The University of Washington

OSHA

Susan Harwood Training and Educational Material Development Grant FY 2011

Developing Fall Protection Training Materials for Non-English Speaking and Illiterate Construction Workers

Case 5
02/2013

English

CREDITS (alphabetically):

Associated General Contractors of Washington
Computer Aided Engineering Group, Civil Engineering Department, National Taiwan University
Department of Construction Management, University of Washington
Department of Environmental and Occupational Health Sciences, University of Washington

PRODUCTION TEAM:

Project director: Dr. Ken-Yu Lin
Project co-director: Dr. Giovanni Migliaccio
Project assistant: Mr. Rahman Azari
Project assistant: Mr. Cheng-Hao Lee
Project assistant: Mr. Jorge De La Llata H
Project assistant: Mr. Jacob Je-Chian Lin
Project assistant: Mr. Ta-Yu Tseng
Project assistant: Ms. Che-Wen Yang
Project assistant: Mr. Danny Caldera
Subject expert (safety): Mr. Rick Gleason
Subject expert (safety): Mrs. Amanda Kime
Subject expert (3D modeling): Dr. Shih-Chung Kang

CONTACT INFORMATION:

Please contact Dr. Ken-Yu Lin (kenyulin@uw.edu or kenyulin@live.com / 1-206-616-1915) at the Department of Construction Management, University of Washington if you have any questions or comments about the materials.

A. Long description

(Excerpt[1] from FACE website (case 8827))

The victim was a 55-year-old-male dry wall finisher working for a general contracting construction company.

…The company has been in business for approximately 4 years and currently employs 90 employees, including 4 dry wall finishers. The company uses written safety rules and procedures and provides on-the-job training to employees. The construction job site superintendent is responsible for administering the safety program which includes conducting weekly job site safety meetings with all the employees. The victim had almost 4 years' experience as a dry wall finisher. He had never received a reprimand for violating safety rules or procedures.

The construction company had been contracted to build a multilevel brick high school…..On June 23, 1988, two dry wall finishers were putting filler compound over the heads of the screws that secured sheetrock panels to the interior walls. They were working in the same room from separate scaffolds. The scaffolds were mobile metal scaffolds, 17 feet high, 7 feet long, and 5 feet wide, and were equipped with 8-inch rubber tires with locking casters. The victim's work platform was made up of two 2-inch by 10-inch, 7-foot-long wooden boards and one 2-foot-wide by 7-foot-long standard aluminum plank mounted across the top railing of the scaffold. Additionally, the victim placed an 8-foot wooden stepladder on top of the work platform to reach the upper sections of the wall, which was 25 feet high.

Prior to the incident a co-worker told the victim that the casters on the scaffold were not locked. The victim replied, "I want them that way." The victim positioned the stepladder on the scaffold platform and leaned the top of the ladder against the wall. When the victim climbed the ladder, the force exerted at the ladder's foot caused the scaffold to roll. The victim fell headfirst onto a concrete floor 19 feet below…..The victim was transported to a local hospital where he was pronounced dead on arrival.

B. Learning objectives

a. By the time the trainee completes the training, he/she should be able to understand how unsafe working conditions might lead to a scaffold fall fatality similar to case #5. "Each employer -- shall furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees" (OSH Act Section 5(a)(1)).

b. "The employer shall instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to his work environment to control or eliminate any hazards or other exposure to illness or injury" (1926.21(b)(2)). The second goal of the training for this case is to raise the workers' awareness about the causes of the fall incident and the safe way to perform a work task on upper parts of a wall on mobile scaffolds, in order to avoid falling off the scaffold.

[1] Italic text at section a (long description) represents excerpts from FACE website.

C. Lesson plan

The trainee will be shown the figures, which are to be narrated by the trainer, to understand the situation leading to the fall. Also, he or she will be taught the safe methods of task performance to avoid the incident. Worker's rights to (1) having a safe and healthful work environment and (2) filing a complaint free from discrimination are other objectives of this case which should be addressed. It is recommended that copies of the OSHA safety and health complaint form be distributed to the trainees to show the required elements in a valid complaint. The trainer should emphasize that if the worker requests anonymity, the worker's identity would remain anonymous after filling a complaint form.

Finally, the workers' knowledge should be assessed through two major questions which address: a) the cause of the scaffold fall incident presented during the training, and b) the alternative safe actions that could be taken to avoid similar incidents.

D. Assumptions

i. **Activity**: Putting filler compound over the screw heads that secure sheetrock panels to the interior walls.

ii. **Location**: Upper section of a 25-foot-high wall. The worker used a step ladder positioned on top of a scaffold to reach the section. (Scaffold: 17 feet high, 7 feet long, and 5 feet wide, equipped with 8-inch rubber tires with locking casters. Work platform: Two 2-inches by 10-inches by 7-foot-long wooden boards and one 2-foot-wide by 7-foot-long standard aluminum plank mounted across the top railing of the scaffold. Step ladder: 8-foot wooden ladder)

iii. **Work expectation**: Doing a good safe job in reasonable amount of time

iv. **Scenario**: When finishing a drywall, the worker fell off a step ladder positioned on an unlocked rolling scaffold and died.

E. Questions

i. Ask what unsafe action(s) caused the incident.
   Items to be discussed:
   - Scaffold erection - Scaffolds must be designed by a qualified person (1926.451(a)(6)) and constructed under the supervision of a competent person (1926.451.(f)(7)).
   - Training - The employer shall have each employee who performs work while on a scaffold trained by a person 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 those hazards (1926.454(a)).
   - Safety issues when working on high sections of a wall on rolling scaffolds.
   - No ladders on top of scaffolds.

ii. Ask what action(s) can be taken to avoid the incident. (Which is the correct, or safe, way of performing the task? **The answer is C**)
   Items to be discussed:

- Ladder selection/choice – It is apparent that the worker was using the wrong ladder for the task in the case study. The worker was using a stepladder, in the closed position, leaned up against the wall. This is a violation of (1926.1053(a)(8)).
- No ladders on top of scaffolds - The standard lays out some very specific requirements that must be met before a ladder can be used on a scaffold. The instructor must ensure those areas are fully addressed during the "using ladders on scaffolds" discussion period (1926.451(f)(15)).
- Scaffold erection - Scaffolds must be designed by a qualified person (1926.451(a)(6)) and constructed under the supervision of a competent person (1926.451.(f)(7)).
- Training - The employer shall have each employee who performs work while on a scaffold trained by a person 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 those hazards (1926.454(a)).
- No scaffold inspections – Scaffolds and scaffold components shall be inspected for visible defects by a competent person before each work shift, and after any occurrence which could affect a scaffold's structural integrity (1926.451(f)(3)).
- Scaffold with locked casters.
- Higher scaffolds.
- Guardrails for scaffolds.
- Proper access to scaffolds.

iii. Continue to ask what action(s) can be taken to avoid the incident. (Of the following options, which is the correct, or safe, way of performing the task? **The answer is B**)
Items to be discussed:

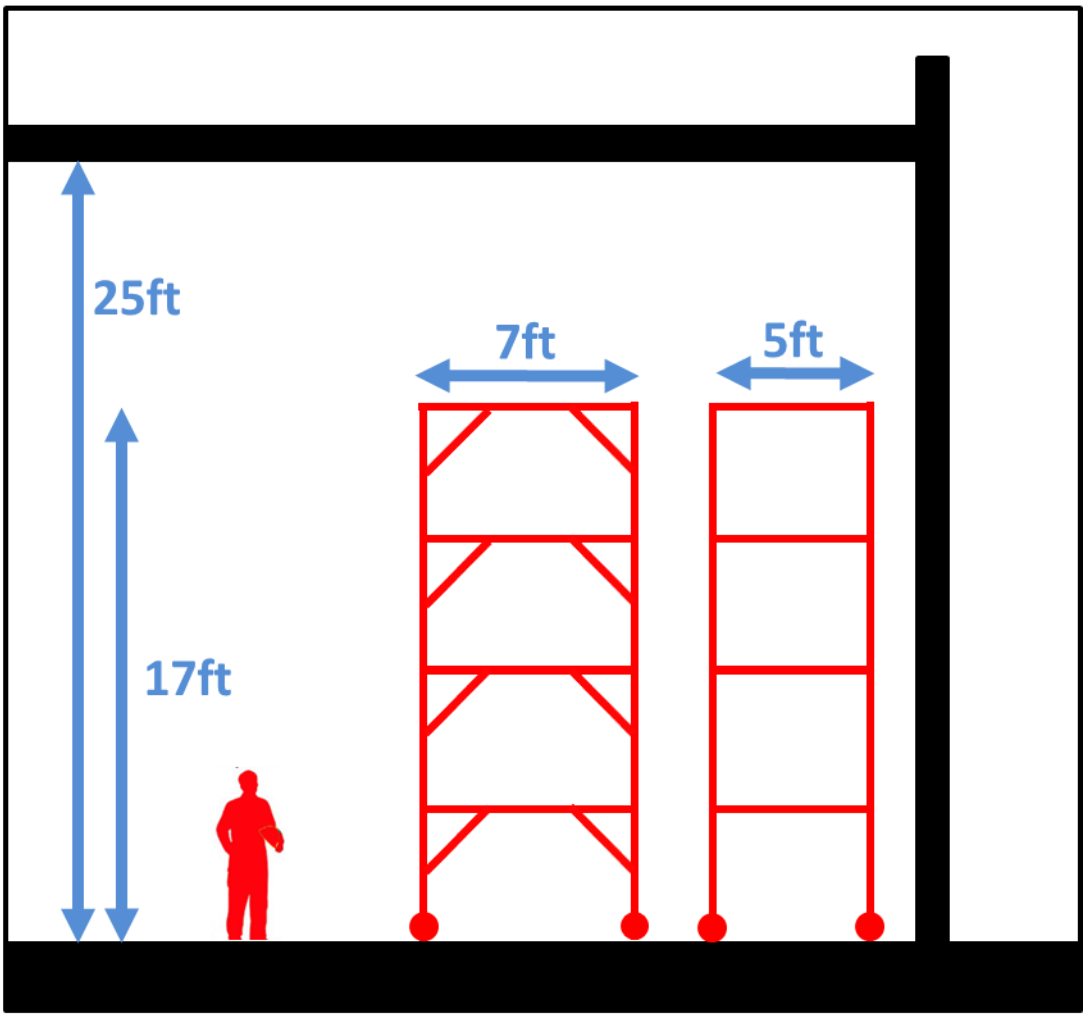
- Ladder selection/choice – It is apparent that the worker was using the wrong ladder for the task in the case study. The worker was using a stepladder, in the closed position, leaned up against the wall. This is a violation of (1926.1053(a)(8)).
- No ladders on top of scaffolds - The standard lays out some very specific requirements that must be met before a ladder can be used on a scaffold. The instructor must ensure those areas are fully addressed during the "using ladders on scaffolds" discussion period (1926.451(f)(15)).

F. Short description

A drywall finisher was assigned a finishing task at the upper part of a wall. To perform the task, he positioned a step ladder on top of the platform of a rolling scaffold and leaned the top of the ladder against the wall. When the victim climbed the ladder, the scaffold rolled as a result of the force applied at the ladder's foot. The victim fell 19 feet and died.

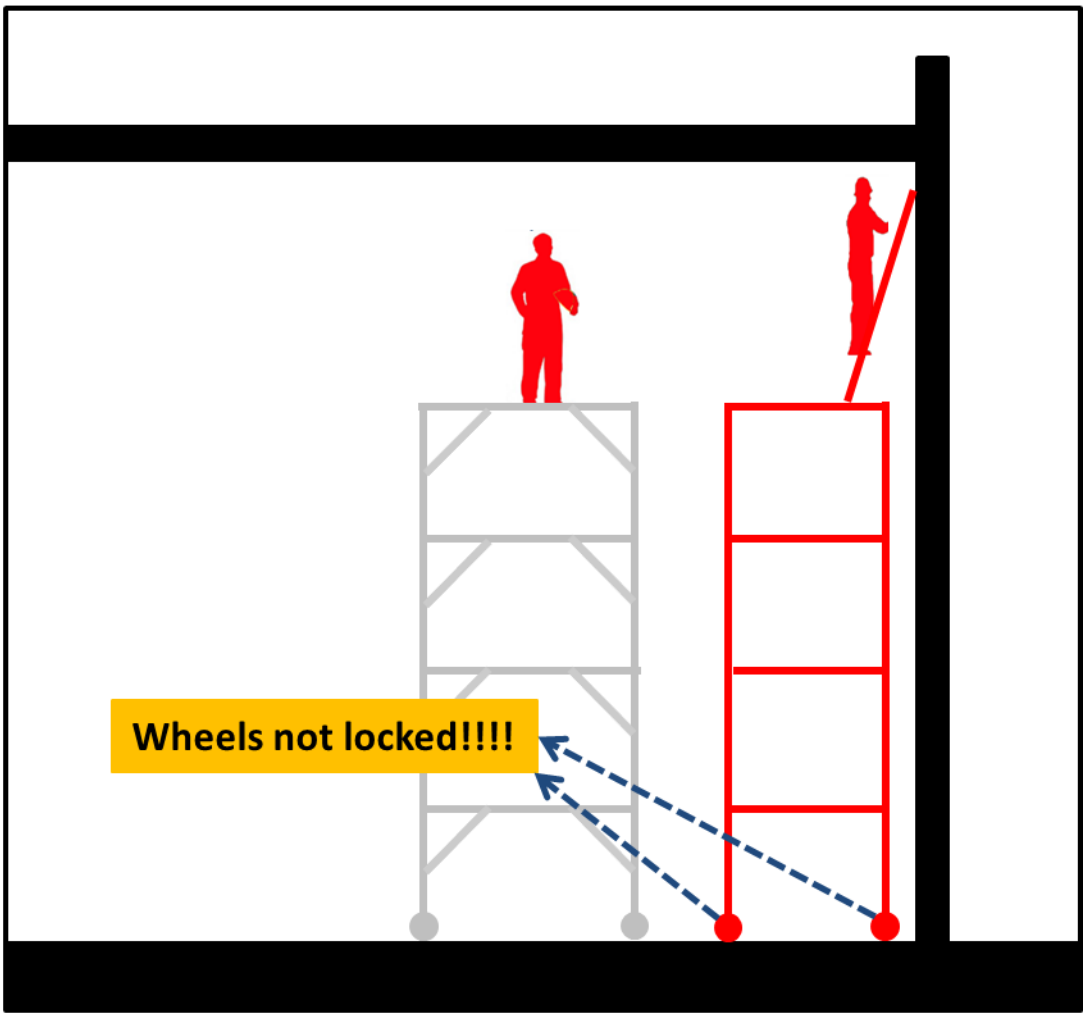
G. Pictorial Prototype

1



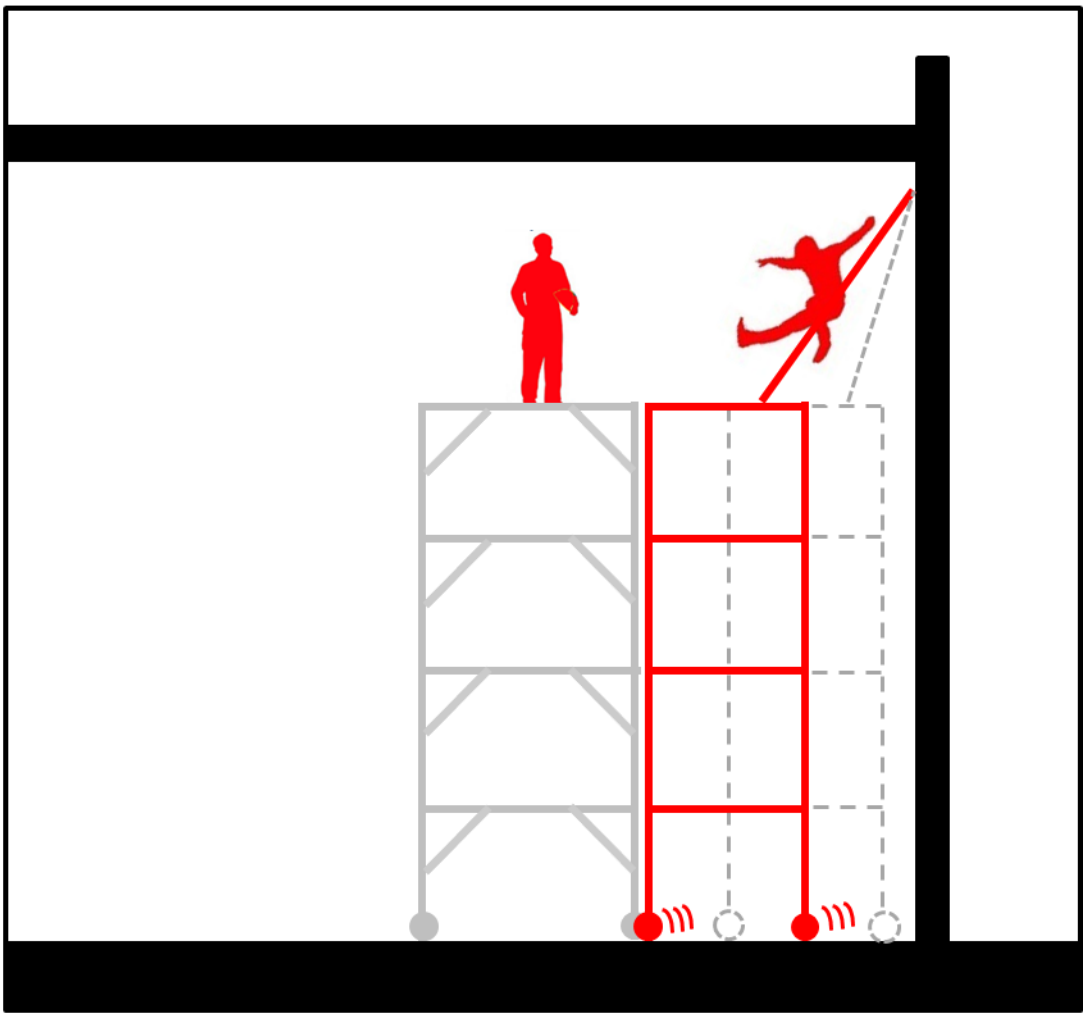
“Fill the heads of screws, at the upper section of the wall, with the filler compound.”

2



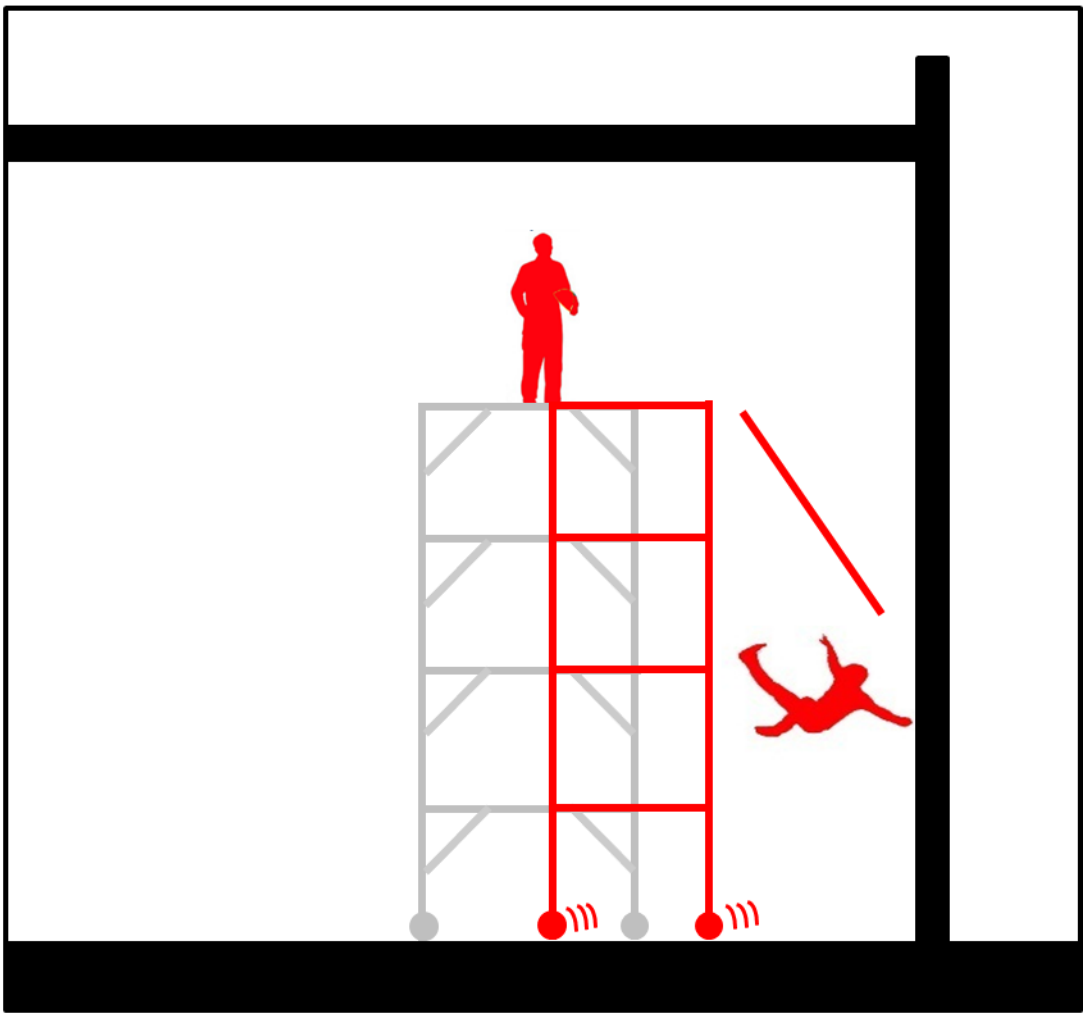
“Let’s get started.”

3



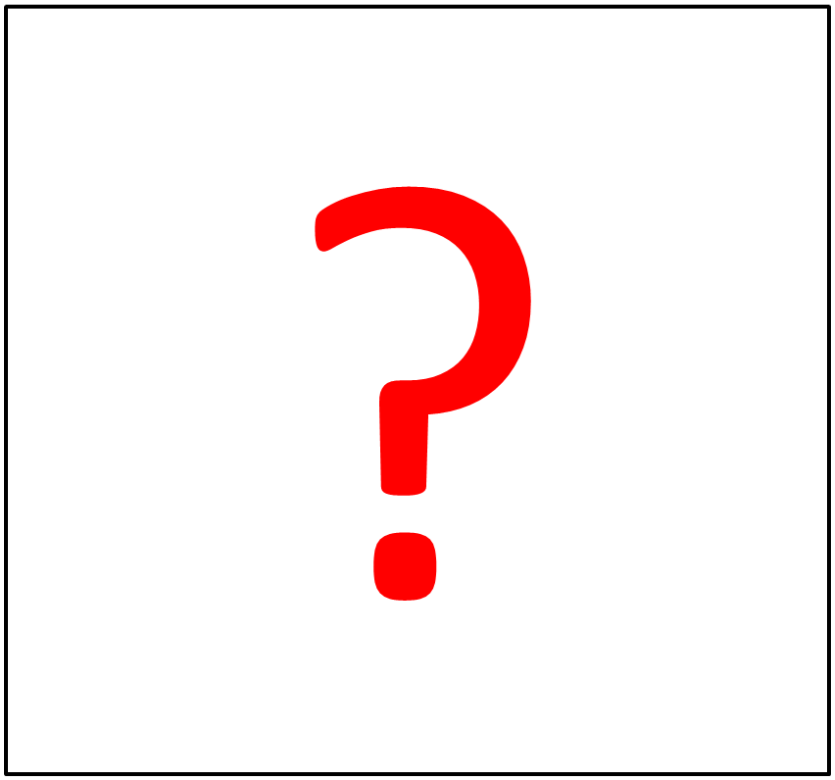
“Oops! The scaffold is rolling.”

4



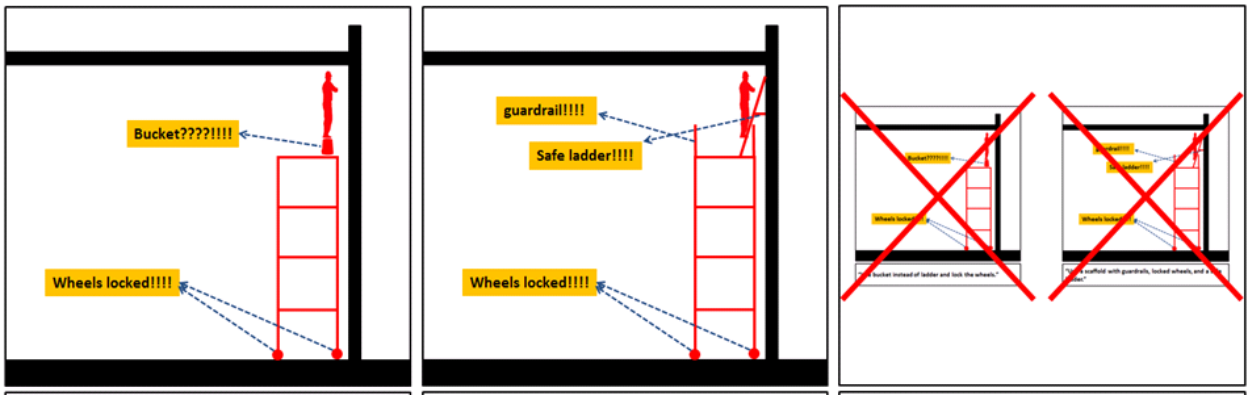
“Helpppppppppppp!”

5



What could I have done differently before my death?

1. Why was the method used to perform the task in this example unsafe?
2. Which is the correct, or safe, way of performing the task?



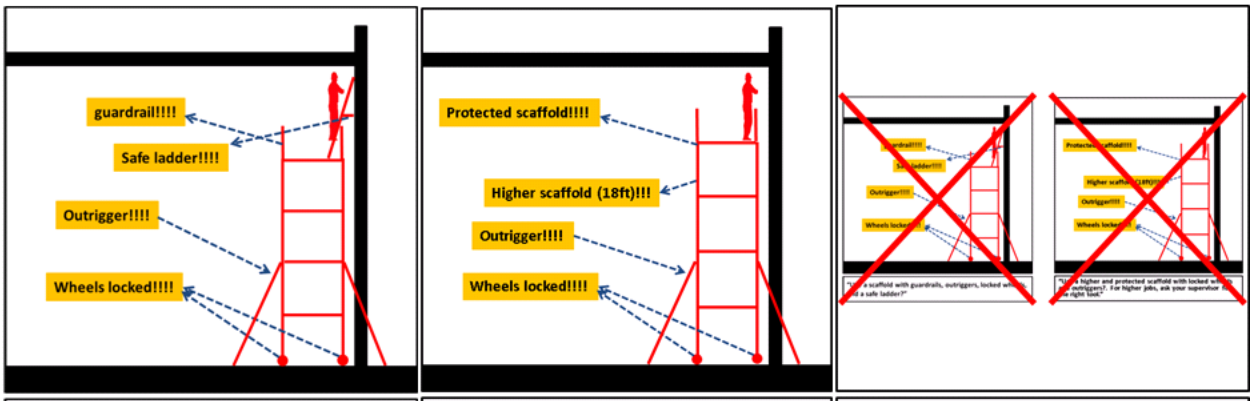
"Use a bucket instead of a ladder and lock the wheels?"

"Use a scaffold with guardrails, locked wheels, and a safe ladder?"

"None of the options (above)?"

A **B** **C**

3. Of the following, which is the correct, or safe, way of performing the task?



"Use a scaffold with guardrails, outriggers, locked wheels, and a safe ladder?"

"Use a higher and protected scaffold with locked wheels and outriggers?. For higher jobs, ask your supervisor for the right tool."

None of the options (above).

A **B** **C**

You have the **RIGHT** to:

1. Ask OSHA to inspect your workplace. (1-800-321-OSHA)
2. Exercise your rights under the law without retaliation and discrimination.
3. Receive information and training about hazards, methods to prevent the harm, and OSHA standards that apply to your workplace. The training must be in a language you can understand.
4. Get copies of test results done to find hazards in your workplace.
5. Review records of work-related injuries and illnesses.
6. Get copies of your medical records.

U. S. Department of Labor
Occupational Safety and Health Administration

Notice of Alleged Safety or Health Hazards

For the General Public:

This form is provided for the assistance of any complainant and is not intended to constitute the exclusive means by which a complaint may be registered with the U.S. Department of Labor.

Sec 8(f)(1) of the Williams-Steiger Occupational Safety and Health Act, 29 U.S.C. 651, provides as follows: Any employees or representative of employees who believe that a violation of a safety or health standard exists that threatens physical harm, or that an imminent danger exists, may request an inspection by giving notice to the Secretary or his authorized representative of such violation or danger. Any such notice shall be reduced to writing, shall set forth with reasonable particularity the grounds for the notice, and shall be signed by the employee or representative of employees, and a copy shall be provided the employer or his agent no later than at the time of inspection, except that, upon request of the person giving such notice, his name and the names of individual employees referred to therein shall not appear in such copy or on any record published, released, or made available pursuant to subsection (g) of this section. If upon receipt of such notification the Secretary determines there are reasonable grounds to believe that such violation or danger exists, he shall make a special inspection in accordance with the provisions of this section as soon as practicable to determine if such violation or danger exists. If the Secretary determines there are no reasonable grounds to believe that a violation or danger exists, he shall notify the employees or representative of the employees in writing of such determination.

NOTE: Section 11(c) of the Act provides explicit protection for employees exercising their rights, including making safety and health complaints.

For Federal Employees:

This report format is provided to assist Federal employees or authorized representatives in registering a report of unsafe or unhealthful working conditions with the U.S.Department of Labor.

The Secretary of Labor may conduct unannounced inspection of agency workplaces when deemed necessary if an agency does not have occupational safety and health committees established in accordance with Subpart F, 29 CFR 1960; or in response to the reports of unsafe or unhealthful working conditions upon request of such agency committees under Sec. 1-3, Executive Order 12196; or in the case of a report of imminent danger when such a committee has not responded to the report as required in Sec. 1-201(h).

INSTRUCTIONS:

Open the form and complete the front page as accurately and completely as possible. Describe each hazard you think exists in as much detail as you can. If the hazards described in your complaint are not all in the same area, please identify where each hazard can be found at the worksite. If there is any particular evidence that supports your suspicion that a hazard exists (for instance, a recent accident or physical symptoms of employees at your site) include the information in your description. If you need more space than is provided on the form, continue on any other sheet of paper.

After you have completed the form, return it to your local OSHA office.

NOTE: It is unlawful to make any false statement, representation or certification in any document filed pursuant to the Occupational Safety and Health Act of 1970. Violations can be punished by a fine of not more than $10,000. or by imprisonment of not more than six months, or by both. (Section 17(g))

Public reporting burden for this voluntary collection of information is estimated to vary from 15 to 25 minutes per response with an average of 17 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An Agency may not conduct or sponsor, and persons are not required to respond to the collection of information unless it displays a valid OMB Control Number. Send comment regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to the Directorate of Enforcement Programs, Department of Labor, Room N-3119, 200 Constitution Ave., NW, Washington, DC; 20210.

OMB Approval# 1218-0064; Expires: 05-31-2014

Do not send the completed form to this Office.

OSHA-7(Rev. 9/93)

U. S. Department of Labor
Occupational Safety and Health Administration

Notice of Alleged Safety or Health Hazards

			Complaint Number	
Establishment Name				
Site Address				
	Site Phone		Site FAX	
Mailing Address				
	Mail Phone		Mail FAX	
Management Official			Telephone	
Type of Business				

HAZARD DESCRIPTION/LOCATION. Describe briefly the hazard(s) which you believe exist. Include the approximate number of employees exposed to or threatened by each hazard. Specify the particular building or worksite where the alleged violation exists.

Has this condition been brought to the attention of:	☐ Employer ☐ Other Government Agency(specify)
Please Indicate Your Desire:	☐ Do NOT reveal my name to my Employer ☐ My name may be revealed to the Employer
The Undersigned believes that a violation of an Occupational Safety or Health standard exists which is a job safety or health hazard at the establishment named on this form.	(Mark "X" in ONE box) ☐ Employee ☐ Federal Safety and Health Committee ☐ Representative of Employees ☐ Other (specify) _____

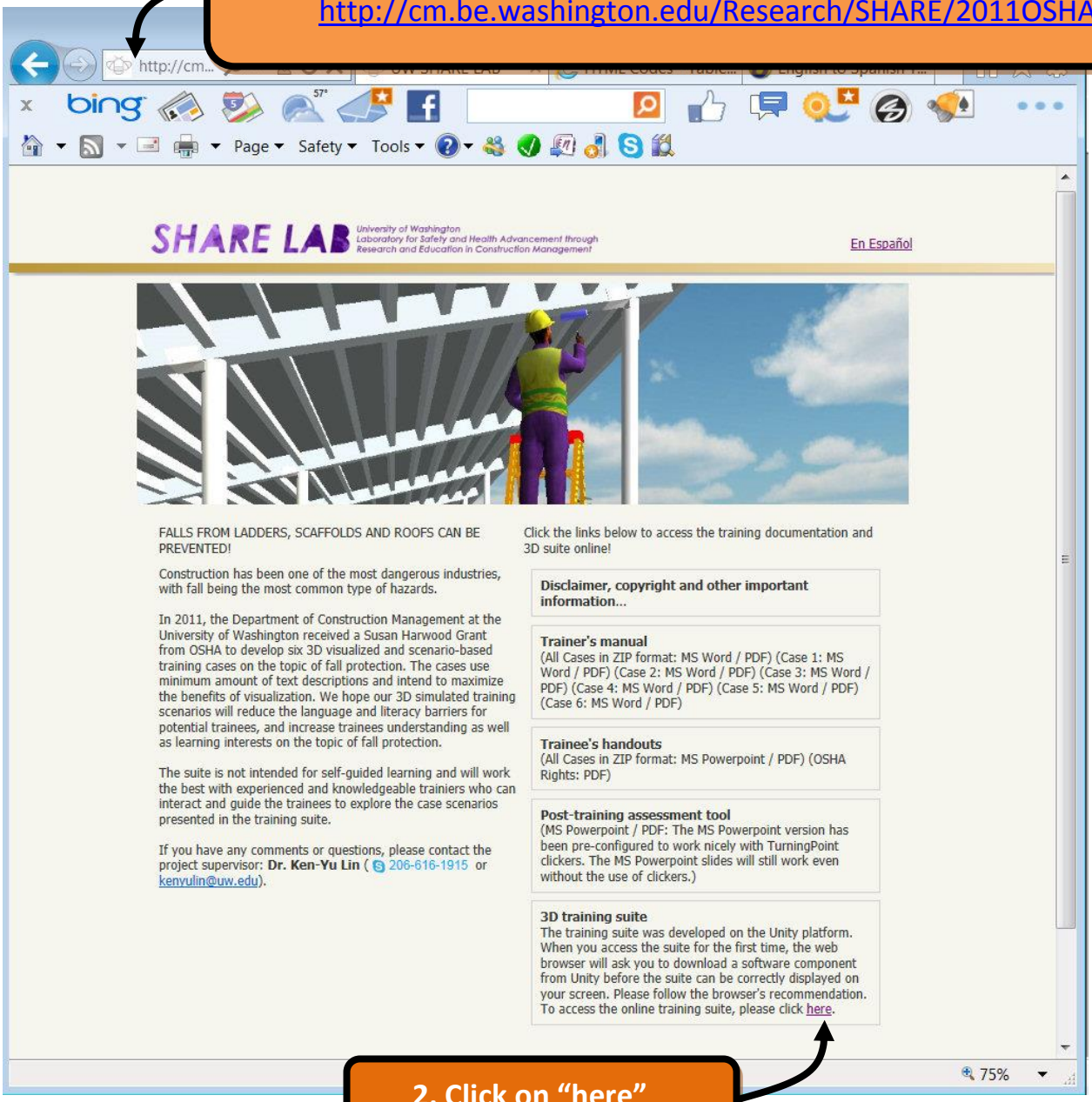
Complainant Name		Telephone	
Address(Street,City,State,Zip)			
Signature		Date	

If you are an authorized representative of employees affected by this complaint, please state the name of the organization that you represent and your title:

Organization Name: Your Title:

1. Click on the link below or copy/paste it onto your browser:

http://cm.be.washington.edu/Research/SHARE/2011OSHA/



2. Click on “here”


Unity Web Player | WebPlayer
FALLS FROM LADDERS, SCAFFOLDS AND ROOFS CAN BE PREVENTED!
Fall Protection Safety Training Suite
Department of Construction Management, University of Washington
English Español
About
3. Make sure that “English” is selected (in bold)
4. Click on “Case 5”