SHARP
Safety & Health Assessment & Research for Prevention

Worker Hospitalization Alert

Construction

January 2020

Foreman Falls 15 Feet from Ladder

An experienced framing foreman suffered fractures to both lower legs when he fell 15 feet from an unsecured extension ladder.

The foreman and another worker needed to gain access to the fourth level of the building from the third level, but the designated access points were temporarily blocked off because of a concrete pour in the area.

The foreman and worker looked for an alternative access point. With help from another worker, they found a place where a ladder had been secured earlier in the day, but had been temporarily moved to allow for other work. They decided to put the ladder back in the original location while one worker held the ladder at the bottom.

The general contractor had recently inspected the ladder. It had a single rail extension attached to the top left side. They placed the ladder at the proper angle, but left it unsecured at the top and bottom.

The foreman started climbing the unsecured ladder while holding an electronic tablet and laser level in his left hand. As he neared the top, the ladder began to twist, causing the foreman to fall to the concrete deck below. He landed on both of his feet, causing his right ankle to break and multiple fractures to his left lower leg.

The foreman has returned to work, but is still on modified duty more than a year after the incident.

What do you think went wrong?

In the space below, list some of the factors that you think could have contributed to this incident.

Then, flip the page over for contributing factors and safety recommendations and requirements.

Figure 1: Area where the workers placed the extension ladder.

Figure 2: The red arrow points to where the foreman landed on his feet near a row of covered vertical rebar.

Figure 3: The extension ladder that the foreman fell from. Only one rail extension was attached at the time of the incident.

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Contributing Factors

The extension ladder was not secured at the top and bottom to prevent it from moving or falling. There were tie-off points at both the top and bottom of the ladder from where it was previously secured.

The foreman climbed the ladder while carrying a laser level and an electronic tablet in his hand. Not using both hands while climbing put him at risk of falling. A material hoist would have been the best way to lift the laser level and electronic tablet.

Recommendations

Plan for safety. During pre-shift meetings, notify workers of access point changes. If access changes during the shift, stop and create a new plan for safe access and communicate these changes to those in the area.

Secure ladders at the top and bottom to prevent them from moving while being used. Set the base of the ladder where the foot pad is on a stable, level surface and secure both side rails evenly at the top and bottom to a fixed structure. This important step should be done before the ladder is used, even if the task may only take a short time.

Hoist materials safely. Lifting systems and load-rated lifting buckets are a safe way to lift, lower or transport tools and supplies to different work locations. This allows workers to climb ladders with both hands free.

Follow manufacturer's instructions. Using ladders or ladder attachments improperly can cause severe injuries or even death. Read and follow manufacturer's instructions and ladder labels. This can help prevent workers from getting hurt.

Requirements

- Employers must train workers who use ladders. See **WAC 296-876-150**
- You must have both hands free to hold on to the ladder. See **WAC 296-876-40025**
- You must set up nonself-supporting ladders at a safe angle. The ladder is set at the proper angle when the horizontal distance from the top support is approximately one-quarter the working length of the ladder. (Figure 4.). See **WAC 296-876-40020**
- Ladder must extend at least three feet above the landing surface if the ladder length permits. If the ladder is not long enough to extend three feet above the landing surface, provide a grasping device, such as a grab-rail, to assist in mounting and dismounting the ladder. See **WAC 296-876-40030**

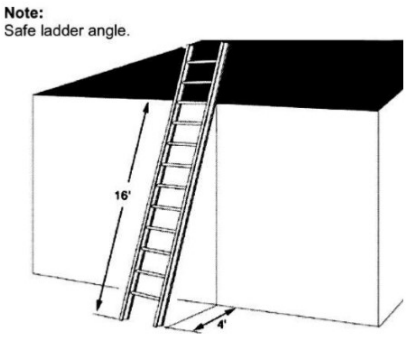

Figure 4: Horizontal distance from the top support is approximately one-quarter the working length of the ladder.

Resources

- Chapter 296-876 WAC: Ladders, Portable and Fixed - **Lni.wa.gov/safety-health/safety-rules/chapter-pdfs/WAC296-876.pdf**
- Reducing Falls in Construction: Safe Use of Extension Ladders - **www.osha.gov/Publications/OSHA3660.pdf**
- NIOSH Ladder Safety App - **www.cdc.gov/niosh/topics/falls/mobileapp.html**

Safety Training Sign-In (Print Name Legibly) *Date:* _____

The Immediate Inpatient Hospitalizations Project is part of the Safety & Health Assessment & Research for Prevention (SHARP) program within the Washington State Department of Labor & Industries. Learn more at ***Lni.wa.gov/safety-health/safety-research/ongoing-projects/immediate-inpatient-hospitalizations.***

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