

Kentucky Injury Prevention and Research Center
Bona fide agent for Kentucky Department for Public Health
333 Waller Avenue, Suite 242 • Lexington, KY 40504 • 859-257-5839

REPORT#: 17KY037

REPORT DATE: 5-6-2019

INCIDENT HIGHLIGHTS



DATE:

August 25, 2017



TIME:

11:15 am



VICTIM:

41-year old gutter installer



INDUSTRY/NAICS CODE:

Siding contractor / 238160



EMPLOYER:

Siding contractor



SAFETY & TRAINING:

No safety training



SCENE:

Private Residence



LOCATION:

Kentucky



EVENT TYPE:

Fall from Ladder

Gutter Installer Dies after Falling from Ladder Placed on Roof While Taking Measurements.

SUMMARY

On Friday, August 25, 2017, a 41-year-old male gutter installer (the victim) was standing on a ladder positioned on the porch roof of a private residence taking measurements for the purpose of installing gutters. As he descended the ladder, the base kicked out, causing him to lose his balance and fall 10 feet 9 inches to the ground below.

[READ THE FULL REPORT>](#) (p.5)

CONTRIBUTING FACTORS

Key contributing factors identified in this investigation include:

- Lack of hazard recognition and safety training.
- Performing work at heights without adequate fall protection.
- Ladder not used on stable and level surface.

RECOMMENDATIONS

FACE investigator concluded that, to help prevent similar occurrences:

- Perform a job hazard analysis of the worksite.
- Train employees on and enforce the use of fall protection when working at heights above 6 feet.
- Ensure ladders are placed on sturdy, level ground or secured before use.
- Implement workplace health and safety programs.





KENTUCKY

State **FACE** Program

Fatality Assessment & Control Evaluation

Kentucky Injury Prevention and Research Center
Bona fide agent for Kentucky Department for Public Health
333 Waller Avenue, Suite 242 • Lexington, KY 40504 • 859-257-5839



Fatality Assessment and Control Evaluation (FACE) Program

This case report was developed to draw the attention of employers and employees to a serious safety hazard and is based on preliminary data only. This publication does not represent final determinations regarding the nature of the incident, cause of the injury, or fault of employer, employee, or any party involved.

This Case report was developed by the Kentucky Fatality Assessment and Control Evaluation (FACE) Program. Kentucky FACE is a NIOSH-funded occupational fatality surveillance program with the goal of preventing fatal work injuries by studying the worker, the work environment, and the role of management, engineering, and behavioral changes in preventing future injuries. The FACE program is located in the Kentucky Injury Prevention and Research Center (KIPRC). KIPRC is a bona fide agent for the Kentucky Department for Public Health.

Email: Kyfaceprogram@uky.edu

Twitter: <http://twitter.com/KYFACEProgram>

Facebook: <https://www.facebook.com/Kyfaceprogram/>

Website: <http://www.mc.uky.edu/kiprc/face/index.html>

Kentucky Injury Prevention and Research Center
Bona fide agent for Kentucky Department for Public Health
333 Waller Avenue, Suite 242 • Lexington, KY 40504 • 859-257-5839

INTRODUCTION

At 11:15 am, on Friday, August 25, 2017, a 41-year-old male gutter installer (the victim) was taking measurements for the purpose of gutter installation at a private residence when he attempted to descend a ladder that had been placed on the residence's porch roof. The ladder shifted, causing the victim to fall 10 feet 9 inches to the ground below, landing on his head. On Monday, August 28, 2017, the Kentucky Fatality Assessment and Control Evaluation was notified of the event via the Kentucky Labor Cabinet. A site visit was subsequently conducted where pictures and measurements were taken.

EMPLOYER

The employer was a gutter installation contractor. The company had been in business since July 17, 2015, and consisted of four employees, including the owner. According to their website, the company states that they provide a variety of seamless gutter installation and repair services.

WRITTEN SAFETY PROGRAMS and TRAINING

The company had no written health and safety program. All four employees had several years of experience in residential repair and guttering.

WORKER INFORMATION

The victim was a 41-year-old married father. The decedent had received a high school diploma. He had been employed with the company since it was founded two years prior.

INCIDENT SCENE

The incident took place on a new construction site of a private residential house. The two-story residence measured 1,679 square feet, contained three bedrooms, 2.5 baths, and was located within a suburban neighborhood.



Photo 1: Porch area from which the victim fell (photo courtesy of KY OSHA).



Photo 2: Side angle of the porch area (photo courtesy of KY OSHA).



Kentucky Injury Prevention and Research Center
Bona fide agent for Kentucky Department for Public Health
333 Waller Avenue, Suite 242 • Lexington, KY 40504 • 859-257-5839

WEATHER

The temperature was approximately 71°F at the time of the incident. The humidity was 57%, and the wind was 7 mph coming from the east. Weather was not considered a factor in this incident¹.

INVESTIGATION

On Monday, August 28, 2017, the Kentucky Fatality Assessment and Control Evaluation Program was informed by the Kentucky Labor Cabinet of a fatality involving a gutter installer. A site visit and investigation were subsequently conducted.

On Friday morning, August 25, 2017, four gutter installation specialists arrived on the construction site of a new private residence for the purpose of installing gutters. This was their first day on the site. At approximately 11:00 am, the victim and a co-worker gathered two, 16 feet aluminum extension ladders and approached the front porch. The workers set up the first ladder on the side of the house in order to access the porch roof. The two then worked together to carry the second ladder up to the porch roof, where they positioned it in order to take measurements of the house roof. The victim ascended the second ladder while his coworker held the base of it in order to keep it in place. The victim took measurements and verbally communicated the results to the owner of the company who was located on the ground below. In an interview with the coworker who was holding the ladder, he stated that as the victim completed his measurements and began descending the ladder that was placed on the porch roof, the steep angle of the porch roof caused the base of the ladder to 'kick out' and strike the employee who was holding the ladder. This resulted in the victim, the coworker, and ladder all falling 10 feet 9 inches from the porch roof to the ground below.

As the incident occurred, the owner of the company stated that he had his back turned away from the house and was walking away in order to cut the guttering material when he heard the noise behind him. As he turned, he observed the two employees and the ladder on the ground. The coworker was uninjured, but the victim had landed on his head and neck area, and was unresponsive. The owner of the company rushed to the victim and called 911. Emergency services arrived within five minutes of the call and transported the victim to a local hospital where he was pronounced dead at 3:13 pm the same day.

Kentucky Injury Prevention and Research Center
Bona fide agent for Kentucky Department for Public Health
333 Waller Avenue, Suite 242 • Lexington, KY 40504 • 859-257-5839



Photo 3: Finished house. (Photo property of KY FACE)



Photo 4: The two ladders used when the incident occurred.
(photo courtesy of KY OSHA)



Photo 5: The base of the ladder from which the victim fell.
(photo courtesy of KY OSHA)

CAUSE OF DEATH

The cause of death was blunt force head and torso injuries due to a fall from height.

CONTRIBUTING FACTORS

Occupational injuries and fatalities are often the result of one or more contributing factors or key events in a larger sequence of events that ultimately result in the injury or fatality. Investigation identified the following unrecognized hazards as key contributing factors in this incident:

- Lack of hazard recognition and safety training
- Performing work at heights without adequate fall protection
- Ladder not used on stable and level surface

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Perform a job hazard analysis of the worksite.

Discussion: A job hazard analysis (JHA) is a technique employed by site supervisors, experienced employees, and safety personnel that focuses on job tasks as a way of identifying potential hazards that workers may encounter when performing each task. The Occupational Safety & Health Administration (OSHA) states that JHAs should take priority on the following types of jobs: jobs with the highest injury or illness rates; jobs with the potential to cause severe or disabling injuries or illness, even if there is no history of previous accidents; jobs in which one simple human error could lead to a severe accident or injury; jobs that are new to your operation or have undergone changes in processes and procedures; and jobs complex enough to require written instructions². Had a job hazard analysis been performed, it is likely the employer would have recognized potential hazards on the site, which included working at heights above six feet and using a ladder on an uneven surface.

Recommendation #2: Train employees on and enforce the use of fall protection when working at heights above 6 feet.

Discussion: The victim and a coworker were on the roof of the porch, 10 feet 9 inches above the ground. In interviews with other employees, they acknowledged that the owner of the company had never directed them to wear fall protection nor were they ever trained on how to inspect or adjust a personal fall arrest system (PFAS). Failure to protect employees while working at heights and failure to properly train and document completion of fall protection training directly violates two separate OSHA standards.

According to 29 CFR 1926.501 (b)(1): *Each employee on a walking/working surface (horizontal and vertical surface) with an unprotected side or edge which was 6 feet (1.8m) or more above a lower level shall be protected from falling by the use of guardrail systems, safety net systems, or personal fall arrest systems.*

According to 29 CFR 1926.502(b)(1): *The employer shall verify compliance with paragraph (a) of this section by preparing a written certification record. The written certification record shall contain the name or other identity of the employee trained, the date(s) of the training, and the signature of the person who conducted the training or the signature of the employer. If the employer relies on training conducted by another employer or completed prior to the effective date of this section, the certification record shall indicate the date the employer determined the prior training was adequate rather than the date of actual training.*

In fiscal year 2017, 381 construction workers died as a result of falls, making up 39.2% of the 971 total deaths in construction that year³. In calendar year 2017, fall protection in the construction sector (29 CFR 1926.501) was the most cited standard by Federal OSHA (6,072 citations) and training requirements for fall protection (CFR 1926.503) was the ninth most cited standard (1,523 citations)⁴. Continued effort is needed to educate employers on the importance of correctly training employees on and enforcing the use of fall protection when working at heights above 6 feet.

Kentucky Injury Prevention and Research Center
Bona fide agent for Kentucky Department for Public Health
333 Waller Avenue, Suite 242 • Lexington, KY 40504 • 859-257-5839

Recommendation #3: Ensure ladders are placed on sturdy, level ground or secured before use.

Discussion: At the time of the incident, the victim was descending a ladder whose base was being held in place by a coworker. The base of the ladder was positioned on the roof of the porch that had a measured pitch of 6:12. A roof’s pitch is measured by how many inches the roof rises for every 12 inches it moves inwards toward the peak (or ridge). A roof with a pitch of 6:12 would convert to an angle of 26.5°. According to 29 CFR 1053(b)(6): *Ladders shall be used only on stable and level surfaces unless secured to prevent accidental displacement.* Because of the slope of the roof upon which the ladder sat, precautions should have been taken by extending the ladder at least three feet above the point of support – in this case, the house roof – and secured there. If there was no feasible way to secure the top of the ladder to the house roof, efforts should have been made to secure the base of the ladder to the porch roof.

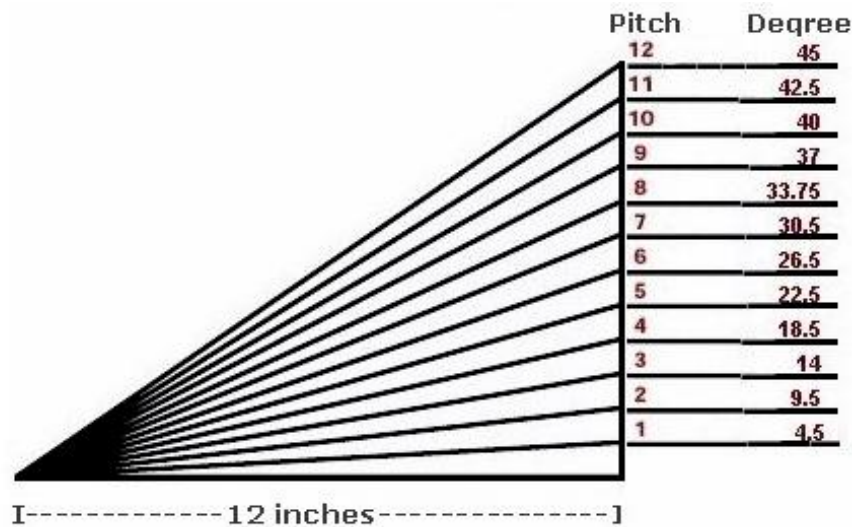


Photo 5: Chart showing the angle conversion of roof pitches
Stock image.

Recommendation #4: Implement workplace health and safety programs.

NIOSH encourages employers concerned about opioid use among their workforce to implement health and safety policies and programs to support employees, as well as to create and maintain healthy workplace environments. The form of a workplace health and safety plan or program will vary depending on the work setting and many other considerations. Increasing numbers of states are developing programs to educate and guide employers through steps they can take to address the opioid crisis among workers and help create healthier and more productive workplaces⁵. If workplaces include drug testing as part of such programs, the testing should be performed as part of an overall plan or program intended to assist workers who struggle with drug use, especially opioid use⁶. Allowing workers confidential access to medication-assisted treatment (MAT) should be an important part of such workplace programs.



Kentucky Injury Prevention and Research Center
Bona fide agent for Kentucky Department for Public Health
333 Waller Avenue, Suite 242 • Lexington, KY 40504 • 859-257-5839

SURVEY

Please take the time to complete our brief survey regarding this report:

https://uky.az1.qualtrics.com/jfe/form/SV_cGBZhUJnvRKMf8N

DISCLAIMER

This case report was developed to draw the attention of employers and employees to a serious safety hazard and is based on preliminary data only. This publication does not represent final determinations regarding the nature of the incident, cause of the injury, or fault of employer, employee, or any party involved.

PROGRAM FUNDING

The Kentucky Fatality Assessment & Control Evaluation Program (FACE) is funded by grant 5U60OH008483-14 from the National Institute for Occupational Safety and Health (NIOSH).

REFERENCES

[1] "Historical Weather". Archive. Weather Underground. <https://www.wunderground.com/history>

[2] Job Hazard Analysis. <https://www.osha.gov/Publications/osha3071.pdf>

[3] Commonly Used Statistics. <https://www.osha.gov/oshstats/commonstats.html>

[4] NSC 2017: OSHA Releases its List of the Top 10 Violations. <https://www.ehstoday.com/osha/nsc-2017-osha-releases-its-list-top-10-violations>

[5] Examples include: New Hampshire's "Recovery Friendly Workplace" <https://www.recoveryfriendlyworkplace.com/trainings>; and Indiana's "Indiana Workforce Recovery" <http://www.wellnessindiana.org/indiana-workforce-recovery-initiative-recovery/>

[6] Substance Abuse and Mental Health Services Administration (SAMHSA) [2015]. "Drug Free Workplace Programs." <https://www.samhsa.gov/workplace/legal/federal-laws/contractors-grantees>

INVESTIGATOR INFORMATION

This investigation was conducted by DeAnna McIntosh, Safety Specialist, Fatality Assessment and Control Evaluation, Kentucky Injury Prevention and Research Center, University of Kentucky, College of Public Health.

ACKNOWLEDGEMENT

The Kentucky FACE program would like to thank Kentucky OSHA, the county coroner, the Sheriff's department, the company with their assistance with this report.