

Highway Construction Zone Safety

OCTOBER 2021

While construction zones create additional hazards for drivers, highway workers are the most at risk. Sudden stops, dirt and mud, poor highway conditions, driver stress and frustration, inadequate highway markings and the lack of an escape route due to barricades and heavy equipment help create a recipe for disaster in construction zones.

According to the National Highway Traffic Safety Administration, (NHTSA) hundreds of people lose their lives in highway work zone accidents, both drivers, passengers and construction workers. Thousands are injured every year.

Safety Mechanisms

Because one of the deadliest hazards to highway workers is oncoming traffic, creating a safe environment for traffic is a major priority for project engineers and contractors. Begin every job with a written safety plan. The Manual on Uniform Traffic Control Devices (MUTCD) is a good place to start.

Warning Signs and Road Barriers

Once the work order has been issued, the contractor is usually responsible for erecting advanced signs warning the public of impending construction. This also includes modifying the speed limit and notifying drivers of any lane closures. The contractor is responsible for seeing that all signs and barriers are in good working order for the duration of the project.

Signage should conform to practices in the MUTCD, as inadequate warnings is the basis for the majority of highway construction accidents and litigation. Consider videoing the job site and signage for legal defense.

Signs, which can be mounted atop vehicles to display messages, arrows or other communication concerning traffic flow should be used whenever possible due to their high visibility from far distances.

Inside construction zones, bright reflective tape, orange cones placed 6-10 feet apart, barricades with flashing lights, reflective barrels, raised reflective pavement markers and reflective fencing should be used to indicate driving hazards and the correct flow of traffic.

Barriers to protect highway workers from traffic should also be considered, especially for work on freeways or in roadways where speeds typically exceed 50 mph.

Placement of signs and barriers should take into account driver reaction times. While three seconds is average, conditions such as time of day, traffic congestion, weather, visual complexity of the scene, road grade steepness and others, all contribute to a driver's ability to



process information about roadway changes and react in time to safely maneuver through them. A Federal Highway Administration study indicates drivers need 1275 feet to react to an obstacle.

Flaggers

When a lane or shoulder must be closed or used by construction workers, use flaggers to safely guide traffic around the hazard. Flaggers should be stationed 200-300 feet before the construction site on open highways and interstates as dictated by speed, project specifications and other conditions. This distance may be reduced in urban areas.

Safety Garments

Flaggers, as well as construction workers, should wear bright-colored or orange work vests or clothing during the day and reflective vests at night. Hardhats should also be worn when on the jobsite.

Warning Horns

Flaggers can be equipped with horns to alert workers of an approaching danger.

Training

Supervisors and workers should be trained in the hazards of working on roadways. Flaggers should be instructed on uniform hand signals that are crisp and easily understood. Everyone should know emergency procedures and the correct placement of traffic control devices.

Driver Behavior

Even with these safety measures in place, driver behavior is the most common cause of construction zone vehicle accidents. Speed, inattentiveness and impatience all contribute to construction zone accidents.

Many states, such as *Louisiana, passed laws that require judges to double or triple speeding fines that occur construction zones.

One of the most effective safety methods is strict enforcement of state laws and local ordinances by law enforcement. Using additional police officers to patrol constructions zones may be worth the additional expense. Others have found unattended police cars and radar detectors help reduce speeds in construction zones. Another option is the use of pilot vehicles.



Inspect Work Site

Contractors should inspect barricades and traffic warning devices on a daily basis. Replace or repair any barricade or warning device that are found defective and clean any dirty signage regularly for maximum visibility.

Safety equipment, such as back up horns and reflective devices, on heavy equipment and trucks should be regularly tested and maintained in good working condition.

Rotate Flaggers

Management should ensure flaggers remain fresh by rotating them at least once an hour to reduce complacency and fatigue.

Work Zone Clearinghouse

For more information on construction zone safety visit the National Work Zone Safety Information Clearinghouse website www.workzonesafety.org.

*Louisiana Revised Statue 32:57-H: If a person operating a motor vehicle exceeds the speed limit on the portion of a highway which is under active construction and construction workers are on site, or which is in the process of being repaired and construction workers are on site, the fine shall be twice the standard fine imposed.

