

CSI Country-Wide Case Study Safety Strategy Discussion

Construction Safety Investigator



Instructions:

The objective of this tool is to provide field supervisors with information to proactively engage workers and discuss safety related concerns that they may encounter. Safety discussions typically pertain to all activities that workers will be involved in that may have the potential for safety related exposures. This case study is based on facts and materials developed and first published by the agency/organization identified in the section below entitled Source of Case Study Investigative Information.

Case Day:

September 2022

Accident Type:

Work Zone Flagger Accident — Struck by

Relevant Laws, Rules, and Codes May Include:

29CFR 1926.20(a)(1); 29 CFR 1926.20(b)(2); 1926.20(f)(2); 1926.21; 1926.201; 1926.200(g); Manual on Uniform Traffic Control Devices (MUTCD) Ed. 2023; American Traffic Safety Service Association (ATSSA)

Case:

Highway Construction Flagger Dies After Being Struck by Vehicle

Accident Detail:

The employer is a highway construction contractor that specializes in the installation of guardrails, cable barriers, and road signs.

The general laborer (victim) was conducting traffic control for a guardrail installation project on a two-lane state highway. While doing so, a vehicle failed to stop and struck and killed the victim.

The incident occurred on the shoulder of a two-lane state highway with a posted speed limit of 55 miles per hour. East- and westbound travel lanes are divided by a standard double yellow line. A grassy slope meets the edge of the shoulder and leads to a ditch and earth embankment on both east- and westbound lanes. Work zone signage was present on the day the incident occurred.

The crew consisted of two flaggers and five field installation technicians.

After a safety briefing, the victim put on his Class 2 safety vest and positioned himself on the shoulder. The construction project was positioned on the shoulder of the westbound lane, requiring the westbound lane of travel to be closed. Vehicles traveling east and west were required to alternate the use of the eastbound travel lane.

A pickup truck approached the work zone but failed to stop, as instructed by the victim. The driver of the pickup truck made an evasive maneuver and steered to the right, attempting to avoid the flagman (victim) while simultaneously, the victim fled to his left toward the ditch to escape the approaching vehicle.

The vehicle traveled 21 feet after leaving the eastbound lane of travel, across the shoulder of the highway and into the ditch, striking the victim approximately 3 feet off the paved shoulder.

According to the involved company, the impact resulted in the victim being thrown to the ground. The involved vehicle continued forward, driving over the victim and out of the ditch, steering the truck back onto the travel portion of the highway. Once back on the highway, the involved vehicle proceeded to make a U-turn and flee the scene of the incident.

The weather is not believed to have been a factor in this incident.

Reconstructive Safety Evaluation:

- What are some of the possible causes of the accident being discussed?
- What actions could have been taken that might have prevented this accident from occurring?

Agency's Accident Scene Conclusion:

According to the owner, the company utilizes the Guidelines for Traffic Control in Short Duration/Mobile Work Zones to train all employees.

Upon completion, field training takes place that requires new employees to shadow tenured employees for up to six weeks to learn additional job-specific functions.

The employer stated that a drug testing program is in place; however, he was unable to provide specifics on the exact details of the program.

Each flagger was equipped with a standard stop/slow paddle, to communicate appropriate commands to oncoming drivers.

The victim received a safety briefing and was wearing his Class 2 safety vest.

The day the incident occurred; law enforcement was not present on scene to assist with traffic control duties. Although law enforcement presence may be utilized in the state where the accident occurred work zones, it was not required at the time of this incident.

Key contributing factors identified in this investigation include:

- Unsafe operation of a motor vehicle
- Lack of hazard recognition
- No physical barrier between moving vehicles and workers

Preventive Safety Measures Identified by the Investigating Agency Include:

The investigators concluded that the following actions should be implemented in order to reduce the likelihood of similar accidents:

- Employers should utilize automated flagger assistance devices (AFAD) for traffic control in work zones in lieu of flaggers. The utilization of automated flagger assistance devices (AFADs) is an alternative method to control the flow of traffic in temporary work zones. AFADs can be operated via remote control from up to 200 ft away, eliminating the need for traditional flaggers to be present on the highway in potentially vulnerable locations
- Stationary law enforcement vehicles with activated blue lights should be utilized in work zones when workers are present.
 - Findings in a study conducted by the Maryland State Highway Administration (MSHA) on the Use of Police Traffic Services in Work Zones conclude that the presence of a marked police vehicle is the most effective speed control measure in work zones. Results of the study show police presence reduced average speed of travel by 6–22%, while excessive speeding events were reduced by 14–32%¹
 - MSHA states other advantages, including:
 - Police enforcement increases motorists' compliance with work zone regulations and discourages aggressive or careless driving.
 - Work zone officers can immediately respond to any incident/accident, quickly restoring traffic flow and enhancing the safe operation of the work zone
 - A police officer commands respect and authority. Thus, police presence facilitates the safe and efficient movement of traffic through the work zone.
 - The presence of a marked police vehicle in the work zone area is an effective measure to capture the attention of passing motorists causing greater motorist alertness¹

- ### **Additional Commentary on Preventive Safety Measures from Chubb Include:**

- ## Attendance Roster

[illegible]

1. Maryland State Highway Administration.
<https://www.roads.maryland.gov/oots/O1police.pdf>
2. Temporary Rumble Strips in Work Zones.
<https://www.atssa.com/Portals/0/WZGrant/GuidelinesUseTemporaryRumbleStripsWorkZones.pdf>

10/2025