



AMERICAN SOCIETY OF
SAFETY PROFESSIONALS

Fall Protection for Leading Edge Work: Ask the Experts

MAY 1, 2025

Welcome & Introduction: Brian A. Rizzo, Director, Office of Construction Services, OSHA

Moderator: Thomas Kramer, PE, CSP, Fall Protection Subject Matter Expert at LJB Inc.

Panelists:

Dan Henn, Chairman, ANSI/ASSP Z359 Committee; Safety Operations Manager – Products, LJB, Inc.

Don Hurley, CSP, Safety Directory, Zachry Industrial, Inc.


Michael Overholt, CSP, Vice President, Safety & Quality, American Contractors Insurance Group (ACIG)

Housekeeping

- Today's webinar will be recorded and automatically shared via follow-up email.
- The recording and slides will also be posted on cpwr.com/webinars.
- Attendees are automatically muted! Please submit panelist questions via the Q&A box.
- Spanish audio is available via simultaneous interpretation

Simultaneous Interpretation

WINDOWS / MAC / BROWSER

1. In your meeting/webinar controls, click **Interpretation** .
2. Click the language that you would like to hear.
3. (Optional) To hear the interpreted language only, click **Mute Original Audio**.

Notes:

- You must join the meeting audio through your computer audio/VoIP. You cannot listen to language interpretation if you use the [dial-in](#) or [call me](#) phone audio features.

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1. In your meeting controls, tap the ellipses **...**.
2. Tap **Language Interpretation**.
3. Tap the language you want to hear.
4. (Optional) Tap the toggle to **Mute Original Audio**.
5. Click **Done**.

Notes:

- You cannot listen to language interpretation if you use the [dial-in](#) or [call me](#) phone audio features.



Fall Protection for Leading Edge Work: Ask the Experts

Thom Kramer, P.E., C.S.P.

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- Session Moderator

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- Z359 Full Committee Member

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- Z359 Full Committee Member

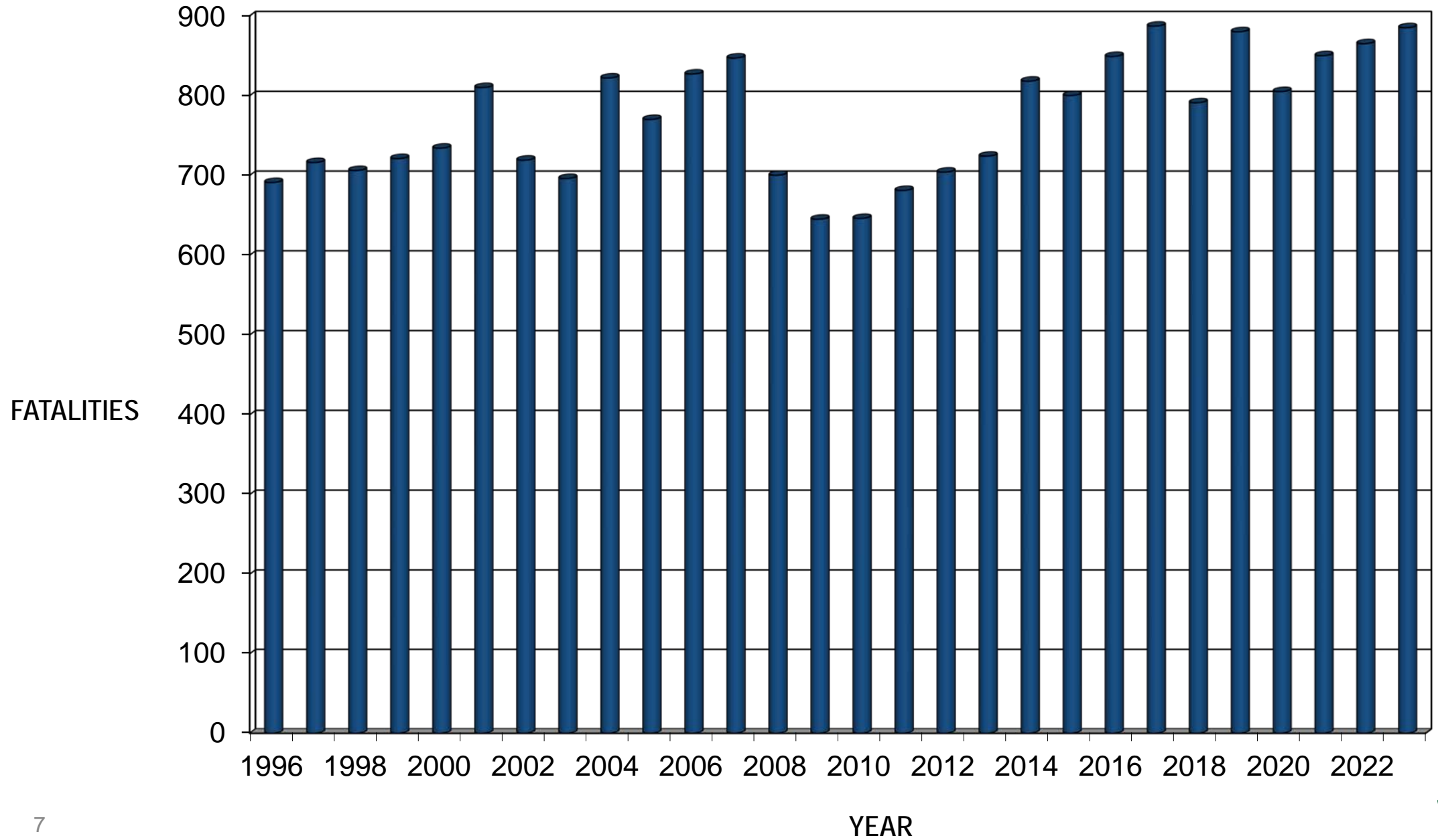
Agenda

- Why are we here?
- Industry updates & news
- Open Q&A
- Closing

Why are we here?

- Fall fatalities are not decreasing.
- Much has and will be changing in the industry.
- What can each of us do to better protect workers at height?





OSHA National Emphasis Program

- OSHA National Emphasis Program (NEP) to Prevent Falls
- Launched May 1, 2023



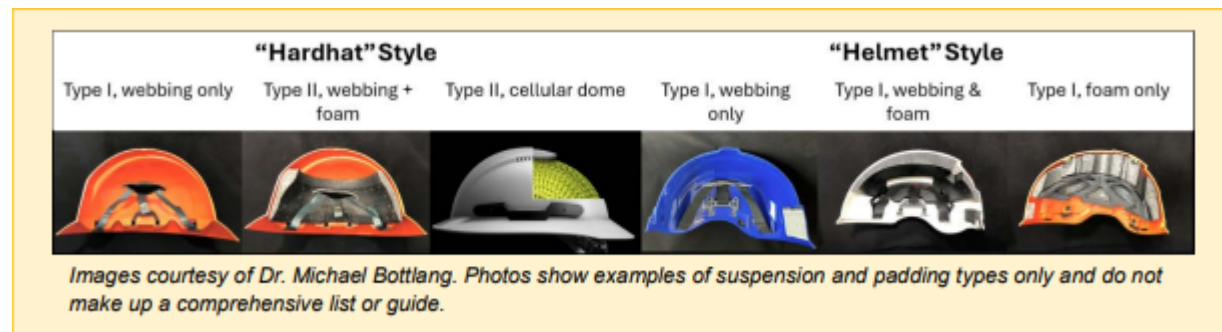
OSHA NEP

- What's a National Emphasis Program (NEP)?
- Why is this needed to prevent falls?
- How does it work?
- What do organizations need to do to prepare for this program?



Selecting Head Protection

- 50,000+ traumatic brain injuries (TBI's) are treated annually in the US
- 2,297 fatal intracranial injuries from 2015-2022
- Wearing proper headgear is essential to reducing the risk of a TBI
 - Hardhat vs Helmet
 - Type I vs Type II



2021-2024 STANDARDS

1. Z359.11: Full body harnesses (Effective in 2022)
2. Z359.14: Self-retracting devices (Effective in 2023)
3. Z459.1: Rope access (Effective in 2022)
4. Z359.9: Descenders (Effective in 2022)
5. Z359.4 Rescue (reaffirmed in 2023)
6. Z359.13 Energy absorbing lanyards (reaffirmed in 2023)
7. Z359.2 (Effective in 2024)
8. Z359.15 (Effective in 2025)
9. Z359.1 (Effective in 2025)



Future ANSI/ASSP Ballots

1. Z359.21 – Hoist and Rope Haul Systems (Pending)
2. Z359.19 – Rigid Rail Fall Arrest Systems (Pending)
3. Z359.17 – Flexible Horizontal Lifelines (Pending)



Q&A from Panel

Thom Kramer, P.E., C.S.P.

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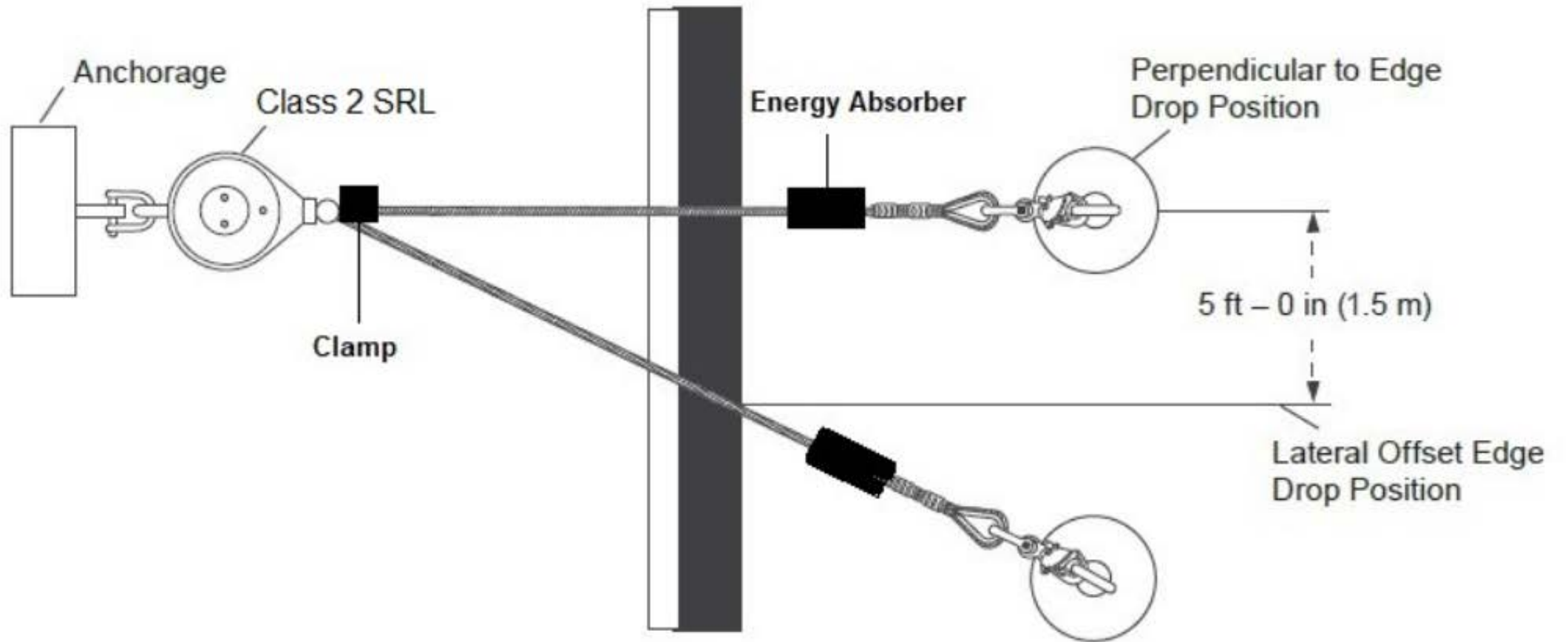


Figure 12: Dynamic Performance testing of SRDs – Class 2

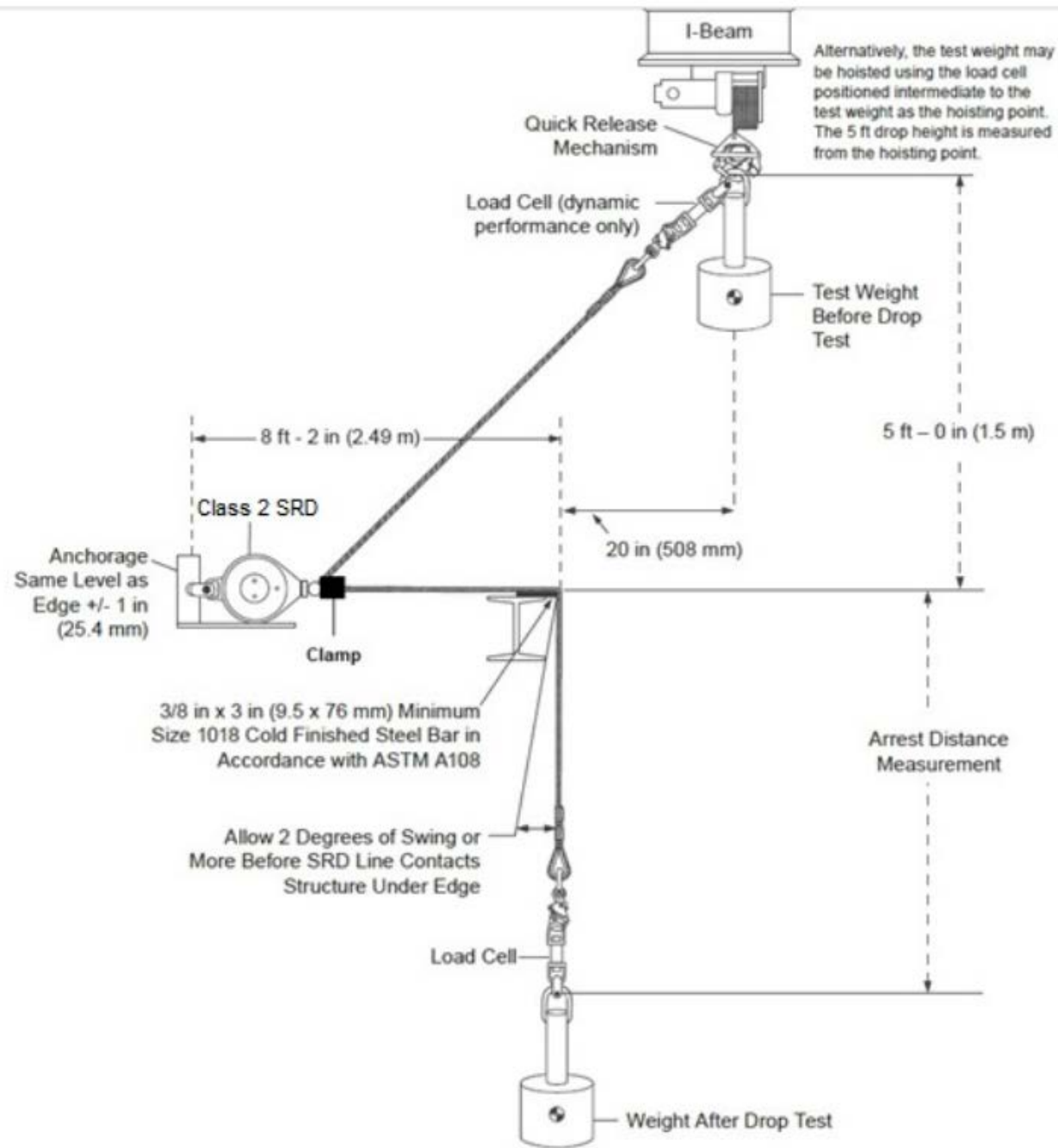


Figure 5a: Class 2 SRD Test Structure

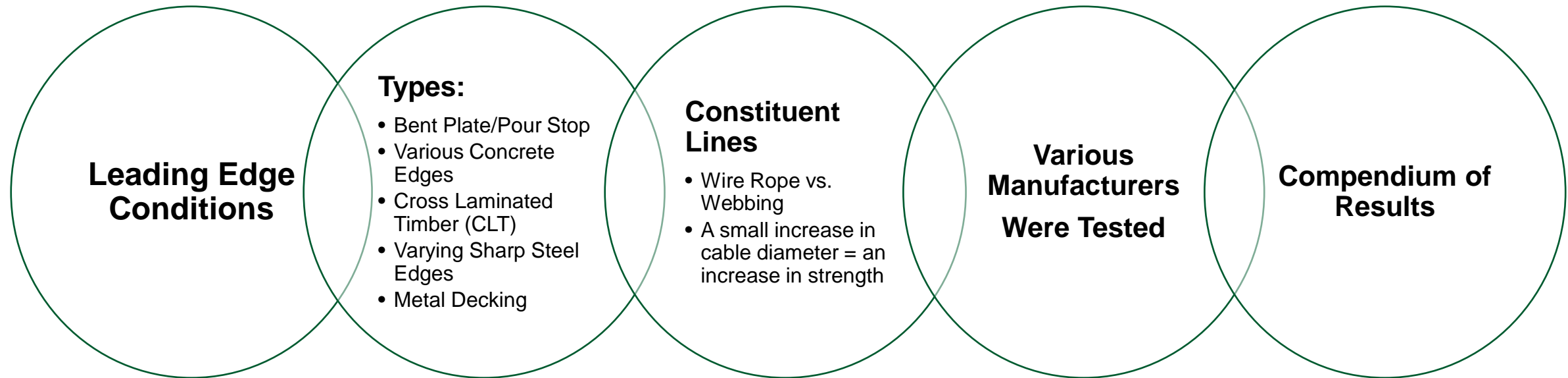


Testing Outside of Standard Requirements



Reduce opportunities for failure by managing your SRDs

Our workers deserve our best.



Thought Leadership

- Elevate your overhead anchorages
- In general terms, wire rope outperformed webbing
- Issued safety alerts to contractors
- Procurement
 - Create specification
 - Consistent purchasing parameters
 - Match products to the application
 - No “one size fits all” solution



Just because you're tied off doesn't mean you're protected.



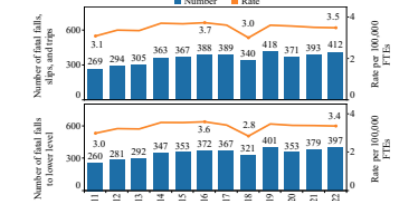
Fatal and Nonfatal Falls in US Construction (2021-2022)

- CPWR Data Bulletin
 - Nearly half of work-related fatal falls, slips, and trips in 2021 happened to construction workers



In 2022, there were 412 fatal falls, slips, and trips in construction, with the majority resulting from falls to a lower level (96.4%, n=397; chart 1). From 2011 to 2022, the number of these types of fatal falls increased 53% (53.2% and 52.7%, respectively), while rates increased 13% (12.9% and 13.3%, respectively). From 2021 to 2022, the number of fatal falls, slips, and trips increased 4.8% (393 to 412) while fatal falls to a lower level increased 4.7% (379 to 397). The rates for fatal falls, slips, and trips and falls to a lower level both decreased slightly from 2021 to 2022 (3.52 to 3.50 and 3.39 to 3.37 per 100,000 FTEs, respectively).

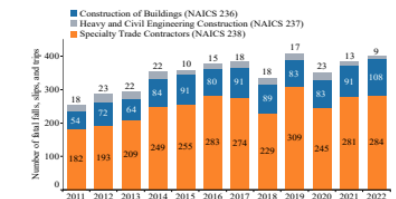
1. Number and rate of fatal falls, slips, trips and falls to lower level, 2011-2022



Source: U.S. Bureau of Labor Statistics, 2011-2022 Census of Fatal Occupational Injuries and 2011-2022 IPUMS Current Population Survey.

In 2022, Specialty Trade Contractors (NAICS 238) accounted for 68.9% (n=284) of the 412 fatal falls, slips, and trips, while Construction of Buildings (NAICS 236) accounted for 26.2% (n=108) and Heavy and Civil Engineering Construction (NAICS 237) accounted for 2.2% (n=9; chart 2). From 2011 to 2022, fatal falls, slips, and trips doubled in Construction of Buildings (54 to 108) and rose 56.0% in Specialty Trade Contractors (182 to 284). There was a 50.0% decrease in fatal falls, slips, and trips in Heavy and Civil Engineering during the same period (18 to 9).

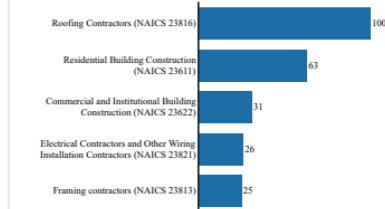
2. Number of fatal falls, slips, and trips by major subsector, 2011-2022*



Source: U.S. Bureau of Labor Statistics, 2011-2022 Census of Fatal Occupational Injuries.

Among the detailed subsectors examined, Roofing Contractors (NAICS 23816) had the highest number of fatal falls, slips, and trips in 2022 (n=100; chart 3). Numbers were also high among Residential Building Construction (NAICS 23611; n=63) and Commercial and Institutional Building Construction (NAICS 23622; n=31).

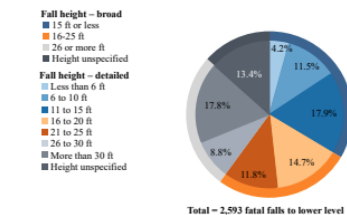
3. Detailed subsectors with the highest number of fatal falls, slips, and trips, 2022



Source: U.S. Bureau of Labor Statistics, 2022 Census of Fatal Occupational Injuries.

Next, fatal falls to a lower level from 2011 to 2018 were evaluated by fall height (chart 4). A third of these incidents occurred from heights of 15 feet or less (33.6%), while falls from 16 to 25 feet and 26 feet or higher each accounted for 26.5% of these injuries. Examining detailed height categories, falls from 11 to 15 feet (17.9%), more than 30 feet (17.8%), and 16 to 20 feet (14.7%) accounted for the three largest proportions of fatal falls to a lower level. This is consistent with prior findings in that a majority (83.4%) of fatal falls in construction occurred from heights greater than 10 feet.

4. Fatal falls to lower level by fall height among construction workers, sum of years 2011-2018*



Source: U.S. Bureau of Labor Statistics, 2011-2018 Census of Fatal Occupational Injuries.

*Due to data availability, years are limited to 2011-2018.



End User Guide

Self-Retracting Devices for Personal Fall Arrest and Rescue Systems

As published in ANSI/ASSP Z359.14-2021,
Appendix B



End User Guide

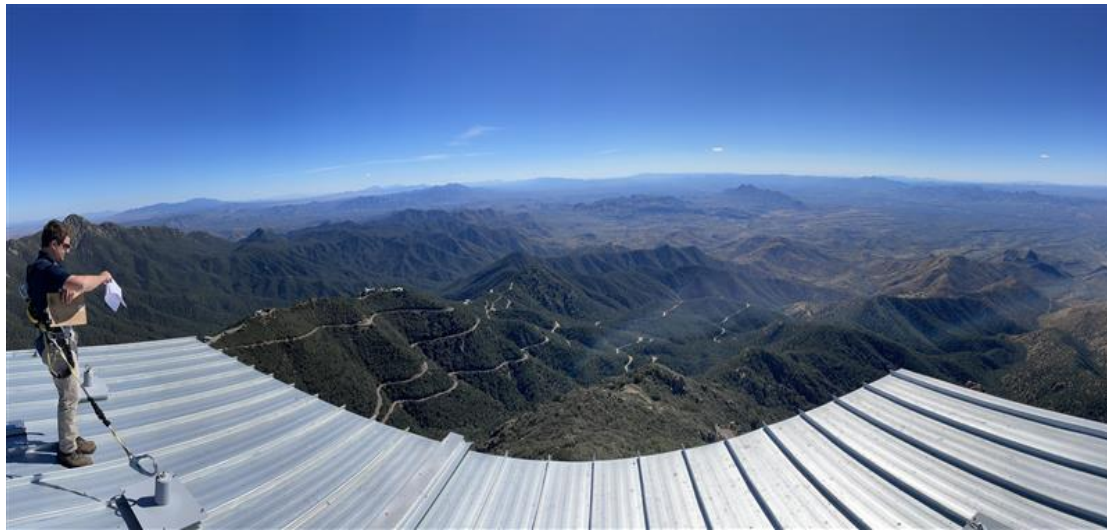


Available in Spanish



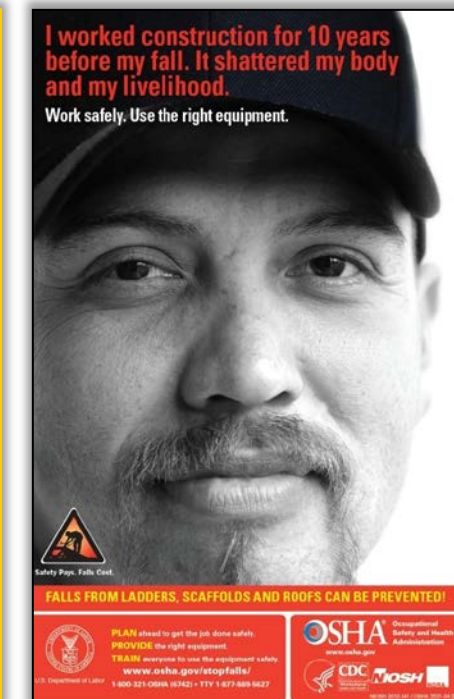
ANSI Z359.2-2023

- Effective date: June 10, 2024



Campaign to Prevent Falls in Construction

- **Leadership:** Led by the National Occupational Research Agenda (NORA) Construction Sector Council. Campaign leaders are NIOSH, OSHA, and CPWR – The Center for Construction Research and Training
- **60+ partners** – government, unions, businesses, associations
- **Tagline:** Plan. Provide. Train.
- **Campaign Name:** Safety Pays, Falls Cost
- **Campaign brand:** testimony approach; factual and serious tone



National Safety Stand-Down to Prevent Falls in Construction: Launched 2014, celebrated 11th anniversary this year



Training & Implementation Resources

- Infographics, factsheets, flyers, posters, and data bulletins
- Toolbox talks, hazard alert cards
- Spot the Hazard sheets
- Hard-hat Stickers
- Op ed release, press releases, media
- How-to guide, planning tools
- Videos & webinars
- Social media resources
- Science blogs, Webinars, Podcasts



Stop Construction Falls Website

AHORRE Tiempo y Dinero

3 pasos sencillos para prevenir caídas

PAZO 1 - PLANIFIQUE cada día para prevenir caídas en el trabajo.

PAZO 2 - PROPORCIONE las herramientas adecuadas y el equipo de seguridad necesario para el trabajo.

PAZO 3 - CAPACITE a sus empleados con el equipo de seguridad y sobre prácticas laborales para prevenir caídas.

Encuentre materiales **GRATUITOS***

*Cuando recorra el código QR o que el URL, se le va a pedir registro automático personal de la empresa. El objetivo es evitar caídas y lesiones proporcionando información gratuita a los constructores, sus empleados y personas cercanas (OSHA, 1994, 2014, 2017) (contenido protegido). Los materiales fueron compilados por el Instituto Nacional de Seguridad y Salud (Instituto Nacional de Estadística y Capacitación en Construcción (INPEC)).

Autorefinanciamiento, Seguro CPWR

2024 STAND-DOWN
May 6-10

StopConstructionFalls.com

FALLS FROM LADDERS CAN BE PREVENTED!

- ✓ Choose the right ladder for the job
- ✓ Maintain three points of contact
- ✓ Secure the ladder
- ✓ Always face the ladder

DON'T stand on top or on the top step of a step ladder.

DON'T overreach

DON'T place the ladder on uneven footing.

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

Choosing the Right Anchorage for your personal fall arrest system

DO USE: Certified anchorages that meet or exceed OSHA regulations.

All anchorages should be:

- Designed before construction begins
- Independent of anchorage loads to be attached other employees or work activities
- AND
- Properly installed and rated for 5,000 lbs per employee attached
- OR
- Designed, installed, and used under supervision of a qualified person, as part of a complete personal fall protection system that maintains a safety factor of at least 2.

Engineered anchor point systems typically exceed regulations and are the safest option.

Engineered anchor points can be temporary or permanent.

Temporary anchor points can be used after construction for routine working and maintenance.

DO NOT USE: Certified anchor points, such as:

- Wires or strand poles
- Electrical conduits
- Rebar/guardrails
- Rebar/anchors
- Light fixtures
- Steel ladders

PLAN PROVIDE TRAIN

For more information on fall prevention, visit stopconstructionfalls.com

Join the Campaign to Stop Construction Falls!

OSHA CDC NIOSH CPWR

#StandDownSafety



Fall Protection Q&A Panel 2024

Welcome: Chris Trahan Cain, CIH, Executive Director, CPWR – The Center for Construction Research and Training

Presenters:
 Thom Kramer, PE, CSP, Principal at LIB Inc., Chair of the ANSI/ASSP Z359 Full Committee
 Dan Henn, VP of Operations at Reliance Fall Protection, Vice-Chair of the ANSI/ASSP Z359 & Chair of the Z359.14 Subgroup
 Adam Rubin, MS, CSP, Vice President, Safety at Buckeye Partners, Vice-Chair of the Z359.14 Subgroup
 Mike Dickerson, Safety Consultant, American Contractors Insurance Group, Member of the ANSI/ASSP Z359 Full Committee

For audio trouble, call in using a phone at: (415) 655-0003
Access code: 2550 088 6787 #

For technical difficulties, chat Jessica Bunting or email jbunting@cpwr.com.

Today's event is being recorded and will be emailed to cpwr.com/webinars.

CPWR PLAN PROVIDE TRAIN

Planning Resources

RESCUE PLANNING SAVES LIVES

Falls can occur in the blink of an eye, even when being careful. Using personal fall arrest systems is only the first step in protecting workers if a fall does happen. If the fallen worker is suspended in a harness for longer than a few minutes, a lack of circulation can lead to nausea, unconsciousness, suspension trauma, and even death.

Planning for safe, efficient rescue saves lives.

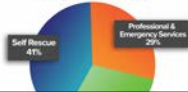
In a recent CPWR survey of contractors, safety & health pros, workers, and others, over 67% of respondents indicated they never or only occasionally witnessed sufficient pre-planning for fall rescue.¹

Use these tips to strengthen your rescue planning:

Prioritize preparation for self- and crew-assisted-rescue

- Use any method available to help blood circulation. For example, raise the worker up, lower them down, bring them into a structure through an opening, or bring support equipment to them. Make sure equipment for self-rescue, such as trauma straps, self-rescue harness units, or even bucket trucks, are available, ready to be used, and in good condition.
- The CPWR survey found that Self-rescue (e.g., climbing or lowering oneself) was the most used method of rescue.
- The odds of a fall being fatal were lower for workers who received rescue training compared to those who did not.

Methods of Rescue in Fall Experience Survey



Tailor the plan to each jobsite

- Talk to emergency services in your area and how quickly they can get to the jobsite through design and construction.
- Designate a qualified rescuer to be on emergency methods of communication (e.g., walkie talkies, whistles).
- Think about how your access equipment can be used for rescue after self-rescue.

Train workers

- Train workers on self-rescue and how to use the specific protocols and locations of rescue equipment on the jobsite.
- Make sure to provide training in a language understood by all workers employed by subcontractors who work on jobsites where falls as workers employed by general contractors.

REMEMBER! Even if a worker does not speak English, a rescue plan should always be examined by a multilingual professional.

Use CPWR's Generic Rescue Plan (available in English and Spanish).

Join the Campaign to Stop Construction Falls

CPWR (2023). "Understanding Causes of Falls from Heights." www.stopconstructionfalls.com

PLANNING A MULTI-LAYERED APPROACH TO FALL PREVENTION AND PROTECTION

A recent CPWR survey identified insufficient or ineffective planning as the number one underlying cause of falls from lack of preparation can lead to a reliance on PPE as the only protective measure, but the survey also found that when they didn't do any planning, the odds of workers using their fall protection equipment were 71% lower.¹

The table below is based on the hierarchy of controls. The top of the table represents approaches that result in the greatest risk reduction, and the bottom represents approaches that result in the least risk reduction. Contractors, owners, design should use this chart, beginning at the top and incorporating controls as feasible to prevent falls.²

Control Level	Control Type	Control Description	Implementation Steps
Eliminate or minimize the fall hazard	Elimination	Plan, design, install, or move equipment to eliminate or minimize hazards associated with working at heights. Use Prevention Through Design measures. Inspect and maintain equipment regularly to prevent failure.	<ol style="list-style-type: none"> Adopt a building design with a slope grade rather than multiple levels. Use parapet walls or permanent least 39 inches high.
	Substitution	Change the method of work to reduce the risk of falling.	<ol style="list-style-type: none"> Move equipment or work to a lower level. Use safer equipment, for example ladders with aerial lifts.
Prevent the fall	Passive Engineering Controls	Use passive fall prevention. Install temporary guardrails or barriers around skylights and holes.	
	Active Engineering Controls	Use active fall prevention. Use fall restraint systems that secure an anchor point, connector, lanyard, prevent the worker from reaching the fall edge.	
Minimize the impact of the fall	Administrative Controls	Establish and use safe operating procedures when working at heights and provide comprehensive training in a language understood by workers.	<ol style="list-style-type: none"> Make sure a competent/qualified person is present on the job site. Train workers for the specific task and fall hazards faced.
	Personal Protective Equipment & Other Protective Measures	Supply and use personal protective equipment (PPE) such as a personal fall arrest system. Plan ahead to reduce the risk of injury or death if a fall does occur.	<ol style="list-style-type: none"> Make sure fall harnesses fit workers. Plan ahead with input from the competent or qualified person to ensure certified anchor points, lanyard type and length, etc. Provide rescue equipment and training. Make sure the fall clearance is sufficient to avoid both swing hazards and the ground or nearest obstruction below. Select PPE that includes trauma straps or loops or a personal rope ladder to avoid suspension trauma. Provide hard helmets with chinstraps. Have a trained first aider on site when possible.

Join the Campaign to Stop Construction Falls! www.stopconstructionfalls.com

CPWR (2023). "Understanding Causes of Falls from Heights." www.stopconstructionfalls.com

CPWR (2023). "Understanding Causes of Falls from Heights." www.stopconstructionfalls.com

CPWR THE CENTER FOR CONSTRUCTION RESEARCH AND TRAINING

FALL PROTECTION

CPWR – The Center for Construction Research and Training created this do National Campaign to Prevent Falls in Construction to provide companies with guidance to enhance their site-specific fall protection plans. While OSHA only requires a written fall protection plan for high-risk work, CPWR believes that developing and implementing a fall protection plan is essential to protect all workers at risk for a fall. We encourage you to develop a fall protection plan that is applicable to your jobsite(s).

Note: blue text indicates that a word can be found in the glossary at the end of this document.

For more information about the National Campaign to Prevent Falls in Construction, visit stopconstructionfalls.com or participate in the annual Safety Stand-Down, visit stopconstructionfalls.com

Job Name: _____
 Jobsite Phone: _____
 Job Address: _____
 Job Foreman: _____
 Qualified Person: _____

1. JOBSITE/BUILDING DETAILS

Use the following page to sketch and note the important details of the jobsite. Be sure to include:

- Type of jobsite or building (e.g. two-story residential home, commercial high-rise building, etc.)
- Type of work being done (e.g. framing, roofing, electrical, restoration)
- Prevention through Design measures already in place (e.g. permanent railings, safety harnesses, etc.)
- Relevant work surfaces & building materials (e.g. abrasive concrete edges, steel beams, etc.)
- Estimated duration of job (should you consider longer-term solutions such as scaffolding?)

PLAN. PROVIDE. TRAIN. Three simple steps to prevent falls.

CPWR THE CENTER FOR CONSTRUCTION RESEARCH AND TRAINING

Selecting Head Protection for Construction Work

A traumatic brain injury (TBI) is an injury that affects how the brain works. It can be caused by a bump, blow, jolt, or penetrating injury to the head. TBIs can be mild, but more serious TBIs can lead to disability and even death.¹

Based on historical data, over 50,000 nonfatal work-related TBIs are treated on average annually in United States (US) emergency departments.² Nonfatal TBIs can be life-altering events; 43% of hospital patients treated for a TBI did not attend ordinary work for five years after their injury, which means these individuals were receiving a social transfer payment such as sickness absence benefits, experiencing short- or long-term sickness, or had died.³ Among all US industries, construction has the highest number of both nonfatal² and fatal work-related⁴ TBIs. Between 2003 and 2010, 2,210 construction workers died from a TBI. These deaths represented 25% of all construction fatalities and 24% of work-related TBI fatalities among all industries during the same period.⁵ More recent data show a similar pattern, with 2,297 fatal intracranial injuries in construction from 2015 to 2022.⁶

Construction workers are at higher risk for TBIs because, in their work environment, they may be struck by falling or flying objects and may experience different kinds of slips, trips, and falls – from falls on the same level to falls from ladders and equipment to falls from multi-story buildings or scaffolding dozens of feet in the air. Over a third of all nonfatal work-related TBIs are attributed to falls, and among workers 55 years and older, the majority result from same level falls.² When it comes to fatal work-related TBIs, more than half are caused by falls, especially from roofs, ladders, and scaffolds.⁵

Wearing protective headgear, such as a hardhat or helmet, is essential for reducing the risk of a TBI. A study by Kim et al. found individuals who had a work-related fall and were wearing a safety helmet were less likely to have head injuries compared to individuals who were not wearing a safety helmet.⁷ Protective headgear should be selected based on your trade, type of work, and work environment. Rather than recommending a one-size-fits-all solution, the goal of this guidance document is to provide you with information on types of protective headgear, factors to consider, and additional resources.

Acknowledgements

CPWR – The Center for Construction Research and Training would like to thank its Expert Evaluation Panel on Construction Headgear for their feedback throughout the inception and development of this document. In 2023, CPWR convened experts from academia, labor, government, manufacturing, and others to participate in an evaluation panel on the use of helmets with chin straps versus traditional hardhats. The goal of this expert evaluation panel was to: (1) assess industry awareness and adoption of Type II

Planifique. Proporcione. Adiestre.

Proteja a sus empleados al:

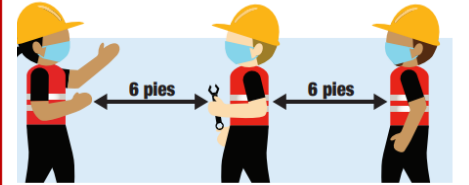
PLANIFICAR...

- Identifique los riesgos de caídas en el sitio de trabajo.



PROPORCIONAR...

- Equipo para prevenir caídas:
- Sistemas personales anticaídas
 - Equipo de acceso (plataformas aéreas, escaleras, etc.)
 - Barandillas
 - Otros equipos adecuados de prevención de caídas



¡Consejo! acerca de cómo crear un plan contra caídas para su compañía en com/general/fallplan

PLANIFIQUE. PROPORCIONE. ADIESTRE. Tres pasos sencillos para prevenir caídas.

¡No se acabe la construcción!



#StandDown4Safety

Julio 2020

Preventing Falls through Improved Design

Moderator: Chris Trahan Cain, CIH, Executive Director, CPWR

Panelists:

- G. Scott Earnest, PhD, PE, CSP, Associate Director for Construction, Office of Construction Safety and Health, NIOSH
- Bill Wright, Communications Director, CPWR
- Bob Moser, PE, CSP, RA, Manager of Health & Safety by Design, Jacobs
- Ralph Bierschwale, Architectural Design Manager and Architecture SME, Jacobs
- TJ Lyons, CSP, Safety Director, Gilbane
- Jose Herrera, Safety & Occupational Health Specialist, Directorate of Construction, OSHA



NEW Leading Edge Tipsheet

FALL PROTECTION:

Leading Edge Safety Tipsheet

A **leading edge** is the unprotected side and edge of a floor, roof, or formwork for a floor or other walking/working surface (such as a deck) that changes location as components are added. It is called a **leading edge** because the location of the edge changes as workers add or construct additional floor, roof, decking, or formwork sections. When a leading edge is not actively and continuously under construction – and therefore is not moving, it is considered an “unprotected side or edge”.

Employers must protect all workers constructing a leading edge that is **6 feet or more above lower levels** from falling through use of passive engineering controls (e.g., guardrails, safety net systems) and/or active systems (e.g., travel restraint or personal fall arrest systems).*

Visit [CPWR's Tipsheet on Planning a Multi-Layered Approach to Fall Prevention and Protection](#) for more information on these and other controls.

When there is no overhead anchorage point available on a leading edge, workers often tie off at foot level. If they fall, it causes the lifeline to catch and pull taut on the leading edge. The positioning of the lifeline along the edge can also add increased force on both the lifeline and the worker's body.

This can cause a standard lanyard or self-retracting lifeline (SRL) to break or be cut.

Always work with your **competent person** and your **qualified person** to ensure the best fall prevention and protection methods and equipment are in place. These may be the same person or two different people on your site. A **competent** person is capable of identifying and correcting fall-related hazards, while a **qualified** person is approved to supervise the design, installation, and inspection of fall protection and rescue systems.

**An exception to this rule occurs when the employer can demonstrate that these solutions are infeasible or create a greater hazard. In these cases, the employer must still develop and implement a fall protection plan which meets OSHA requirements. For more information, view OSHA's Hazard Alert.*

Sources: OSHA 1926.751 and ANSI Z-359

April 2024

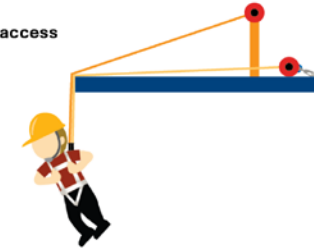


To Protect Workers on A Leading Edge, Consider Implementing the Following Measures:

1. Use a guardrail system or safety net system as close to the working level as possible. Safety nets can also help protect workers below from being struck by falling objects from above.

2. Use a fall restraint system to prevent access to the leading edge fall hazard.

3. Use overhead anchorage solutions whenever possible. Keep in mind that an overhead anchorage system does not automatically protect the lifeline from pulling taut and fraying/breaking on the edge. Pay close attention to the distance from the edge and angle created.



4. Equip workers with **Class 2 SRLs** that are made of materials that can withstand a sharp edge and include energy/shock absorption. Class 2 SRLs have integrated permanent energy absorbers (shock packs) that remain in-line with the force vector during fall arrest. Adding accessory shock packs to standard SRLs does NOT turn them into Class 2 SRLs.



Look for the Class 2 icon to determine if an SRL can be used for anchorage positioned below the dorsal D-ring (i.e., for tying off at foot level)

5. Consider the building materials being used. Is the edge sharp, serrated, or abrasive? If so, even a Class 2 SRL can fray and break after a fall is arrested. ANSI has added a test for use with sharp leading edges, however it is only for structural steel and does not consider other types of sharp and abrasive materials that make up many leading and non-leading edges and can lead to cutting and fraying of both Class 1 and Class 2 SRLs.

Remember that Class 2 SRLs require considerable clearance for deceleration, so it will always be safer to utilize guardrails or restraint systems to prevent the fall from occurring in the first place.



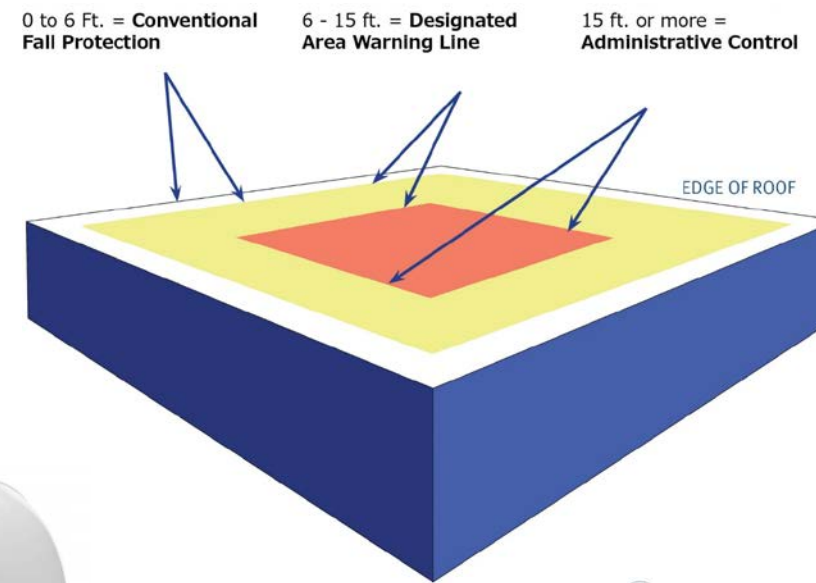
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ENGLISH: https://www.cpwr.com/wp-content/uploads/IG-Leading_Edge_Tipsheet.pdf
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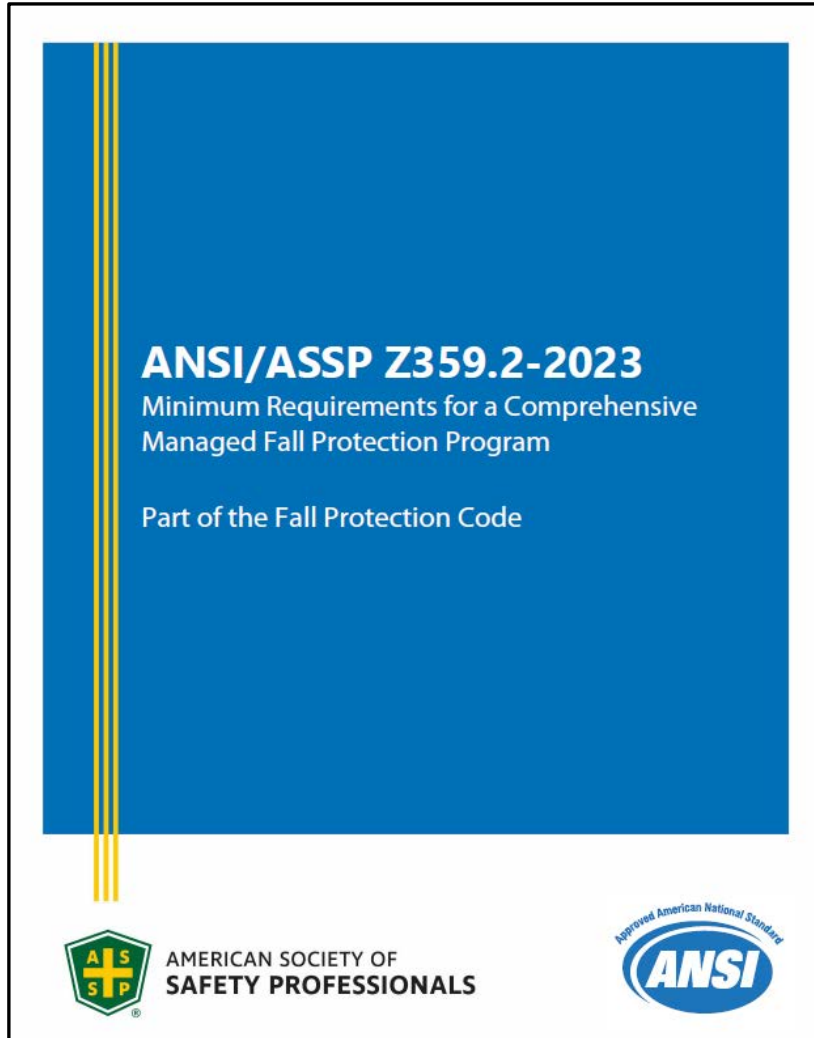


RECOMMENDED ACTIONS

- Use controls other than PPE
- Ensure proper harness fitting
- Elevate anchorages
- Visualize outcomes



OPERATIONAL IMPROVEMENTS



CLOSING EXERCISE: IMAGINE!

Imagine every year on May 22nd at precisely 10:15 am, all your workers simultaneously “tested” their fall protection systems.

What would happen?

Are you good, or just lucky?



Questions

