Automated Speed Enforcement (ASE) systems, consisting of traffic enforcement cameras, photo enforcement programs, or speed cameras, are used to more strictly enforce speed limits in work zones. ASE systems help improve work zone safety by identifying drivers who exceed the posted speed limit by a certain amount, who are then issued citations. Use of ASE systems is especially beneficial at work zones in high-speed areas. ASE systems typically include signage, placed well before the speed camera installation, clearly indicating that ASE systems are in use and specifying the lowered speed limit. Agencies are highly encouraged to deploy a speed display trailer informing drivers of their vehicles’ speed as they enter the enforcement area.

ASE systems in work zones function similarly to permanent speed camera installations used in many jurisdictions to enforce speed limits through automatic citations. These permanent setups are unmanned and often installed near schools or roads with high crash or fatality rates. Important differences include the permanence of the equipment and, in most cases, the requirement that vehicle mounted work zone ASE systems be continuously manned during operation. The permanent installations are often used in lower speed settings, while the work zone ASE systems are only recommended for roadways with a posted speed limit of 45 mph or higher.

What Are Its Primary Benefits?

ASE systems help in slowing down traffic prior to the work zone which enhances both motorist and construction crew safety.

The advance warning signs recommended for these systems alerts drivers to the upcoming work zone and the reduced speed limit associated with it. These systems have been shown to significantly reduce the number of drivers exceeding the posted speed limit, the number of crashes in the work zone and the number of injuries and fatalities due to crashes in the work zone.

While there has been occasional public backlash against the use of speed cameras in some locations, the use of ASE systems in work zones is widely supported by the public \(^1\). Overall, the program has proven to be very effective at obtaining voluntary compliance to the speed limits from most drivers.

\(^1\) http://www.ruralsafety.umn.edu/events/aseworkzones/documents/may1_ase_webinar_slides.pdf
Where Are Work Zone ASE Systems Effective?

ASE systems can be considered in the following circumstances:

- There is an active work zone on an expressway or controlled access highway (speed limit of 45 mph or higher).
- Workers are exposed or there are motorist hazards (lane shifts, lane splits, lane width reductions, closed shoulders, rough pavement, etc.)
- The work zone will remain active over a long period of time.
- There are no significant obstructions to line of sight for the speed camera.

Considerations When Deploying ASE Programs

- Warning signs should be placed well before drivers arrive at the work zone to inform them that an ASE system is in use.
- In most cases the systems must be continuously manned during deployment.
- The vehicle mounted setup should be placed behind a protected area (preferably behind a barrier or guiderail, otherwise behind a traffic control device or on the shoulder).
- The grade of the roadway and any other features must not impair visibility of the setup.
- Legislation may be required to authorize the use of ASE systems in some jurisdictions.
- ASE systems are not intended to replace other work zone safety operations.
- Because each construction project differs, the selection, application and location of these devices should be determined on a project-by-project basis.

Findings

Implementation of an ASE system in Maryland has resulted in a significant increase in work zone safety. In addition to an 80 percent reduction in speeding violations, as shown below, fatalities have dropped by half in the three years since the Maryland program's inception.[2]

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