Scaffolding

By Thomas Retano, Safety Consultant

According to OSHA's scaffolding/construction webpage, “An estimated 2.3 million workers or 65% of the construction industry work on scaffolds. Protecting these workers from scaffold-related accidents may prevent some of the 4,500 injuries and over 60 deaths every year (Bureau of Labor Statistics (BLS) 2003 and 2004 data for the private sector) at a savings for American employers of $90 million in workdays not lost. In a recent BLS Study, 72% of workers injured in scaffold accidents attributed the accident either to planking or support giving way or to the employee slipping or being struck by a falling object.”

Construction workers continue to be afflicted by scaffold-related injuries every year. Examples of the types of accidents which continue to injure and kill employees working on scaffolds include:

Case 1. Two employees were working on a pump jack scaffold doing roofing work. The scaffold became overloaded and broke. The employees fell 12 feet to the ground, resulting in one fatality and one serious injury.

Case 2. Two workers were erecting an aluminum pump jack scaffold. As they were raising the second aluminum pole, the pole apparently contacted an overhead power line. The pole being raised was 29 feet 10 inches long, and the line was 28 feet 10 inches high. The line was approximately 11 feet from the house. One employee died, and the other suffered severe burns and was hospitalized. The surviving employee noted that he thought they had enough room to work around power lines, which were not de-energized or shielded.

Case 3. A foreman climbed up the frame of a fabricated frame scaffold to check on an employee who was sandblasting inside a stack at a steam plant. The scaffold was not equipped with guardrails, and there was no access ladder. After talking to the employee, the foreman either fell from the unguarded platform or fell while climbing down the scaffold end frame, resulting in his death. There were no witnesses to the fall.

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Employees using scaffolds are exposed to a significant risk of harm, as evidenced by these three case studies.

Scaffold-related accidents can be controlled by compliance with OSHA’s Scaffolds Standard (1926.450 - 454). The standard applies to all scaffolds used in the construction, alteration, repair (including painting and decorating), and demolition operations covered under the OSHA construction industry standards (29 CFR Part 1926), but does not apply to crane or derrick suspended platforms. Scaffolding in Construction (29 CFR 1926.451) was Federal OSHA’s 4th most frequently cited standard in FY 2020 (see table on Page 3).

In the Scaffolds Standard there is a distinction between a qualified person and a competent person. A qualified person's role is to design scaffolds, whereas a competent person's role is to take prompt corrective measures when necessary to eliminate scaffold-related hazards. Specifically, a competent person is responsible for:

1. Inspecting scaffolds and scaffold components for visible defects before each work shift, and after any occurrence which could affect a scaffold's structural integrity.

2. Determining the feasibility and safety of providing fall protection for employees erecting or dismantling supported scaffolds.

3. Training those employees who erect, disassemble, move, operate, repair, maintain, or inspect scaffolds to recognize any hazards associated with their work responsibilities.

4. In relation to suspended scaffolds:
   a. Evaluating direct connections to confirm that supporting surfaces are capable of supporting the loads imposed on them.
   b. Inspecting ropes for defects prior to each work shift and after every occurrence which could affect the integrity of the rope.
   c. Determining if two-point or multi-point suspension scaffolds need to be tied or otherwise secured to prevent them from swaying.

In addition, employers are required to provide training for each employee who performs work on a scaffold. Training must be conducted by a person who is qualified in the subject matter to recognize the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize these hazards. Training for employees performing work on scaffolds shall include:

- Nature of any electrical hazards, fall hazards and falling object hazards in their work areas
- Correct procedures for dealing with electrical hazards
- Correct procedures for erecting, maintaining, and disassembling fall protection systems and falling object systems in use
- Proper use of scaffolds
- Correct handling of materials on scaffolds
- Maximum intended load and load-carrying capacities of scaffolds
- Any other pertinent requirements of the Scaffold Standards
- Retraining as specified in 1926.454 (b)(c)

OSHA has an excellent guide for scaffolds, “Scaffold use in the Construction Industry (3150).” The booklet includes a “Questions and Answers” section and a full copy of the standard as well as a comprehensive index and a description of OSHA’s free Consultation Assistance Program.
Top Ten Most Frequently Cited Standards  
Federal OSHA FY 2020

1. Fall Protection in Construction  
   29 CFR 1926.501

2. Hazard Communication in General Industry  
   29 CFR 1910.1200

3. Respiratory Protection in General Industry  
   29 CFR 1910.134

4. Scaffolding in Construction  
   29 CFR 1926.451

5. Ladders in Construction  
   29 CFR 1926.1053

6. Control of Hazardous Energy in General Industry  
   29 CFR 1910.147

7. Powered Industrial Trucks in General Industry  
   29 CFR 1910.178

8. Fall Protection Training Requirements in Construction  
   29 CFR 1926.503

9. Eye and Face Protection in Construction  
   29 CFR 1926.102

10. Machinery and Machine Guarding in General Industry  
    29 CFR 1910.212

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Top Ten Most Frequently Cited Standards
Connecticut OSHA FY 2020

1. Hazard Communication
   29 CFR 1910.1200

2. Portable Fire Extinguishers
   29 CFR 1910.157

3. Personal Protective Equipment
   29 CFR 1910.132

4. Electrical, general
   29 CFR 1910.303

5. Walking-Working Surfaces
   29 CFR 1910.22

6. Electrical, wiring methods
   29 CFR 1910.305

7. Medical Services and First Aid
   29 CFR 1910.151

8. Bloodborne Pathogens
   29 CFR 1910.1030

9. Sanitation
   29 CFR 1910.141

10. Abrasive Wheel Machinery
    29 CFR 1910.215

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<table>
<thead>
<tr>
<th>Training Schedule</th>
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<tr>
<td><strong>Fall Prevention</strong></td>
<td>Falls from heights and on the same level (a working surface) are among the leading causes of serious work-related injuries and deaths. OSHA has issued a final rule on Walking-Working Surfaces and Personal Fall Protection Systems to better protect workers in general industry from these hazards by updating and clarifying standards and adding training and inspection requirements. During this training, we will cover the new rule, and how to recognize and minimize fall hazards. 5/4/21</td>
</tr>
<tr>
<td><strong>Welcome to the Burn, Dealing with Summer Heat</strong></td>
<td>This one-hour session will allow you to understand and prepare for working with summer heat. We will discuss heat and sun injuries and their first aid measures, tools for planning work in the heat and sun, and how to manage and monitor workers during activities in the heat and sun. Instructor: David Brown, Senior Site Safety Manager for Dimeo Construction. 15 years construction experience, 5 years offshore as an oil field safety manager and medic. Retired after 20 years as a US Army Special Forces Medic. Nationally registered as a Paramedic and a AHA First Aid &amp; CPR Instructor. 5/12/21</td>
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<tr>
<td><strong>Powered Industrial Trucks (Fork Trucks)</strong></td>
<td>With more than one million forklifts operating in the U.S. today, safe operations and effective operator training are top priorities. This workshop introduces participants to OSHA’s Powered Industrial Truck standard. This session will help attendees develop an industrial truck training program, and pedestrian safety will also be discussed. 6/1/21</td>
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<tr>
<td><strong>Trenching &amp; Excavations</strong></td>
<td>Studies show that excavation work is one of the most hazardous types of work done in the construction industry. Injuries from excavation work tend to be of a very serious nature and often result in fatalities. The primary concern in excavation-related work is a cave-in. Cave-ins are much more likely to be fatal to the employees involved than other construction-related accidents. This workshop will provide an overview of 29 CFR 1926.650 - 652 Excavations, including the role of the competent person. 6/17/21</td>
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<td><strong>Intro to OSHA</strong></td>
<td>This class helps business owners gain an understanding of OSHA operations and how to prevent workplace injuries. Includes OSHA background, standards, the inspection process, implementing a safety &amp; health program, and available assistance. 7/13/21</td>
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<td><strong>Noise and Hearing Protection</strong></td>
<td>The class will review OSHA standards for occupational noise exposure, including hearing conservation programs; types of noise; and what hearing protection works best in certain situations. 8/3/21</td>
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<td><strong>Safety &amp; Health Programs</strong></td>
<td>Establishing a safety and health program in your workplace is one of the most effective ways of protecting your most valuable asset: your workers. Safety and health programs foster a proactive approach to “finding and fixing” workplace hazards before they can cause injury or illness. Employers who have implemented safety and health programs have also found that managing for safety results in higher-quality product or output and higher profits. 8/10/21</td>
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<td><strong>Breakfast Roundtable</strong></td>
<td>These meetings cover subjects ranging from evacuation plans and fire extinguishers to air quality and ergonomics. The intent of these free 90-minute workshops is to discuss safety and health issues in a supportive and informal environment. The roundtable meetings are held from 8:15 am to 9:45. 3rd Tuesday of the Month</td>
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[Visit this link for more info and to sign up.](#)
Hazard Corner: Does it really matter?

By Catherine Zinsser

They went to work at a construction site or a factory; or perhaps they worked on a farm or a ship. They went to work and fell. It doesn’t really matter if they fell from a ladder or a scaffold, a roof or a floor opening. They died or were injured, and it did not have to happen. Slips, trips and falls are one of the leading causes of occupationally related injuries and deaths every year.

In April 2012, a 37-year-old male laborer fell approximately 13.5 feet from a residential roof to a concrete driveway. He died immediately. The laborer was working with a crew of eight other workers for a construction subcontractor replacing shingles on a roof accessed by a ladder. At the time of the incident, five workers were on the roof, including the laborer who was out of sight of his coworkers working on the garage side of the home. When the incident occurred, the co-workers heard the laborer hit the ground, rushed to his aid, and called 911. Emergency Medical Services were dispatched to the incident and the laborer was pronounced dead at the scene.

Some contributing factors identified during this investigation included the fact that the 25-foot working length of the victims’ fall arrest system lifeline was inappropriate for the 13-foot fall distance, as was the lanyard connection point. The workers’ experience and lack of training were also factors.

To prevent future occurrences employers should:

- Ensure that all employees working at heights are provided with fall prevention training that complies with OSHA standards, in a language and at a literacy level that they can comprehend.
- Ensure that all employees are provided with properly assembled and maintained fall protection systems when exposed to fall hazards.
- Assign a competent person to inspect the worksite before work begins to identify fall hazards, determine the appropriate fall prevention systems for workers, and ensure that personal fall arrest systems (PFAS) are installed properly.

Preventing workplace falls should be an employer’s #1 priority.

Fatality & Casualty Reporting

State & Town:
- Report to CONN-OSHA
- (860) 263-6946
- (866) 241-4060 Toll Free

Private Employers:
- Report to Federal OSHA
- (800) 321-OSHA (6742)