

Health & Safety



Slip, Trip & Fall

Slips, trips, and falls constitute the majority of general industry accidents. They cause 15% of all accidental deaths, and are second only to motor vehicles as a cause of fatalities. The OSHA standards for walking/working surfaces apply to all permanent places of employment, except where only domestic, mining, or agricultural work is performed. Mining would fall under MSHA standards. Walking/working surfaces are addressed in specific standards for the general industry, shipyard employment, marine terminals, long shoring, phosphoric acid plants, and the construction industry.

Falls: Unprotected Sides, Wall Openings, and Floor Holes

Am I In Danger?

Almost all sites have unprotected sides and edges, wall openings, or floor holes at some point during construction. If these sides and openings are not protected at your site, injuries from falls or falling objects may result, ranging from sprains and concussions to death.

How Do I Avoid Hazards?

"Unprotected sides and edges." Each employee on a walking/working surface (horizontal and vertical surface) with an unprotected side or edge which is 6 feet (1.8 m) or more above a lower level shall be protected from falling by the use of one or more of the following:

- ◇ Personal Fall Arrest Systems
- ◇ Guardrail Systems
- ◇ Safety Net Systems

- During new construction, cover or guard floor holes as soon as they are created.
- For existing structures, survey the site before working and continually audit as work continues. Guard or cover any openings or holes immediately.
- Construct all floor hole covers so they will effectively support two times the weight of employees, equipment, and materials that may be on the cover at any one time.
- In general, it is better to use fall prevention systems, such as guardrails, than fall protection systems, such as safety nets or fall arrest devices, because fall prevention systems provide more positive safety means.

Personal Fall Arrest Systems

A personal fall arrest system is one option of protection that OSHA requires for workers on construction sites who are exposed to vertical drops of 6 feet or more. OSHA General Industry regulations require guardrails or a personal fall arrest system for vertical drops of 4 feet or more. This 4 foot requirement is followed by the Phosphate and Oil & Gas Industry for both the general industry areas along with their construction areas.

Using Fall Arrest Systems Safely

Ensure that personal fall arrest systems will, when stopping a fall, operate properly by adhering to the following:

- Be rigged such that an employee can neither free fall more than 6 feet nor contact any lower level.
- Bring an employee to a complete stop and limit maximum deceleration distance to 3½ feet.
- Have sufficient strength to withstand twice the potential impact energy of a worker free falling a distance of 6 feet, or the free fall distance permitted by the system, whichever is greater.
- Includes a proper harness, lanyard, and anchor point
- Remove PFAS systems and components from service immediately if they have been subjected to fall impact until inspected by a competent person and deemed undamaged and suitable for use.
- Promptly rescue employees in the event of a fall, or assure that they are able to rescue themselves.
- Inspect systems before each use for wear, damage, and other deterioration, and remove defective components from service. Workers must be trained in proper use and inspection of equipment.
- Do not attach fall arrest systems to guardrail systems or hoists.
- Rig fall arrest systems to allow movement of the worker only as far as the edge of the walking/working surface. Use a Self Retracting Lanyard (SRL) when working at heights 4 feet or greater on a Ardaman drill rig upper platform or when climbing the derrick.

July 7, 2025

Ardaman & Associates, Inc.
A Tetra Tech Company



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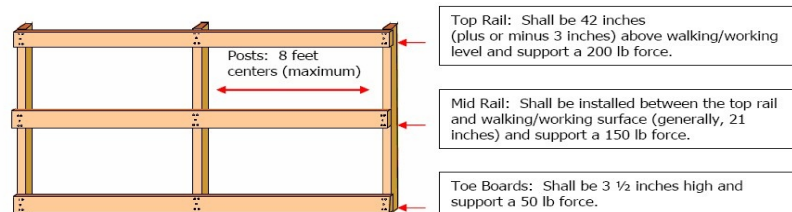
Tips to Prevent Slip, Trip, and Falls in the office or field

- Floors are kept clean, dry, and in good repair.
- Aisles, stairs, and passageways that are free of clutter and obstructions.
- Ensure proper safety ladder type and use.
- Rails and guards are placed around floor and wall openings.
- Clean, orderly, sanitary work areas.
- Maintain Work Areas to prevent slips, trips, and falls.
- Clean up leaks or spills on floors promptly and mark them.
- Repair or report floor problems such as broken planks, stairs, missing tile, etc.
- Block off and mark floor areas that are being cleaned or repaired, or holes in floors or the ground.
- Keep cords, power cables, and air hoses out of walkways.
- Place trash promptly in proper containers.
- Keep drawers closed.
- Work on level surfaces in the field or office using the appropriate footwear.
- Keep walkways, work areas, aisles, and stairs free of tools, materials, and other hazards.
- Always take smaller/shorter steps when walking on material that maybe wet or slippery.
- Walk diagonally (especially on steeper slopes) if feasible to avoid losing balance. Use a stick or probe rod to check ahead of the path you are walking for subsurface holes or erosion areas. Look for hidden cavities and holes when walking on grassed and vegetative slopes.
- Watch for loose rocks/sand/materials that will cause you to slip and fall. Walk slowly on uneven ground and pick your path carefully. Use small steps and walk slowly when going up or down steep slopes, especially when uneven, wet, and slick, or dry and loose conditions prevail. Keep your hands out of your pockets to increase balance.
- Keep your hands out of your pockets when walking through work areas as this will help maintain balance and allow you to brace yourself if a fall was to occur.

Guardrail Systems

Many times the nature and location of the work will dictate the form that fall protection takes. If a guardrail system is used, it must comply with the following provisions:

- Top edge height of top rails, or equivalent guardrail system members, must be between 39 and 45 inches above the walking/working level, except when conditions warrant otherwise and all other criteria are met (e.g., when employees are using stilts, the top edge height of the top rail must be increased by an amount equal the height of the stilts).
- Midrails, screens, mesh, intermediate vertical members, or equivalent intermediate structures, must be installed between the top edge and the walking/working surface when there is no wall or other structure at least 21 inches high.
 - Midrails must be midway between the top edge of the guardrail system and the walking/working level.
 - Screens and mesh must extend from the top rail to the walking/working level, and along the entire opening between rail supports.
 - Intermediate members (such as balusters) between posts must be no more than 19 inches apart.
 - Other structural members (such as additional Midrails or architectural panels) must be installed so as to leave no openings wider than 19 inches.
- Guardrail systems must be capable of withstanding at least 200 pounds of force applied within 2 inches of the top edge, in any direction and at any point along the edge, and without causing the top edge of the guardrail to deflect downward to a height less than 39 inches above the walking/working level.
- Midrails, screens, mesh, and other intermediate members must be capable of withstanding at least 150 pounds of force applied in any direction at any point along the Midrails or other member.
- Guardrail systems must not have rough or jagged surfaces that would cause punctures, lacerations, or snag clothing.
- Guardrails are needed on any wall openings 18 inches or greater in width and 30 inches in height with exposure to a fall hazard of 6 feet or more.



Safety Net Systems

If the employer chooses to use a safety net system, the system must comply with the following provisions:

- Safety nets must be installed as close as practicable under the surface on which employees are working, but in no case more than 30 feet below.
- When nets are used on bridges, the potential fall area must be unobstructed.
- Safety nets must extend outward from the outermost projection of the work surface as follows: See chart below.
- Safety nets must be installed with sufficient clearance to prevent contact with the surface or structures under them when subjected to an impact force equal to the drop test.
- Safety nets and their installations must be capable of absorbing an impact.
- Safety nets and safety net installations must be drop-tested at the jobsite:
 - ⇒ After initial installation and before being used.
 - ⇒ Whenever relocated.
 - ⇒ After major repair.
 - ⇒ At 6-month intervals if left in one place.

Extending safety nets outward from the outermost projection of the work surface

Vertical distance from working level to horizontal plane of net	Minimum required horizontal distance of outer edge of net from the edge of the working surface
Up to 5 feet	8 feet
5 to 10 feet	10 feet
More than 10 feet	13 feet

Portable Ladder Safety

Many of the most common accidents that occur when we use a portable step ladder can be avoided by observing the following tips:

DO's . . .

- Always inspect your portable step/extension ladder before use, and take it out of service if there is any deficiency found that affects its safe use.
- Make sure all four feet of the portable step ladder or two feet on an extension ladder are set on a level and stable surface, and that both ladder spreaders are fully extended and locked into place before use.
- Keep your ladder, your body, your tools and any materials at least 10 feet away from energized electrical conductors (or even further for higher voltages exceeding 50kv).
- Always make sure at least one of your hands is firmly grasping a rung or side rail when you are climbing up or down a ladder. And be aware that just sliding your hand along a side rail as you ascend or descend the ladder does NOT constitute "grasping" the ladder. **(3 points of contact)**
- Maintain your balance and center of gravity on your portable step ladder by keeping your belt-buckle between the two side rails. Reposition the ladder instead of over-reaching.
- Do not use a portable step ladder made of metal or any other conductive materials when performing any task or working in an area where you, your tools or materials, or the ladder could make contact with energized electrical conductors or equipment.
- Never climb up or down a portable step ladder while carrying any object that prevents you from firmly grasping the ladder with at least one hand or that could cause you to lose your balance.
- Do not place any tools or materials on the top cap or any step of your ladder that might fall and strike someone if the ladder were to be bumped or inadvertently moved.
- Never stand on the top cap of a regular portable step ladder, or on the top step. Always follow the ladder manufacturer's rules and warning stickers for proper standing surfaces.
- When determining proper working height/angle, non-self supporting ladders (extension) should be set at a **4:1 lean ratio** from the foot to the top support. Each section of a multi-section ladder must overlap the adjacent section by at least 3 feet for ladders up to 36 feet and 4 feet for 40 feet or longer extension ladders.

DO NOT's . . .

- Never use a portable step ladder for purposes for which it was not designed. For

example, do not lean a closed portable step ladder against a wall or other surface for the purpose of climbing, or stand on one that has been placed across objects in a horizontal position.

Misuse of Portable Ladders

Am I in Danger?

- You risk falling if portable ladders are not safely positioned each time they are used. While you are on a ladder, it may move and slip from its supports. You can also lose your balance while getting on or off an unsteady ladder. Falls from ladders can cause injuries ranging from sprains to death.

How Do I Avoid Hazards?

- Position portable ladders so the side rails extend at least 3 feet above the landing.
- Secure side rails at the top to a rigid support and use a grab device when 3 foot extension is not possible.
- Make sure that the weight on the ladder will not cause it to slip off its support.
- Before each use, inspect ladders for cracked or broken parts such as rungs, steps, side rails, feet, and locking components.
- Do not apply more weight on the ladder than it is designed to support. (Ladder Safety)
- Use only ladders that comply with OSHA design standards. Always use the 4:1 lean ratio.

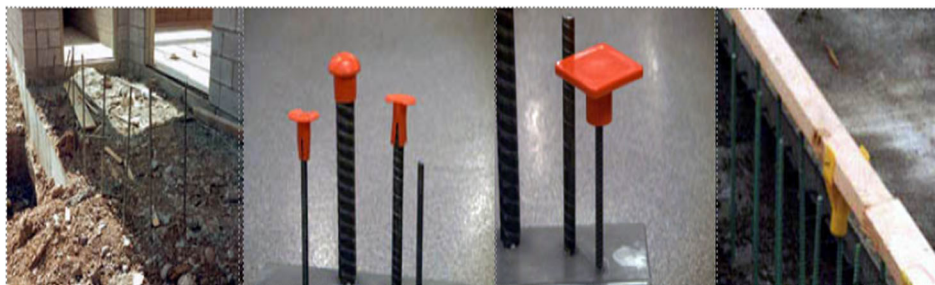
Guarding Steel Reinforcing Bars

Am I in Danger?

Unguarded protruding steel reinforcing bars are hazardous. Even if you just stumble onto an unguarded reinforcing steel bar (rebar) you can impale yourself, resulting in serious internal injuries or death.

How Do I Avoid Rebar Exposure Hazards?

- Guard all protruding ends of steel rebar with rebar caps or wooden troughs, or
- Bend rebar so exposed ends are no longer upright.
- When employees are working at any height above exposed rebar, fall protection / prevention is the primary line of defense against impalement.



These rebar should be bent over or protected with caps so that a worker would not be injured by falling on them.

The OSHA Standard requires that rebar "be guarded to eliminate the hazard of impalement." Not all guards provide that level of protection. In some circumstances, the force of a fall can cause rebar to push clear through a plastic cap and still impale a worker, or the worker can be impaled by the rebar and the cap together.

Only rebar caps designed to provide impalement protection, such as those containing steel reinforcement, should be used.

This type of cap positions a 2 x 4 over the exposed rebar, and has been approved by California OSHA.



They are improperly using the top rung of this step ladder to work from.

This ladder is being used at the proper angle, and appears to be stable and secure.

Is it safe or unsafe?

This phrase is used in the workplace to represent desired safety behaviors and conditions, but do not reflect the reality of what goes on at a job site.

Safe is an ideal state in which no risks are present in the work environment. Unfortunately, that state does not exist. Unsafe is most often used by individuals to express the higher probability risks or more potentially severe injuries that may be present. That, too, is an inexact science. Whether we think it is Safe or Unsafe, even risks that usually result in only minor injuries can occasionally result in a fatality. In addition, High-level risks can be taken regularly with no injury in some instances.

The reality is that there is no safe state in the workplace, but there is a safer method. The hierarchy of safety controls starts with eliminating risks. That is seldom possible, so we take other steps which do not eliminate but simply attempt to control the risk, such as engineering and administrative controls. These steps reduce the probability of the risk producing an injury and are considered safer. The last line of defense in safe vs unsafe is the use of personal protective equipment.

**“IF IT’S NOT SAFE,
STOP....DO IT THE
SAFE WAY.”**



Understanding and avoiding near misses

A concrete contractor forgoes fall protection because he finds it uncomfortable. Later that day, he slips and nearly falls off the floor of the 12 story building he is working on.

A project manager is reading their smartphone as they walk down the hall at the office and almost collides with a co-worker. Although one case is more extreme than the other, both are examples of near misses (or near hits) – and both are preventable situations.

“A near miss is an unplanned event that did not result in injury, illness or damage – but had the potential to do so.” The easiest way to identify a near miss is, when you witness or are involved in an event that is unnerving or scary relative to safety in which “your heart skips a beat or flutters while observing or performing a task or event.” If this happens you just observed a near miss.

History has shown repeatedly that most loss-producing events (incidents), both serious and catastrophic, were preceded by warnings or near-miss incidents,” that had previously occurred.

The reporting of near misses can help create an open culture in which workers feel responsible not only for their own safety, but also for the safety of their co-workers. Near-miss reporting systems also can help

capture data for statistical analysis, and can be considered to be a leading indicator of performance used in balance with other leading and lagging measures of performance in regards to safety incidents in the work-place.

For a near-miss reporting program to be successful, leadership must reinforce a culture that promotes identifying and reporting hazards, and then take action. The system needs to be non-punitive – avoiding punishment and the “blame game”. Rather, reported incidents should be investigated to determine root causes.

Here at Ardaman we strongly encourage the reporting of near misses and hazard identifications as they help to identify potential issues and allow us to provide solutions early to prevent an incident from occurring. Reporting unsafe behaviors and conditions and near miss events is a proactive measure that focuses on correcting situations before they cause injury or loss.

By doing your part in reporting, you may be saving yourself or a co-worker from future injury. Always notify your supervisor when hazards and near misses are identified and



Shortcuts are a choice

The decision to take a shortcut can be influenced by many different factors. That being said, at the end of the day shortcuts are a choice made by an individual. It is important to realize this fact and take steps to avoid taking shortcuts especially when it comes to safety on the job. When an incident resulting from a safety shortcut occurs, the time and cost of the incident always far exceeds the perceived time and cost savings of the shortcut.

Common Safety Shortcuts

Taking shortcuts when it comes to safety can manifest in many different ways. Some common types of safety shortcuts that occur in many workplaces:

- Not implementing all necessary safeguards. Almost every work task has several safeguards that are to be implemented prior to work beginning. Each safeguard that is implemented is one more way to protect yourself and others from injury.
- Not wearing the necessary PPE. PPE is the last line of defense for workers. You never know when you may need it.
- Rushing during tasks or not taking the necessary time to do certain tasks. Many things can be missed when rushing during a work task. This can lead to incidents occurring.

Ways to Avoid Taking Shortcuts

- Hold yourself to a higher standard. Do not take the easy way out. Take the time and energy to perform tasks correctly. Make it a habit to follow safety policies, JSAs, and procedures.
- Help set the expectation that shortcuts are unacceptable when it comes to safety. If coworkers see you taking shortcuts they are more likely to do so themselves.
- Realize that shortcuts affect more than just you. They can result in negative impacts on production, property damage, as well as injuries, and your family.
- If facing a perceived time pressure, evaluate whether it is a self-imposed time pressure. Many times individuals put pressure on themselves to perform a task faster when there is no real outside pressure to get a work task completed.
- Preplan work tasks well ahead of time so the necessary tools, training, personnel, safety equipment time, etc. are available. Having all the necessary items for work tasks can help to avoid the urge to take shortcuts.





Ardaman Update

Injury Incidents:

- Employee was performing microgravity survey and was bitten three times by an unknown insect. When working in areas where insects may be present, refer to JSA G-2 Biological Safety Information. First Aid Only. (Orlando)
- Employees were cleaning off the drill rod during drilling operations. While wiping down a rod, a drop of muddy water contacted the driller's left eye causing irritation. Employee flushed the eye with eyewash. Always wear safety glasses when performing drilling activities and when outside of the vehicle on a job site. Make sure the safety glasses are on properly and fitting tightly towards your face for optimal protection. First Aid Only. (Orlando)
- Employee was moving a wooden work bench with a dolly. They sat the table upright on its side, and then turned around. The table became unbalanced, fell, and struck them in the lower back area. When instructed to not lift something without a second individual, please follow the directive. When moving and transporting items, make sure they are secured properly and placed on a flat surface and stabilized to avoid tipping over. First Aid Only. (Ft. Myers)

Vehicle and Equipment Incidents:

- Employee was parked at a gas station and went inside the store front. Another Ardaman employee was outside of the store and witnessed a third-party driver back into the rear passenger side of the truck bed of our vehicle. The employee and another bystander were able to get a license plate number before the other driver took off. The license plate provided to law enforcement shows it was not valid or registered. (Ft. Myers)
- Employee was exiting the main interstate and traveling on the transfer ramp to another interstate. They looked at their left side mirror to move over to the left lane. They looked back ahead and saw a semi-truck was braking. Our driver quickly applied the brakes, but was not able to stop in time and struck the back of the semi-truck. Always maintain a four second following distance per the Smith System. The additional distance provides the driver the necessary time to be able to recognize and react to hazards safely. (Tampa)
- Employee was traveling on the roadway. The vehicle ahead of our driver had debris fall out of their truck bed onto the roadway. After checking their surroundings, our driver was unable to move into an open lane without striking another vehicle and opted to drive over the debris. The debris struck the underbody of the vehicle and damaged a component. Always maintain the Big Picture around your vehicle and try to leave yourself an out. (Tampa)

Near Miss / Hazard Identification

Highlighted Near Miss/ Hazard Identifications from 35 reports received from the month of May.

- Employee observed a broken soil sample jar that was left on the counter top in the lab area. The broken jar presented a severe laceration hazard as jagged edges were exposed to anyone working/walking in the area. The employee who noticed the broken jar put on safety glasses and gloves and safely cleaned up and discarded the sample in the proper area. Incidents like this can happen anywhere, and it is important to secure the area, notify others of the hazard, and clean up after yourself. (Orlando)
- Employee was monitoring timber pile driving. A large piece of timber from the pile was ripped off the pile after the hammer stuck it during the installation. The loose piece fell down right in front of one of the crew members but did not strike anyone. Our employee was standing outside of the exclusion zone to ensure their safety. Remember that when heavy equipment is in use, always maintain a safe distance from the equipment. When entering an exclusion zone, ensure the operator and personnel are aware of your presence and make eye contact with the operator. (Orlando)

PPE REMINDER: Ear Buds are **not allowed to be worn during any field work activities**. In addition, ear buds are also not approved hearing protection for Ardaman. Approved hearing protection for AAI activities includes ear plugs, banded ear plugs, and ear muffs.

Ardaman Safety Audits

Identified Hazards from Loss Prevention Observation/ Safety Audits conducted in the month of June.

- **Over exertion:** Employee observed lifting sample while pivoting from their waist. Always keep your back straight when lifting and bend with your knees.
- **PPE:** Employees did not have on tinted safety glasses on site. They were wearing regular sunglasses. Safety glasses are required on all job sites. Tinted and clear safety glasses are ANSI Z87.1+ approved which means they are impact resistant and have side shields. Regular sunglasses do not, and will shatter on impact potentially causing an eye injury.
- **Equipment:** Employee did not inspect the five pound fire extinguisher and update the tag on their vehicle. All fire extinguishers must be inspected monthly to ensure they are in proper working order.



Ardaman Health and Safety Recognition Awards

This month, the Ardaman safety committee reviewed an increased volume of submittals. We are continuing the lottery pool this month and with the increase of submittals this month, we drew two winners at random for a \$25.00 gift card.

May Winners:

Ethan Geiger: Tampa
Jason Karasevich: Tallahassee

A Safety Sticker was awarded to the following individual:

- **Debbie Garcia** for recognition and actions regarding poor lighting and insufficient signs demarcating MOT access on the roadway. The employee alerted the FDOT of the issue. (Orlando)

July 2025 Safety Quiz

Please circle the letter of the answer that fits best. Some answers can be found in the newsletter

1. Which systems can be used to protect a worker when exposed to a fall hazard

- A. Safety net B. Guardrails C. Personal Fall Arrest System D. All the above

2. A personal fall arrest system can be attached to a guardrail as an approved anchor point to prevent a vertical fall.

- A. True B. False

3. When walking on slippery/wet surfaces or materials you should always take smaller/baby steps.

- A. True B. False

4. When reinforcing steel bar (rebar) is exposed on a job site, what can be done?

- A. Guard them B. Bend rebar so exposed ends are no longer upright C. Have fall protection in place when working above D. All the above

5. What type of personal fall arrest system should be used when accessing the top platform of a drill rig or when climbing the derrick?

- A. Harness and lanyard B. Harness and Self Retracting Lanyard C. Nothing D. A&B

6. Keeping walkways, aisles, stairs, and work areas clear helps prevent slips, trips, and falls.

- A. True B. False

7. When you go up and down a ladder, how many points of contact must be maintained at all times?

- A. 2 B. 4 C. 3 D. 1

8. Floor covers used to guard employees from falls must be able to support how many times the intended weight of the heaviest object?

- A. 5 times B. 3 times C. 2 times D. All the above

9. What is the correct lean ratio when using an extension ladder?

- A. 2:1 B. 4:1 C. 1:1 D. All the above

10. What are some common short cuts in safety that could cause an incident?

- A. Not wearing the necessary PPE B. Rushing to get tasks done C. Not implementing safe guards prior to starting task D. All the above

11. Ear Buds are not allowed to be worn during any field work activities.

- A. True B. False

12. When walking down slopes, you should always walk in a diagonal pattern to increase your stability.

- A. True B. False

All Ardaman employees must complete the quiz and turn it into their H&S coordinator by the end of each month. For those individuals who cannot attend the monthly safety meeting, please complete the quiz and submit it to your supervisor for approval. All completed quizzes must be submitted at a designated location at each office. The supervisor only needs to sign the quiz if you are unable to attend the monthly safety meeting. Please provide a reason for your absence in the box below:

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Employee Print Name	Employee Sign Name	Date
Supervisor Print Name	Supervisor Sign Name	Date