

**TO:** Director, National Institute for Occupational Safety and Health

**FROM:** California Fatality Assessment and Control Evaluation (FACE) Program

**SUBJECT:** A construction worker jumps over a cement barrier onto an interstate highway transition road and is killed when struck by an oncoming vehicle.

**SUMMARY**  
**California FACE Report #02CA003**

A 31-year-old male construction worker was killed when struck by an oncoming vehicle on an interstate highway transition road. The victim jumped over a concrete barrier separating the work zone from the roadway. The vehicle that struck the victim was traveling at an estimated speed of 62-80 mph when the incident occurred. The driver of the vehicle did not see the victim until it was too late to avoid hitting him. The CA/FACE investigator determined that, in order to prevent future occurrences, employers, as part of their Injury and Illness Prevention Program (IIPP) should:

- Ensure employees remain within the safe work zone designated by protective barriers.

**INTRODUCTION**

On February 27, 2002, at approximately 12:45 p.m., a 31-year-old male, working as a construction laborer, died after being struck by a moving vehicle. The victim crossed over a cement barrier, known as a "K" rail, and into oncoming traffic. The incident occurred on a transition road from an east/west interstate highway to a north/south interstate highway. The CA/FACE investigator learned of this incident on February 28, 2002, through the Legal Unit of the Division of Occupational Safety and Health (Cal/OSHA). On March 28, 2002, the CA/FACE investigator made contact with the victim's employer. The employer was contacted but refused to be interviewed. On April 8, 2002, the CA/FACE investigator requested information and copies of reports from other government agencies that had investigated the incident. On December 10, 2002, the CA/FACE investigator contacted and interviewed one of the co-workers.

The victim had approximately seven years experience in his occupation and had been with the company for three months when the incident occurred. According to the general contractor, the employer of the victim had a safety program and a written IIPP with the required elements. There were task-specific safe work procedures written and available for employees to follow. Safety meetings were held monthly, and tailgate safety meetings were held weekly at the job sites. Training was accomplished mainly through on-the-job-training (OJT).

## INVESTIGATION

The site of the incident was a two-lane transition road from an east/west interstate divided highway to a north/south interstate divided highway. The transition road was two lanes formed from the westbound #3 and #4 traffic lanes. The #3 lane divided at the transition point and continued west. On the day of the incident, the victim was assigned to work with a co-worker and remove a concrete drain cover by breaking it into small pieces with sledgehammers. The location of the drain cover was at the beginning of the transition road on the north side behind the protective barrier. The protective barrier was set up in accordance with the Manual on Uniform Traffic Control Devices. The co-worker drove the victim to the work site and parked the truck behind the protective barrier. They both got a sledgehammer and started breaking the concrete drain cover. The victim made comments to the co-worker that they had the wrong tools to do the job. The victim wanted to use a jackhammer instead of a sledgehammer. The co-worker told the victim he would finish the job himself. The victim then dropped his sledgehammer into the dirt, picked up a shovel, and walked away. The co-worker, not aware of where the victim was going, went back to work and finished the job.

The driver of the vehicle that struck the victim told the police that he was driving westbound in the #3 lane preparing to make the transition to the north bound interstate. His speed was estimated to be approximately 62-80 mph. The driver traversed to the right to the transition road. All of a sudden he saw the victim running with his back toward him directly in front of his vehicle. The driver could not stop his vehicle in time and struck the victim. The driver pulled over to the side of the road and assisted the victim.

According to the police report, other witnesses to the incident stated they saw the victim, wearing an orange reflective vest and hard hat, jump over the protective concrete barrier and onto the transition ramp and run right in front of the vehicle that struck him. The paramedics and fire department responded and subsequently found the victim without a pulse and respirations. The victim was pronounced dead at the scene.

## CAUSE OF DEATH

The cause of death, according to the death certificate was blunt force head and chest injuries.

## RECOMMENDATIONS / DISCUSSION

**Recommendation #1: Ensure employees remain within the safe work zone designated by protective barriers.**

Discussion: Employers are required to provide a safe work zone for their employees working on streets and highways. This safe work zone should be described in a written procedure that explains the boundaries and safe work practices of that safe work zone. Employers should also ensure employees are aware of the safe work procedures and practices by having a system in place that informs them of their safety responsibilities. Safe work practices can be assured through programs of training, supervision, incentives, and progressive disciplinary measures. When that system fails to achieve the desired goals, then new or different techniques must be employed in order to ensure compliance. Effective methods might include extended training programs, testing to ensure understanding, stronger disciplinary measures for violators, and recognition for compliance.

**References:**

California Code of Regulations, Vol. 9, Title 8, Sections 1509 & 1598.

American Traffic Safety Services Association Standards for Work Zone Traffic Control, 1998

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**July 21, 2003**

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**FATALITY ASSESSMENT AND CONTROL EVALUATION PROGRAM**

The California Department of Health Services, in cooperation with the California Public Health Institute, and the National Institute for Occupational Safety and Health (NIOSH), conducts investigations on work-related fatalities. The goal of this program, known as the California Fatality Assessment and Control Evaluation (CA/FACE), is to prevent fatal work injuries in the future. CA/FACE aims to achieve this goal by studying the work 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.

NIOSH funded state-based FACE programs include: Alaska, California, Iowa, Kentucky, Massachusetts, Michigan, Minnesota, Nebraska, New Jersey, New York, Oklahoma, Oregon, Washington, West Virginia, and Wisconsin.

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**Additional information regarding the CA/FACE program is available from:**

**California FACE Program**  
**California Department of Health Services**  
**Occupational Health Branch**  
**850 Marina Bay Parkway, Building P, Third Floor**  
**Richmond, CA 94804**

**EXHIBITS:**



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Exhibit #1

View of the "K" rail used to separate the work area from on-coming traffic looking east.



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Exhibit #2

View of the transition road where the incident occurred looking west.





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Exhibit #3

View of the end of the protective barrier that the victim jumped over.



02CA003  
Exhibit #4

View of the work area where the victim was working.



Exhibit #5

View of the work area looking toward the transition road where the incident occurred.