

Fatality Investigation Report

OR 2003-32-1

Vehicle strikes utility worker in short-duration work zone

Summary

On Oct. 3, 2003, a 57-year-old utility worker was killed when a vehicle entered his short-duration work zone and struck him. The worker was in the process of locating underground gas lines for construction work taking place on both sides of an active five-lane suburban road. The worker parked his vehicle half on the sidewalk and half on the bike lane to avoid obstruction, and placed two orange safety cones behind the vehicle on the edge of the bike lane to warn motorists of the work zone. The worker was standing near the left rear of his vehicle using a locator device when struck. The 18-year-old motorist in the incident was reportedly using a cell phone when her vehicle drifted off the roadway. The victim was pronounced dead on scene by the medical examiner.

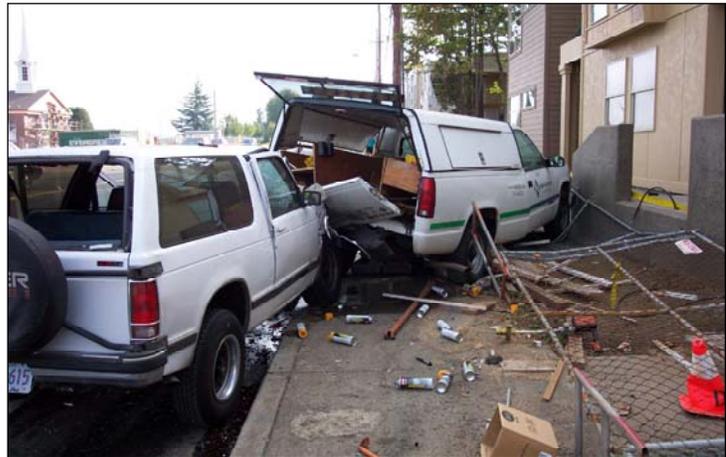


Photo 1. Blazer's position behind victim's pickup.

Cause of death: Multiple blunt-force traumatic injuries

Recommendations

1. **Analyze the work site including traffic patterns and plan the work zone, before you begin working.**
2. **Position work vehicle to create an obstacle to prevent oncoming traffic from hitting you.**
3. **Minimize exposure to moving traffic.**
4. **Drivers should not engage in activities that distract them from driving or hinder driving performance.**

Introduction

On Oct. 3, 2003, a 57-year-old utility worker was killed when a vehicle entered his short-duration work zone from the roadway and struck him. OR-FACE learned of the incident the next day from local news reports. Oregon OSHA investigators arrived at the scene shortly after the incident, but were given limited access by police, who were treating the area as a crime scene. OR-OSHA closed the investigation upon finding the case was referred to the county district attorney for possible criminal charges. OR-FACE obtained the brief OR-OSHA report of the incident and police photographs, and also consulted a safety officer at the Department of Transportation.

The utility worker had worked for the utility company for over 29 years and was considered very knowledgeable on setting up a work zone. He was working alone on this occasion. The company follows the Manual on Uniform Traffic Control Devices (MUTCD) for guidance in establishing its work zones. According to company policy, the worker was wearing an orange T-shirt and hard hat. His placement of safety cones to the rear of his vehicle was determined to be appropriate for the work being conducted. Posted speed on the roadway was 35 mph.

Investigation

The utility worker arrived at the work site to locate underground gas lines for construction work taking place on both sides of the five-lane road. A construction fence apparently obstructed access to off-road parking at the site. The worker parked his vehicle half on the sidewalk and half in the bike lane, conforming to MUTCD guidelines recommending that pedestrian thoroughfares remain unobstructed, since pedestrians are unlikely to take a detour. Traffic was light on the morning of the incident, the road flat and straight, and the weather dry and clear.

The worker placed two orange 24-inch safety cones at approximately 30-foot intervals behind his vehicle to demarcate the work zone for passing motorists. He elected not to use traffic signs, which is permissible for short-duration work zones that will not impact traffic. The work vehicle was equipped with an amber roto-beam over the cab and an arrow board on the rear of the canopy. There are conflicting reports whether the utility vehicle's roto-beam or arrow board had been turned on yet. The canopy's rear window was up, partially obscuring the arrow board.

The worker was only shortly onsite, standing next to the left rear quarterpanel of his vehicle using a handheld locating device when struck. He was evidently not facing traffic, and was intent on his work. The Chevy Blazer that drifted off the roadway into the bike lane knocked over the safety cones, struck the victim, and continued on to strike the rear of the utility vehicle with an impact that pushed it about 30 feet up onto the sidewalk and through the construction fence. The moving vehicle was so far adrift that the victim was struck by the vehicle's left front (driver's side) headlamp. A witness reportedly observed the driver talking on a cell phone.

The victim was thrown up into the windshield of the moving vehicle with enough force to shatter it. Injuries were immediately fatal. Police arrived and cordoned off the scene. The medical examiner was called for the victim. An ambulance took the female driver to a hospital with unknown injuries.

Recommendations/Discussion

1. Analyze the work site including traffic patterns and plan the work zone, before you begin working.

Scout the intended work location and plan parking location, setup of traffic cones and signage. At a minimum, use cones and rotating flashing lights. This incident indicates the importance of arranging the work zone to alert drivers and to protect workers, even in clear weather on a straight, unobstructed roadway.

2. Position work vehicle to create an obstacle to prevent oncoming traffic from hitting you.

At the worksite, park vehicle completely off the roadway, if possible, without obstructing pedestrian thoroughfares. Strategically park the work vehicle between the work zone and oncoming traffic. Face traffic as much as possible while setting up the worksite.

3. Minimize exposure to moving traffic.

Keep all work as far away from moving traffic as possible. Never turn your back to traffic while working in or near active traffic lanes. Minimize exposure time.

4. Drivers should not engage in activities that distract them from driving or hinder driving performance.

Use of electronic devices such as cell phones, GPS receivers, or computers while driving can lead to significant reductions in attentiveness and driver performance. Recent studies suggest that cell-phone use, even hands-free devices, hinder safety and result in greater levels of driver distraction than listening to music or audio books. Drivers engaged in cell-phone conversations missed twice as many simulated traffic signals, and took longer to react to those signals they did detect. These deficits were similar for both hand-held and hands-free units.

Any activities that distract a driver from driving, including eating, applying makeup, taking notes, or operating personal electronic devices can lead to serious traffic injuries. The National Safety Council issued a statement on “multitasking” and driving in March 2002, concluding that “a driver’s first responsibility is the safe operation of the vehicle and that best practice is to not use electronic devices including cell phones while driving.”

The NSC statement called upon producers and providers of electronic devices to educate the public on the safe operation of electronic devices, and for employers to assess the risk and to consider restrictions of employee use of cell phones while driving.

ExxonMobil Corporation, for example, banned the use of cell phones by employees and contractors while driving on company business. The company reviewed nine studies of driving and cell-phone use, and concluded the studies “gave clear evidence that cell phone use while driving leads to a sharply increased accident risk.”

References

“NSC: Cell Phone Use Distracting for Motorists”

<http://www.occupationalhazards.com/articles/3388> Accessed July 13, 2003

“Does Cell Phone Conversation Impair Driving Performance?”

<http://www.nsc.org/issues/idrive/inincell.htm> Accessed July 13, 2003

“Multitasking Statement” <http://www.nsc.org/news/policy/multitasking.htm> Accessed July 13, 2003

“ExxonMobil Enacts Cell Phone Policy for Employees”

<http://www.occupationalhazards.com/articles/12035> Accessed July 13, 2003

For More Information

The Center for Research on Occupational and Environmental Toxicology at Oregon Health & Science University performs Fatality Assessment and Control Evaluation (FACE) investigations through a cooperative agreement with the National Institute for Occupational Safety and Health (NIOSH), Division of Safety Research (DSR). The goal of these evaluations is to prevent fatal work injuries in the future by studying the working environment, the worker, the task the worker was performing, the tools the worker was using, the energy exchange resulting in fatal injury, and the role of management in controlling how these factors interact.

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