DATE: October 16, 1995

FROM: Minnesota Fatality Assessment and Control Evaluation (MN FACE) Program,
Minnesota Department of Health

SUBJECT: MN FACE Investigation 95MN02701
Teacher/Handy-man Dies After Falling From Second-Story Roof of House

SUMMARY

The victim was working alone at the time that the incident occurred. This report is based on a review of a written sheriff's department report and copies of their photos of the incident site and a review of the county coroner's report.

A 53-year-old male teacher/handy-man (victim) died of injuries sustained when he fell from the second-story roof of a house while installing shingles. He had removed the old shingles and roofing materials from the house on the day prior to the incident. On the day of the incident, the homeowner secured the house and left the residence at approximately 7:00 a.m. The victim arrived sometime later and installed four complete rows of shingles across the roof and partially completed two additional rows. He was not using any personal fall protection equipment at the time of the incident. While installing the shingles, he apparently fell from the roof. The homeowner arrived home at approximately 5:00 p.m. and found the victim laying on a stone stairway near the house. The victim was laying on his right side with his head on the third step, from the top, of the stone stairway. An extension ladder was leaning in a tilted position against the second story of the house and the feet of the ladder were partially resting on the victim. A wood plank which supported the ladder was found at the victim's feet on the stone steps. The homeowner immediately called emergency medical personnel who arrived at the scene shortly after being called. They examined the victim and pronounced him dead at the scene. MN FACE investigators concluded that to reduce the likelihood of a similar incident, the following guidelines should be followed:

- whenever work is performed at an elevation where the potential for a fall exists, fall protection equipment should be used; and

- a catch platform should be properly installed and used whenever possible to provide a safe work platform.

INTRODUCTION

On June 5, 1995, MN FACE investigators were notified of a fall fatality that occurred on June 1, 1995. The county sheriff's department was contacted and releasable information was obtained. This information included photographs and a drawing of the accident site, the initial complaint report, and an investigation report. The county coroner was contacted and a copy of their report was obtained. A site investigation was not conducted by MN FACE investigators.

INVESTIGATION

The incident occurred at a rural two-story home. The victim had been contracted to remove and replace the shingles on the house. He was doing the work during the summer break from his full-time teaching position.

The second story roof of the house had a 6-12 pitch[1] or slope. The victim had removed the old shingles and roofing materials from the roof on the day prior to the incident. The edge of the second story roof was approximately 16 feet above the ground. Two ladders provided access to the second story roof where the victim worked at the time of the incident. One ladder provided access from an adjacent one-story roof which was accessed by a third ladder from a ground level patio (See Figure 1). An extension ladder provided direct access to the second story roof from ground level. The base of the extension ladder rested on a wood plank which extended across a stone stairway (leading down from the patio/ground level to a lower yard level). Due to the uneven terrain near the house, the wood plank was supported on one end by the patio and on the other end by a five-gallon plastic pail.

On the day of the incident, the homeowner secured the house and left the residence at approximately 7:00 a.m. The victim arrived sometime later and installed four complete rows of shingles across the roof and partially completed two additional rows. While installing the

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1 Pitch: The specified downward slant of a roof. A roof with a 6-12 pitch has 6 inches of vertical drop for every 12 inches of horizontal measurement.

shingles, he fell from the roof of the house. The homeowner arrived home at approximately 5:00 pm and found the victim laying on the stone stairway. He was laying on his right side with his head on the third step, from the top, of the stone stairway. The distance from the roof edge (rain gutter) to the victim's head was approximately 17 feet. The extension ladder was leaning against the house but tilted to the left, when observed while standing at the base of the ladder and facing the house. The top of the ladder was resting against the edge of a second story window and the feet of the ladder were partially resting on the victim. The wood plank which supported the ladder was found at the victim's feet on the stone steps. The homeowner immediately called emergency medical personnel who arrived at the scene shortly after being called. They examined the victim and pronounced him dead at the scene.

The autopsy report indicated that the victim had massive skull fractures and that both wrists were broken. From this information, it was concluded that the victim probably did not fall from the extension ladder but instead fell from the second story roof of the house.

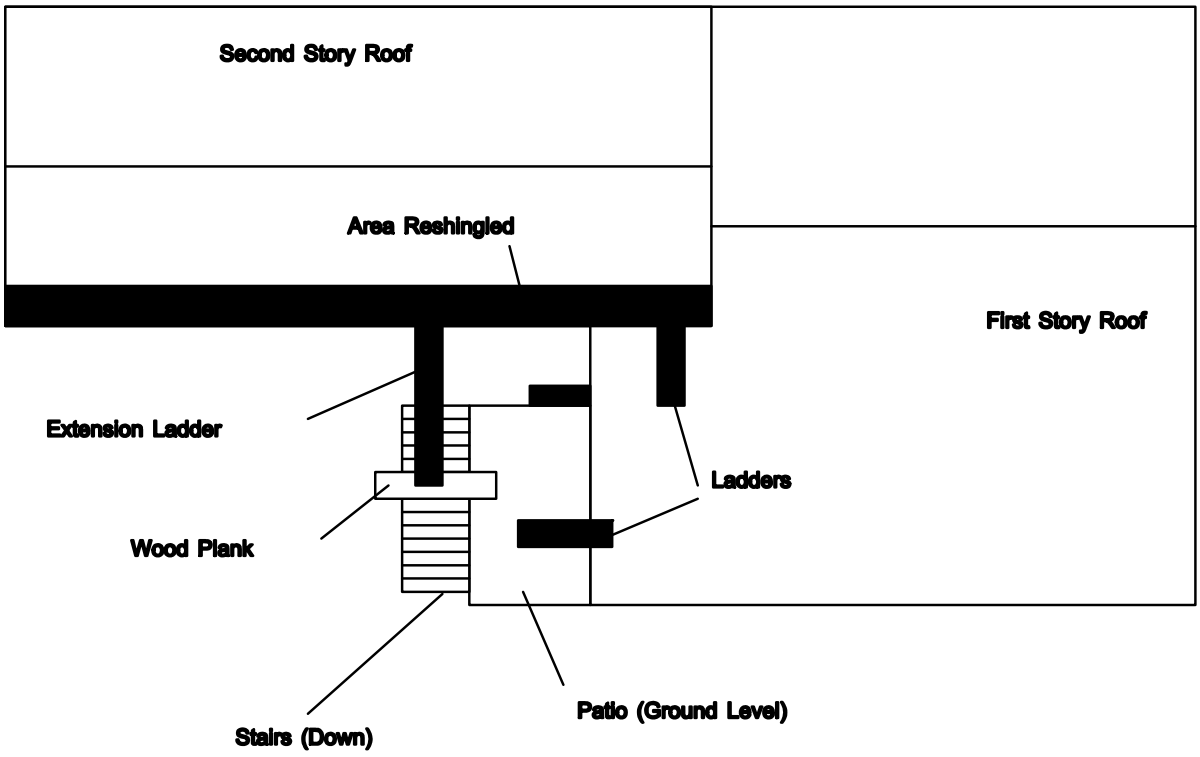

Figure 1. House Roof Work Site
Not To Scale

CAUSE OF DEATH

The cause of death listed on the death certificate was massive skull fracture.

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Whenever work is performed at an elevation where the potential for a fall exists, fall protection equipment should be used.

Discussion: The victim was working at an elevation where the potential for a fall of more than 15 feet existed. Installation of the first several rows of shingles required the victim to work along the edge of the roof where he was continually exposed to the hazards of a serious fall. In accordance with OSHA Standard 29 CFR 1926.104, adequate fall protection equipment such as lifelines, safety harnesses or safety belts and lanyards, should always be used whenever working at an elevation where the potential for a fall exists. If the victim had been using fall protection equipment (i.e., lifeline, safety harness or belt, and lanyard), this fatality might have been prevented.

Recommendation #2: A catch platform should be properly installed and used whenever possible to provide a safe work platform.

Discussion: In this incident, access to the second story roof in the vicinity where the victim fell was provided by an extension ladder. The use of only a ladder resulted in a situation where a safe work platform did not exist along the edge of the roof. Because of the lack of a safe work platform along the roof edge, the victim apparently worked on the roof while he installed the first few rows of shingles. Whenever possible, a catch platform, in accordance with OSHA Standard 1926.451 (u) (3), should be used to provide a safe work platform along roof edges. The proper installation and use of a catch platform along the entire length of the second story roof would have provided a safe work platform from which to work while the first several rows of shingles were installed. It also would reduce the risk of a fall when workers either climb onto or off of roofs. If a properly installed catch platform had been used at this work site, this fatality might have been prevented.

REFERENCES

1. Office of the Federal Register: Code of Federal Regulations, Labor, 29 CFR Part 1926.104 (b), U.S. Department of Labor, Occupational Safety and Health

Administration, Washington, D.C., July 1, 1994.

2. Office of the Federal Register: Code of Federal Regulations, Labor, 29 CFR Part 1926.451 (u) (3), U.S. Department of Labor, Occupational Safety and Health Administration, Washington, D.C., July 1, 1994.

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