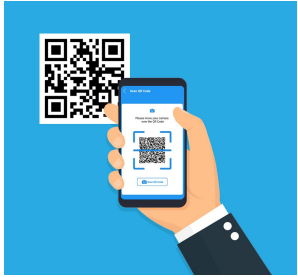
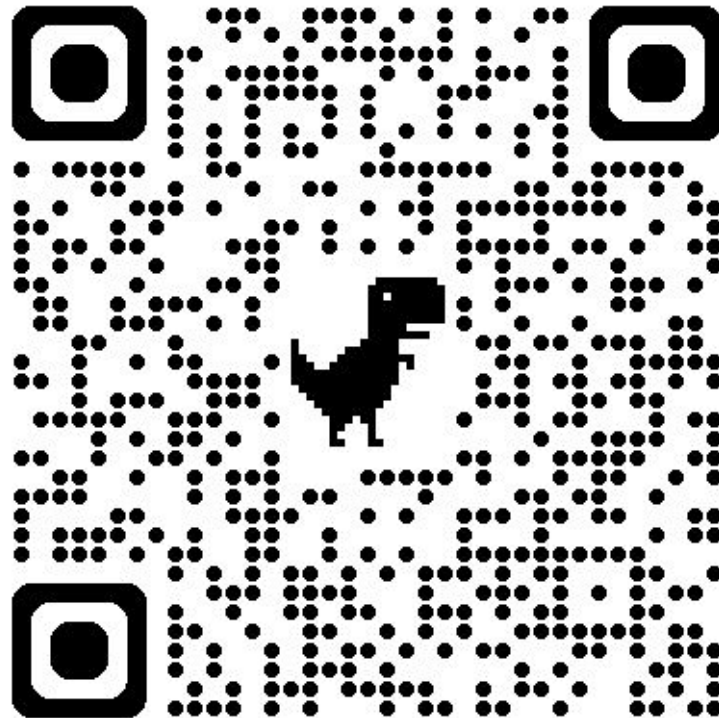




**FALL PROTECTION
TRAINING
OSHA - SUSAN HARWOOD
TRAINING GRANT**



**TO REGISTER FOR TODAY'S CLASS,
PLEASE SCAN THE QR CODE**



WELCOME IN-PERSON

- Please sign the attendance sheet - QR code
- Take one handout (Folder with QR code)
- There will be a group activity
 - Pre & Post-Test & Evaluation

LOCATION

- Emergency Exits
- Emergency Stairs
- Location of restrooms
- Location of water fountains (If applicable)

HOUSE KEEPING RULES

- Please keep mask on at all times
- No talking during class
- No cell phone usage during class
- Be sure to fill out all required forms (Electronic)



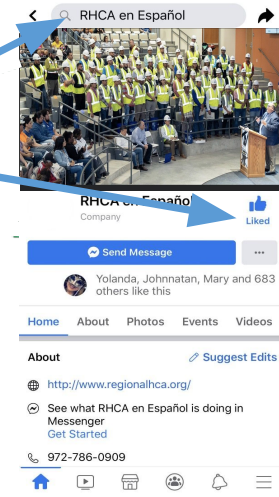
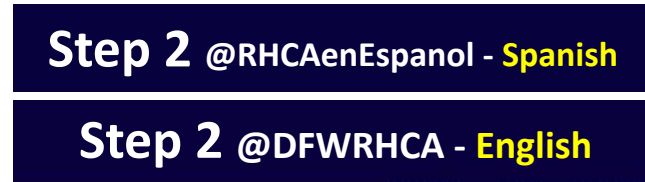
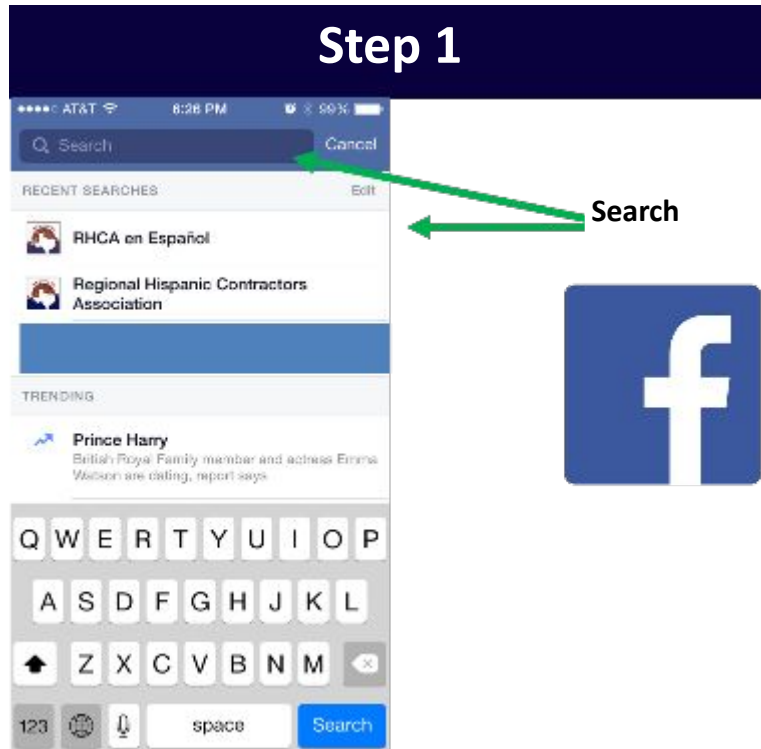
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SUSAN HARWOOD GRANT

- The Fall Protection course is offered for **free** to the construction community through the Susan Harwood Training Grant from the Occupational Safety and Health Administration (OSHA) under the U.S. Department of Labor (DOL)
- The Fall Protection Course covers the area that causes the majority of deaths and injuries in construction. “Falls”
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@DFWRHCA



REGIONAL HISPANIC CONTRACTORS ASSOCIATION (RHCA)

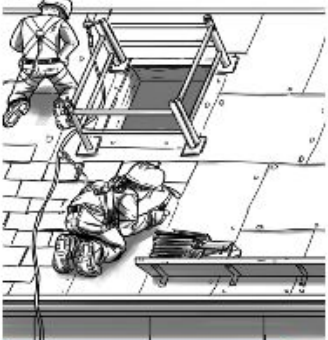
WORKERS' RIGHTS




FALL PREVENTION FACT SHEET


FALLS FROM ROOFS CAN BE PREVENTED! **FALL PREVENTION FACT SHEET**

- ✓ Wear a harness and always stay connected
- ✓ Make sure your harness fits
- ✓ Use guardrails or lifelines
- ✓ Inspect all fall protection equipment before use
- ✓ Guard or cover all holes, openings, and skylights






DON'T
distract from the lifeline







DON'T
work around unprotected openings or skylights




DON'T
use defective equipment

PLAN ahead to get the job done safely.
PROVIDE the right roof equipment.
TRAIN everyone to use the equipment safely.

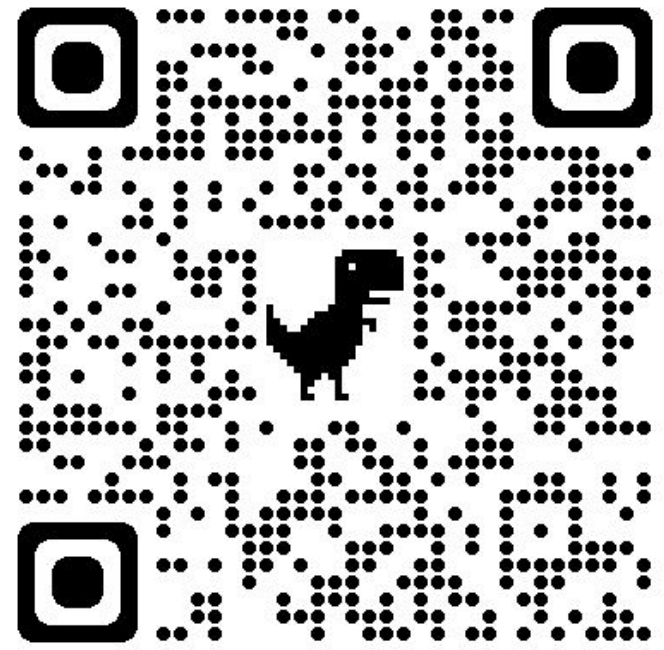
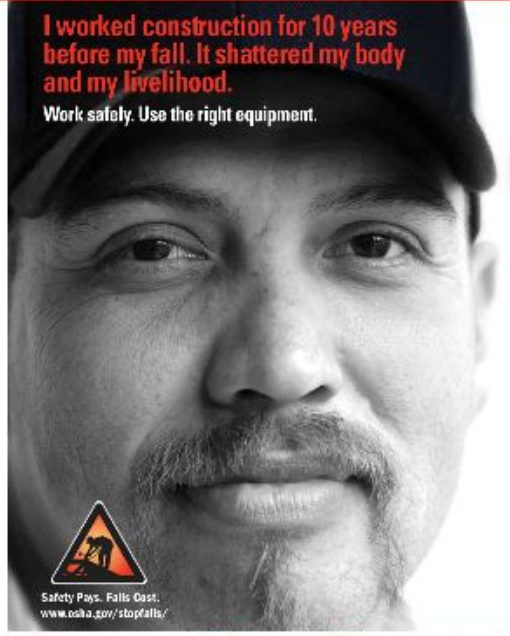
Occupational Safety and Health Administration
 1-800-321-OSHA (6742) • TTY 1-877-889-5627
www.osha-slc.gov



Safety Pays. Falls Cost.
www.osha.gov/stopfalls/

PLAN ahead to get the job done safely. PROVIDE the right equipment. TRAIN everyone to use the equipment safely.

FALLS FROM LADDERS CAN BE PREVENTED! **FALLS FROM SCAFFOLDS CAN BE PREVENTED!**



HEALTH EFFECTS OF HEAT



Health effects of heat

Two types of heat illness:

Heat Exhaustion



Heat Stroke



Watch out for early symptoms. You may need medical help.

1 People react differently — you may have just a few of these symptoms, or most of them.

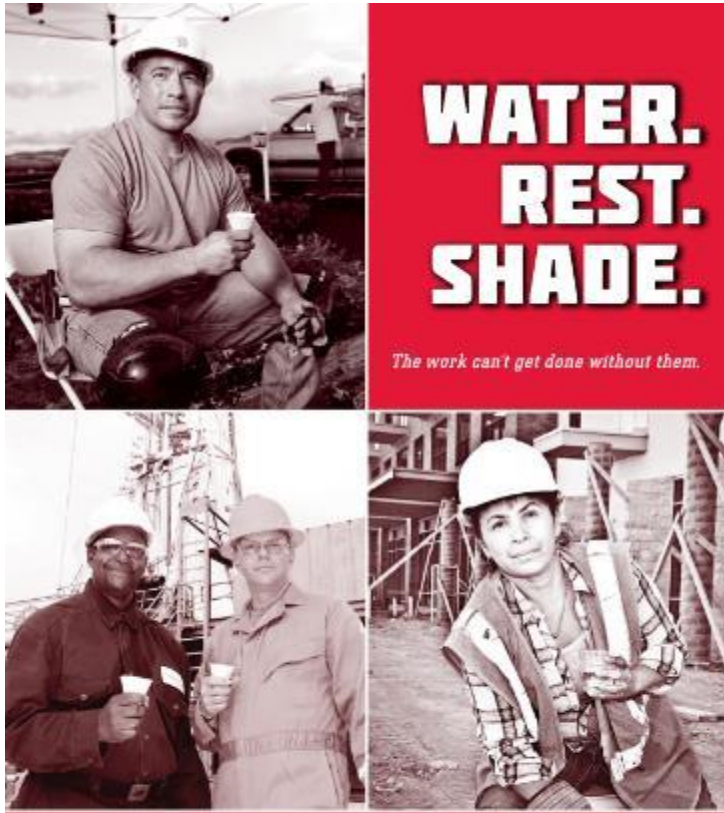


Stay safe and healthy!

WATER. REST. SHADE. The work can't get done without them.





A HEAT SAFETY FACT SHEET



**WATER.
REST.
SHADE.**

The work can't get done without them.



 **A HEAT SAFETY FACT SHEET**



OSHA PORTABLE LADDER SAFETY



Portable Ladder Safety



Falls from portable ladders (step, straight, combination and extension) are one of the leading causes of occupational fatalities and injuries.

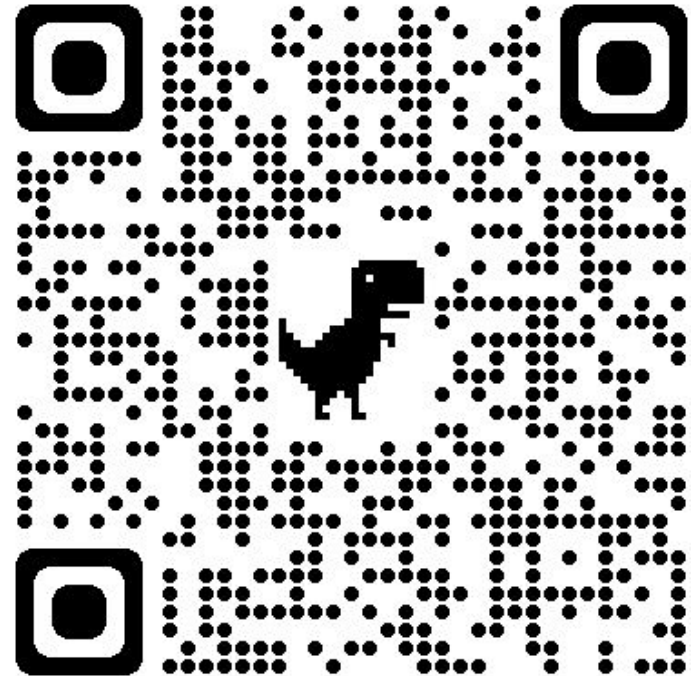
- Read and follow all labels/markings on the ladder.
- Avoid electrical hazards! – Look for overhead power lines before handling a ladder. Avoid using a metal ladder near power lines or exposed energized electrical equipment.
- Always inspect the ladder prior to using it. If the ladder is damaged, it must be removed from service and tagged until repaired or discarded.



3-Point Contact

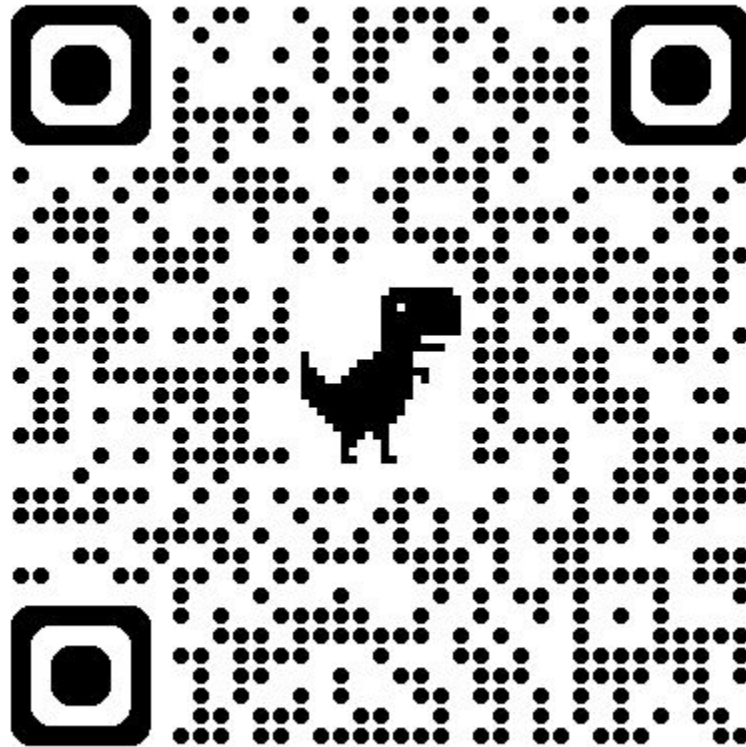
- Always maintain a 3 point (two hands and a foot, or two feet and a hand) contact on the ladder when climbing. Keep your body near the middle of the step and always face the ladder while climbing (see diagram).
- Only use ladders and appropriate accessories (ladder levelers, jacks or hooks) for their designed purposes.
- Ladders must be free of any slippery material on the rungs, steps or feet.
- Do not use a self-supporting ladder (e.g., step ladder) as a single ladder or in a partially closed position.
- Do not use the top step/rung of a ladder as a step/rung unless it was designed for that purpose.

(continued on reverse)





QR CODE TO DOWNLOAD TRAINING MATERIAL



AGENDA

- Welcome
- Introduction to OSHA
- Worker's rights
- Introduction to Fall Protection
 - ❑ Recognition of Fall Hazards
 - ❑ Basic Fall Prevention Principles
 - ❑ Basic Fall Protection Principles
 - ❑ Brief Review of Applicable Standards



AGENDA

- Controlling the Hazard
 - Hierarchy of Controls
 - Restrain
 - Components
 - Fall Clearance
 - Inspections

- Rescue

- Certificates



FALL PROTECTION PRE-TEST

1. In general, fall protection must be provided to construction workers who are working on surfaces with unprotected sides and edges which are _____ above the lower level.
 - a. (a) 3 ft.
 - b. (b) 4 ft.
 - c. (c) 6 ft.
 - d. (d) 8ft.

2. What are the ways an employer can protect workers from falls on site?

(a) Guardrails, safety net systems and safety belts

(b) Guardrails and safety net systems

(c) Guardrails, safety net systems and personal fall arrest systems

(d) Top rail, middle rail, toe board

3. A personal fall arrest system consists of:

(a) An anchorage and a body belt

(b) An anchorage, lanyard and connectors and a body belt

(c) An anchorage, lanyard and connectors and a full body harness

(d) A full body harness and a lanyard

4. After a fall accident occurs, the first step is to take is:

(a) Report orally to OSHA

(b) Fill the 300A form

(c) Videotape the scene

(d) Implement the emergency procedure that best fits the situation

5. If you are asked to perform a job that you feel is unsafe, you should do it anyways because you might get fired otherwise.

(a) True

(b) False

6. Employee may file a complaint with OSHA under Section 11(c) if your employer retaliates against you by taking unfavorable personnel action because you engaged in protected activity relating to workplace safety and health. OSHA requires that complaints must be filed within _____ after the alleged retaliation.

- (a) 3 days
- (b) 7 days
- (c) 30 days
- (d) 90 days

7. One who, by possession of a recognized degree, certificate or professional standing or by extensive knowledge, training and experience, has successfully demonstrated his ability to resolve problems relating to the subject matter, the work or the project is called a _____

- (a) Authorized Person
- (b) Competent Person
- (c) Qualified Person
- (d) Smart Person

INTRODUCTION TO OSHA

Overview of anti-retaliation provisions, employee rights, employer responsibilities, whistleblower laws, and OSHA's complaint investigation procedures

WHY IS OSHA IMPORTANT TO YOU?

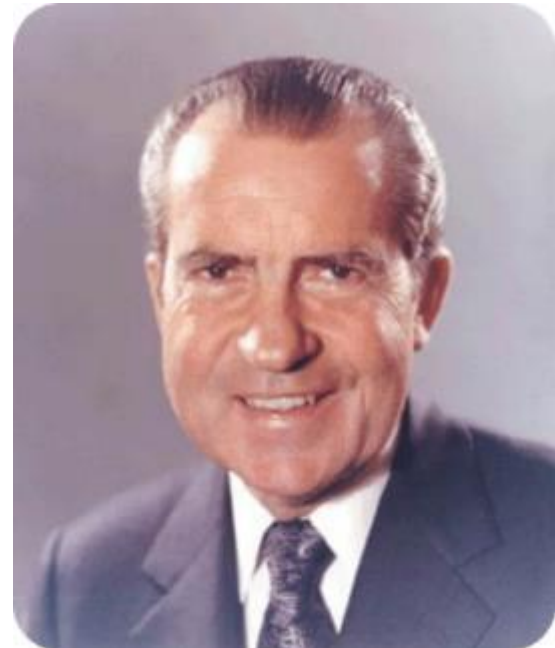
- OSHA began because, until 1970, there were no national laws for safety and health hazards.
- On average, 12 workers die every day from job injuries
- Worker deaths in America are down—on average, from about 38 worker deaths a day in 1970 to 12 a day in 2013.

• **WORKER FATALITIES**

- 4,836 workers were killed on the job in 2015
- Falls — 364 out of 937 total deaths in construction in CY 2015 (38.8%)

HISTORY OF OSHA

- OSHA stands for the Occupational Safety and Health Administration, an agency of the U.S. Department of Labor
- OSHA's responsibility is worker safety and health protection
- On December 29, 1970, President Nixon signed the OSH Act
- This Act created OSHA, the agency, which formally came into being on April 28, 1971



OSHA'S MISSION

- To save lives
- To prevent injuries
- To protect America's workers



**Job Safety and Health
IT'S THE LAW!**

All workers have the right to:

- A safe workplace.
- Raise a safety or health concern with your employer or OSHA, or report a work-related injury or illness, without being retaliated against.
- Receive information and training on job hazards, including all hazardous substances in your workplace.
- Request an OSHA inspection of your workplace if you believe there are unsafe or unhealthy conditions. OSHA will keep your name confidential. You have the right to have a representative contact OSHA on your behalf.
- Participate (or have your representative participate) in an OSHA inspection and speak in private to the inspector.
- File a complaint with OSHA within 30 days (by phone, online or by mail) if you have been retaliated against for using your rights.
- See any OSHA citations issued to your employer.
- Request copies of your medical records, tests that measure hazards in the workplace, and the workplace injury and illness log.

Employers must:

- Provide employees a workplace free from recognized hazards. It is illegal to retaliate against an employee for using any of their rights under the law, including raising a health and safety concern with you or with OSHA, or reporting a work-related injury or illness.
- Comply with all applicable OSHA standards.
- Report to OSHA all work-related fatalities within 8 hours, and all inpatient hospitalizations, amputations and losses of an eye within 24 hours.
- Provide required training to all workers in a language and vocabulary they can understand.
- Prominently display this poster in the workplace.
- Post OSHA citations at or near the place of the alleged violations.

FREE ASSISTANCE to identify and correct hazards is available to small and medium-sized employers, without citation or penalty, through OSHA-supported consultation programs in every state.

This poster is available free from OSHA.

Contact OSHA. We can help.



1-800-321-OSHA (6742) • TTY 1-877-889-5627 • www.osha.gov

OSHA'S INSPECTION PRIORITIES

Priority	Category of Inspection
1st	Imminent Danger: <i>Reasonable certainty an immediate danger exists</i>
2nd	Fatality/Catastrophe: <i>Reported to OSHA; inspected ASAP</i>
3rd	Complaints/Referrals: <i>Worker or worker representative can file a complaint about a safety or health hazard</i>
4th	Programmed Inspections: <i>Cover industries and employers with high injury and illness rates, specific hazards, or other exposures.</i>

RIGHTS AS A WHISTLEBLOWER

- Employee may file a complain with OSHA under Section 11(c) if your employer retaliates against you by taking unfavorable personnel action because you engaged in protected activity relating to workplace safety and health.
- OSHA requires that complaints must be filed within 30 days after the alleged retaliation.

RIGHTS AS A WHISTLEBLOWER

- Your employer may be found to have retaliated against you if your protected activity was a contributing or motivating factor in its decision to take unfavorable personnel action against you. Such actions may include:

- ✧ Firing or laying off
 - ✧ Blacklisting
 - ✧ Denying overtime or promotion
 - ✧ Disciplining
 - ✧ Denying benefits
-
- ✧ Failing to hire or rehire
 - ✧ Intimidation
 - ✧ Reassignment affecting promotion prospects
 - ✧ Reducing pay or hour

**QUESTIONS ABOUT
OSHA?**

INTRODUCTION TO FALL PROTECTION

OBJECTIVES

- Recognize, avoid and prevent fall hazards in construction
 - Identify major fall hazards
 - Describe types of fall hazards
 - Protect him/herself from fall hazards
 - Recognize employer requirements to protect workers from fall hazards

FALLS IN CONSTRUCTION

- FALLS ARE THE LEADING CAUSE OF DEATH IN CONSTRUCTION.
- In 2015, there were 350 fatal falls to a lower level out of 937 construction fatalities (BLS data). These deaths are preventable.

BUILDING STRUCTURES

- Work conditions 6' or more above lower level require the use of fall protection:
 - Unprotected sides, edges
 - Leading edges
 - Excavations
 - Walking/working surfaces



OSHA REGULATIONS ON FALL PROTECTION

✓ General Industry:

Fall protection required when working at 4 feet above lower level

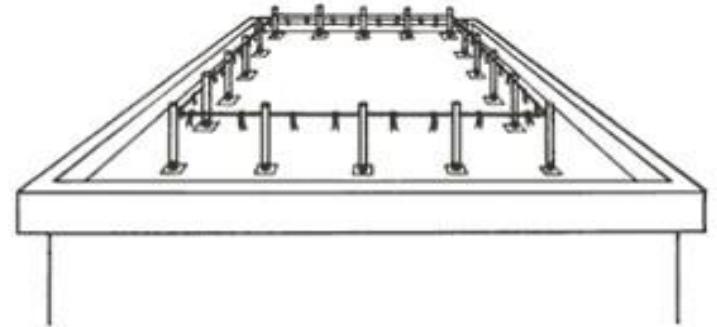
✓ Construction Industry:

Fall protection required when working at 6 feet above lower level

- Employer's operations will completely or mostly fall under one of the sectors listed and will follow their regulations.

WARNING LINES – 1926 ROOFING

- 4-sided set of lines in-place to warn workers of edge hazard
 - **NOT** a guardrail
 - Distances from edge:
 - ✓ **6'** - General
 - ✓ **10'** – “Mechanical Equipment”
 - Permit work inside w/ no PFAS
 - Points of access, materials handling areas, storage areas, and hoisting areas connected by access path formed by two warning lines
 - ✓ Rope / Wire / Chain Gate or “Other Barricade”
 - ✓ Offset Access



MISUSE OF PORTABLE LADDERS



This one seems properly inclined and secured



No standing on the top step! Employee training on proper use of ladders will help prevent unsafe use.



Do not use! Ladders in need of repair must be taken out of service immediately or replaced.



Danger! The spreader isn't fully open (WAC 296-876-40050).



Ladder secured to roof.

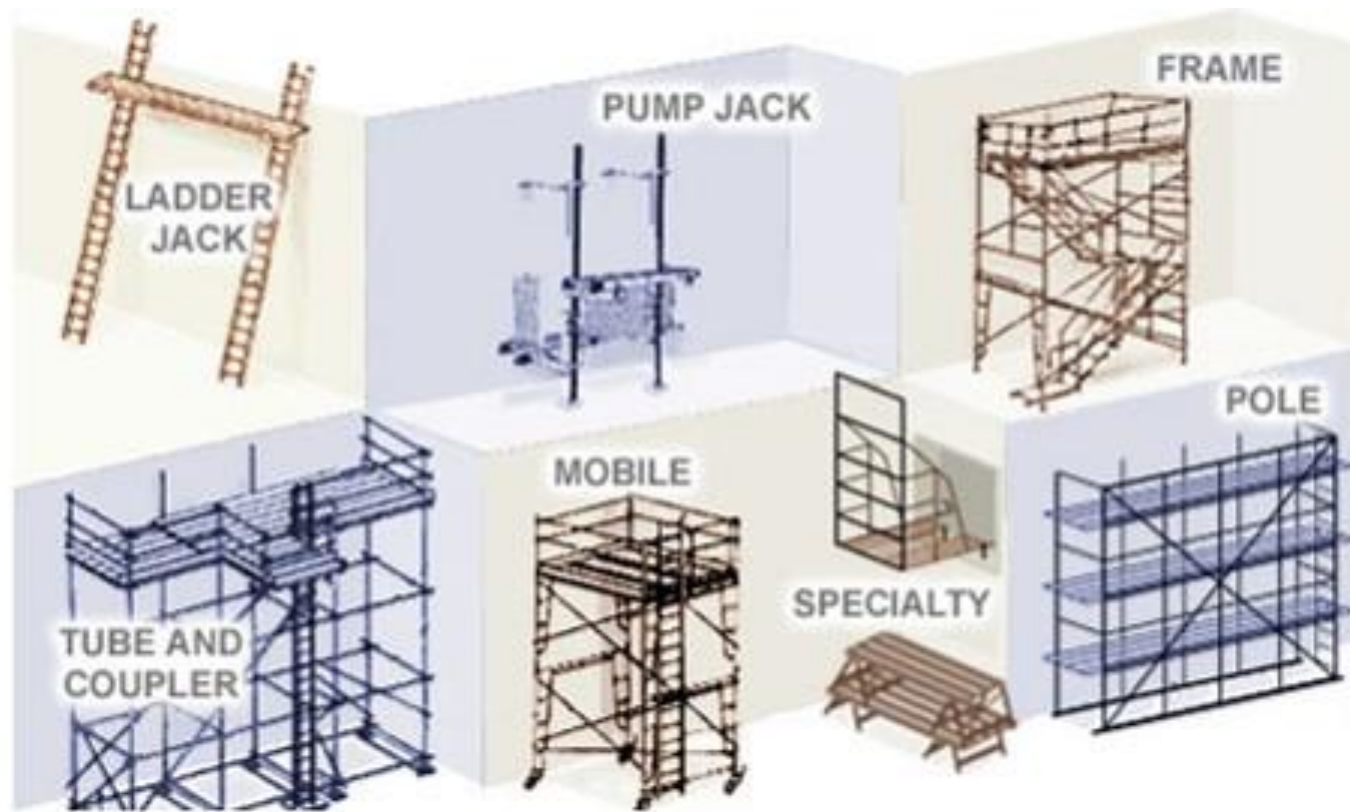
AERIAL LIFT FALL PROTECTION

- Is fall protection required?
- Where is the correct place to attach?
 - What about outside the basket?
 - Basket guardrails?
- General Prohibitions:
 - Moving large distances w/ the basket elevated
 - Standing on the basket guardrails



SCAFFOLD TYPES

Supported Scaffold



SCAFFOLDS IN CONSTRUCTION

- Avoiding risks
 - Follow manufacturer's instructions.
 - Install guardrail systems along all open sides and ends of platforms.





SCAFFOLDS IN CONSTRUCTION

- Never stack blocks, bricks, or use ladders on top of scaffolds for extra height.



- Workers must have a safe way to access the scaffold.

AUTHORIZED PERSON

- Authorized Person:

A person approved or assigned by the employer to perform a specific type of duty or duties or to be at a specific location or locations at the jobsite.

- This is the “user” of the equipment.
- They know what they need to know in order to be able to perform their particular jobs



COMPETENT PERSON

Competent Person:

One who

(1) is capable of identifying

[a] ***existing*** &

[b] ***predictable hazards*** in surroundings or work conditions which are unsanitary, hazardous, or dangerous to employees, and

(2) who has ***authorization*** to take prompt corrective measures to eliminate them.



QUALIFIED PERSON

Qualified Person:

One who

(1) by possession of a

[i] *recognized degree*,

[ii] *certificate* or

[iii] *professional standing*, or

(2) who by extensive *knowledge, training, and experience*

has successfully demonstrated his ability to **resolve problems** relating to the subject matter, the work, or the project.

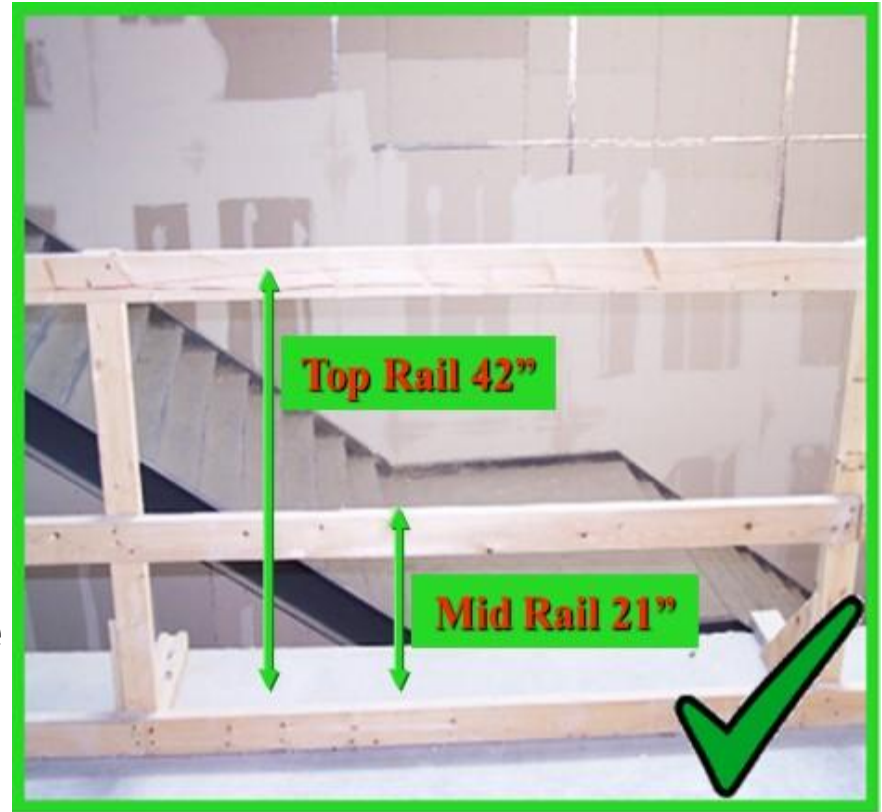


FALL PROTECTION REQUIREMENT

- "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 guardrail systems, safety net systems, or personal fall arrest systems.
- On scaffolds, fall protection is required at 10 feet.

GUARDRAILS

- ❑ Guardrails must have a top rail, a mid rail and a toe board.
- ❑ The top rail must be at least 42" from the working surface.



GUARDRAILS



Top Rail
Mid- Rail
Toeboard

- ❑ Top rails 42 +/- 3 in: between 39 and 45 inches tall
- ❑ Toe boards at least 3 1/2 inches high

USE OF SAFETY NETS

- Assumes the fall will occur



SAFETY NETS

- Not a debris net
- This is meant to catch falling people.
- Form of collective and passive F.P.
- Sometimes used during work on bridge projects or pre-fab building construction



Safety Net in Residential
Construction



SafetyRespect® Safety Net
System

SKYLIGHTS & HOLES

- Skylights & Roof Floor Openings

- Back / Trip into;
- Step on weak area of roof;
- Hole hidden by non-load-supporting covering



NIOSH FACE Skylight Fatality

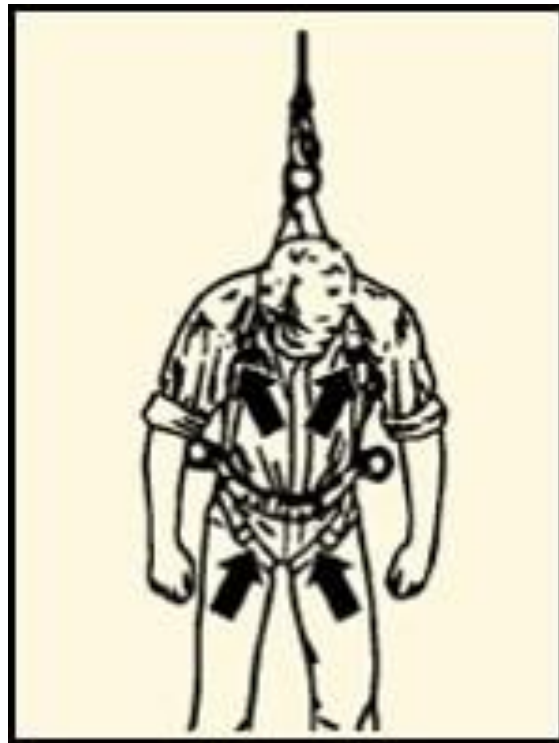
- Hole Covers:

- Be able to support at least twice the load imposed upon them
- Be secured to prevent accidental displacement



PERSONAL FALL ARREST SYSTEMS

- Includes an anchor point, a lifeline, and a safety harness
- Once a Personal Fall Arrest System has been used in a fall, it must be removed from service right away.



ANCHORAGE POINT

- Secure location of attachment for the worker's F.P. gear:
- Typical “anchorage / anchor points” include:

- | | | | |
|-----------------|---------------|------------|-------------------------------|
| • Large Columns | • Large Beams | • Concrete | • Roof Panel / Understructure |
|-----------------|---------------|------------|-------------------------------|

- OSHA Anchorage Requirements:
5,000 lbs.



TEMPORARY ANCHORAGE CONNECTORS



**Anchorage Connector Straps /
Chain**



Workman® FP Stryder™



Workman Reusable Roof Anchor



Removable Concrete Anchorage Connectors

CONNECTORS



Connectors



D- Rings



Snaphooks

CONNECTING DEVICES

Self-Retracting Lifelines

- Drum-wound line is slowly extracted from or retracted back into the housing in normal use
- Like a car seatbelt, locking off in a fall



PFL

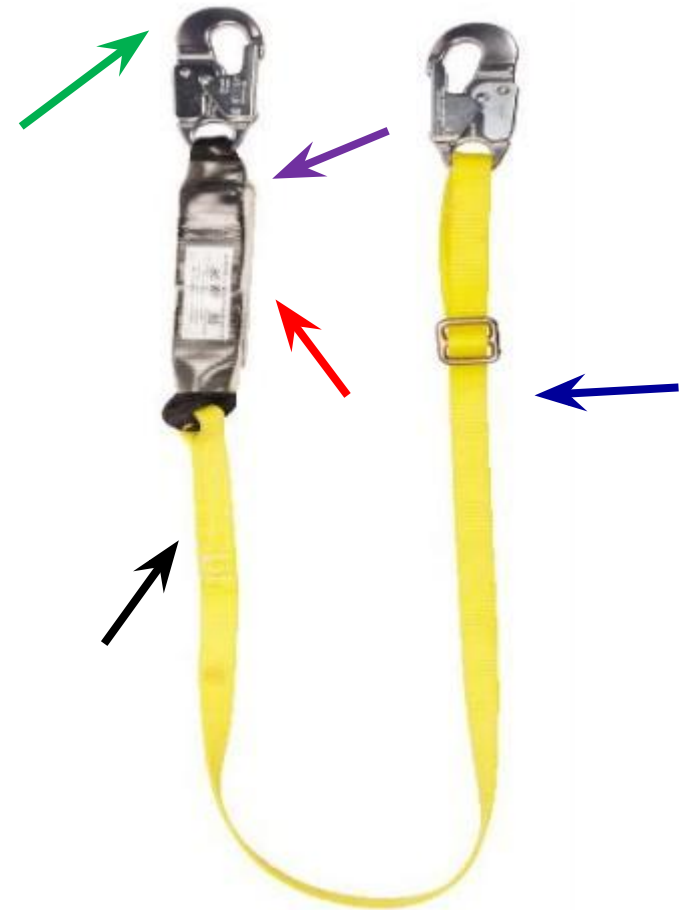


Web SRL



LANYARDS

- Inspections should be recorded in log
 - If past prescribed inspection interval, mark as “unusable.”
 - Many inspection points are similar to those on a harness.
- Lanyard Inspection Points:
 - **Hardware**
 - **Energy-Absorber**
 - **Webbing**
 - **Tags**
 - **Stitching**



BODY HARNESS



PFAS INSPECTION







CONNECTING DEVICES



Anchorage Connector Straps / Chain



Workman® FP Stryder™

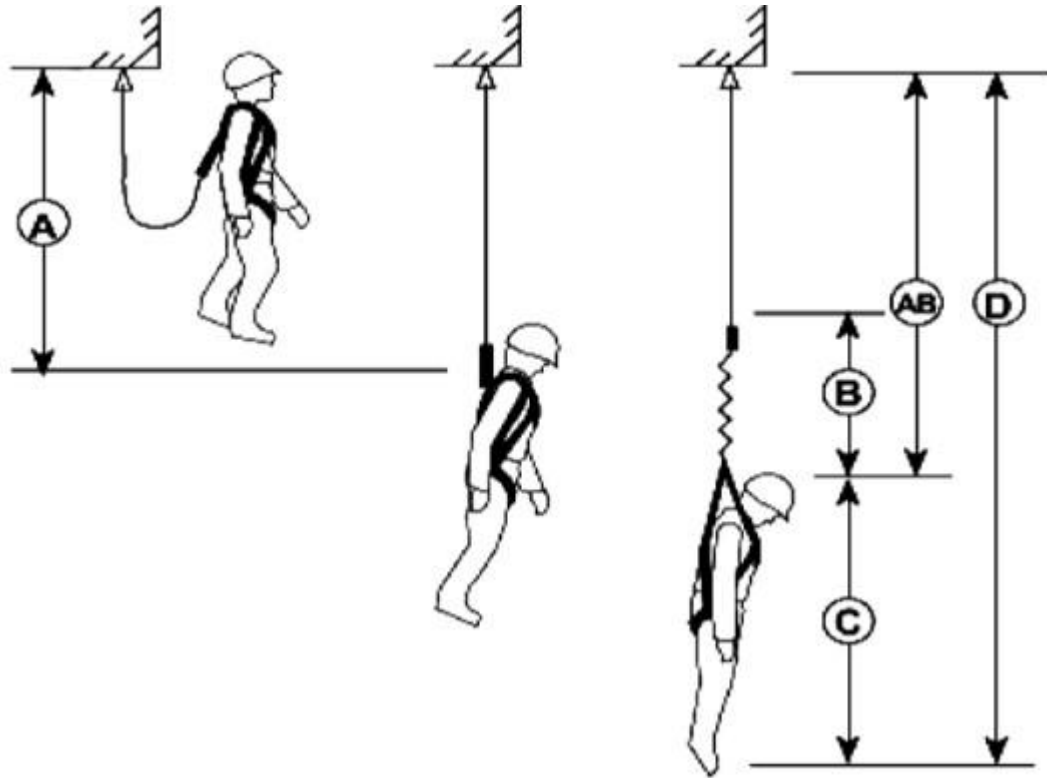


Workman Reusable Roof Anchor



Removable Concrete Anchorage Connectors

FALL CLEARANCE - LANYARD



A = 6 Feet (1.83 m)

B = 3 ½ Feet (1.07 m)

AB = 9 ½ Feet (2.9 m)

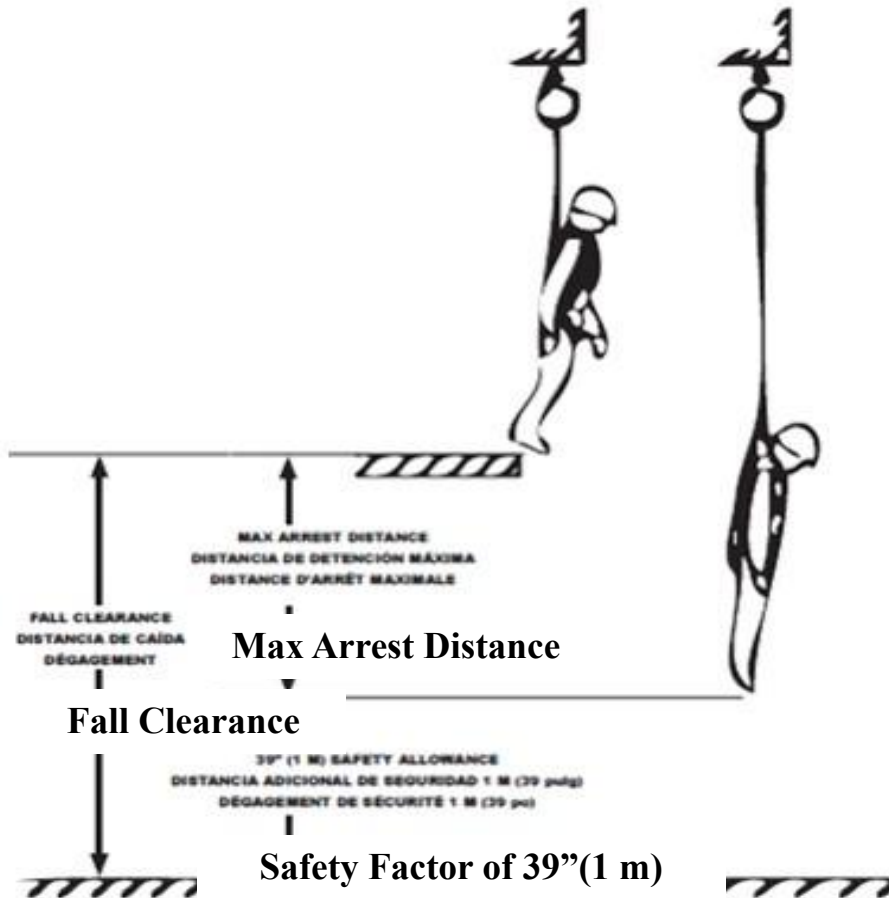
C = 6 Feet (1.82 m)

+ 3 (0.9m) Safety Margin

D = 18 ½ Feet (5.33 m)

Safety Margin: 3'

FALL CLEARANCE - SRL



A Typical Example

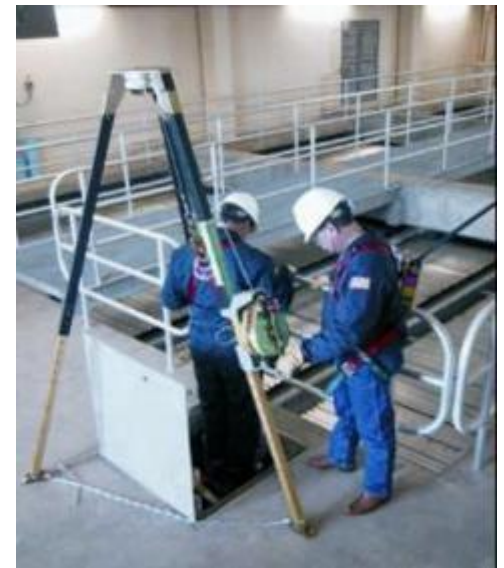
MAD = 4 ½ Feet (1.37 m)

+ 39" (1 m) Safety Margin

D = 7'9" Feet (2.4 m)

RESCUE EQUIPMENT

- Rescue Cradle
 - Person is rescued in a physically neutral position.
- Full Body Harness
 - May be different
 - Allows longer suspension
- Anthron
 - Self-Rescue
 - Great in a panic
- Rescue Equipment Kits
 - Rescue Utility Set
- Rescue Hoist
 - Confined Space Application
 - Able to reset

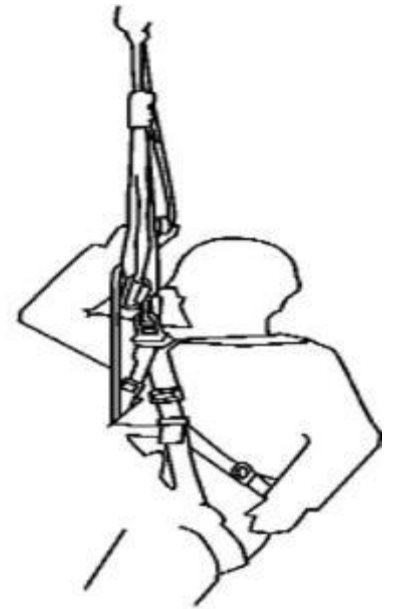


FALL RESCUE PROCEDURES

- If the worker may be hurt, call 9–1–1.
- Figure out the best way to rescue the fallen worker.
- Locate the nearest rescue anchor
- Look for the nearest safe working level for the fallen worker
- Identify equipment needed to get the fallen worker to a safe working level



QUESTIONS?



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FALL PREVENTION OPTIONS

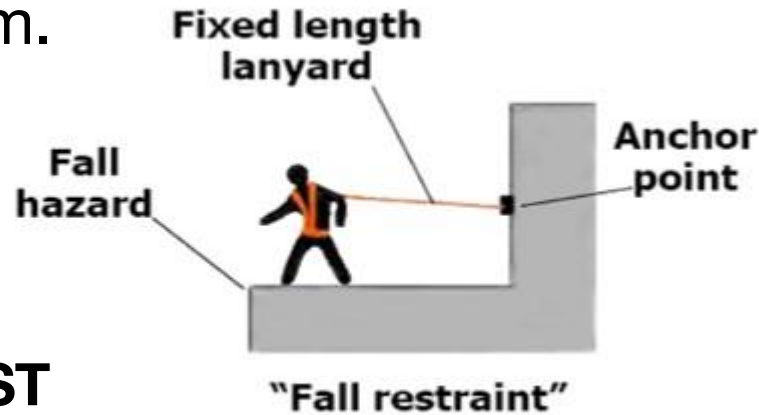
- Platforms and Railings
- Lifts
- Scaffolding
- Ladders
- Fall Restraint Systems
- Mobile Stairs



COMMONLY USED TERMS

- FALL RESTRAIN

- Prevents people from reaching a fall hazard through a tie off system.

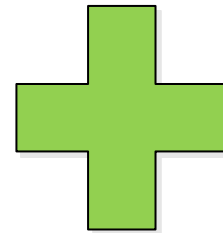
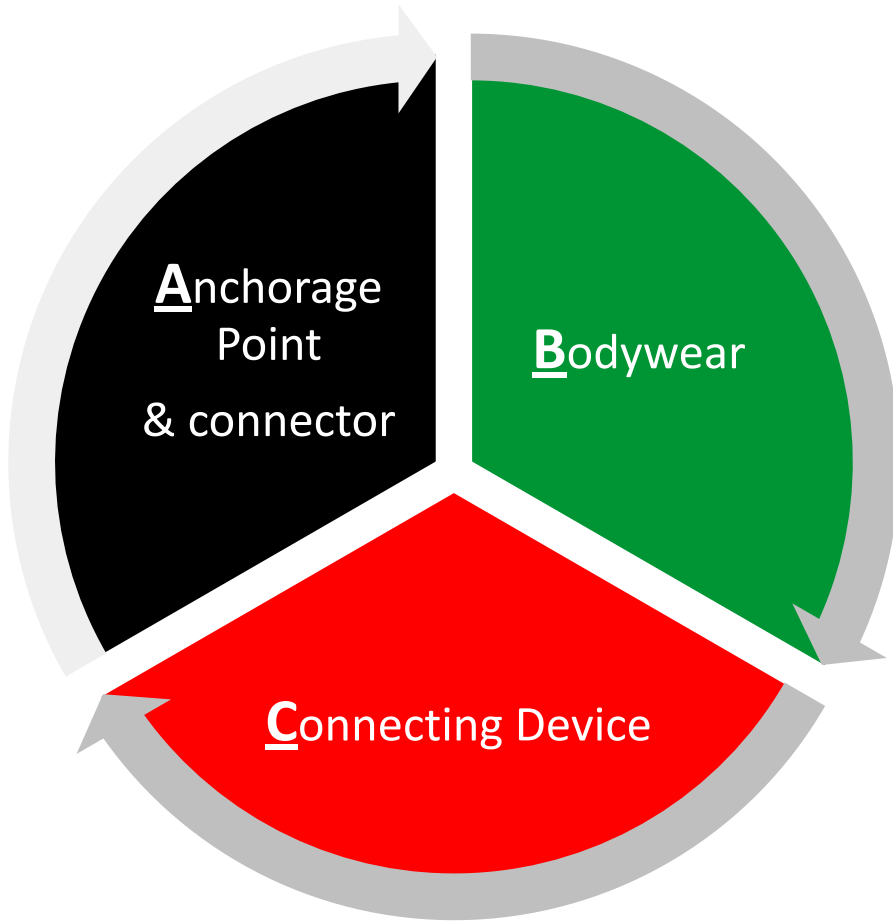


- FALL ARREST

- Stops a fall that is in progress through a tie off system.



PERSONAL FALL ARREST SYSTEM



Rescue

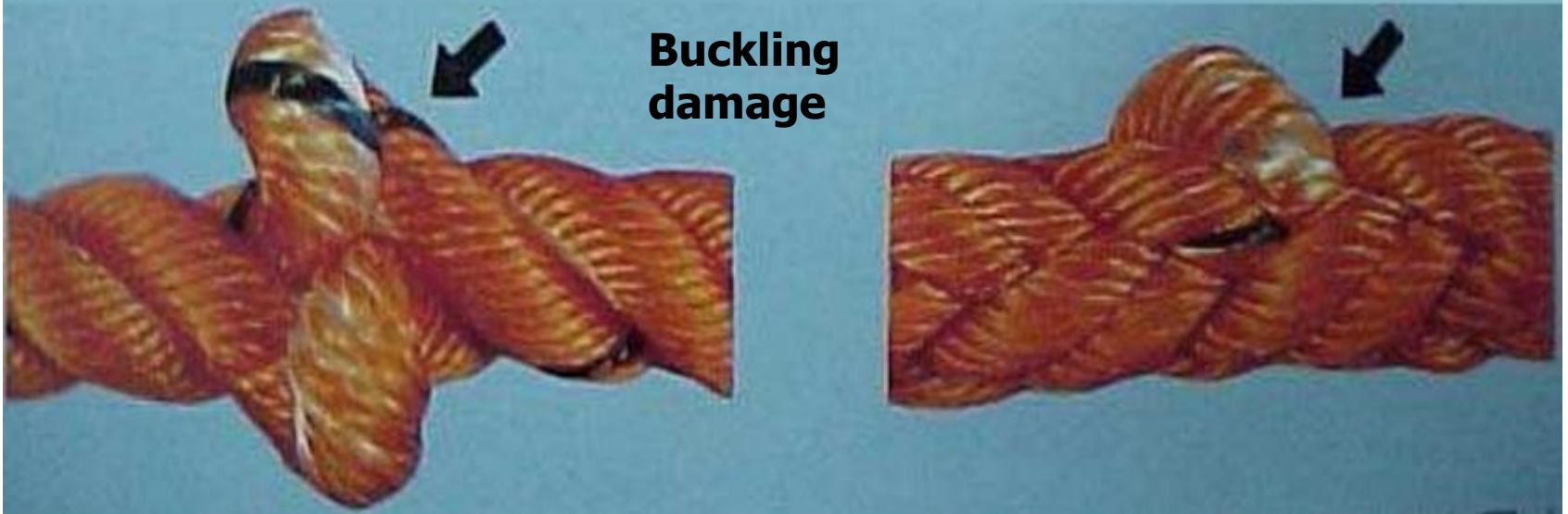
EXAMPLES OF PPE FAILURES



EXAMPLES OF PPE FAILURES



Damage due to spark or heat – surface damaged



Buckling damage

SCAFFOLDS IN CONSTRUCTION

Suspended Scaffold



SCAFFOLDS IN CONSTRUCTION

Aerial Lift Scaffold



IS THIS A FALL HAZARD?

YES



Workers are exposed to a fall hazard greater than 6 feet, while working near stairwell opening.

Workers must be protected from falls over 6 feet.

IS THIS A FALL HAZARD?

YES



NOTE: Remember that ladders must extend 3 feet above the landing area.

IS THIS A FALL HAZARD?

YES

Lack of fall protection for workers on fabricated frame scaffolds.



Planks appear to be overloaded and there is no safe access for workers.

The workers are exposed to a 35-foot fall hazard from a scaffold while stacking blocks prior to overhand bricklaying operations.

IS THIS A FALL HAZARD?



YES

Worker working on an 8:12 pitch roof with only the lifeline tied to his waist as fall protection.



Employer must provide full body harnesses.

FALL PROTECTION POST-TEST

1. In general, fall protection must be provided to construction workers who are working on surfaces with unprotected sides and edges which are _____ above the lower level.
 - (a) 3 ft.
 - (b) 4 ft.
 - (c) 6 ft.
 - (d) 8 ft.

The correct answer is:

(c) 6 ft

2. What are the ways an employer can protect workers from falls on site?

(a) Guardrails, safety net systems and safety belts

(b) Guardrails and safety net systems

(c) Guardrails, safety net systems and personal fall arrest systems

(d) Top rail, middle rail, toe board

The correct answer is:

(c) Guardrails, safety net systems and personal fall arrest systems.

3. A personal fall arrest system consists of:

(a) An anchorage and a body belt

(b) An anchorage, lanyard and connectors and a body belt

(c) An anchorage, lanyard and connectors and a full body harness

(d) A full body harness and a lanyard

The correct answer is:

(c) An anchorage, lanyard and connectors and a full body harness.

4. After a fall accident occurs, the first step to take is:

(a) Report orally to OSHA

(b) Fill the 300A form

(c) Videotape the scene

(d) Implement the emergency procedure that best fits the situation

The correct answer is:

(d) Implement the emergency procedure that best fits the situation.

5. If you are asked to perform a job that you feel is unsafe, you should do it anyways because you might get fired otherwise.

(a) True

(b) False

The correct answer is:

(b) False

6. Employee may file a complaint with OSHA under Section 11(c) if your employer retaliates against you by taking unfavorable personnel action because you engaged in protected activity relating to workplace safety and health. OSHA requires that complaints must be filed within _____ after the alleged retaliation.

- (a) 3 days
- (b) 7 days
- (c) 30 days
- (d) 90 days

The correct answer is:

(c) 30 days

7. One who, by possession of a recognized degree, certificate or professional standing or by extensive knowledge, training and experience, has successfully demonstrated his ability to resolve problems relating to the subject matter, the work or the project is called a _____

- (a) Authorized Person
- (b) Competent Person
- (c) Qualified Person
- (d) Smart Person

The correct answer is:

(c) Qualified Person

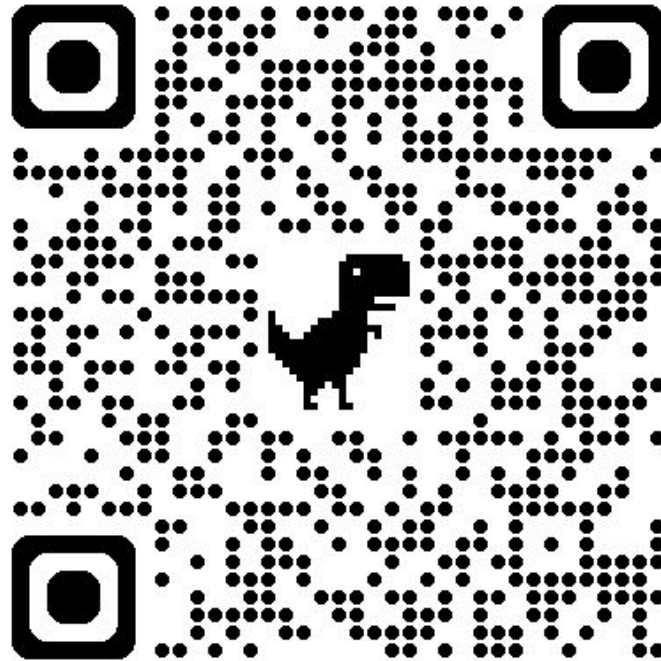
THANK YOU FOR
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Questions



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