where road user conditions are changed because of a construction, maintenance, utility, planned special events or emergencies. Work zones are marked by the use of TTC devices, flaggers, uniformed law enforcement officers or other authorized personnel.

Work Zone Speed Limits

A regulatory speed limit in a Temporary Traffic Control (TTC) zone.

Commonly Used Acronyms and Abbreviations in Temporary Traffic Control

AB – Arrow Board	PE – Professional Engineer
ATSSA – American Traffic Safety Services Association	PRS – Portable Regulatory Sign
CFR – Code of Federal Regulations	RSDU – Radar Speed Display Unit
HAR – Highway Advisory Radio	S – Speed (Usually posted speed, prevailing speed or off peak 85 th percentile speed)
L – Length of a merging taper	TA – Typical Application
LEO – Law Enforcement Officer	TCD – Traffic Control Device
MASH – Manual for Assessing Safety Hardware	TCP – Traffic Control Plan
MOT – Maintenance of Traffic	TE – Traffic Engineering
MUTCD – Manual on Uniform Traffic Control Devices	TMA – Truck Mounted Attenuator
NCHRP – National Cooperative Highway Research Program	TTC – Temporary Traffic Control
PCMS – Portable Changeable Message Sign (Message Board)	W – Width of transition
	WZ – Work Zone
	WZTC – Work Zone Traffic Control

References:

2009 MUTCD; MNDOT Field Manual; FL Design Standards 102-600; TRB 1230-001; VDOT WZTCT