

Work Zone Signing

As a general rule, signs should be located on the right-hand side of a two-way roadway and on both the right and left sides of a multi-lane divided roadway. See the "TTC Distance Charts" for the advance warning sign spacing distance called **A**. When special emphasis is needed, signs may be placed on both the left and right sides of a two-way roadway. Signs, although ordinarily mounted on posts for long term operations, may be mounted on or above barricades or on temporary supports.

Signs mounted on temporary supports should not be placed in the open traveled lane where they pose a hazard to traffic nor where pedestrians are expected to travel. Generally these signs are placed on the shoulder or in the parking lane of the street or highway. The signs should not be blocked from view by parked vehicles, trees or other sight obstructions on or near the roadway.

Signs shall not be mounted on existing traffic signs, posts or other utility structures without permission from the proper authority. All signs shall be mounted so that the sign face is perpendicular to the roadway and vertically plumb in accordance with the Quality Standards starting on page 6K- 91. The bottom of signs mounted on barricades or temporary supports shall be no less than one foot above the traveled way. All regulatory signs on portable supports shall be mounted with a minimum mounting height of 4 feet measured from the ground to the center of the sign face.

Some activity areas move slowly down a roadway and away from the operation's advance signing. The distance from the last advance warning sign to the activity area should not allow the motorist to forget the existence of the temporary traffic control zone. For high-speed streets and rural highways, the maximum distance from the last sign to a point where the driver detects the activity area shall not exceed one mile. In urban areas, the number of intersections shall be considered and this distance reduced accordingly.

All advance warning signs shall be at least 48 x 48 inch in size when used on high speed roadways. Warning signs used on low speed roadways shall be at least 36 x 36 inch in size. **Smaller signs may be used as approved by the governing road authority** where larger signs become an additional hazard to motorists and pedestrians.

Advance warning should be installed for drivers entering the TTC zone from cross streets. ROAD WORK AHEAD signs on intersecting roadways shall be installed if the motorist will not encounter another advance warning sign prior to reaching the activity area except for mobile operations.

All signs used at night shall be retroreflective with a material that has a smooth sealed outer surface that shows the same shape and color both day and night. Non-retroreflective mesh signs shall not be used at any time. Retroreflectorized roll-up signs may be used for daytime, and for nighttime only when workers are present to monitor the signs.

On multi-lane divided roadways, where the median shoulder is narrow (less than 6 feet), the 48 x 48 inch advance warning signs, as shown on the TTC layouts, may not fit on the left side of the roadway. Where this situation occurs, one of the following options may be used:

- A.) Reduce the left side signs sizes, or
- B.) Eliminate the left side signing, use an additional RIGHT LANE CLOSED (or LEFT as appropriate) sign on the right side, and require the use of an arrow board on the shoulder at the beginning of the lane closure taper.

Optional Signs

Several signs are shown on the TTC layouts as optional or have factors that may make them optional. Some advance warning signs may be omitted for low speed roads and/or if the duration will be less than an hour. Read the associated notes on each layout for options. The ONE LANE ROAD AHEAD sign is an example of a sign that is only required for higher speeds. The BE PREPARED TO STOP sign is shown as optional on most TTC layouts. This sign is usually added to the complement of signs when restricted sight distances warrant additional warning to the motorist or the advance warning area becomes extremely long due to sight distances or a move of the operation.

All advance warning signs shall be removed, covered, or turned to face away from traffic when they are no longer required or appropriate.

Crashworthy Testing Compliance

All temporary traffic control devices, including Type A and Type B channelizing devices, Type III barricades, ballast systems and sign support structures, used on any roadway open to public travel shall be crashworthy when installed facing traffic or turned away from traffic.

FHWA policy requires that all roadside appurtenances, including temporary traffic control devices, 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)."

	R1-1		R11-3a		W8-1
	R1-2		R11-4		W8-1a
	R1-X3		W1-4R		W8-8
	R3-1		W1-4L		W8-9
	R3-2		W1-6		W8-11
	R4-7c		W3-1		W8-15P
	R10-6R		W3-2		W8-23
	R10-6L		W3-3		W9-3a
	R9-9		W3-3		W13-1P
	R9-10		W3-4		W20-1
	R9-11R		W4-2R		W20-1a
	R9-11L		W4-2L		W20-4
	R11-2		W7-3aP		W20-7

SIGN CODES QUICK REFERENCE

For additional signs and information on typical sizes and usage, see the Minnesota Manual on Uniform Traffic Control Devices <http://www.dot.state.mn.us/trafficeng/publ/mutcd/index.html>

Figure 6K-8

	W20-100P		W21-X5		W22-2
	W20-X3R		W21-X5a		W22-3
	W20-X3L		W21-X5L		G20-4
	W20-X12		W21-X6		G20-X1
	W20-X13R		Flagger Paddle		G20-X7
	W20-X13L		W21-X7		
	W20-X16		W21-X9		G20-X9
	W20-X18		W21-X10		G20-X10
	W21-1		W21-X11		G20-X11
	W21-X4aR				G20-X12
	W21-X4aR		W21-X12		
					
	W21-X4aRA		W22-1		G20-X14
	W21-X4aRS				

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