

Falls in Construction

Case Studies



Kentucky Fatality Assessment and Control Evaluation
(FACE) Program

How am I at risk?

Falls are the #1 killer in the construction industry, both in Kentucky and across the nation.

In 2015 alone in the U.S., falls accounted for 364 out of 937 deaths in construction (38.8% of total deaths).¹

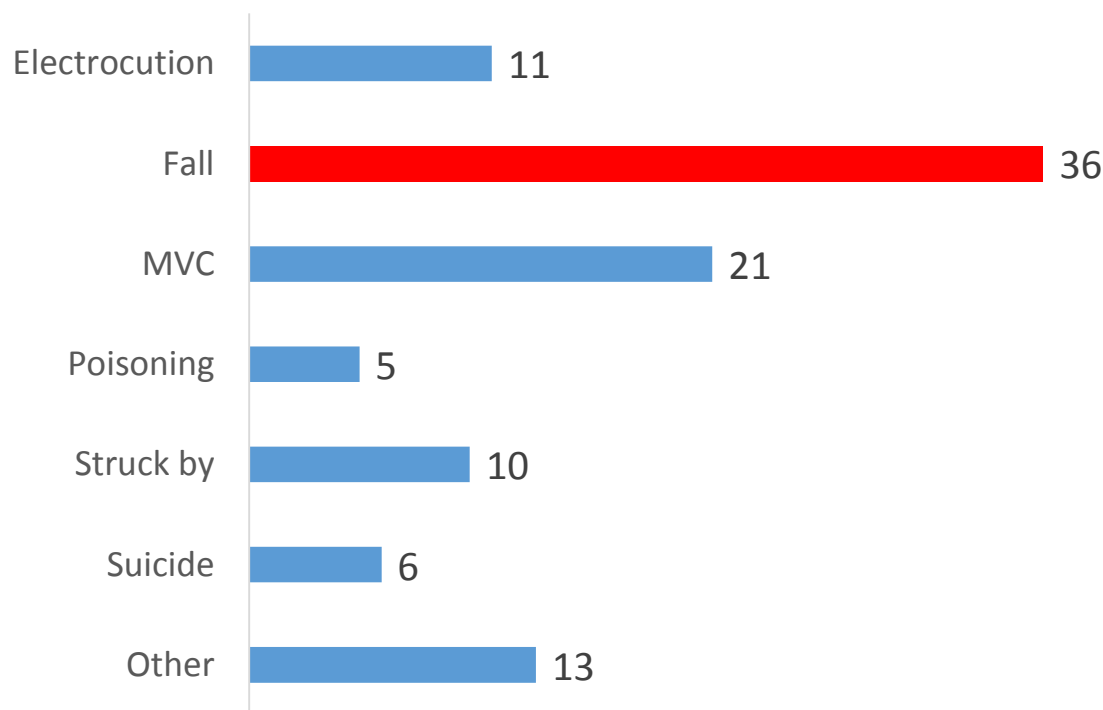
That's nearly one fall every day in the U.S. in 2015.

Construction fall hazards accounted for 3 of the 10 most commonly cited OSHA violations in 2015 in the U.S. for ALL industries combined¹:

- 1. Fall protection, construction** ([29 CFR 1926.501](#))
2. Hazard communication standard, general industry ([29 CFR 1910.1200](#))
- 3. Scaffolding, general requirements, construction** ([29 CFR 1926.451](#))
4. Respiratory protection, general industry ([29 CFR 1910.134](#))
5. Control of hazardous energy (lockout/tagout), general industry ([29 CFR 1910.147](#))
6. Powered industrial trucks, general industry ([29 CFR 1910.178](#))
- 7. Ladders, construction** ([29 CFR 1926.1053](#))
8. Machinery and Machine Guarding, general requirements ([29 CFR 1910.212](#))
9. Electrical, wiring methods, components and equipment, general industry ([29 CFR 1910.305](#))
10. Electrical systems design, general requirements, general industry ([29 CFR 1910.303](#))

From 2008-2015, 102 construction workers were killed on the job in Kentucky. Falls accounted for **more than a third** of all of these deaths².

Causes of Construction Worker Fatalities in Kentucky, 2008-2015



Let's take a look at two cases that occurred in Kentucky.

Case No. 1

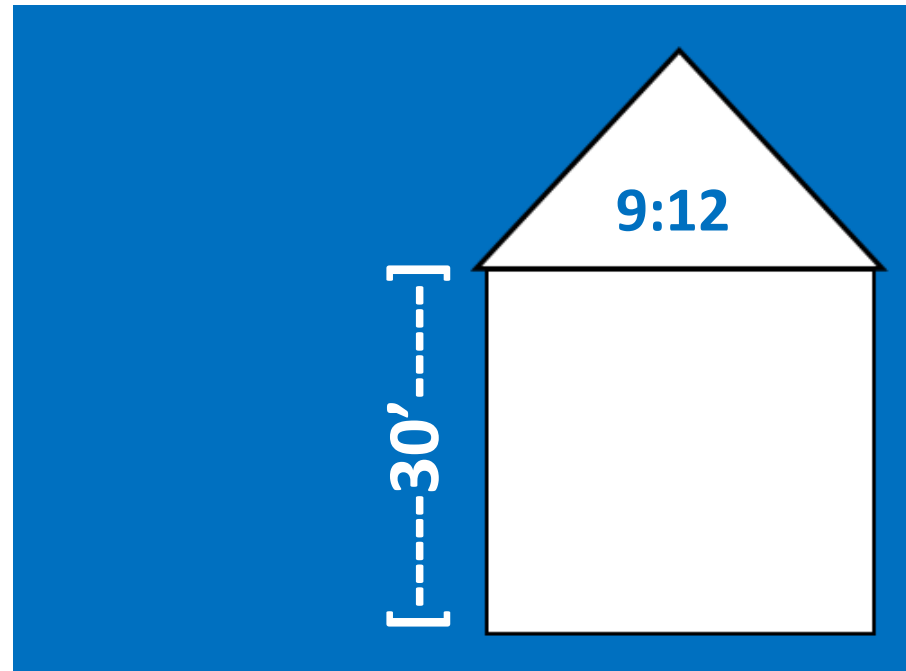
Roofer's Fall Protection Failed Causing Him to Fall 29.91 Feet to His Death



Case No. 1

Incident Scene:

- The incident took place on a church roof which had a 9:12 pitch.
- The distance from the roof eave to the ground was roughly 30 ft.



Case No. 1

Equipment:

- Vertical Lifeline Rope.
- Had visible signs of aging and deterioration prior to use.



Case No. 1

Incident:

- A 60-year-old roofer and five co-roofers were replacing a 9:12 pitched roof on a church. This was their second week on the job.
- They were in the process of tearing off the old shingles and laying out the felt paper.
- The victim was working on the leading edge. Employees interviewed stated the victim was wearing a safety harness, which was secured via nylon lifeline rope to a temporary anchor affixed to the ridge line of the roof.
- The victim was situated near the box gutter on the leading edge with his body weight applied to the lifeline, when the rope snapped and he fell to the ground below.
- Emergency services were contacted, and the roofer went into cardiac arrest while waiting for them to arrive. The worker died from his injuries.

Case No. 1

Corroded Rope:

- The manufacturer estimated the rope to be approximately 4 years old.
- The state of deterioration of the rope was readily visible, and would have been identified had a proper PPE inspection taken place.
- The positioning device and snap hook showed rust.

Severed rope



Case No. 1

Corroded Rope:



Case No. 1

Rusted positioning device & snap hook:



Case No. 1

Questions for employees:

1. What went wrong?
2. How can we prevent this from happening to us?

Case No. 1

Key takeaways:

1. Fall protection is **critical** when working from heights.
2. Fall protection **must** be inspected for defects prior to use.
3. You should **never** start a job at heights unless you are using fall protection that you are 100% confident will not fail due to a defect.

Case No. 2

Temporary Electrician Helper Steps Into Unguarded Elevator Shaft and Falls to Death



Case No. 2

Incident Scene:

- Construction site of 4 story building, second floor.
- Elevator had not been installed yet, no guards at elevator shaft openings.
- Pallets were cluttered near the elevator shaft entrance.



Case No. 2

Incident:

- Worker was a temporary employee who had never worked in construction and was on his second day on the job. No safety training was administered.
- Worker was instructed to lay out light fixtures on each floor for electricians.
- Worker was working alone near elevator shaft on 2nd floor; area had minimal light.
- Pallets and boxes were cluttering the area.
- While no one witnessed the incident, footprints on the dusty pallets near the elevator shaft suggested that the worker was standing near the shaft, when he inadvertently stepped into the unguarded opening.
- Worker was found dead at the bottom of the shaft, 3.5 hours after he had last been seen. It is unknown how much time had passed between the incident and discovery.

Case No. 2

Can you identify 3 hazards that were present in this case?

Case No. 2

#1 - Elevator shaft was not properly guarded. Below is an example of a safe work practice for elevator shafts.



J. Vinton Schafer & Sons, Inc. and CCBC
Catonsville

Case No. 2

#2 – Pallets and boxes cluttered the area next to the unguarded shaft. Ensure that work areas are tidy and free of trip hazards.



Case No. 2

#3 – Lighting was absent from the work area. Lighting should be supplied in working areas in accordance with OSHA standards ([CFR 1926.56](#))



Case No. 2

#4 – Bonus points....

He was not trained.

Remember. No one expects to fall. Many people who have died from construction falls were carrying out a routine task in the same manner in which they had countless times before. You can choose whether to risk becoming one of the fall deaths occurring on construction sites every day in the US.

Choose wisely.

Produced by the Kentucky Fatality Assessment and Control Evaluation (FACE) Program. Kentucky FACE is located organizationally in the Kentucky Injury Prevention and Research Center, a bona fide agent for the Kentucky Department for Public Health.

More safety materials can be accessed on the Kentucky FACE website at: <http://www.mc.uky.edu/kiprc/face/>

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Works Cited

¹ Commonly Used Statistics. (2017). Retrieved from
<https://www.osha.gov/oshstats/commonstats.html>

² Kentucky Industry Injury Profiles: Construction, 2008 – 2015. (2017). Kentucky Fatality Assessment and Control Evaluation Program Database.