

Work Zone Safety

Knowing the Stats:

In the United States, 1,010 people were killed in 2006 in motor vehicle crashes that occurred in work zones. In Massachusetts, there were 11 fatalities in 2006 that occurred in work zones. It is the responsibility of any transportation agency to see that work zones are as safe as possible.

Date Source:
Workzonesafety.org

Background

Construction and maintenance are ongoing activities aimed at keeping our roadways safe and efficient for roadway users; however, the very work zones that contain these construction and maintenance activities can create an unexpected condition along the roadway for motorists. Both the Federal Highway Administration (FHWA) and the Commonwealth of Massachusetts have established formal policies to help keep work zones safe for both drivers and workers, alike.

A work zone should be established at any location where construction or maintenance work is ongoing, which may include long-term or temporary work zones as well as moving work zones. The work zone should be set up such that traffic is separated from potential hazards, whether they be on the shoulder or in the center of the traffic lane. Work zones should last for the duration of time work is being performed. If necessary, a work zone should remain in place even when the worker are not present to separate traffic from roadway hazards.



Sample ROAD WORK AHEAD Warning Sign
(Source: MUTCD)

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A fundamental safety element in a work zone is managing vehicle speeds. Some measures that help manage speeds are posting signs for a speed reduction by the work zone or providing advance signage alerting motorists of the potentially unexpected conditions ahead. Yet another method is to reduce lane width, abiding acceptable guidelines and standards, within the work zone itself. Although this may already occur as a result of construction, it may encourage drivers to find a safer, slower speed.

Construction of an adequate transition and termination zone before and after the designated work zone is another important consideration. This will smoothly move traffic into a path away from workers and equipment and safely back into the lane following the work zone, which can typically be done using signage. Dimensions for these geometric transitions can be found in the MUTCD ([MUTCD Part 6](#)). This signage should inform the driver of the geometry of any potential lane changes as well.

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More Safety Tips

Work Zone Safety Tips

Education – Informing the public about upcoming or ongoing construction or maintenance can provide enhanced safety and operational benefits. Specifically, informing the public regarding a work zone may allow them to seek out alternate routes and be aware of the work zone.

Signage – Erecting temporary signs declaring the presence of a work zone ahead allows drivers added time to slow down or stop when the work zone is reached. Signs should be placed with adequate sight distance for drivers to react appropriately. Signs should follow MUTCD standards ([MUTCD Chapter 6F](#)). Any temporary signs should not impact existing signage. Another consideration is the physical condition and retroreflectivity of the sign.

Barriers – Limit access to the work zone. Allow for vehicular traffic to pass through the work zone, but delineate the zone with barriers to provide safety to the workers. This doesn't necessarily require the use of "Jersey Barriers"; something as simple as traffic cones, reflectorized plastic drum barrels, or Type III barricades.

Police Presence – Massachusetts requires a police presence within a work zone. A police officer helps direct traffic and increase work zone visibility.

Pedestrian, Bike, and Transit Accommodations – Pedestrian and bicyclist safety is as important as motor vehicle safety. Make accommodations for any work zone that shifts pedestrians or bicyclists out of their normal path. A temporary sidewalk or temporary bike lane is one possible solution. If the work zone obstructs a bus stop or roadside pull out, create temporary ones to accommodate users. ([MUTCD Chapter 6D](#))



Pedestrian and Bicycle Detour Sign (M4-9aL)

Lighting – An additional safety measure is to provide additional lighting to the project site, which may allow drivers to better see obstructions and possible hazards at night.

Important Reminder!

All work zone signs and other traffic control devices shall comply with the MUTCD Part 6



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Detour Sign
(M4-9R)

In some instances it becomes necessary to set up a detour route to divert traffic from the work zone. A detour should be clearly marked with signage that conveys the new travel path to the driver. This includes signs warning of a detour, signs that direct the path of travel, and a sign that ends the detour. Detour signage must lead drivers back to their original path.

End Detour
Sign (M4-8a)



Work Zone Signage Choices

Although the signs below do not necessarily represent the actual sequence of signage within a work zone, they do provide information about various signs that may prove useful regardless of the work zone location.



Give ample time and sight distance for drivers to realize that they are approaching a work zone. (Example Sign W21-1a)



If the roadway path has changed, give ample time and distance to drivers so they know what the roadway geometry will be in the upcoming work zone. (Example Sign W20-5R)



If the roadway changes path, show the change in geometry of the roadway so that the driver can prepare for any required maneuvers. (Example Sign W1-4R)



If the work zone creates potential roadway hazards, alert drivers of those hazards. This includes pavement changes, roadway dips, or bumps, as shown here. (Example Sign W8-1)



Just as at the end of a detour route, tell drivers where the work zone has ended and where they may proceed with their normal traffic flow. (Example Sign G20-2)

Resources

The Manual on Uniform Traffic Control Devices (MUTCD)

Published by the FHWA, the MUTCD defines the standards used by transportation professionals nationwide to install and maintain traffic control devices on all streets and highways. The most recent version (2003) can be found at <http://mutcd.fhwa.dot.gov/>

The National Work Zone Safety Information Clearinghouse

This web site is dedicated to providing comprehensive information to improve motorist, worker and pedestrian safety in roadway work zones. Available at www.workzonesafety.org

Standard Details & Drawings for the Development of Traffic Management Plans

Details and drawings developed by MassHighway for the purpose of standardizing the temporary Traffic Management Plans used to control traffic during road and bridge construction projects. These drawings should meet the majority of typical work zone setups, but shall also be used as examples for more customized applications. Available through MassHighway at www.mhd.state.ma.us



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