

# Hazard Avoidance Series: Walking and Working Surfaces



# Speaker & Moderator

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# Introduction

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## Webinar objectives:

1. Identify hazards in the workplace associated with walking and working surfaces.
2. Identify best practices for eliminating or controlling hazards associated with walking and working surfaces in the workplace.
3. Recognize employer requirements to protect workers from walking and working surface hazards.

# Introduction

## OSHA<sup>®</sup> FactSheet

### OSHA's Final Rule to Update, Align, and Provide Greater Flexibility in its General Industry Walking-Working Surfaces and Fall Protection Standards

#### Background

Falls from heights and on the same level (a working surface) are among the leading causes of serious work-related injuries and deaths. OSHA estimates that, on average, approximately 202,066 serious (lost-workday) injuries and 345 fatalities occur annually among workers directly affected by the final standard. OSHA's final rule on Walking-Working Surfaces and Personal Fall Protection Systems better protects workers in general industry from these hazards by updating and clarifying standards and adding training and inspection requirements. The rule affects a wide range of workers, from window washers to chimney sweeps. It does not change construction or agricultural standards.

The rule incorporates advances in technology, industry best practices, and national consensus standards to provide effective and cost-efficient worker protection. Specifically, the rule updates general industry standards addressing slip, trip, and fall hazards (subpart D), and adds requirements for personal fall protection systems (subpart I).

OSHA estimates this rule will prevent 29 fatalities and 5,842 lost-workday injuries every year.

The rule benefits employers by providing greater flexibility in choosing a fall protection system. For example, it eliminates the existing mandate to use guardrails as a primary fall protection method and allows employers to choose from accepted fall protection systems they believe will work best in a particular situation — an approach that has been successful in the construction industry since 1994. In addition, employers will be able to use non-conventional fall protection in certain situations, such as designated areas on low-slope roofs.

As much as possible, OSHA aligned fall protection requirements for general industry with those for construction, easing compliance for employers who perform both types of activities.

For example, the final rule replaces the outdated general industry scaffold standards with a requirement that employers comply with OSHA's construction scaffold standards.

The rule phases out a 1993 exception for the outdoor advertising industry that allows "qualified climbers" to forego fall protection. At least three workers have fallen from fixed ladders under this exception. One of them died. The final rule phases in the fixed ladder fall protection requirements for employers in outdoor advertising.

#### Fall Protection Options

The rule requires employers to protect workers from fall hazards along unprotected sides or edges that are at least 4 feet above a lower level. It also sets requirements for fall protection in specific situations, such as hoist areas, runways, areas above dangerous equipment, wall openings, repair pits, stairways, scaffolds, and slaughtering platforms. And it establishes requirements for the performance, inspection, use, and maintenance of personal fall protection systems.

OSHA defines fall protection as "any equipment, device, or system that prevents a worker from falling from an elevation or mitigates the effect of such a fall." Under the final rule, employers may choose from the following fall protection options:

- **Guardrail System** – A barrier erected along an unprotected or exposed side, edge, or other area of a walking-working surface to prevent workers from falling to a lower level.
- **Safety Net System** – A horizontal or semi-horizontal, cantilever-style barrier that uses a netting system to stop falling workers before they make contact with a lower level or obstruction.
- **Personal Fall Arrest System** – A system that

## Slips, trips, and falls:

- make up the majority of general industry accidents; and
- cause 15% of all accidental deaths, second only to motor vehicle crashes.

# Hazards & Controls

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Slip hazards:

- Grease, oil, water, ice, snow, liquid spills, or polished floors
- Improper footwear



Source: Photos WVU Susan Harwood

# Hazards & Controls

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## Controlling slip hazards:

- Keep walking/working surfaces as clean and dry as possible.
- Make sure your footwear is as slip resistant as possible.
- Require drainage for wet operations.
- Clean up or mark and report spills.
- Remove ice and snow frequently and regularly.

# Hazards & Controls

Trip hazards:

- Poor housekeeping
- Loose flooring, carpeting, or uneven surfaces



Source: Photos WVU Susan Harwood



# Hazards & Controls

- Cords, hoses, open draws or other protruding items



Source: Photos WVU Susan Harwood



# Hazards & Controls

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## Controlling trip hazards:

- Aisles and passageways should be well-lit, clean, and marked.
- Material storage and work-related scraps shouldn't create trip hazards.
- Trip hazards, such as loose flooring, carpeting, uneven surfaces, and protrusion hazards, should be repaired or reported.
- Hoses and cables should be routed away from active work zones and walkways.

# Hazards & Controls

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## Fall hazards:

- Elevated surfaces – top of tanks, towers, machines, platforms, runways, or other elevated surfaces
- Lower-level surfaces – open pits, tanks, vats, or ditches



# Hazards & Controls

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## Controlling fall hazards

- Tanks, towers, machines, and other elevated surfaces:
  - It is best to engineer out the need to go up in the first place.
  - Guardrails are often used, whether temporary or permanent.
  - As a last resort, use a Personal Fall Arrest System (PFAS).



# Hazards & Controls

Conditions leading to falls:

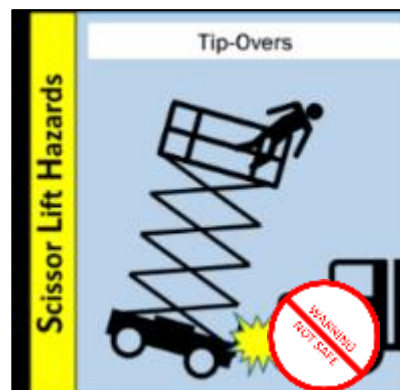
- Ladders
- Scaffolds and scissor lifts
- Stairways
- Floor and wall openings
- Other elevated surfaces



Source: WVU Susan Harwood



Source: www.elcosh.org



Source: OSHA



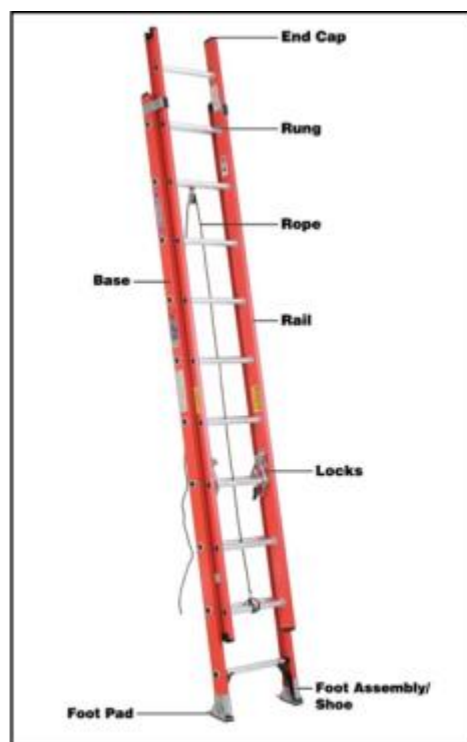
Source: OSHA

# Hazards & Controls

- Basic types of ladders



Step Ladder

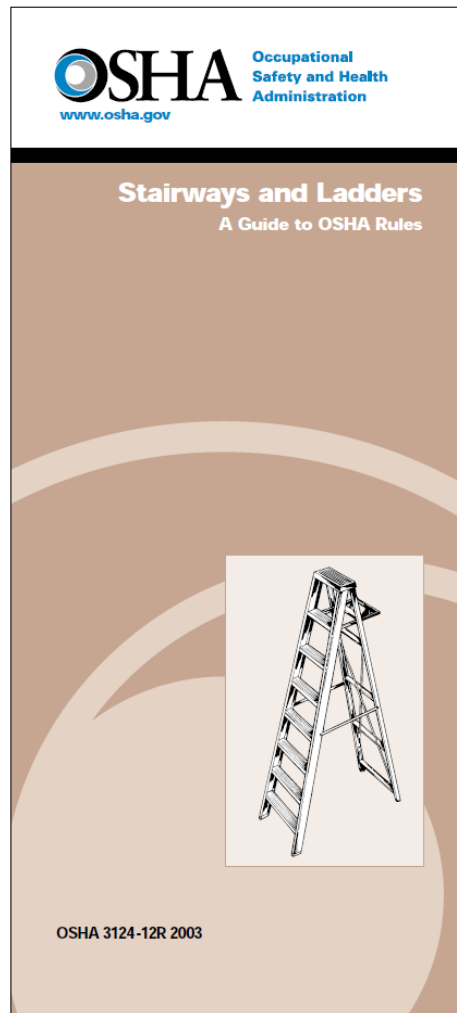


Extension Ladder



Fixed Ladder

# Hazards & Controls

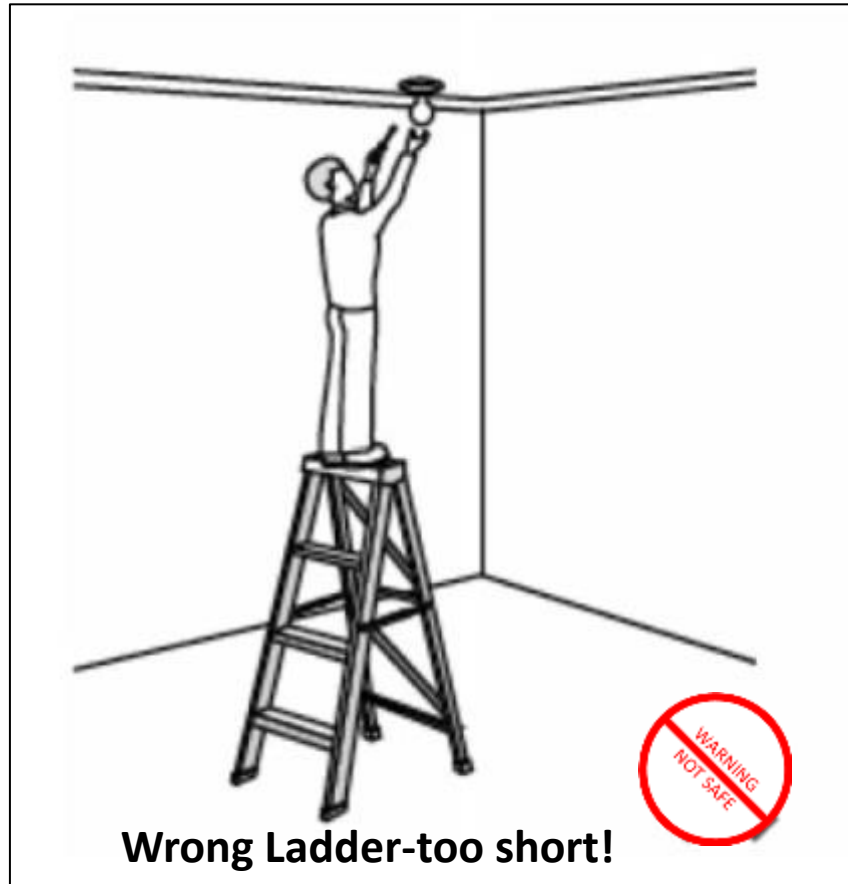


## Controlling fall hazards – ladders:

- One of the leading causes of fatalities and injuries.
- Ladder safety
  - Use the right ladder.
  - Use ladder that is free from defects.
  - Use the ladder properly.



# Hazards & Controls

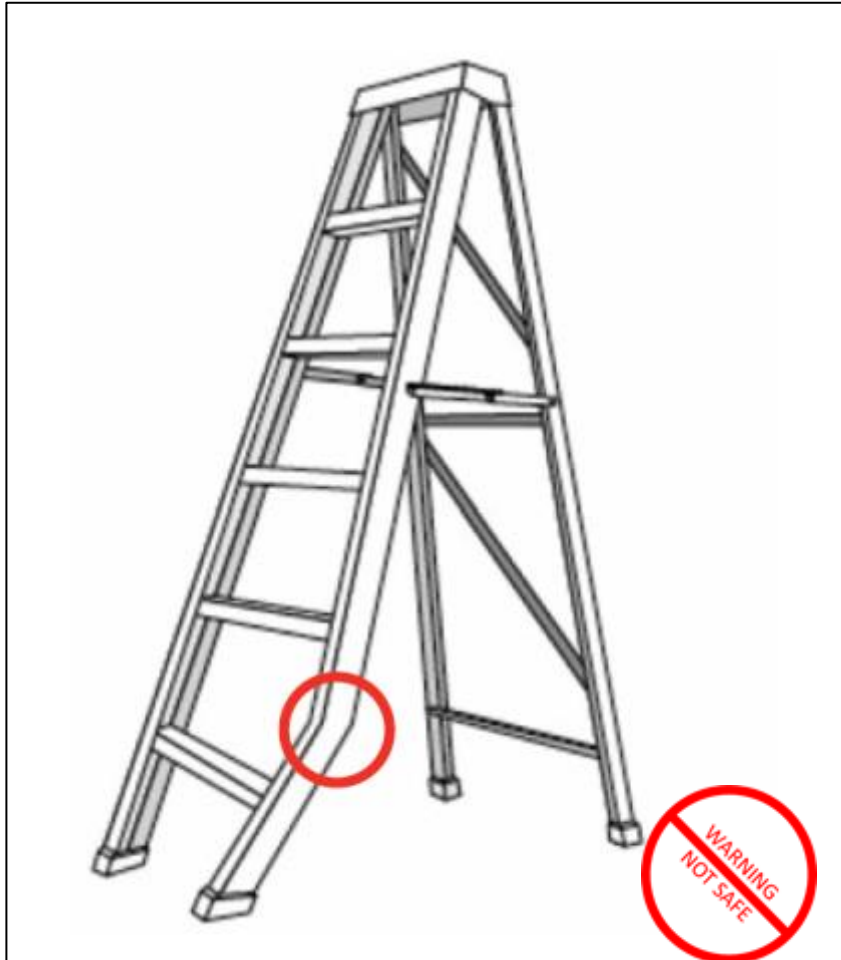


Source: OSHA

- The right ladder:
  - Use the right type, length, and rating for the job.
  - Never use the top two steps of a step ladder.
  - Tell your supervisor if you need a longer ladder.



# Hazards & Controls



Source: OSHA

- Free from defects
  - Regardless of ladder type, inspect the ladder before use.
  - Do not use the ladder if it is bent or there are missing parts.
  - Tell your supervisor about the defective ladder.

# Hazards & Controls

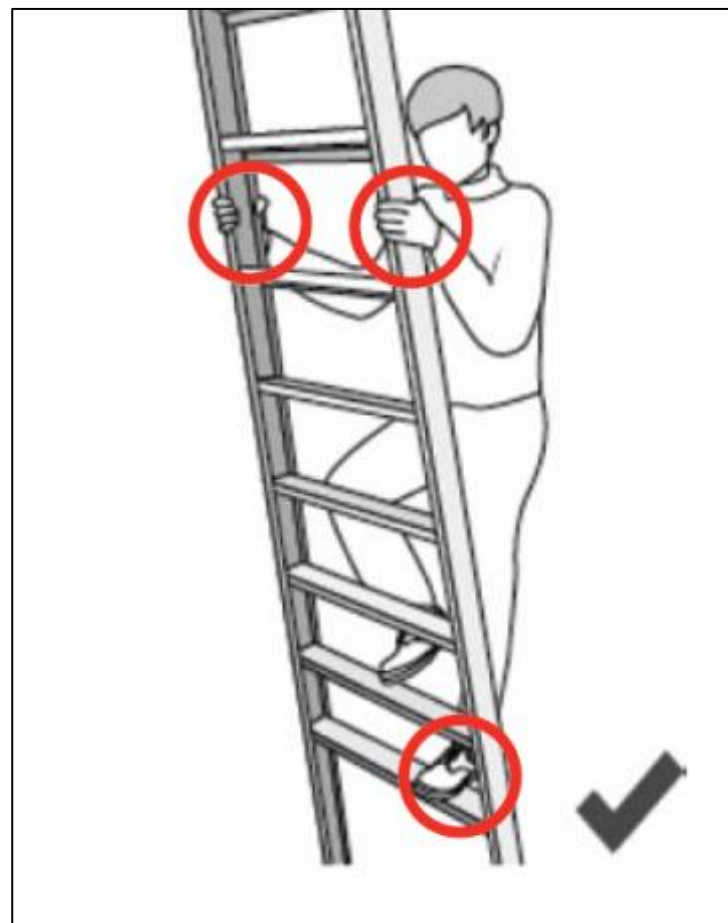


Source: Wernerco shares page

- Proper use
  - Ladders must be used according to the manufacturer.
  - Take the time to read the information.
  - Read and follow all informational stickers and warning labels.

# Hazards & Controls

- Maintain 3 points of contact



Source: OSHA

# Hazards & Controls

- Fixed industrial ladders
  - Must be equipped with a
    - Personal fall arrest system, ladder safety system (if installed on/after 12/19/18)
    - Personal fall arrest system, ladder safety system, cage, or well (if installed before 12/19/18)
  - PFAS or ladder safety system must provide protection throughout entire vertical distance of ladder





# Hazards & Controls



Source: WVU Susan Harwood

Controlling fall hazards – stairs:

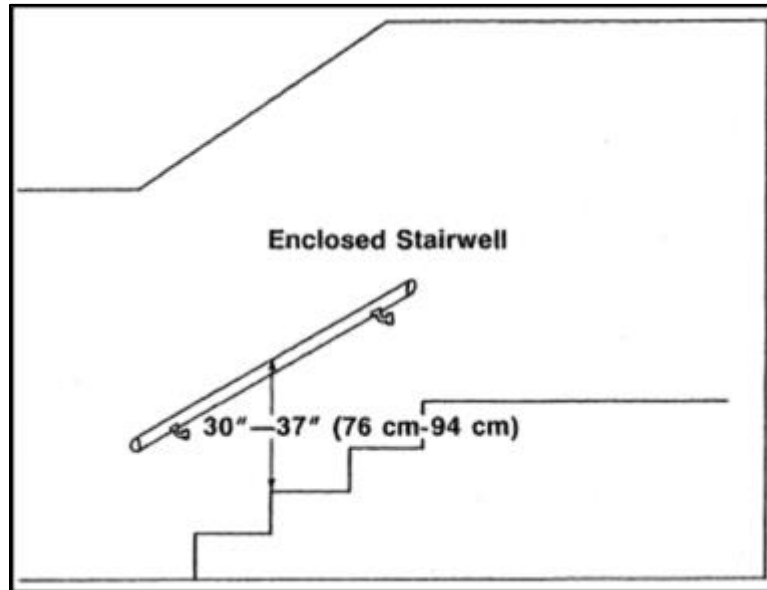
- Often stair-related hazards can be overlooked.
- Stair safety comes down to proper
  - Design & Construction
  - Condition
  - Use

# Hazards & Controls

- Proper design/construction
  - Fixed industrial stairs must be:
    - strong enough to handle a minimum 1,000 lb. live load;
    - at least 22 inches wide;
    - installed at angles between 30-50 degrees; and
    - no more than 1/4 inch variation.



# Hazards & Controls

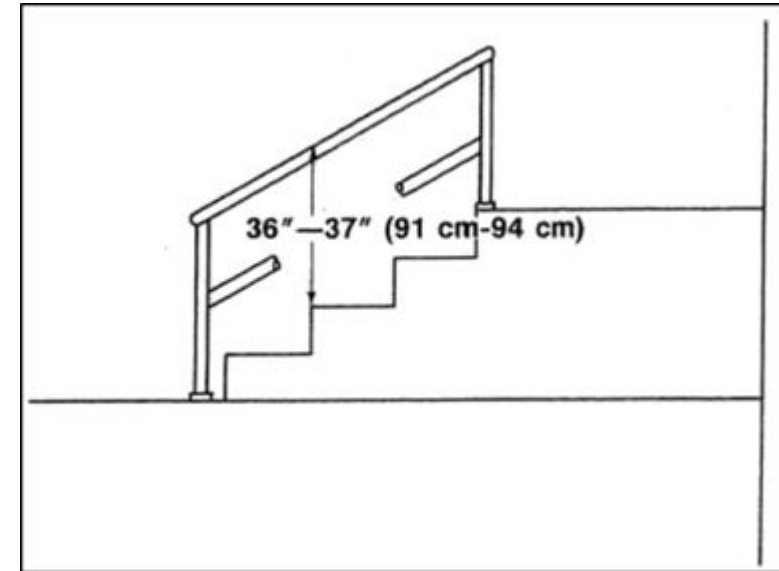


- Handrails are required when there is 4 or more risers.
- Mainly to be used on the right side as you descend.
- Allows you to maintain three points of contact.



# Hazards & Controls

- Stair rails prevent falls from open sides.
- Stair rail system must be present on the unprotected sides and edges (open stairs).
- Stair rails are required when there is 4 or more risers.



# Hazards & Controls



Source: OSHA

- Condition
  - Fixed industrial stairs must be maintained in good shape
  - These stairs are uneven and unpredictable.
  - Report stair-related defects
  - What else is wrong?

# Hazards & Controls



Source: WVU Susan Harwood

- Proper use
  - Maintain at least three (3) points of contact.
  - Do not run up or down stairs.
  - Do not carry heavy objects, only light loads.
  - Do not jump the last few steps.

# Hazards & Controls

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Source: OSHA

- Items should never be placed or stored on stairs.
- Stairs should be inspected on a regular basis.
- Remove items to ensure no one gets hurt.

# Hazards & Controls

## Guardrail systems:

- Standard railing: consists of top rail, mid-rail, and posts. Height from the upper surface of top rail to floor level is 42" (+/- 3"). Mid-rail height is 21 inches.
- Standard toeboard: 3.5" high, with not more than 1/4" clearance above the floor.



# Employer Requirements

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To prevent employees from being injured from falls, employers must:

- Guard every floor hole into which a worker can accidentally walk.
- Provide a guardrail and toeboard around every open-sided platform, floor or runway that is 4 feet or higher off the ground or next level.



# Hazard Recognition

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- Identify hazards and what should be done to control them.



Source : WVU



Source: WVU



Source: OSHA



# Hazard Recognition

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- Identify hazards and what should be done to control them.



Source of photos: OSHA

# Hazard Recognition

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Source: OSHA



Source: OSHA



Source: WVU

# Q&A

- Please submit questions for our instructor via the Q&A button at the bottom of your screen

Feel free to get in touch with further questions!

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# Thank you!

Need to reach a member of our team?

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