

Fall Protection Real Solutions, Not Just Rules

Jim Getting, PhD, CSP

Michigan Safety Conference

April 17, 2024



Objectives

- Go beyond reciting the rules.
- Discuss fall protection use in several settings.
- Generate new ideas and solutions to your fall protection challenges.

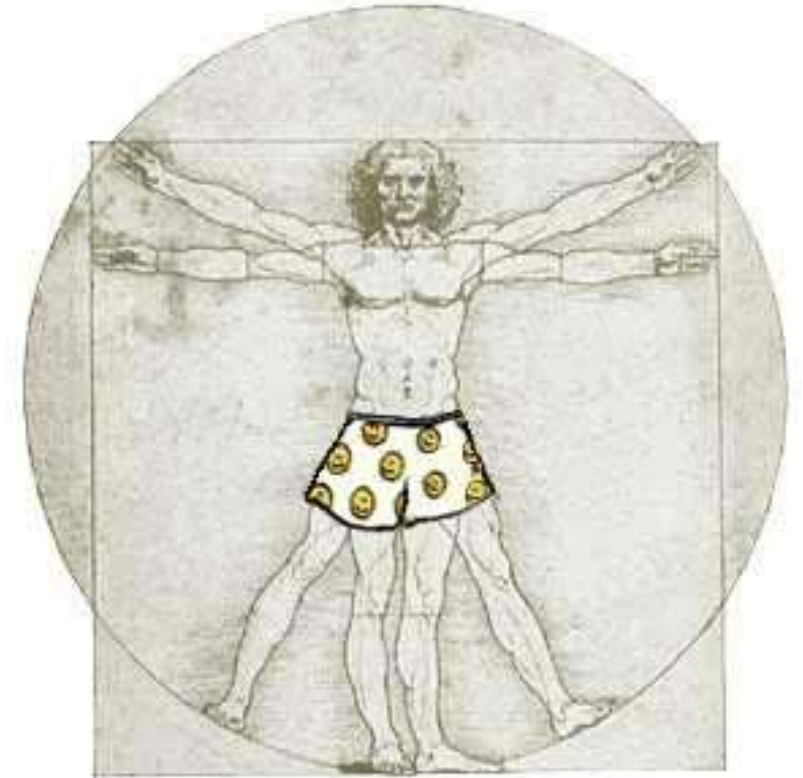
Disclaimer

- MIOSHA does not endorse or recommend any specific brand, product, vendor, or service.
- Any specifics mentioned are intended as a place to start learning more.



The Rules

- MIOSHA Construction Safety and Health Standard Part 45, Fall Protection
 - 6 feet
- MIOSHA General Industry Safety and Health Standard Part 2, Walking Working Surfaces
 - 4 feet



Solutions

- First, solution is remove the hazard.
- Second comes passive fall protection.
 - Guardrails, nets, scaffolds, MEWPs, etc.
- Many solutions that just are not common.
- For PFAS, if we can just find a suitable anchor point...



100 Years of Fall Protection

National Safety News
September 1923

M-S-A LEATHER SAFETY BELT



For Use in TANKS
MINE SHAFTS
TRENCHES
SHIPHOLDS
MANHOLES
GAS MAINS
SEWERS

Used by

American Steel & Wire Co.
Boston Consolidated Gas Co.
Carnegie Steel Company
Atlantic Refining Company
Jones & Laughlin Steel Co.
Standard Oil Company
United States Improvement
Company
Public Service Co. of No.
Illinois

Note Riveted and steel construction. The shoulder straps pass through the D ring at the point where they cross.

Selected Harness leather and tested hardware plus the best of design and workmanship make up the M-S-A Leather Safety Belt.

The chest strap is 2" wide and 48" long, fitted with a buckle tested to 750 lbs. tensile strength, and a belt loop. The shoulder straps are 1 1/2" wide, and also fitted with 750 lbs. tensile strength buckles and belt loops. The D ring is tested to a tensile strength of 1500 lbs.

The design is such that there is no interference with the workman, and the life line is entirely out of his way.

In case of a slip, a fall, or a collapse, the belt grips the wearer around the chest—not up under his arms—and holds him upright, or in a position to be pulled thru a confined space or opening without mutilation.

Price without life line.....	\$7.50 each
50 feet 3/4" Manila Rope spliced on extra.....	5.00 each
25 feet 3/4" Manila Rope spliced on extra.....	3.00 each



In use, the M-S-A Safety Belt holds the wearer in such a position that it is easy to fit him through a small opening.

Mine Safety Appliances Co.
Chamber of Commerce Bldg., Pittsburgh, Pa.

BRANCHES
CHICAGO
CLEVELAND
SAN FRANCISCO
DENVER
HUNTINGTON, W. VA.
ST. LOUIS
LOS ANGELES
NEW YORK
SEATTLE
PHILADELPHIA
PITTSBURG, KAN.
WILKES-BARRE, PA.
(Kingston)

EVERYTHING for MINE and INDUSTRIAL SAFETY

Door Jamb or Window Jamb Anchors



- Dependable Fire Protection
- General Contractor: Westwind Construction
- Abby 42 Apartment Complex
12/2023

Overhead Trolley Systems

For maintenance workers.

15 feet high over
industrial clothes washers
and dryers.

Design by Agile Safety

West Michigan Shared Hospital
Laundry



Davit Systems

- Raises the anchor point.
- Prevents hitting the lower level.

- Miller Edge fall protection davit system
- Used by Baker Concrete
- General Contractor: CSM Group
- Kalamazoo Country Club – 3/24



Portable Fall Protection Devices

- Many different davit systems.
- The “Grabber”.
- 30’.



Safety Pole Systems

- Can be raised as construction goes up.
- Use for multiple trades.



- Safetypole.com

Use the Hook on the Crane

1. Must meet anchor point requirements.
2. Operator aware of use as anchor point.
3. Operator is on site.
4. No load on the hook at the same time.



Positioning Lanyards

- Helps you get to that tough spot.
- Holds you in that awkward position.

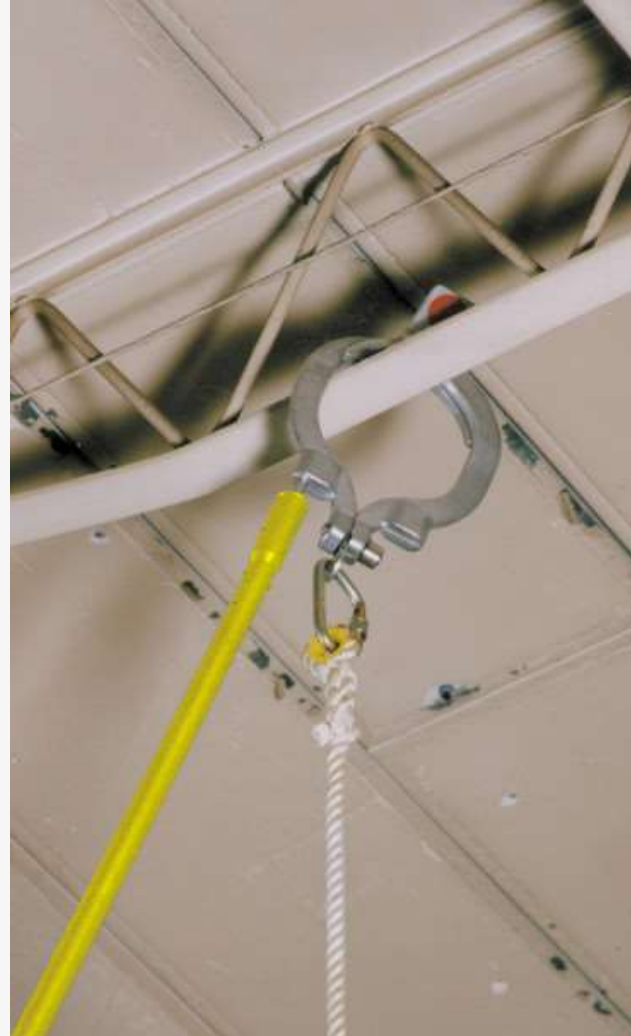


- Petzl Grillon Adjustable lanyard
- DBI Sala Adjustable Rope Positioning Strap



Shepard's Hooks to Set an Anchor

- Set an anchor device from up to 24' below.
- Also removable.
- Use when the anchor point is out of reach.
- Useful for work from ladders.
- Do not use open ended hooks.



MEWP Bolt-On External Fall Arrest Devices

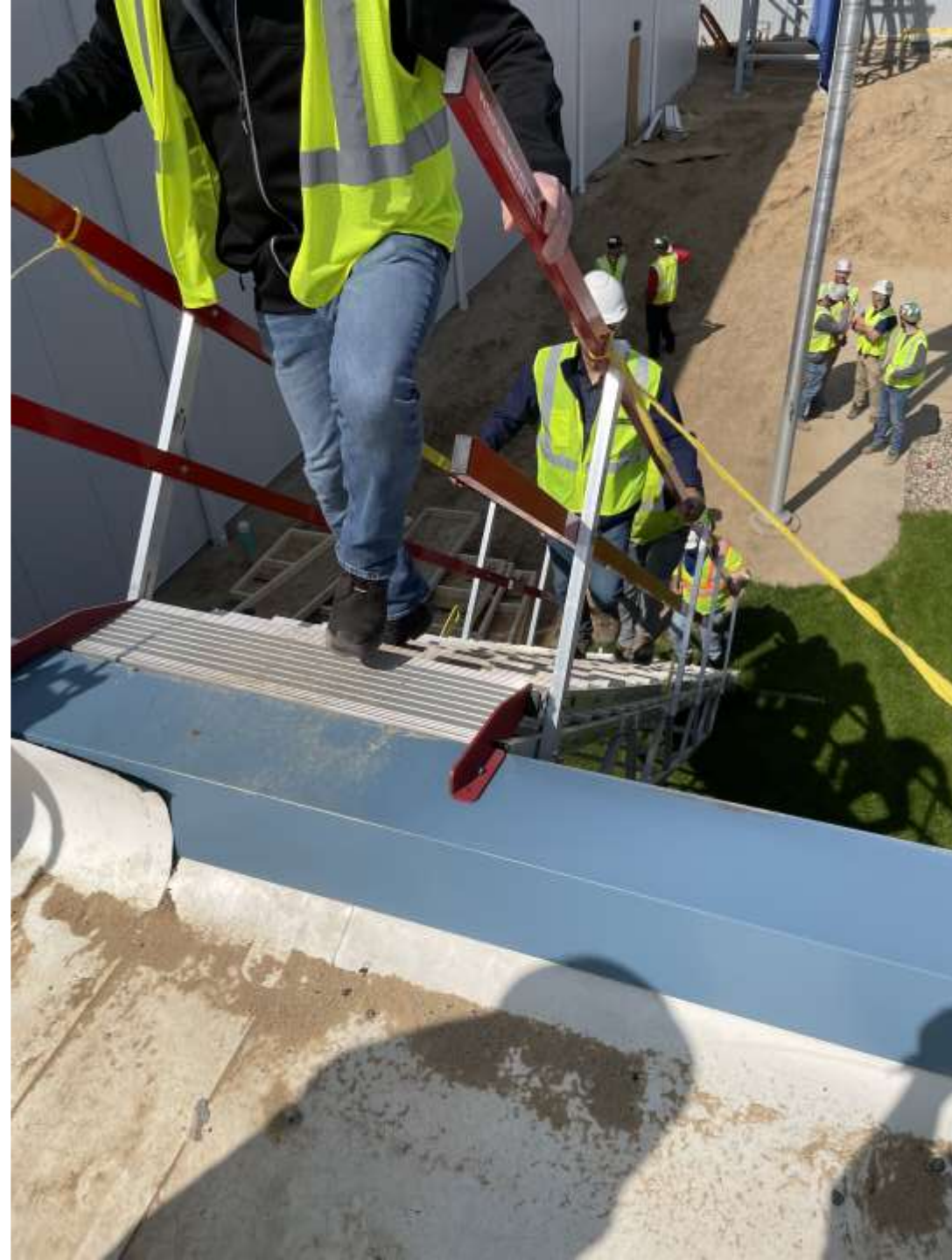
- For work outside the basket.



Stairs to Eliminate the Ladder Hazard

- Purchased with a MIOSHA MIWISH grant.

- Dan Vos Construction
- Fairlife
- Coopersville
- 5/2023



Parapet Clamp Guardrails

- Passive fall protection.
 - Allows everybody on the roof to work efficiently and safely.
-
- Whiting-Turner Contracting Company
 - Corewell Health
 - Grand Rapids
 - March 2024



Also Works for Trench Boxes



Do the Work on the Ground

- Trusses braced together then lifted.



Hard Hats with Chin Straps and Side Protection

- Mistakes will happen. When that happens, we try to fail safely.
- If a hard hat stays on your head when you fall...
- 90% of head injuries from bike accidents are to people not wearing a helmet.



Chimney Sweep Guild Settlement

Dec. 1, 2023

ONLY for Chimney Sweep Guild
members.

Gives requirements for some
ground anchor point options.

Requires specific safety program
elements.

IN THE UNITED STATES COURT OF APPEALS
FOR THE SEVENTH CIRCUIT

NATIONAL CHIMNEY
SWEEP GUILD, et al.,

Docket No. 17-1087

Petitioner,

v.

OCCUPATIONAL SAFETY
AND HEALTH ADMINISTRATION,
UNITED STATES DEPARTMENT OF LABOR,

Respondent.

STIPULATION AND SETTLEMENT AGREEMENT
Between the National Chimney Sweep Guild
and the U.S. Department of Labor

Chimney Sweep Guild Settlement

- Similar settlement with Ned Stevens Company for gutter installation and cleaning.
- Not cleared for anybody else.
 - “They do not apply to, and may not be used for, any work performed by an employer outside the Chimney Service Industry.” – NCSG Settlement 12 1 23
- Your qualified person must determine adequate anchorage for your situation.



Mary Poppins - 1964

Chimney Sweep Guild Settlement

- Preference for ground level work.
- Must use any existing fall protection system available.
- Must determine there are no other feasible means of fall protection.
- **The following anchorage is for “Travel Restraint systems” only!**



Anchorage Options

- A mature tree.
 - Trunk diameter at least 6.5 inches.
 - Solid inside (strike with a rubber mallet).
 - Trunk free of fungus, rot, cracks, splits, or decay.
 - Trunk close to vertical.
 - Bark healthy.
 - Tree roots healthy, not shallow.
 - Very few dead branches.
 - Anchor installed low to the ground.



Anchorage Options



- Structural Member
 - Wood or metal structure.
 - Made of 4" x 4" or larger.
 - Good condition.
 - Not just a single post with questionable attachment into the ground.

Anchorage Options

- Vehicle.
- At least 4000 pounds.
- Many more requirements.
 - Around wheels.
 - Through openings in rims.
 - B pillar.
 - Frame.
 - Axles.



Honeywell Miller Throwing Bag & Line - 2015



So Many More Options Out There!



Freestanding Anchors



Vacuum Anchors



Permanent anchor points



Post anchors



Fall arrest bags

Questions? / Comments?

Jim Getting, PhD, CSP

517.719.7422

Gettingj@michigan.gov

