

Ladder Fall

Situation:

EHS received an Incident Report via email regarding an employee that had fallen from a fixed ladder. An investigation was conducted by an EHS Safety Specialist.

While preparing to put repair materials on the roof of a building, the employee began climbing up the fixed ladder towards the roof. Upon reaching the top, the employee lost his grip and fell backwards onto the concrete.

Immediately following receipt of the accident report, the Safety Specialist spoke to the employee about the incident. EHS also received eye-witness testimony regarding the incident from another employee, who was present at the time of the incident.

The Safety Specialist found that there was no indication of the ground being wet or the rails on the ladder being adversely affected by site conditions. He reported the weather at the time following the accident as 85°F dry with the ground/cement slab also being dry. In his written statement, the Safety Specialist noted “[the employee] also stated that he was having a difficult time making the last transition from holding on to the last rung of the ladder and grabbing side rails (he was wearing loss fitting gloves at the time of the transition period).”

Upon further inspection, the Safety Specialist noted that the fixed ladder was not equipped with a personal fall arrest system or ladder safety system and that the rungs of the ladder were made of standard bar stock and were not equipped with non-slip gripping tape. No pre-task plan or ladder inspection were documented by either employee prior to climbing the ladder.

Conclusions:

Fixed ladders, especially those with a 90 degree slope, represent a known hazard. Fixed ladders that extend more than 24 feet above a lower level, and were installed prior to November 19, 2018, must be equipped with a personal fall arrest system, ladder safety system, cage, or well. Due to the size of the ladder and age of the building, a ladder cage and personal fall arrest system were not required in this instance. Similarly, the ladder was designed and installed meeting all applicable codes and regulations. However, EHS believes that as a best practice, UNM should develop their own ladder design requirements that exceed code requirements by including:

1. Requirements for non-slip rungs
2. Requirements for ladder to platform transitions
3. Requirements for fall prevention/protection

Causes:

1. Lack of non-slip rungs.
2. Lack of easy ladder-to-platform transition
3. Loose fitting gloves.
4. Failure to maintain three points of contact on the ladder.

Corrective Action: Memo to department heads outlining the investigation and conclusions.

Prevention:

1. Develop UNM ladder design requirements that exceed code requirements by including:
 - Requirements for non-slip rungs
 - Requirements for ladder-to-platform transitions
 - Requirements for fall prevention/protection
2. Train staff to the inherent risks associated with fixed ladders, and ensure they are diligent and mindful when working on and around such ladders.
3. Train staff to proper ladder climbing techniques, with a specific focus on maintaining three points of contact.
4. Install a personal fall arrest system. By 2036, OSHA is requiring that all fixed ladders, regardless of height, be equipped with a personal fall arrest system or ladder safety system.

Reference: [OSHA 29 CFR 1910.23](#)