

OSHA We are here to help!

In case of emergency: when to contact OSHA

To report an emergency or imminent life threatening situation, please contact OSHA's toll free number immediately:
1-800-321-OSHA (6742)

TTY [1-877-889-5627](tel:1-877-889-5627)

Also call OSHA in order to:

Report workplace safety or health fatalities, or the hospitalization of 3 or more employees

File a complaint about a workplace hazard

Request information, including publications, from OSHA

For assistance in OSHA-related matters, the Brazilian Immigrant Center can help you file a report or complaint: call us at 617-783-8001, ext. 106 and 102, or visit us at 14 Harvard Ave., 2nd Floor, Allston MA 02134, or email us at oshacourse@braziliancenter.org

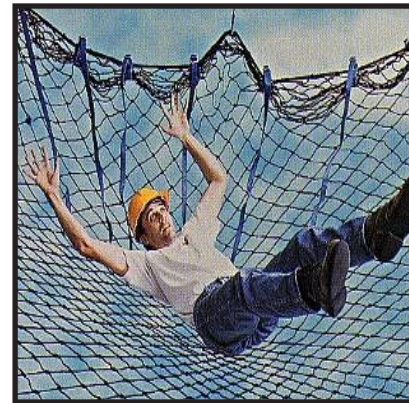
The Brazilian Immigrant Center also offers a variety of OSHA-approved health and safety trainings for employees and their employers. Contact us for more information.



Brazilian Immigrant Center
Centro do Imigrante Brasileiro
www.braziliancenter.org

OSHA Residential Fall Protection

All workers should return home safely to their families every day



About this guide

What is OSHA?

The Occupational Safety and Health Act of 1970 created OSHA to help employers and employees reduce injuries, illnesses and deaths on the job in America. Since then, workplace fatalities have been cut by more than 60% and occupational injury and illness rates have declined 40%, at the same time as US employment has more than doubled. OSHA provides national leadership in occupational safety and health. The agency seeks to find and share the most effective ways to help prevent worker fatalities, and prevent workplace injuries and illnesses.

This brochure offers basic information on OSHA standards and procedures regarding fall protection in the construction industry, emphasizing residential, rather than commercial, construction conditions.

The information presented here reflects OSHA's new, updated standard regarding residential construction, 1926.501(b)(13).

When will residential construction employers that were covered by STD 03-00-001 have to start complying with 1926.501(b)(13)?

The effective date of STD 03-11-002 was June 16, 2011.

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Part five - Maintaining equipment safe

Each time you use it, be sure carefully to inspect your fall-arrest, fall-restraint, and positioning-device equipment.

Check for damage or excessive wear, and replace damaged components. If any equipment has already arrested a fall, have it inspected by a competent person before using it again.

Between uses, store your equipment in a clean, dry place.

Some equipment, especially scaffolds, need to be inspected each time they are assembled, before each shift, and after any event (such as bad weather) that could damage it.

Part six - Responding to falls

What to do if one happens

Put into action your worksite's emergency rescue plan for accidents

Call 911 and be prepared to give the street address, and town or city, of your worksite

Many 911 responders are not equipped to rescue a worker suspended in a personal fall arrest system; explain the circumstances to them

Keep first-aid supplies available on the worksite, and identify on-site equipment ahead of time that responders can use to rescue a suspended worker (e.g., ladders)

Report fatalities, and injuries requiring overnight hospitalization, to OSHA at 1-800-321-OSHA (6742)

Part four - Prevention



Here is an example of a wall bracket, or top plate, scaffold system. Some contractors are using these systems for rolling trusses, cutting rafter tails and hanging fascia.

The positioning of this guard rail system allows easy access for sheathing, roofing and utility installation.



An Aerial lift is a good alternative for reaching heights if properly used. A lift can also be used to install and remove guardrail and safety net systems.

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Introduction

What is Fall Protection?

Falls are the major type of workplace accident suffered within the construction industry, whether residential or commercial. Preventing falls helps all workers return home safely to their families at the end of the work day.

In fall protection, equipment is usually the first thing that comes to mind: personal fall-arrest systems, safety nets, or guardrails, for example. But fall protection is more than equipment. Fall protection is what you do to eliminate fall hazards, to prevent falls, and to insure that workers who do fall don't die.

It is possible to be prepared for fall protection. You can accomplish that by remembering to do these things:

Involve everyone in playing a role in preventing falls.

Identify and evaluate fall hazards on your job.

Eliminate fall hazards, if possible.

Make sure that all workers are trained to recognize fall hazards.

Use appropriate systems and methods to prevent falls and to protect workers if they do fall.

Inspect and maintain fall-protection equipment before and after using it.

What defines Residential Construction?

In order to be classified as residential construction, two elements must be met:

- The end-use of the structure being built must be as a home, i.e., a dwelling; and
- The structure being built must be constructed using traditional wood frame construction materials and methods, even if brickwork and limited steel framing are permitted.

Part four - Prevention



Dee-rings and snap hooks shall have a minimum tensile strength of 5,000 pounds. Snap hooks must be size compatible with the connection point to prevent unintentional disengagement, or shall be a locking type snap hook.

Scaffolds, ladders, and aerial lifts



Platform ladders

Step ladder

Platform ladders are becoming more and more prevalent in the industry. These industry best practices provide workers with a stable work base and allow more flexibility while maneuvering and positioning things like floor joists and trusses.

Part four - Prevention

Personal full arrest systems

There are three primary components to a Personal Fall Arrest System. We have:

- The anchorage point
- The body harness, and
- The connector or lanyard

These three components are commonly referred to as the ABC's of fall protection. We'll take a detailed look at each of these components.



Proper installation of the Anchorage point is critical to the success of this system. It must be designed and installed to support the amount of force that would be applied to it if a worker fell. Consulting the manufacturer's instructions or a registered professional engineer will ensure this critical component is properly installed and maintained.

- A full body harness distributes the force of the fall over the thighs, pelvis, waist, chest and shoulders
- Body belts have not been allowed as part of an arrest system since January 1998.

A full body harness is designed to minimize the impact on the body during a fall by distributing the force of the fall over the entire torso.

Though body belts are no longer allowed as part of an arrest system, they can still be used as part of a fall restraint system that we'll cover below.



Part one - Falling: Myths and truths

Myths & truths

Myth: Roofers on residential projects don't get hurt

Fact: Roof edge falls account for half of all roofing-related fall deaths.

Myth: A worker must fall a long distance to be killed.

Fact: Half of construction falls resulting in death are from a height of 21 feet or less.

Myth: Older, more experienced workers don't fall.

Fact: The average age of residential construction workers who have fallen to their deaths is 47.

Myth: There are not many safe alternatives available for workers to prevent or protect them from a fall.

Fact: There are many and here are just a few that we will be seeing in the following presentation.

Fatalities Statistics

FATALITIES	2005	2006	2007	2008	2009
TOTAL FALLS	134	130	110	93	78
FALLS FROM ROOFS	48	49	35	28	31

Source: BLS CFOI Data

Falls continue to be the leading cause of death among construction workers. Residential falls accounted for roughly 29 percent of all construction fall fatalities and falls from roofs accounted for nearly 35 % of those.

Part two - Preventing falls

New OSHA rules for residential construction

Significant 2011 Changes in the Residential Fall Protection Policy

Under the new directive employers must follow 1926.501(b)(13).

1926.501(b)(13) states ... workers “engaged in residential construction activities 6 feet (1.8 m) or more above lower levels shall be protected by guardrail systems, safety net system, or personal fall arrest system.”

... or, by alternative fall protection measures allowed under 1926.501(b) for particular types of work.

In other words, all employers must protect their workers who are engaged in residential construction from a height of 6 feet or more above lower levels by conventional fall protection systems (guardrail systems, safety net system, or personal fall arrest system).

... or, by other fall protection measures allowed under 1926.501(b) for particular types of work.

Training requirements of 1926.503

Training must cover among other subjects:

- The nature of fall hazards in the work area
- How to erect, maintain, disassemble, and inspect the fall protection systems to be used
- How to use and operate the relevant fall protection systems
- Subpart M requirements – Supplements 1926.21

Certification:

- Courses must provide for training certification
- Documentation of the training certification must be maintained

Retraining is required for:

- Changes in the fall protection systems to be used or in the workplace
- Inadequacies in employees’ knowledge or use of fall protection

Part four - Prevention

Safety nets

- Requirements for safety net systems include:
- As close as practicable, and not more than 30' below – 1926.502(c)(1)
- Sufficient clearance to prevent contact with surface or structures below – 1926.502(c)(3)
- Drop tested or certified – 1926.502(c)(4)

Safety nets are another means of arresting falls. These systems also fall under that passive system umbrella because when they are properly installed and maintained workers do not have to do anything with the system to be safe. Installation, adjustments, and maintenance of the netting should be made only by properly trained personnel.

However, when safety nets are used, they must be:

- Positioned close to the walking/working surface on which employees are working.
- Drop tested or certified.



These nets have been positioned to prevent falls to the interior of the building. Employers should consult the manufacturer's instructions and/or a registered professional engineer to ensure proper installation of the net and bracing of the stud walls. Give due consideration to the potential impact load on the net and lateral load on the stud walls in the event of a fall.

Part four - Prevention

Guardrail 1926.502(b)

Requirements for guardrail systems include:

- Top rails 42" +/- 3"
- Must withstand 200 pounds – 1926.502(b)(1) & 1926.502(b)(3)
- Mid rails halfway
- Must withstand 150 pounds – 1926.502(b)(2)(i) & 1926.502(b)(5)
- Surface the guardrail to prevent punctures, lacerations and the snagging of clothing – 1926.502(b)(6)
- No steel or plastic banding – 1926.502(b)(8)

Guardrail systems are designed to prevent workers from falling. Once properly installed, guardrails also are sometimes referred to as a type of “passive fall protection.”

And remember, whenever there's a possibility for objects to fall on workers below, you must install toe boards.



Here we see a 2nd floor perimeter completely protected by a guard rail system.

Part two - Preventing falls

Employer responsibilities

As an employer, you must:

Be familiar with mandatory OSHA standards and make copies available to employees for review upon request.

Minimize or reduce hazards.

Make sure employees have and use safe tools and equipment (including appropriate personal protective equipment), and that such equipment is properly maintained.

Establish or update operating procedures and communicate them so that employees follow safety and health requirements.

Provide training required by OSHA standards

Report to the nearest OSHA office within 8 hours any fatal accident or one that results in the hospitalization of three or more employees.

Provide access to employee medical records and exposure records to employees or their authorized representatives.

Not discriminate against employees who properly exercise their rights under the Act.

Post OSHA citations at or near the worksite involved. Each citation, or copy thereof, must remain posted until the violation has been abated, or for three working days, whichever is longer.

Abate cited violations within the prescribed period.

Part three - Identifying fall hazards

Importance of having a safety strategy

Make fall protection a regular part of your company's safety policy.

- Maintain conditions & adopt job practices reasonably necessary to protect workers.
- The best strategy to protect workers is to control and prevent hazards at their source before they become a problem. To the extent possible, the work environment and the job itself should be designed to eliminate hazards or reduce exposure to hazards.
- Designate competent persons on the worksite to monitor safety conditions and resolve problems with safety. An OSHA "competent person" is defined as "one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them". [29 CFR 1926.32(f)].
- Have an emergency rescue plan in case of an accident.
- Post emergency-responder phone numbers and addresses at the work site.

Rights and wrongs



All sites have unprotected sides and edges, wall openings, or floor holes at some point during construction. There's no reason to work like this ...



... when at minimum, you can work like this. If this worker should slip and fall, he will not hit the ground. PFAS works!

Part three - Identifying fall hazards



Some builders use 24" OC studs for non-load bearing walls. Prior to installation of drywall, temporary guardrail systems must be installed to prevent workers from falling through the studs.



Like this!



Each employee on walking/working surfaces shall be protected from falling through holes (including skylights) more than 6 feet (1.8 m) above lower levels, by personal fall arrest systems, covers, or guardrail systems erected around such holes (1926.501(b)(4)).

This open-sided stairwell opening can be protected by a guardrail system (and handrail system – 1926.1052(c)).



Like this!