



What's the Hazard?

**EVERYTHING YOU DIDN'T WANT TO KNOW
ABOUT SCAFFOLD SAFETY**

Shawn MacDonald

shawn@superiorscaffold.com

Remember these guys?





What's the Hazard?

WHY?

What's the Hazard?



What's the Hazard?

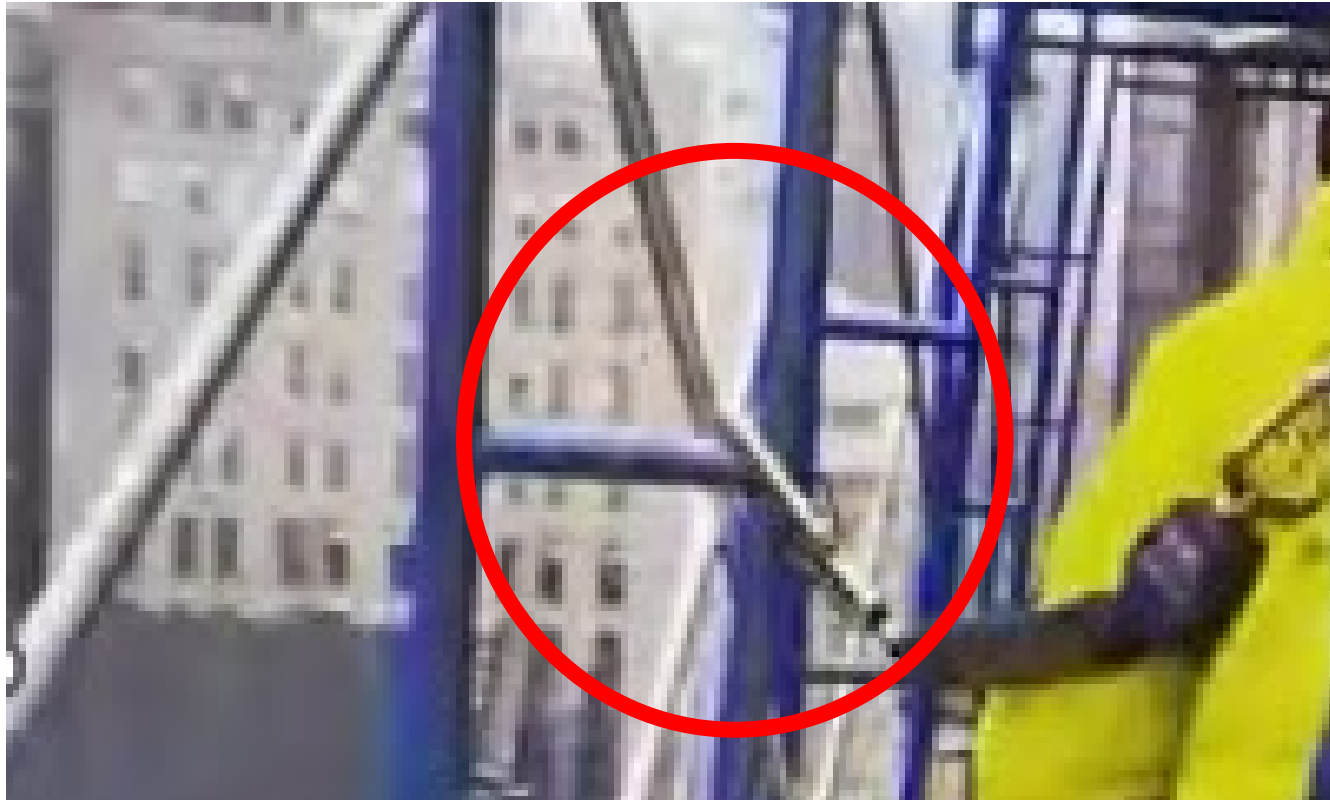


What's the Hazard?



What is the violation?

What's the Hazard?





What's the Hazard?

The authors of the standards, ANSI and OSHA wanted to keep workers safe, but they gave the competent person, the ultimate authority to determine if fall protection is feasible or creates a greater hazard... Why?



What's the Hazard?

OSHA Competent Person (Overview)

“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”

By way of training and/or experience, a competent person is **knowledgeable of applicable standards**, is capable of identifying workplace **hazards relating to the specific operation**, and has the authority to correct them.



What's the Hazard?

capable of identifying workplace hazards relating to the specific operation,



What's the Hazard?

Skill & Confidence

Lack of fear

Cowboy-ism

Lack of Concern

Professionalism



What's the Hazard?

Fall Protection Rules

[29 CFR 1926 Subpart M: Fall Protection.](#)

[29 CFR 1926 Subpart L: Scaffolding.](#)

By Standard Number > 1926 Subpart L App B - Criteria for Determining the Feasibility of Providing Safe Access and Fall Protection for Scaffold Erectors and Dismantlers

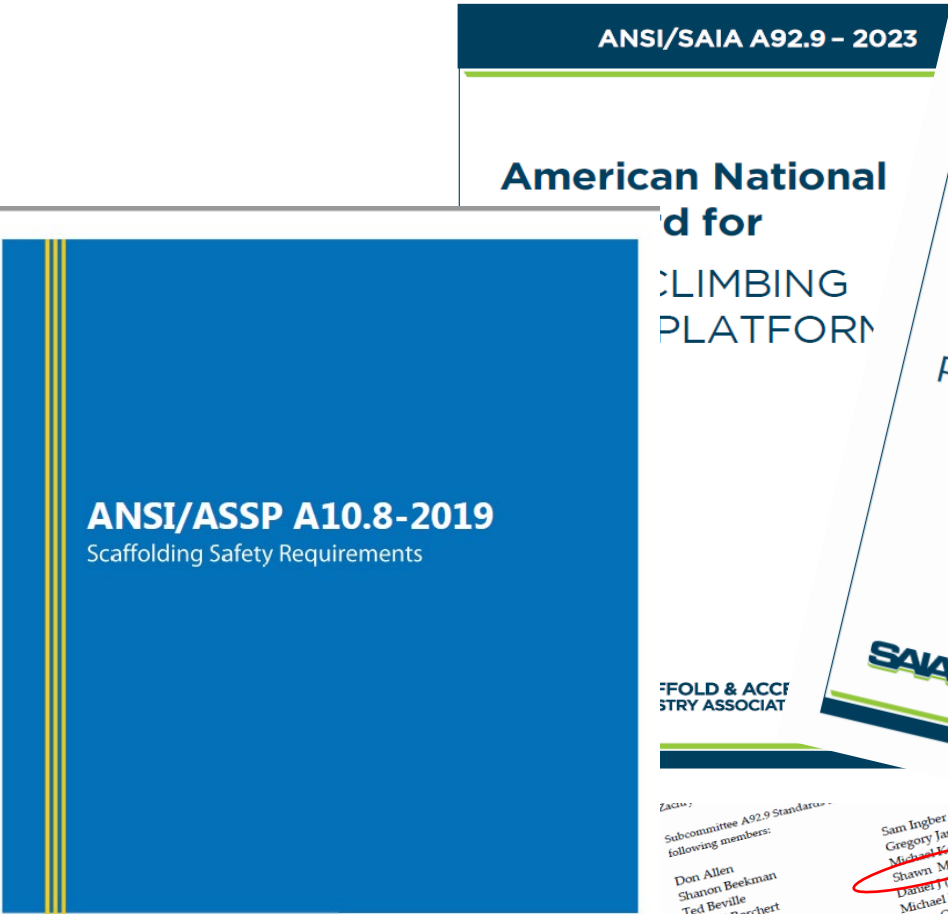
- **Part Number:** 1926
- **Part Number Title:** Safety and Health Regulations for Construction
- **Subpart:** 1926 Subpart L
- **Subpart Title:** Scaffolds
- **Standard Number:** [1926 Subpart L App B](#)
- **Title:** Non-Mandatory Appendix B to Subpart L— Criteria for Determining the Feasibility of Providing Safe Access and Fall Protection for Scaffold Erectors and Dismantlers
- **GPO Source:** [e-CFR](#)

Submit Feedback

[Reserved]
[61 FR 46025, Aug. 30, 1996]

WHY?

What's the Hazard?



Zac...
Subcommittee A92.9 Standards...
following members:
Don Allen
Shanon Beekman
Ted Beville
Donald Borcherdt
Ilton Frederick
James Gordon
Bernard (Barney) Hanna
James Hinton

Sam Ingber
Gregory Janda
~~Michael MacDonal~~
Shawn MacDonal
Damer J (Dary) Moss
Michael Naglieri
Kevin O'Shea
David Reinert

Pam -
Sony Truo.
Francois Villene.
David Wysocki

What's the Hazard?



What's the Hazard?



What's the Hazard?



State of the Art in 1979



State of the Art in 1980



State of the Art in 1985



State of the Art in 1985



State of the Art in 1985



State of the Art in 1985



State of the Art in 1985



State of the Art in 1986-ish



State of the Art in 1986



State of the Art in 1986

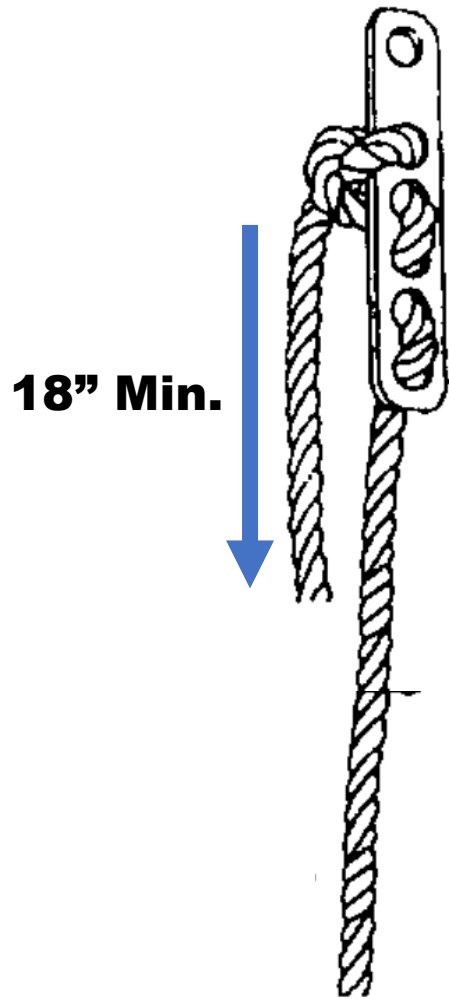


FUN FACT:
It wasn't until 1998 that
OSHA disallowed waist belts
for PFAS

State of the Art until recently



State of the Art in 2000's

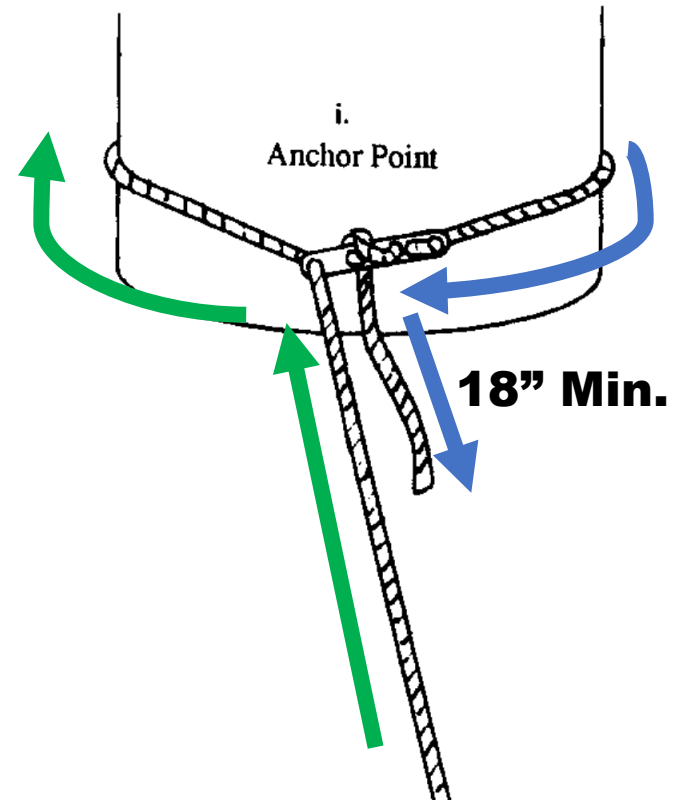


18" Min.

Installed
Conventionally



Hold-Me®
Lifeline Terminator



Installed as a column
or beam anchor

Roof Anchors – P.I. Equipment



Roof Anchors – P.I. Equipment

The employer shall ensure that the installation of the building owner meets the requirements of (c)(3) of this section.



BUILDING OWNER PROVIDES, IN WRITING:
Installation has been inspected, tested, and found to be in compliance with the requirements of the standard.

DOWN
THE
RABBIT
HOLE



Employer shall ensure that the installation meets the requirements of (c)(1) and (c)(2) of this section.



OWNER PROVIDES, IN WRITING:
The building owner provides a certificate of compliance from a registered professional engineer to meet all requirements of the standard.

and that all anchorages meet the requirements of § 1910.140(c)(13)

Roof Anchors – P.I. Equipment

29 CFR Further 13)?

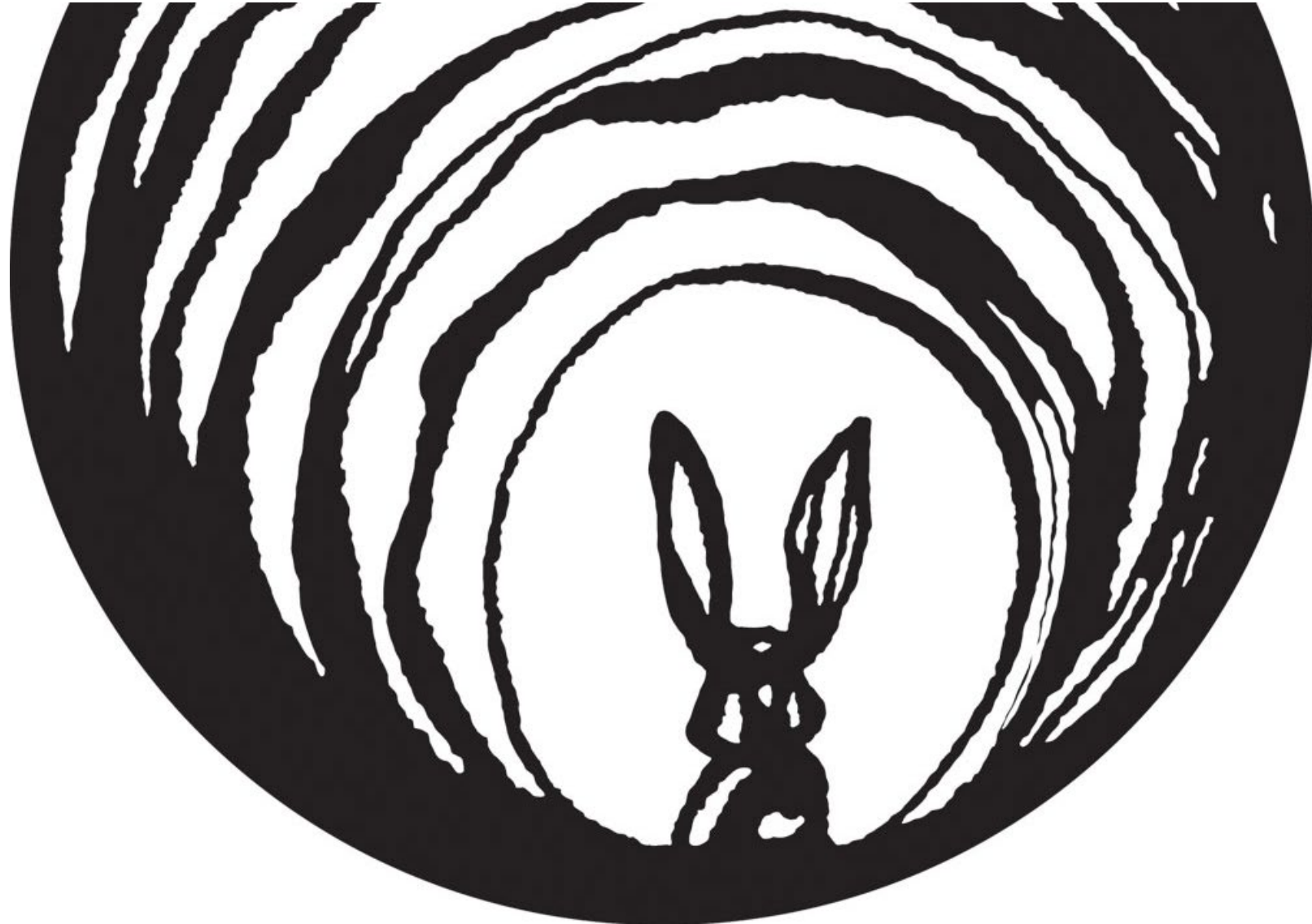
1910.140(c)(13)(ii)

Designed, installed, and used, under the supervision of qualified person, as part of a complete personal fall protection system ...

WAIT... We're Construction. 1910 is Window Cleaning



Roof Anchors – P.I. Equipment



Roof Anchors – P.I. Equipment

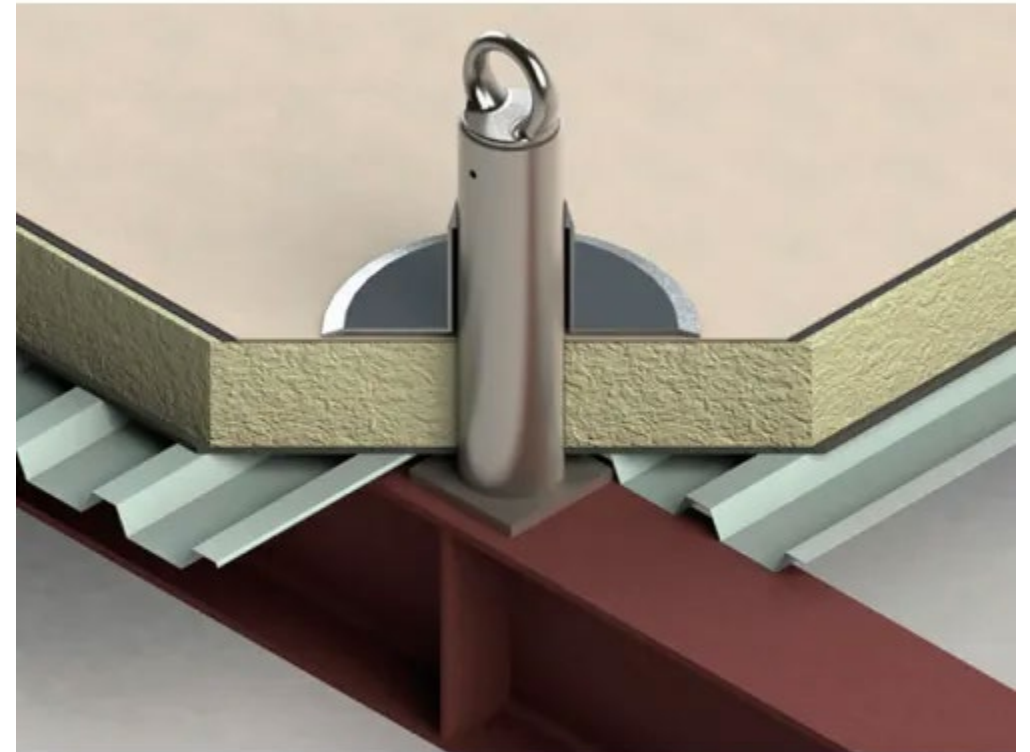
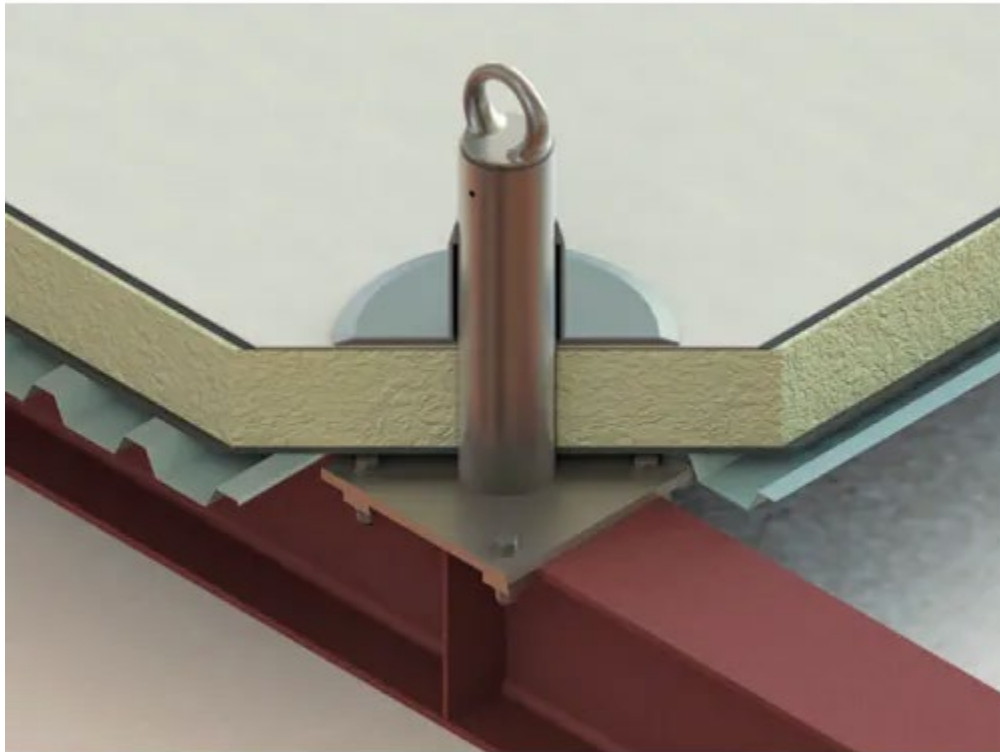
29 CFR 1926.502(d)(15).

The anchorage for a fall arrest system must be capable of supporting 5,000 pounds per worker attached...

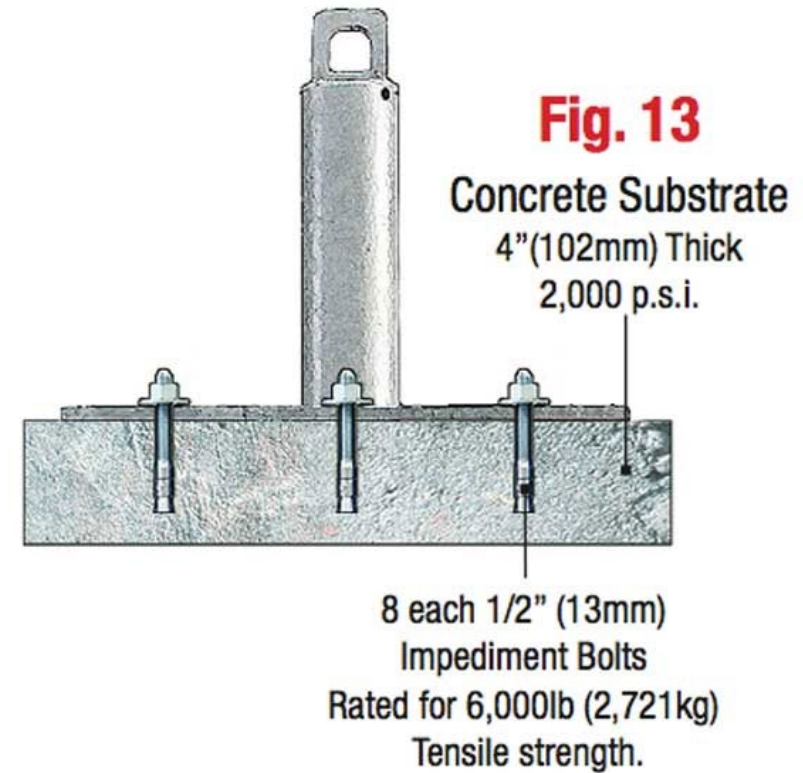
OR be designed, installed, and used under the supervision of a qualified person, as part of a complete personal fall arrest system that maintains a safety factor of at least two



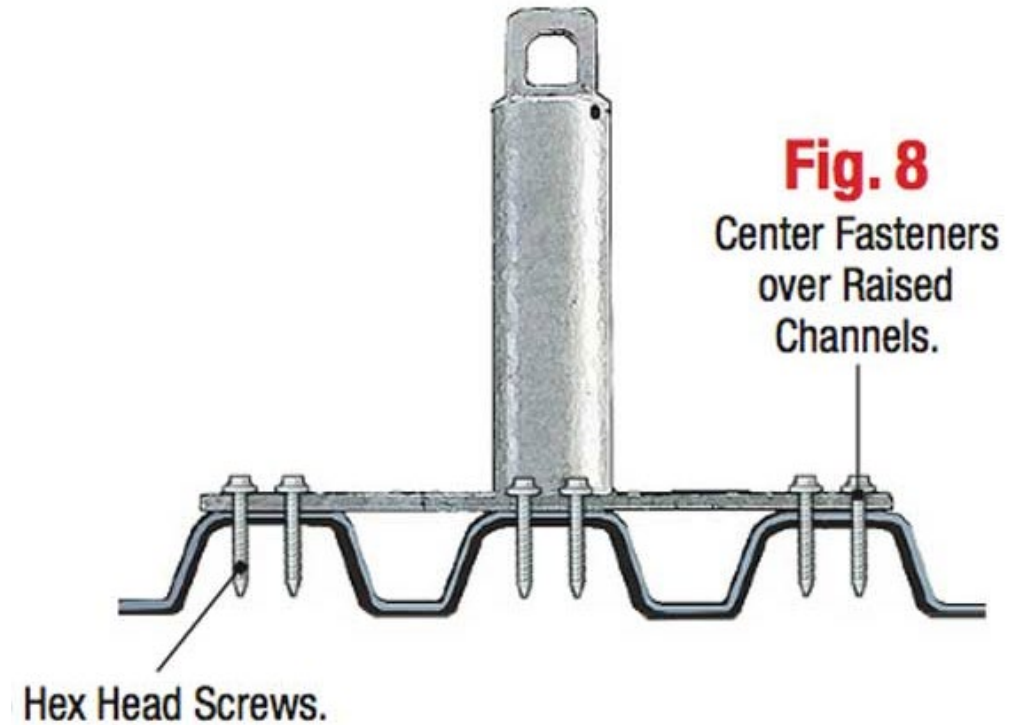
Roof Anchor-



Roof Anchors – P.I. Equipment



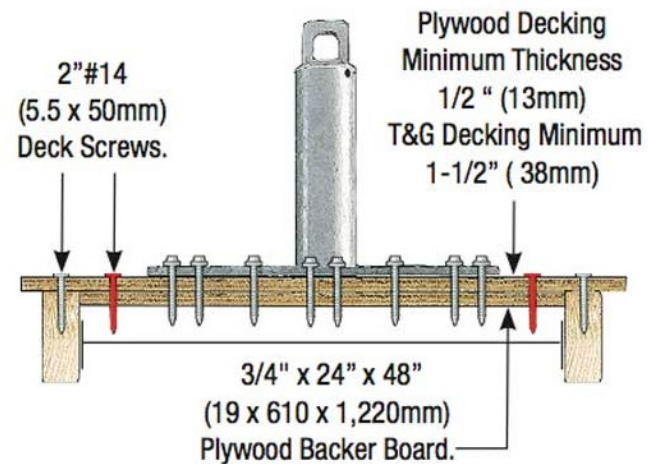
Roof Anchors – P.I. Equipment



Roof Anchors – P.I. Equipment



Fig.4



Roof Anchor-



Roof Anchors – Would'ya???



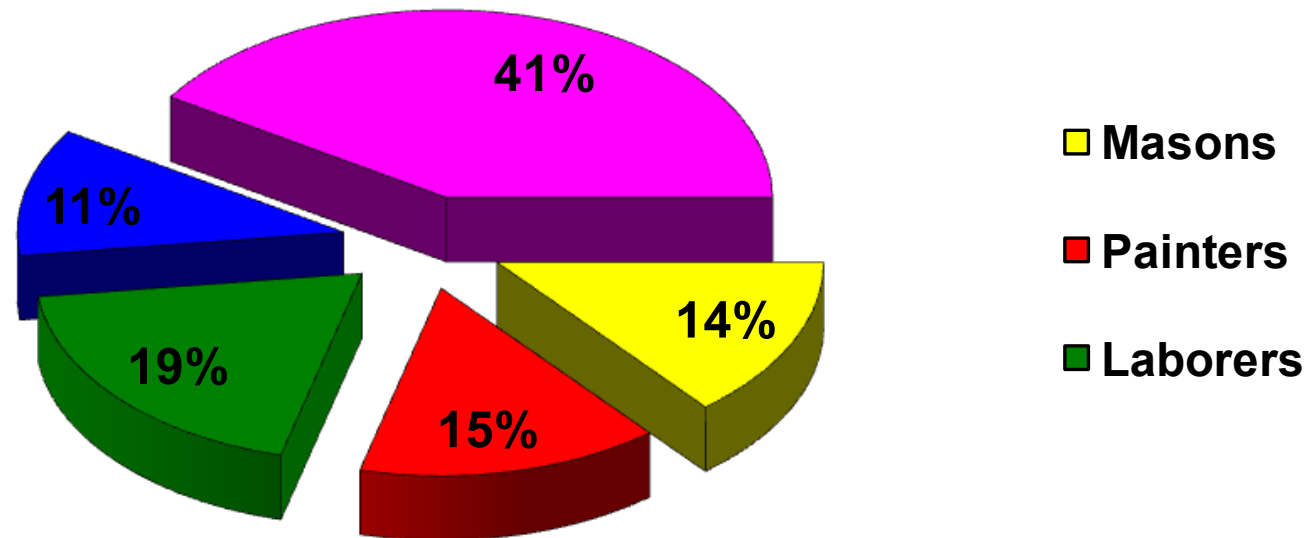




Scaffold Builders



Scaffold Fatalities – By Trade



Spotting an Overloaded Plank

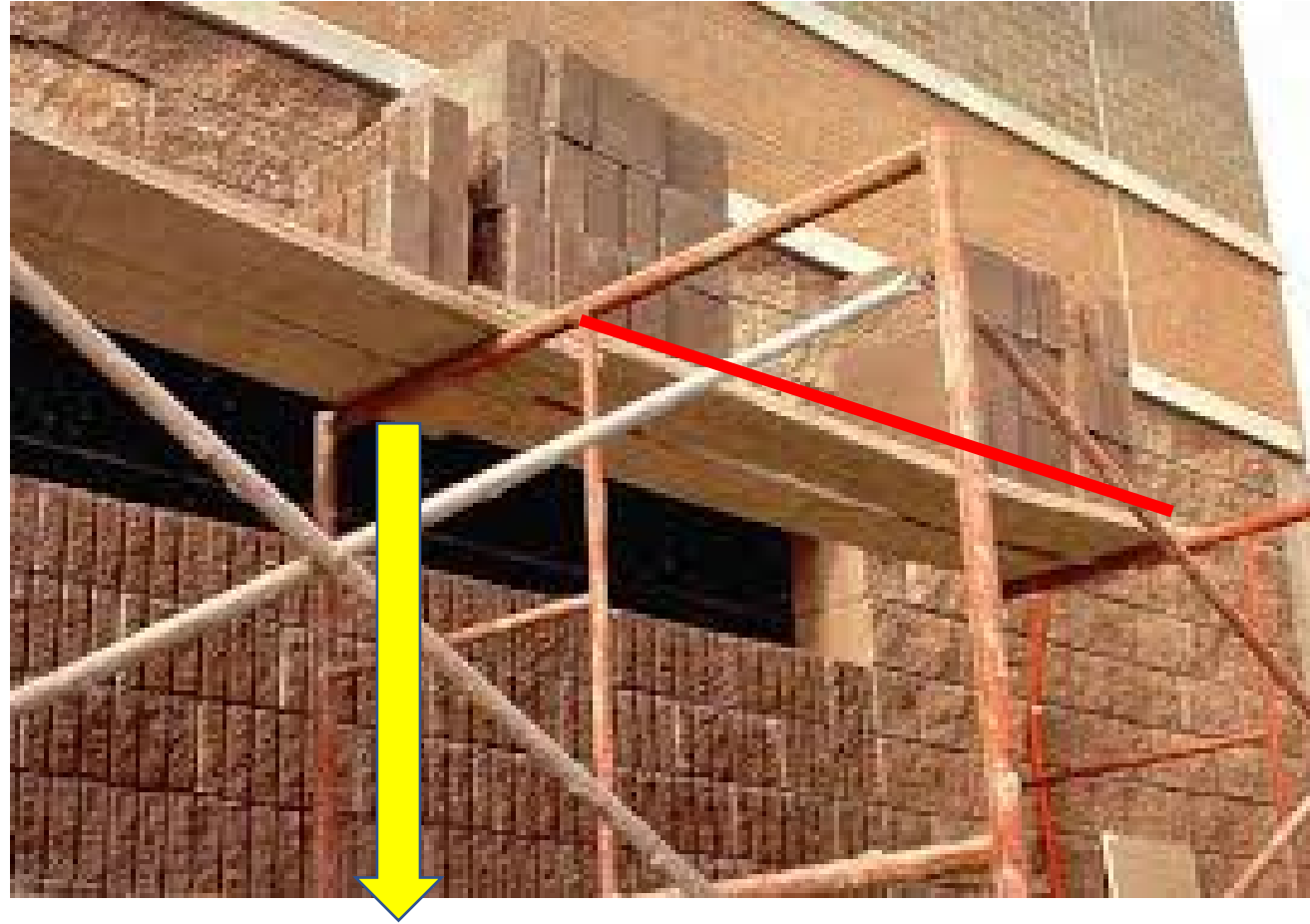


$$10' \times 12 = 120$$

$$120'' / 60 = 2''$$



Spotting an Overloaded Plank

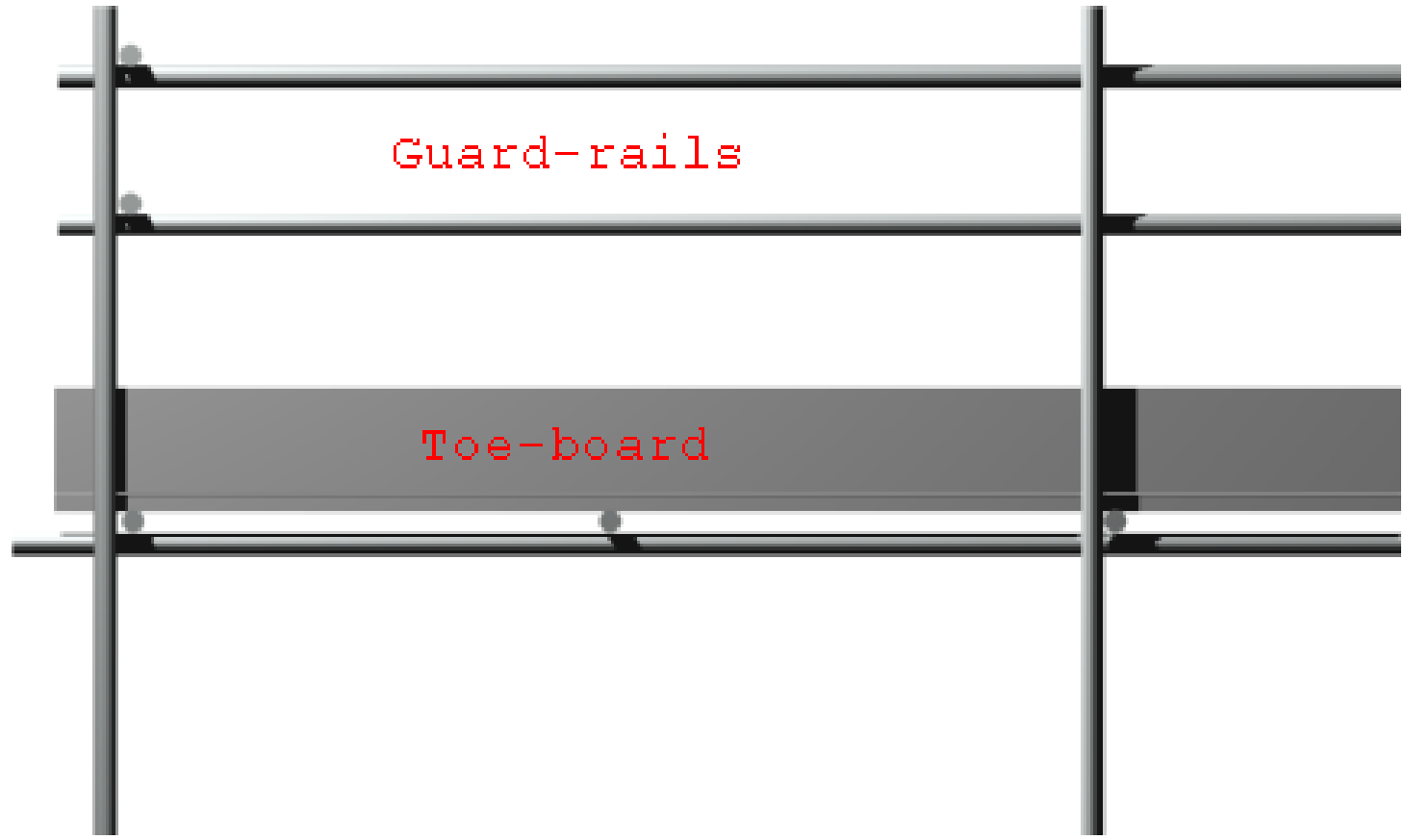


5' x 12 = 60

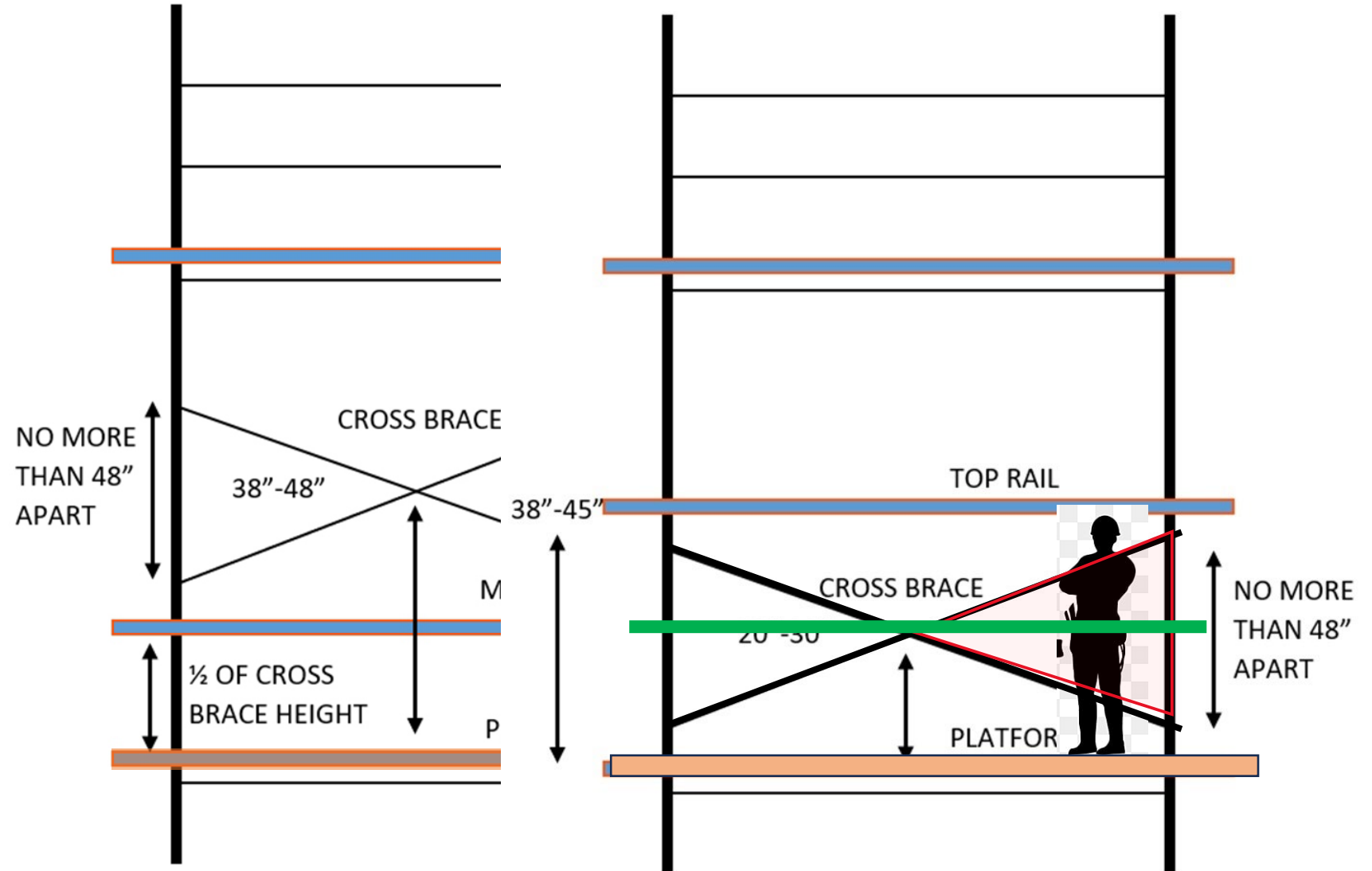
60" / 60 = 1"



Guardrails



Cross Braces for Guardrails?



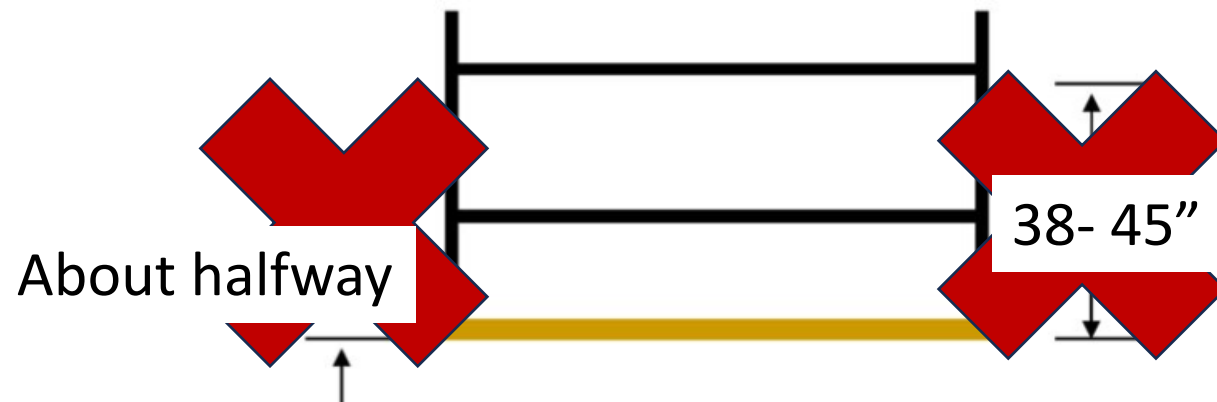
Cross Braces for Guardrails?



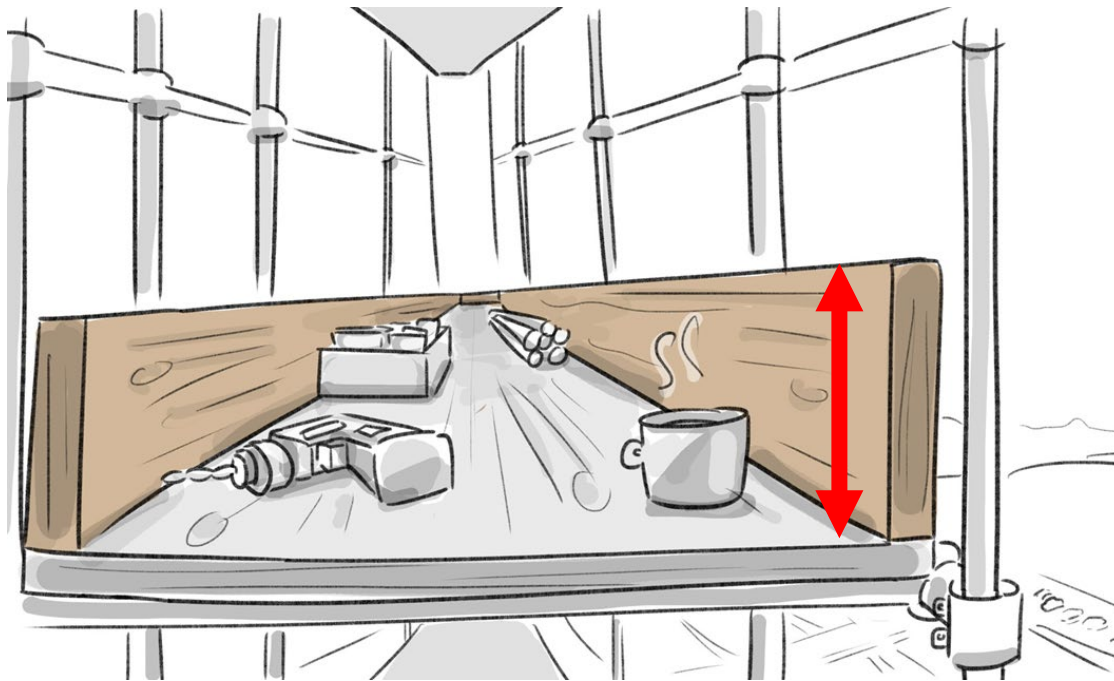
Standard Confusion

Guardrail Systems for Scaffolds

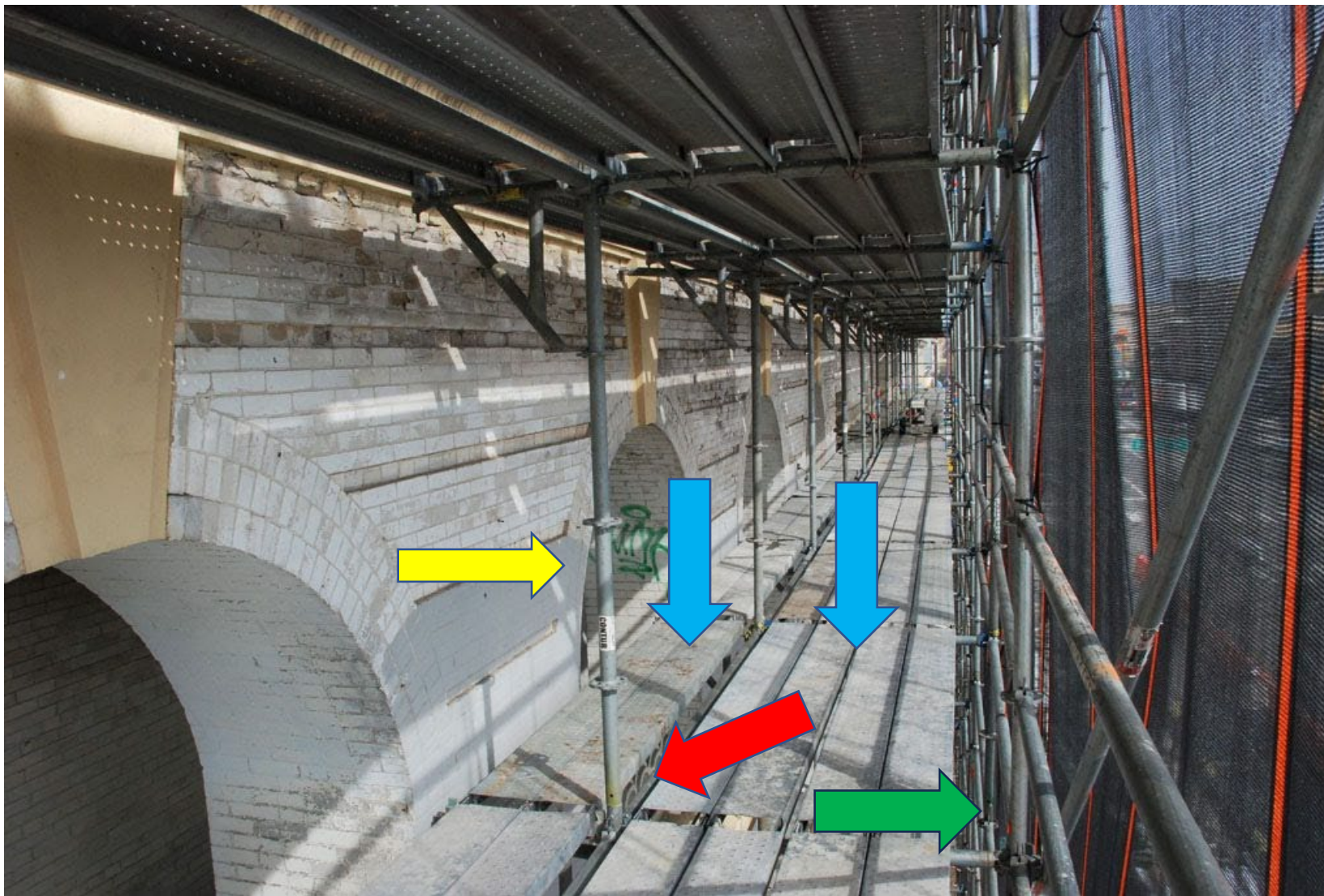
- Guardrail systems must be installed along all open sides and ends of platforms.
- No guardrail is required on a side or edge of any work platform that is no more than 14 inches from the face of the work for most operations, and no more than 18 inches for plastering and lathing operations. If these distances are exceeded, fall protection must be provided by the employer.
- The height of the top-rail for scaffolds must be between 38 inches and 45 inches above the work platform. The mid-rail shall be installed at a height approximately midway between the top edge of the guardrail system and the platform surface.



Toeboard Height



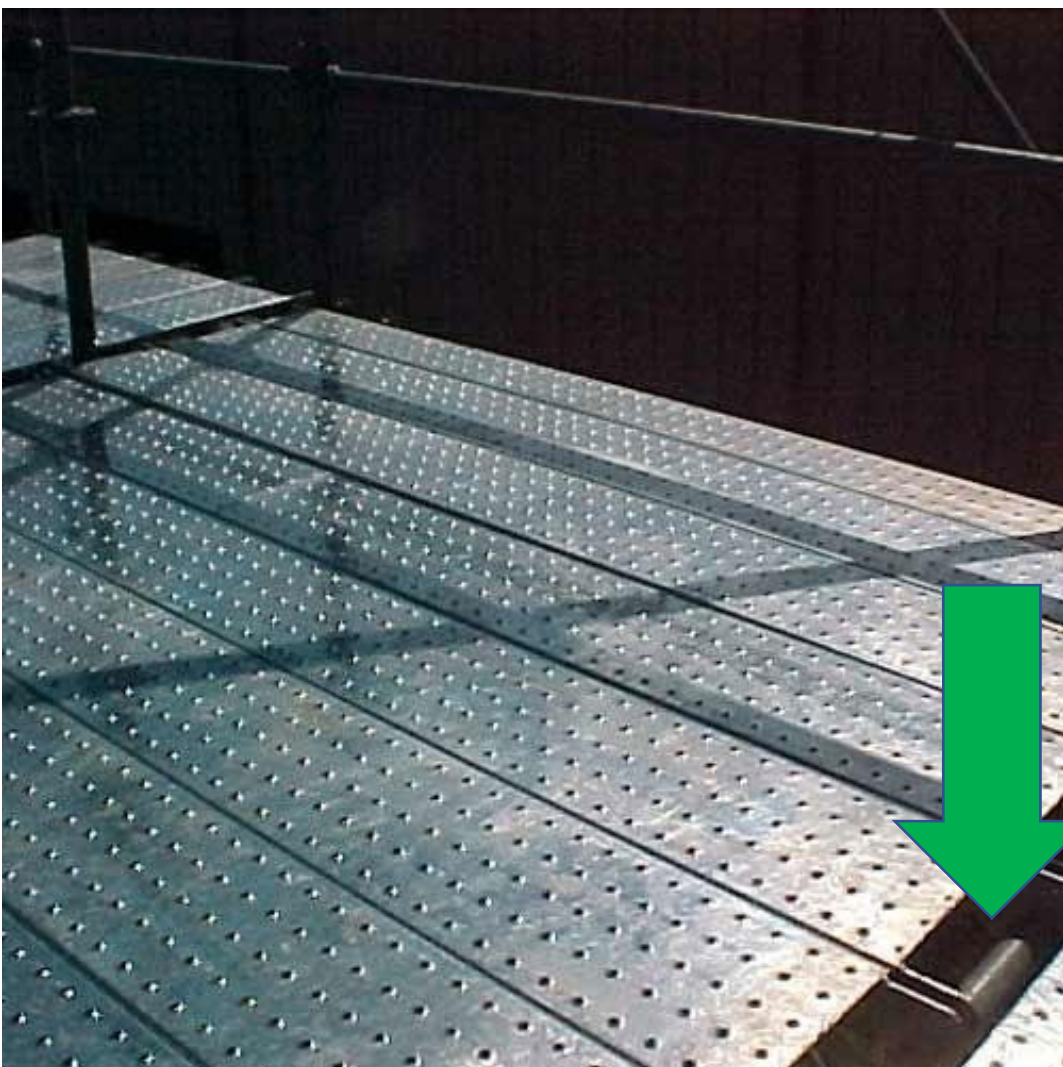
Gaps in Platform



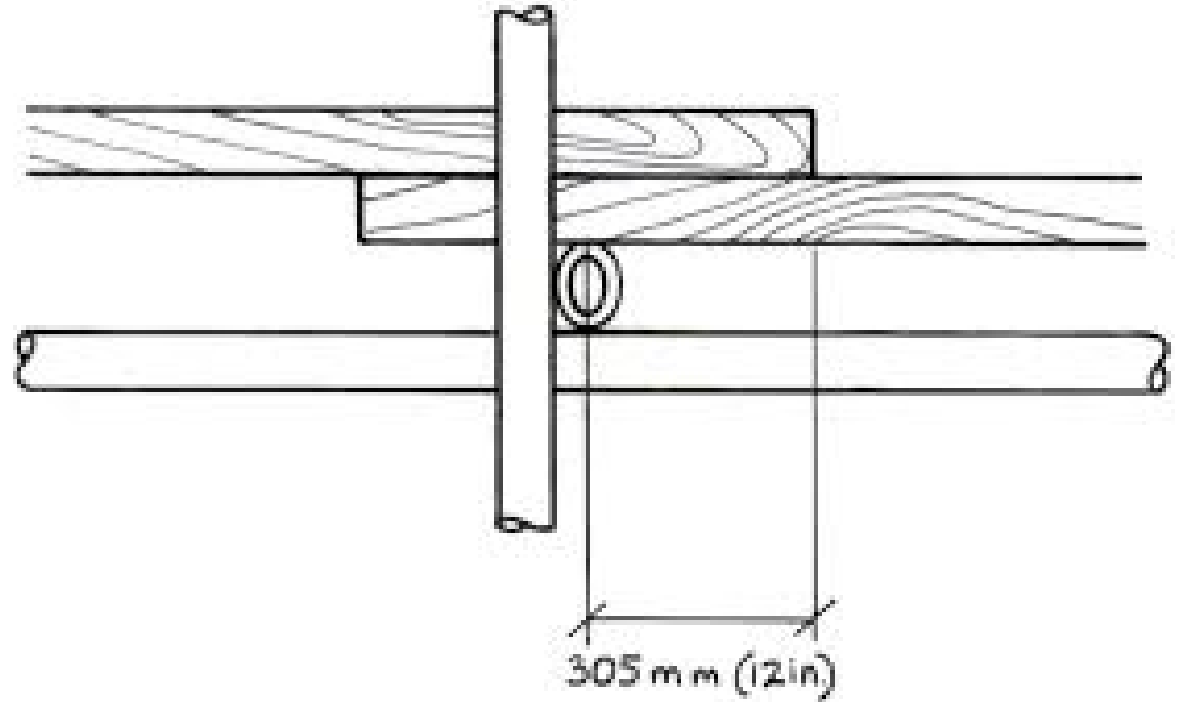
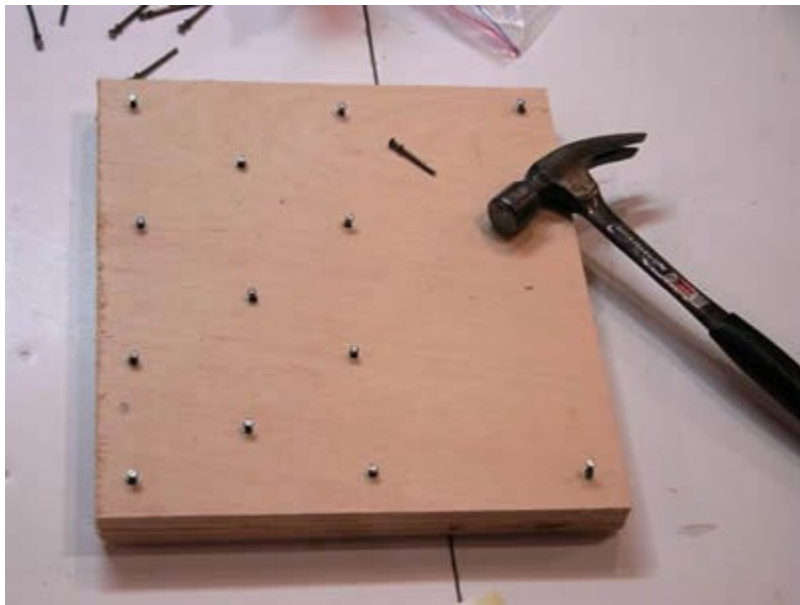
9/13/2024



Gaps in Platform

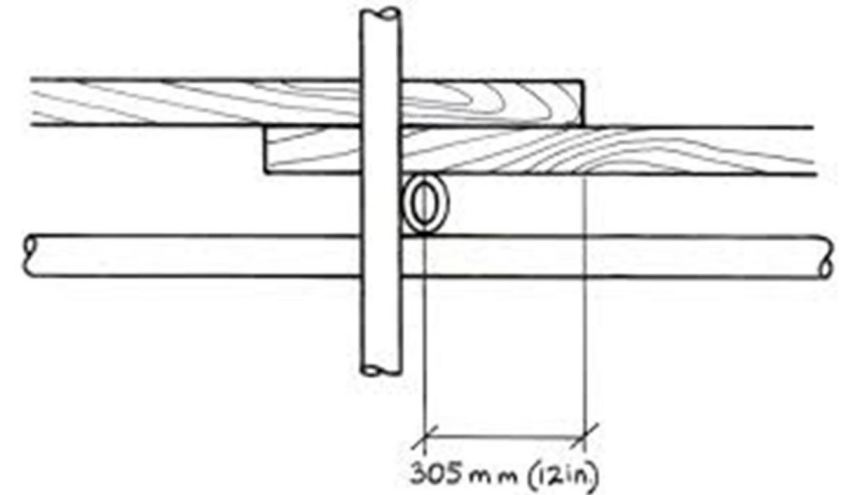


Trip Hazards



Planking Overlap Regulations

- ◆ 6" – 12" over intermediate supports
- ◆ 12" on end supports (under 10' span)
- ◆ 18" on end supports (over 10' span)
- ◆ Boards on angle laid first
- ◆ Secure from movement



Plank Width



Plank Width- Scaffold Builders



Getting your Wires Crossed



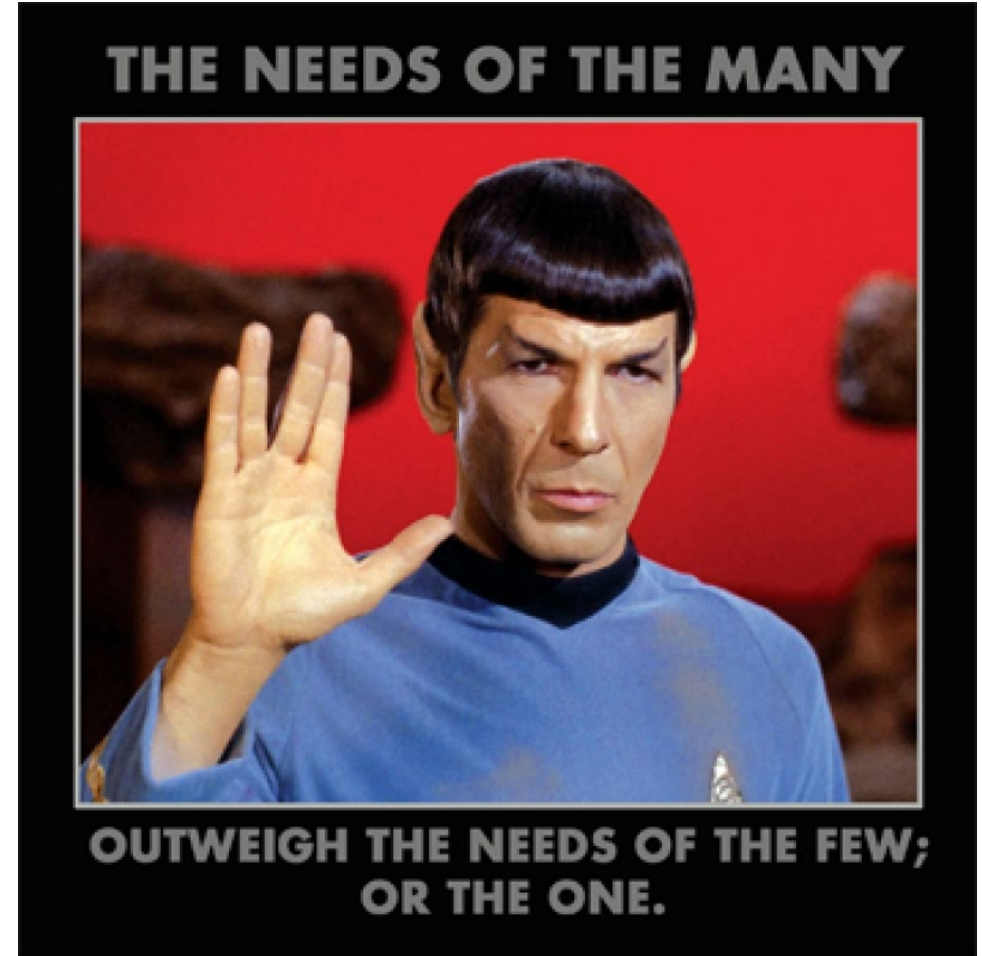
ANSI- A10.8: 4.21 The distance from the supporting surface to the first step of a ladder or frame designed to be climbed shall not exceed 19 inches. Ladders shall be positioned so as not to tip the scaffold

OSHA 1926.451(e)(2)(ii) Hook-on and attachable ladders shall be positioned so that their bottom rung is not more than 24 inches (61 cm) above the scaffold supporting level;

LADDER ACCESS

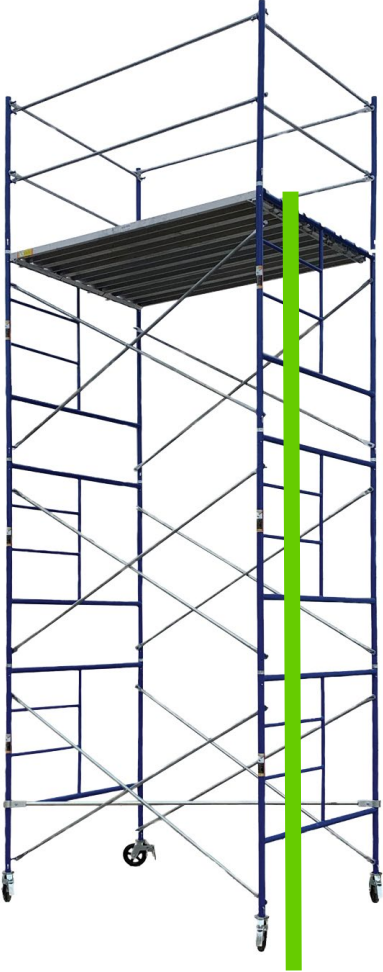
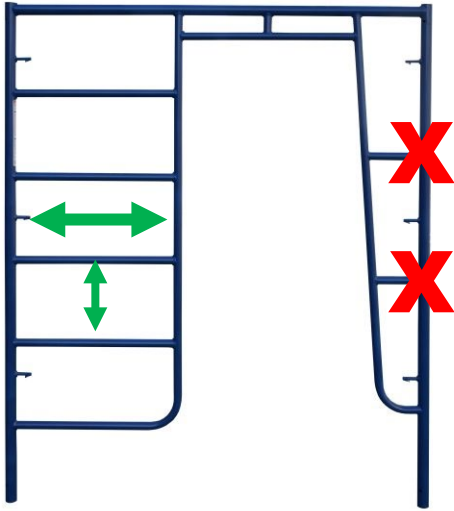
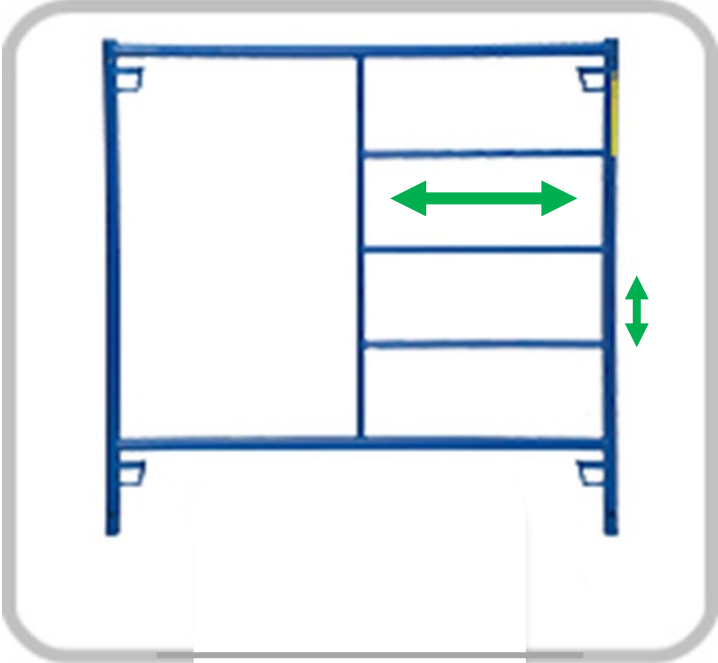


LADDER ACCESS





Access



Scaffold Builders



When is a scaffold NOT a Scaffold



When is a scaffold NOT a Scaffold



When is a scaffold NOT a Scaffold

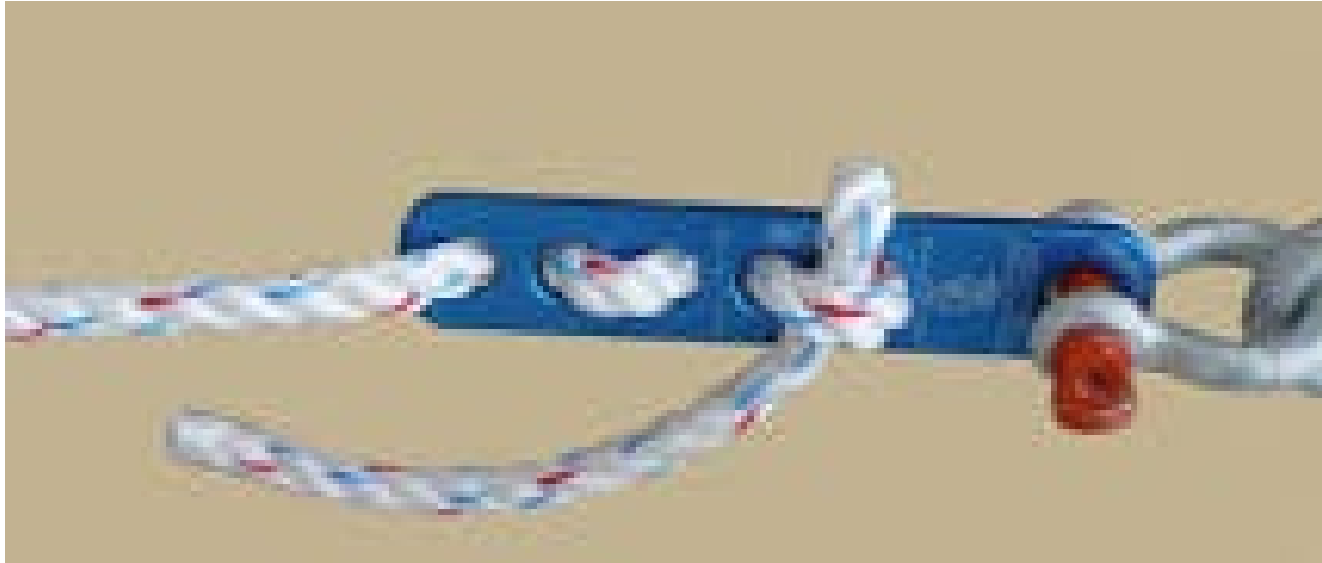


Public Access





Every Safety Pro Should Know About This





Every Safety Pro Should Know About This

- **If any component of the rigging system, such as a shackle, wire rope, or synthetic sling was or is used to hoist materials, these components are not be used as part of a fall protection system.**
- **If they have not been so used, they may be used as part of a fall arrest system if they meet the criteria in §1926.502.**



Every Safety Pro Should Know About This





Every Safety Pro Should Know About This

DISCLAIMER:

Training and competency in Fall Protection is necessary to employ the methods described in this presentation

Consult the equipment manufacturer to determine feasibility

RENUNCIA:

Capacitación y competencia en Protección contra caídas es necesario para emplear los métodos descritos en esta presentación



Every Safety Pro Should Know About This





Every Safety Pro Should Know About This

DANGER DO NOT REMOVE
SUPERIOR SCAFFOLD SERVICES



Every Safety Pro Should Know About This





Every Safety Pro Should Know About This





Every Safety Pro Should Know About This



Every Safety Pro Should Know About This



Every Safety Pro Should Know About This



Every Safety Pro Should Know About This





Every Safety Pro Should Know About This





Every Safety Pro Should Know About This



Every Safety Pro Should Know About This

Suspension Trauma



- When workers are suspended in a harness, the impact pulls everything tight
- The arteries in the legs are squeezed and blood flow to legs is cut off
- There is a 14 minute window to get the tension off of the legs or blood clots will start to form
- Suspension Trauma Straps allow the worker to “stand up” while suspended, allowing proper circulation

Every Safety Pro Should Know About This

Suspension Trauma Relief Straps



Every Safety Pro Should Know About This

Suspension Trauma Relief Straps



Technology Every Scaffold Company Should Know About



Miller QP/75FT Decent Rescue Kits



MORE

Technology Every Scaffold Builder Should Know About

Talk with the Fall Protection Manufacturer.

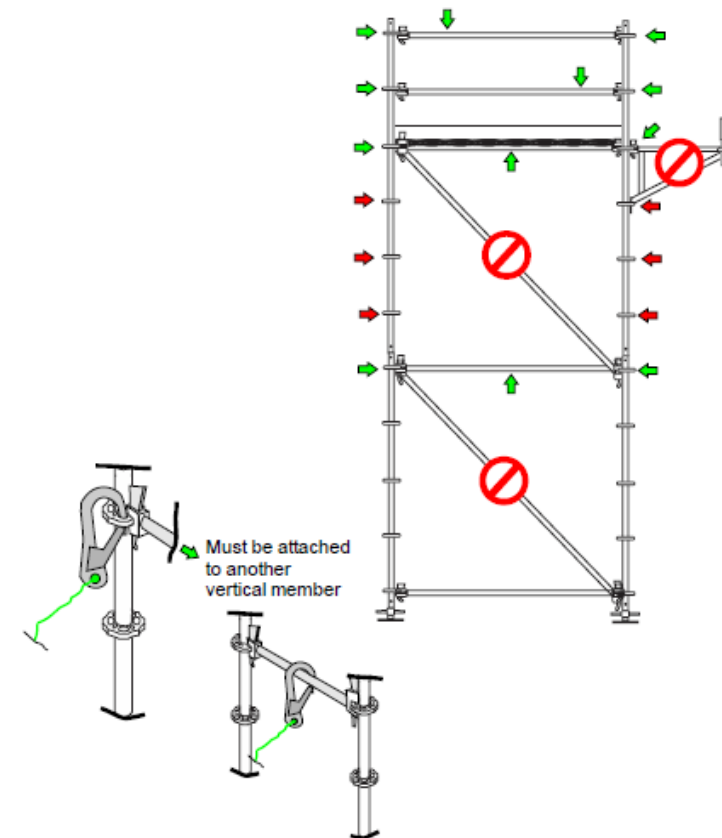
**They all have Professionals on staff
to help you develop a safe, legal program**

Every Safety Pro Should Know About This



Illustration B System Scaffold Tie Off Method
(applies to all system scaffold Manufacturer's brands in Superior Scaffold's inventory)

Retractable Bracket
Mounted 1 Lift above ladder



Green Arrows are safe attachment points
Red Arrows are NOT safe attachment points

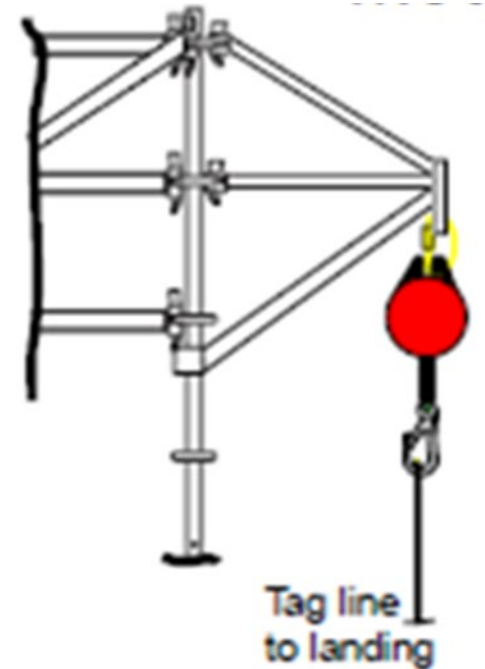
Technology Every Scaffold Builder Should Know About



UDA



RLDA



Ring Lock Davit Arm

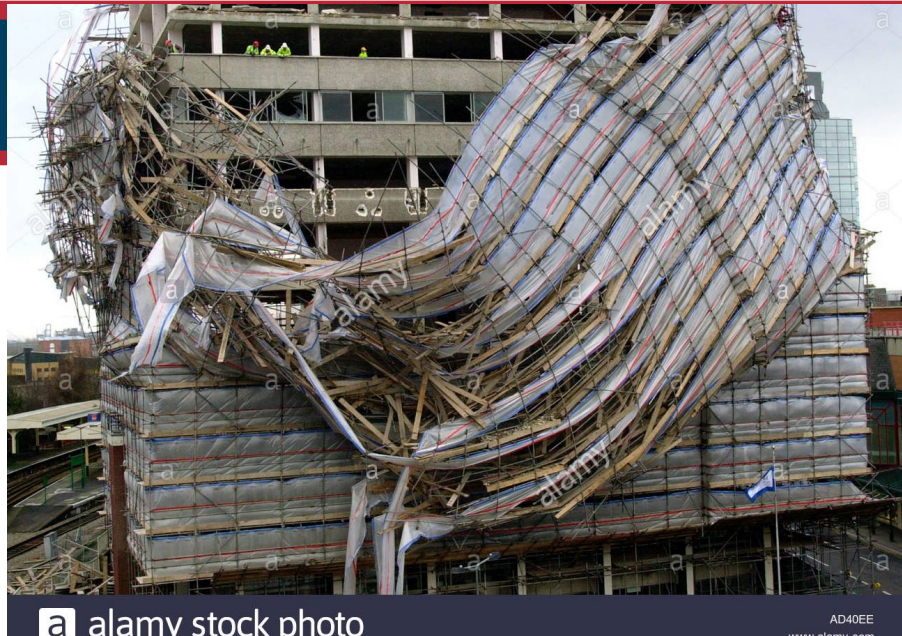
Scaffold Tags



RED= Only Scaffold Builders On Scaffold

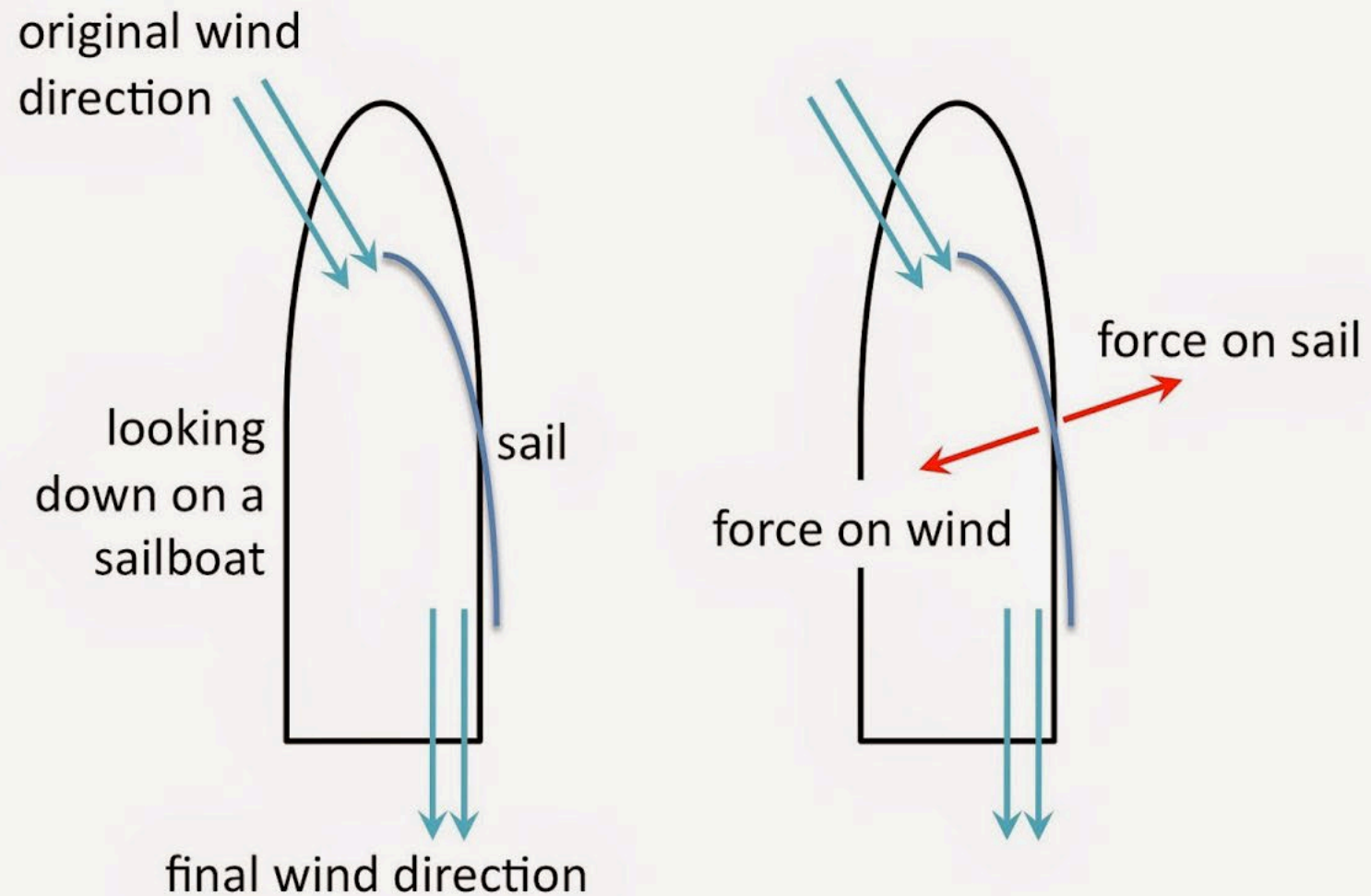
GREEN= Scaffold is 100% Compliant
No Fall Protection Required

YELLOW= There is a Hazard on the Scaffold.
It is NOT 100% Compliant

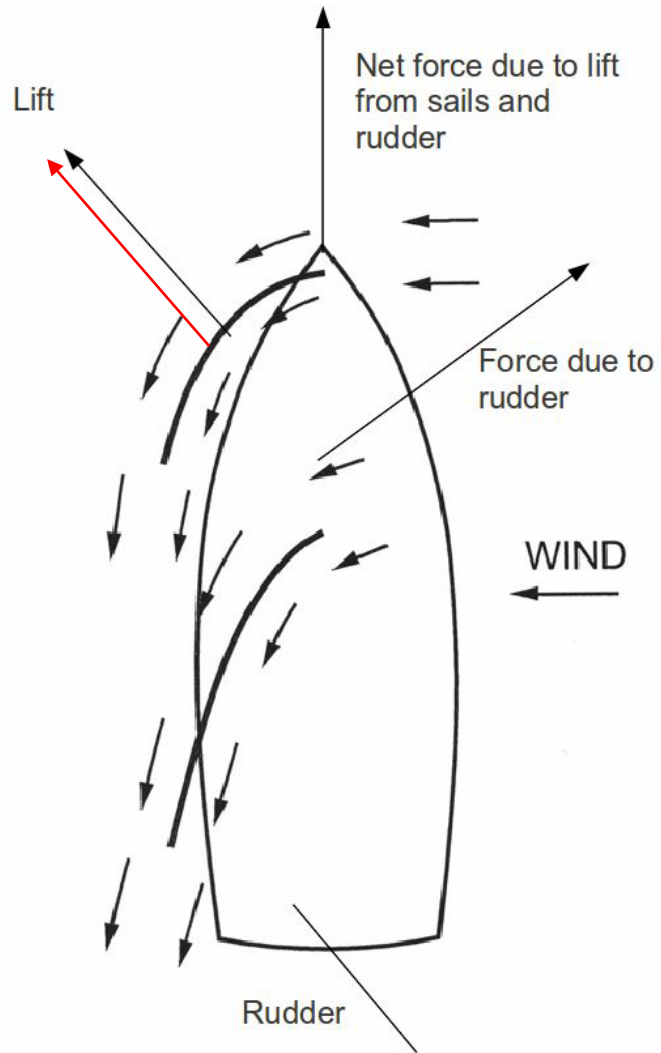


Enclosure

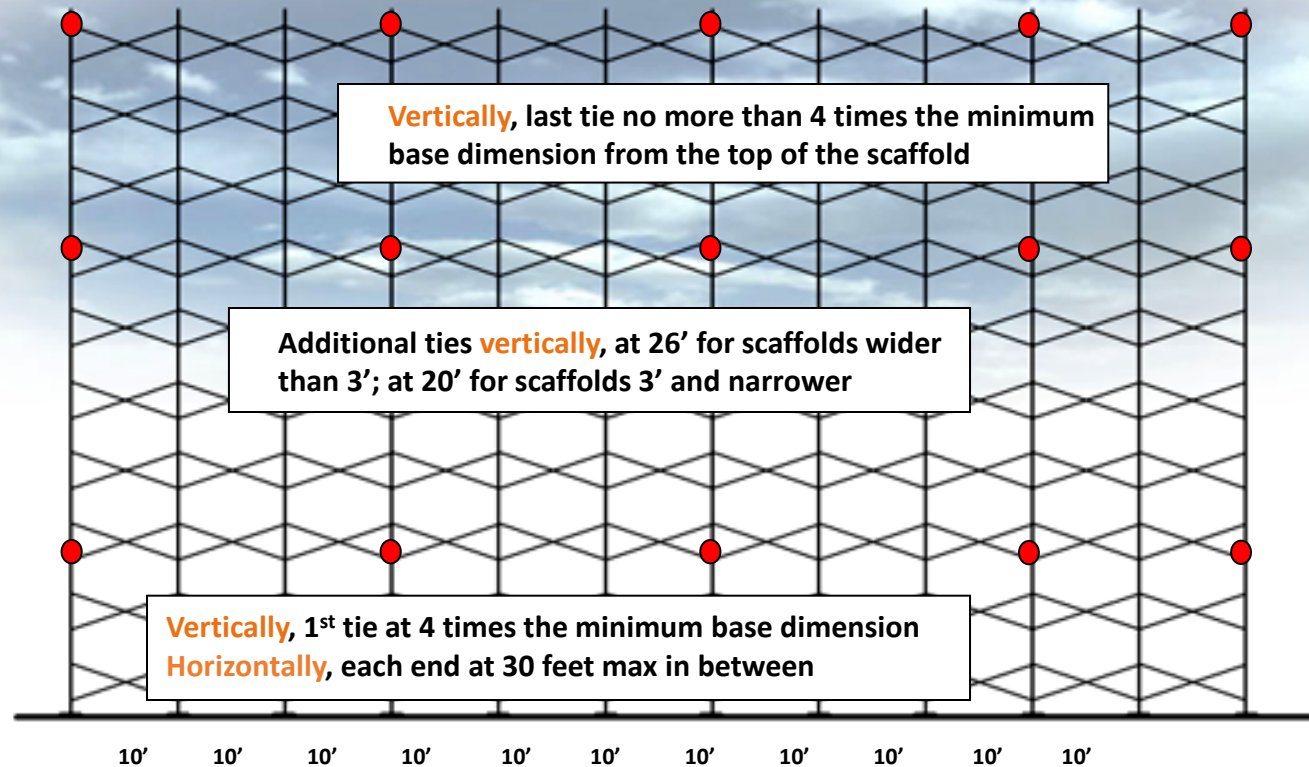
Enclosure



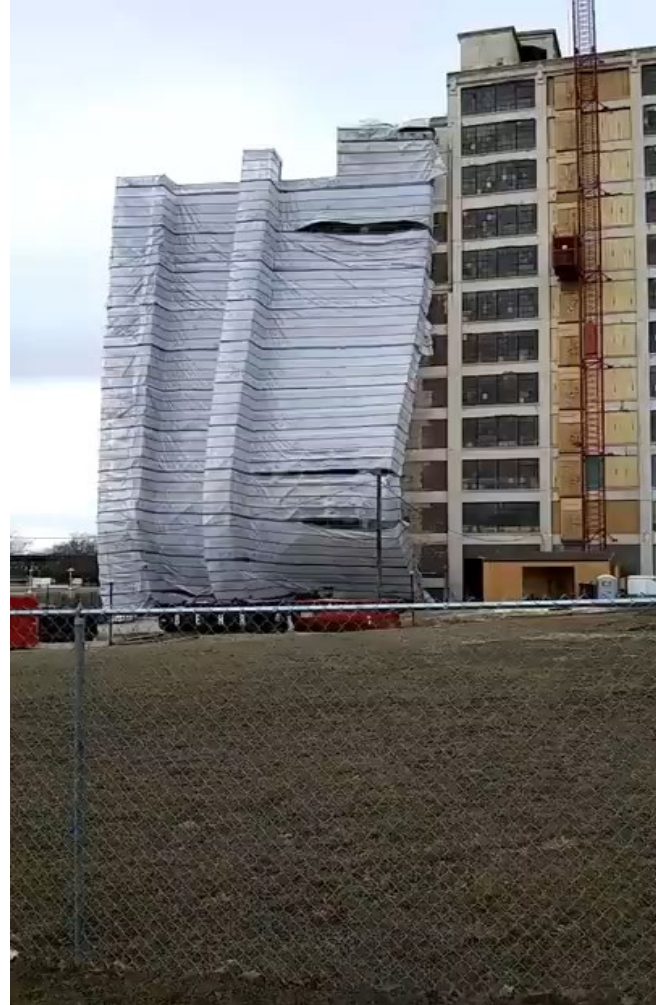
Enclosure



Maximum Tie Spacing



Enclosure





Load Capacity

Light Duty= 25 lbs sq ft

Medium Duty= 50 Lbs sq ft

Heavy Duty= 75 Lbs sq ft

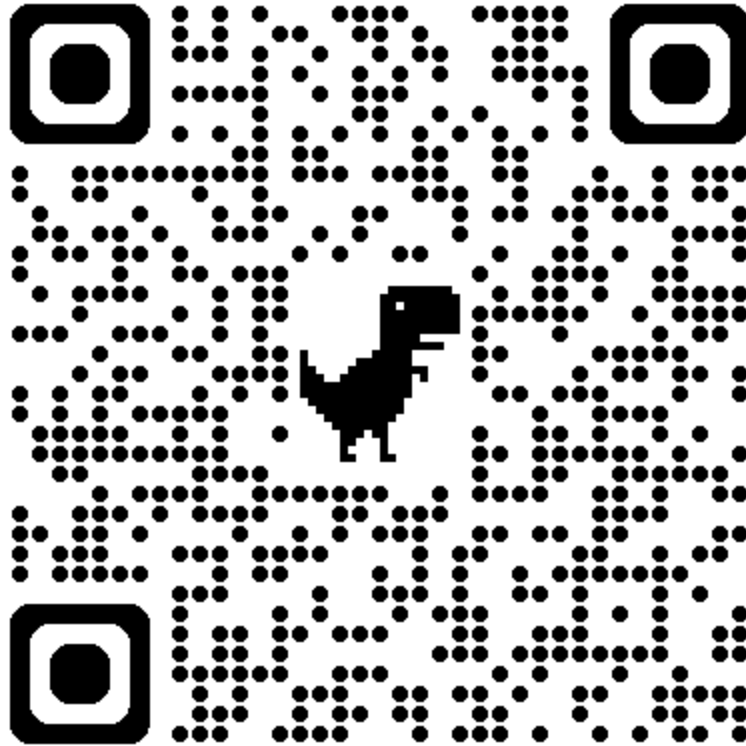
Special Duty= Design



Platform Width

- ◆ Determined by intended use
- ◆ Standard Scaffold Planks are 2x10 nominal
- ◆ 2 planks – Access
- ◆ 3 planks – Workers without materials
- ◆ 4 planks – Workers and materials
- ◆ 5 planks – Wide enough for workers, materials, and passage
- ◆ Wider than one bay– Area Scaffold
- ◆ Side Bracket can be attached to reduce gap between the platform and the work.

How Does He Know This Stuff?



OSHA Training Materials Library

<https://www.osha.gov/training/library/materials>



What's the Hazard?

SCAFFOLDING: SPOTTING THE HAZARDS

Shawn MacDonald

shawn@superiorscaffold.com

(215) 783-0356

THANK YOU