

# Staying on Your Feet: Fall Prevention for Construction

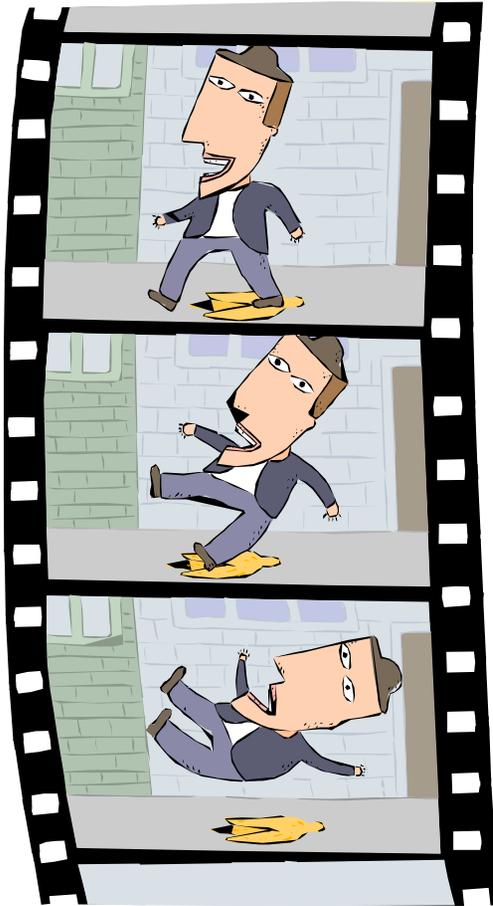


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# Fall Prevention for Construction



Falling has been described as “a cartoon happening in slow motion.”

Although seeing a person fall may be funny, injuries sustained from falling are no laughing matter.

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# Objectives

- Fall injury statistics.
- Prevention of falls on same level.
- Protection against falls from elevation.
- Special considerations for residential contractors.
- Ladder safety & equipment safety.

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# Fall Injury Statistics

Did you know?

- Every 8 seconds, someone is a victim of a slip and/or fall.
- The CDC estimates that by 2020, annual direct and indirect cost of fall injuries will be in excess of \$55 billion.
- According to the Bureau of Labor Statistics, falls account for 11% of job-related fatalities for men.
- Falls are the leading cause of hospital emergency room visits at 8 million per year (21% of all hospital ER visits).
- Falls are the leading cause of workers compensation claims.
- Falls are the primary cause of lost days from work.

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Sources: National Floor Safety Institute (NFSI), U.S. Bureau of Labor Statistics, and Centers for Disease Control (CDC)



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# Fall Injury Statistics

Did you know?

- Falls from elevation are 40% of compensable fall cases.
- Falls on same level are 60% of compensable fall cases.
- Fall injury statistics will absolutely be affected by the aging of the workforce.
  - 1 in 3 persons over the age of 65 will experience a fall; half of these will be “repeaters”.
  - Falls are the second leading cause of injury related deaths in people 65-84.
  - Incident of falls goes up with each decade of life.

Sources: National Floor Safety Institute (NFSI) and National Institute on Aging

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# Falls on Same Level

Falls on same level are generally caused by a slip or trip.

Slip: “to slide suddenly or involuntarily; to lose ones foothold

Trip: “to stumble or misstep; tip or tilt”

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# Falls on Same Level

Falls on same level are 40% of all compensable fall cases.

## Indoor Causes

- Flooring material
- Loose rugs or mats
- Cords, files, “piles”
- Poor housekeeping
- Lack of handrails
- Distractions (human or tech)
- Weather related (rain, snow, ice)

## Outdoor Causes

- Parking lots
- Uneven walkways, pavement
- Gravel or other loose material
- Distractions (human or tech)
- Weather related (rain, snow, ice)
- Poor visibility/lighting

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## Falls on Same Level - Indoor



Cords stretched across walkways present a serious trip hazard.

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## Falls on Same Level - Indoor



Rugs that are loose can be a slip OR trip hazard (notice the curled edge).

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# Falls on Same Level - Indoor



Don't be a "stacker." Keep walkways clear of files, paper or other office material.

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# Falls on Same Level - Outdoor



Raised or uneven curbs can cause a trip.

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# Falls on Same Level - Outdoor



Parking lots have multiple hazards to be aware of:

- Tire stops
- Wheelchair ramps
- Speed bumps
- Improper lighting at dusk
- Uneven pavement

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## Falls on Same Level - Outdoor



You know what a pothole can do to a vehicle. Imagine what it could do to an ankle!

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# Falls on Same Level

## Indoor Slip, Trip and Fall Prevention

- Keep floors clean and dry.
- Remove files, furniture or other objects from walkways.
- Keep cords out of walking path.
- Wear proper shoes (closed toe shoes/slip resistant).
- Make sure rugs are flush with the ground and not “rolled up”.
- Hold on to handrails.
- Do not text or talk on phone while walking.

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# Falls on Same Level

## Outdoor Slip, Trip or Fall Prevention

- Keep snow and ice cleared from walkways.
- Practice good housekeeping at job sites.
- Watch for uneven pavement or ramps.
- Wear proper shoes (closed toe shoes/slip resistant).
- Avoid distractions while walking (phone/text/2-way).
- Be especially careful during times of uneven or poor light (early morning or dusk).

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# Falls From Elevation



Elevation = anything  
above ground level



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## Falls From Elevation

21-year-old male laborer died when he fell through a domed, smoke-vent skylight to a concrete floor 27 feet below. The victim had been throwing old roofing materials off a roof with six unguarded skylights. During a work break, the victim sat down on one of the skylights, which began to break under his weight. As he attempted to raise himself from the skylight with his arms, the plastic dome failed completely and he fell.

Source: [www.cdc.gov](http://www.cdc.gov)

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# Falls From Elevation



OSHA requires any unprotected side or edge with 6 ft or more above a lower level should be protected with some sort of fall protection or personal arrest system

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Source: [www.osha.gov](http://www.osha.gov)



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# Falls From Elevation

## Fall Protection System Components

- Harness – attaches to the person.
- Lanyard – connects harness to the anchorage point.
  - Must incorporate shock absorbers.
  - Attach to a secure fixing point.
  - Anchorage point must be designed to support load.
- Lifeline or retractable device – intermediate attachment point used to allow greater range of movement.

***Safety tip: Your fall protection device is only as strong as the weakest link. Always inspect equipment before use and discard damaged or worn components.***

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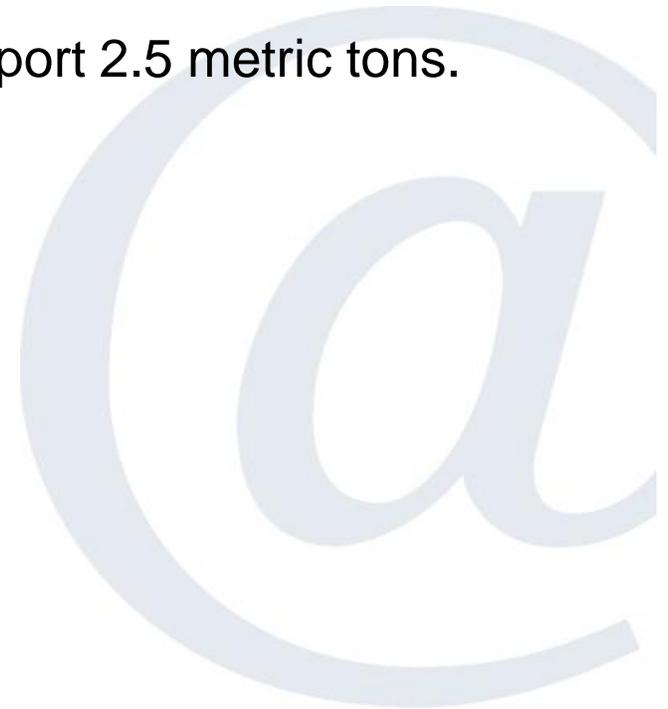


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# Falls from Elevation

## Fall Protection System Requirements

- Company should provide harness.
- Lifelines and anchorage points should support 2.5 metric tons.
- Lanyards should:
  - Be secured ABOVE the point of operation.
  - Have a MAXIMUM length of 2 meters.
  - Never have two hooked together.
  - Have locking snaps on both ends.



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# Falls From Elevation

A 27-year-old male cement finisher died when he fell from a suspension scaffold and his safety lanyard snapped. The victim and a co-worker were dismantling suspended scaffolding at the 160-foot level inside a 172-foot-high, circular concrete silo. Both men were wearing safety belts with nylon rope lanyards secured to independent lifelines.

*Examination of the lanyard after the event showed burn damage at several places, including the point of failure. The employer did not control inspection or distribution of this fall protection equipment. Instead, the equipment was kept in a common supply bin where the workers could readily obtain it when needed and return it when work was completed. The lanyard had been returned to the storage bin even though it had probably been damaged earlier during cutting and welding operations.*

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Source: [www.cdc.gov](http://www.cdc.gov)

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# Residential Contractors

**June 16, 2011**

As of this date, residential construction operations must comply with OSHA regulation 1926.501 (b)(13) which requires the use of conventional fall protection systems from heights of six feet or greater.

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Source: [www.osha.gov](http://www.osha.gov)



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# Residential Contractors



STD 03-11-002 Compliance Guidance in Residential Construction was issued on December 22, 2010. It requires that residential contractors comply with conventional fall protection (guardrails, safety nets or personal fall arrest systems) or use an alternative fall protection plan as described in OSHA regulation 1926.503(k) provisions 1-10.

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# Residential Contractors

## OSHA Regulation 1926.503(k)

"Fall protection plan." This option is available only to employees engaged in leading edge work, precast concrete erection work, or residential construction work (See 1926.501(b)(2), (b)(12), and (b)(13)) who can demonstrate that it is infeasible or it creates a greater hazard to use conventional fall protection equipment.) The fall protection plan must conform to the following provisions (see next slides).

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## Requirements under OSHA Regulation 1926.503(k)

- 1) Shall be prepared by a qualified person and be site specific.
- 2) Any changes must be approved by the qualified person.
- 3) A copy of the alternative fall protection plan shall be maintained at the job site.
- 4) Implementation must be under the supervision of a competent person.
- 5) Plan must state reasons why traditional fall protection is not feasible or more dangerous.

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# Residential Contractors

## Requirements under OSHA Regulation 1926.503(k)

- 6) Plan must include measures to be taken to reduce or eliminate fall hazards.
- 7) Plan must identify EACH location on the site where traditional fall protection can not be used.
- 8) When no other alternative measure is implemented, there must be a safety monitoring system in conformance with 1926.502(h).
- 9) Plan must identify employees designated to work in controlled access zones. (No one else may enter access zones).
- 10) If an accident or incident occurs, employer must investigate to determine if changes to fall protection plan are needed.

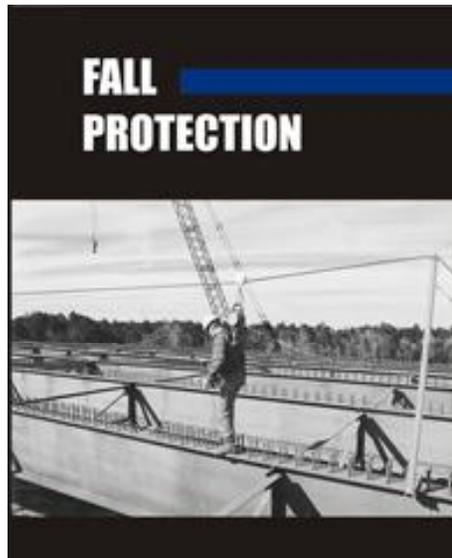
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Training requirements under OSHA regulation 1926.503(a)(1)



“The employer shall provide a training program for each employee who might be exposed to fall hazards. The program shall enable each employee to recognize the hazards of falling and shall train each employee in the procedures to be followed in order to minimize these hazards.”

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Source: [www.osha.gov](http://www.osha.gov)



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# Residential Contractors

## What constitutes residential construction?

- Residence requirement: The end use of the building must be as a home (i.e. dwelling).
- Wood frame construction requirement: Building must be constructed of wood frame construction materials and methods.
  - Includes cold-formed metal studs.
  - Includes residences with brick or masonry walls and wood frame.

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# Residential Contractors



What is NOT residential construction?

- Nursing homes
- Hotels



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# Ladder and Equipment Safety

3-point contact is defined as:

“Three out of four critical points of the body are touching or are in contact with the area you are climbing at all times. “



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# Ladder and Equipment Safety

3-point contact addresses the four critical points, three in contact at all times:



- Two hands and one foot

OR

- Two feet and one hand

*Move by replacing a hand on the ladder or equipment when lifting a foot or replacing a foot when lifting a hand.*

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# Ladder and Equipment Safety

Why is 3-point contact important?

- To maintain control.
- To reduce the chances of falling.
- To reduce the urge to jump.
- To discourage “multi-tasking” while mounting, dismounting or climbing.



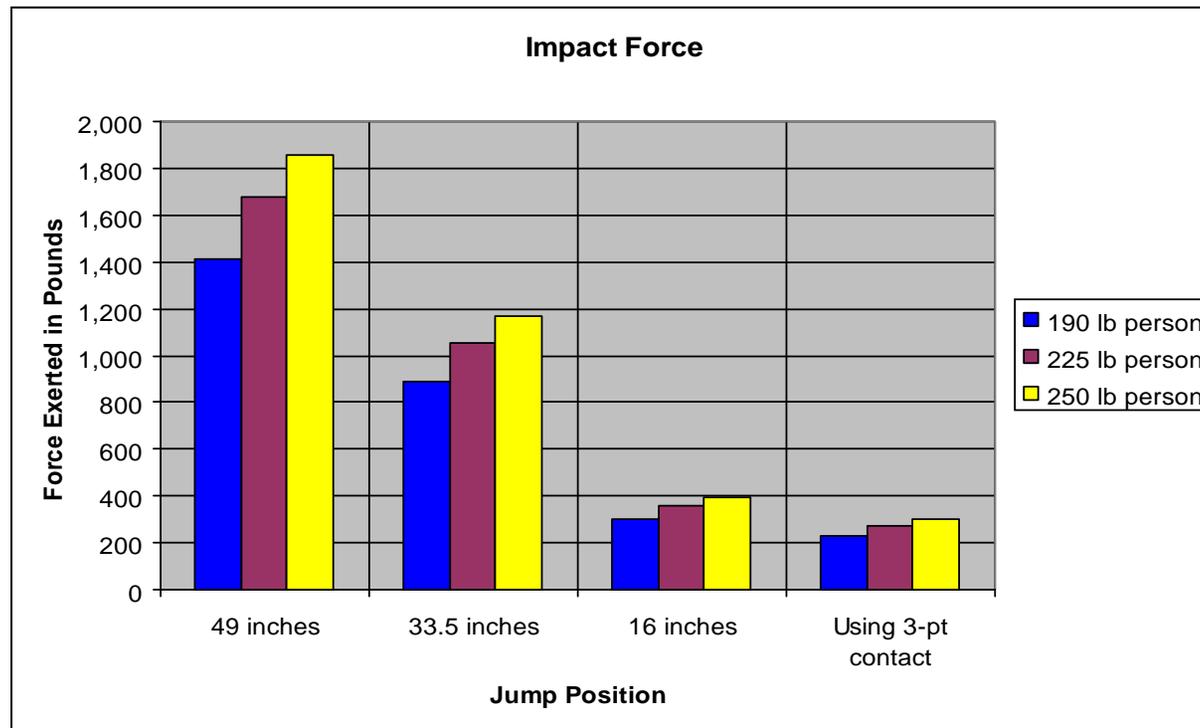
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# Ladder and Equipment Safety

What is the impact of not using proper 3-point contact?



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# Ladder and Equipment Safety

## Don't

1. Jump when exiting the equipment.
2. Have anything in hands while mounting or dismounting.
3. Use wheels or door handles to assist in climbing.

## Do

1. Face the ladder or equipment when mounting or dismounting.
2. Wear slip-resistant shoes.
3. Keep parts clear of mud, grease, snow or ice.
4. Use handgrips, steps or running boards.

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# Risk & Safety Management Contact

If you have any questions or would like Risk and Safety assistance with your policy, please contact us:

Albuquerque area: (505) 345-7260

Toll Free: (800) 788-8851

P.O. Box 27825  
Albuquerque, NM 87125

You can also email us at [NMMSafetyAdvisor@NewMexicoMutual.com](mailto:NMMSafetyAdvisor@NewMexicoMutual.com)



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