



**Portland Community College
Health & Safety Manual**

Dept: **Environmental Health and Safety (EH&S)**

Function: **Facilities Management Services**

Topic: **Chapter 26 — Scaffold Safety Plan**

Board Policy:
B507

Revision Date:
August 2022

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| Authority | PCC Board Policy—B507 |
| | Portland Community College is committed to providing a safe and healthy work and educational environment for its employees, students and visitors. |

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| Summary | These procedures incorporate OR OSHA’s requirements into PCC’s operations involving the use of scaffolding. These procedures will protect employee health and contribute to PCC’s safety program by reducing hazards associated with scaffold use. |
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I. PURPOSE

Portland Community College (PCC or the College) is committed to reducing the risk of injuries and fatalities associated with unsafe use of scaffolding.

Employees who do not follow the procedures in this program bring increased risk of serious injury to themselves, co-workers or others.

A violation of scaffold safety rules and procedures is grounds for disciplinary action.

II. AUTHORITY

- PCC Board Policy B507
- Oregon OSHA Division 3 Subpart L, Scaffolding

III. RESPONSIBILITY

A. **Supervisors/Managers/Deans** are responsible for:

- Ensuring scaffolds are used safely by their staff by ensuring compliance with the health and safety policies and procedures of this chapter.
- Ensuring their employees are trained for their roles.
- Identifying the Competent Person(s) for their department/crew(s) and ensuring that the Competent Person(s) are trained.
- Ensuring that supplemental fall protection is provided as required below and that employees are properly trained in the use of the equipment.

B. **Competent Persons** are responsible for:

- Performing inspections required for scaffold use.
- Identifying any existing or potential hazards associated with scaffold use and ensuring those hazards are controlled.
- Determining if the use of fall protection is feasible during the erection and dismantling of scaffolds. Where such use is feasible, they will require its use during scaffold erection and dismantling.
- Ensuring fall protection, including falling object protection is installed and maintained as required.
- Identifying the necessary personal fall protection equipment required for scaffold users working in fall hazard situations if engineering controls and administrative procedures are not an option or should be supplemented.
- Determining feasible safe access for persons erecting and dismantling scaffolds.
- Ensuring proper access is provided for personnel who will work on/from the scaffold.
- Ensuring the scaffold is erected per the design and/or manufacturer's recommendations.
- Ensuring additional safeguards are in place (e.g. guying, tying, bracing, etc.) when wind would affect partly-enclosed or enclosed scaffolds.

- Determining whether it is safe to work on scaffolds during storms or high winds (e.g., wind, snow and ice, electrical storms, etc.).
- Ensuring hazards associated with electrical exposures, including welding operations, power lines and other electrical equipment, must be accounted for and where present, controlled or eliminated.
- Training scaffold erectors and dismantlers.

C. **Scaffold Erectors and Dismantlers** are responsible for:

- Erecting and dismantling scaffolds in a safe manner as directed by the Competent Person.
- Using fall protection during scaffold erection and dismantling when its use has been identified as feasible by the Competent Person.

D. **Affected Employees** are responsible for:

- Completing all scaffold safety training assigned by their supervisor.
- Following the procedures in this program.
- Only erecting or dismantling scaffolds for which they have been trained as an erector or dismantler and will only engage in such work under the supervision of a Competent Person.
- Only working on/from scaffolds for which they have received scaffold user training applicable to the type of scaffold they will use.
- Only working from scaffolds when the scaffold has been inspected and approved for use by a competent person.
- Only modifying a scaffold if they have been trained to do so and such work will only be performed when supervised by a competent person.

E. **Environmental Health & Safety (EH&S)** is responsible for:

- Developing procedures to help ensure compliance with all applicable federal and state regulations and align with industry best practices.
- Reviewing and updating this Plan.
- Providing technical guidance and assistance in training and methods of compliance.
- Facilitating district-wide training on the contents of this Plan.

IV. PROCEDURES

A. **Types of Scaffolds** - PCC has two types of scaffolds: frame scaffolds and mobile scaffolds. Both types are supported scaffolds. PCC does not use suspended scaffolds.

1. Frame scaffold: there are various types of frame scaffold. Frame scaffolds are characterized by tubular metal frame. The frame is braced in a variety of ways and can be planked with rated scaffold lumber or prefabricated scaffolds planks/decks.

2. Mobile scaffolds are frame scaffolds equipped with wheels, making it possible to easily move them without having to disassemble the scaffold.

B. Scaffold Work Plan (SWP)

1. A written work must be completed whenever scaffolding will be used (see *Form 1: Scaffold Work Plan*). The SWP must be completed by the Competent Person, who may also be the supervisor. The PCC SWP is available on the PCC EH&S website or can be requested from the EH&S Office.
2. The completed SWP must be posted at the job site.

C. Inspections

1. The area where the scaffold will be erected and used must be inspected to ensure safe conditions for scaffold use.
2. Scaffold components must be inspected for damage or deterioration prior to scaffold erection. Components that are not in satisfactory condition will not be used.
3. Completed scaffold must be inspected prior to workers being allowed to use the scaffold. Inspections must be completed by the Competent Person at the start of each shift or if the scaffold is altered. The scaffold must also be inspected by the Competent Person after any event that might affect the safety of the scaffold (e.g., weather, scaffold struck by equipment, etc.).
4. Hazardous conditions on scaffolds shall be corrected or repaired before use of the scaffold is permitted.
5. Inspections must be documented and a copy kept with the completed scaffold work plan. This documentation can be done with a form, scaffold tag, etc. as determined by the Competent Person.

D. Scaffold Platforms

1. Scaffold platforms (except walkways and platforms used by erectors and dismantlers) must be fully decked or planked between the front uprights and the guardrail supports.
2. Place platforms so that the spaces between them do not exceed 1 inch unless more space is necessary (for fitting around uprights with side brackets to extend platform width, for example).
3. The remaining space between the last plank and guardrail can't exceed 9½ inches (the space required to install an additional plank).

4. Platforms and walkways must be at least 18 inches wide. If work areas are too narrow for 18-inch platforms or walkways, one can use narrower platforms. If narrower platforms are used, guardrails or personal fall-arrest systems must be provided to protect workers from fall exposures.
5. The front edge of the scaffold platform can't be more than 14 inches from the face of a structure unless guardrails or personal fall-arrest systems are used to keep workers from falling between the structure and the platform. There is one exception to this requirement: Scaffolds used for plastering and lathing cannot be more than 18 inches from the face of a structure.
6. Platforms up to 10 feet long must extend at least six inches – but no more than 12 inches – beyond their supports unless the extra length is guarded or can support workers and material without tipping.
7. Platforms longer than 10 feet must extend no more than 18 inches beyond a support unless the extra length is guarded or can support workers and material without tipping.
8. When planks are placed end-to-end to make a long platform, each abutted end must rest on a separate support. Abutted planks must touch end to end on separate supports; they can't rest on one another.
9. When planks overlap to make a long platform, they must overlap at least 12 inches over the supports unless they are nailed together or restrained so they won't move.
10. When a platform changes direction (turns a corner, for example) any platform that rests on a bearer at an angle other than a right angle must be laid first. Platforms that rest at right angles over the same bearer must be laid second, on top of the first platform.
11. Wood platforms will not be painted with opaque finishes – opaque finishes can hide defects. Preservatives or slip-resistant and fire-retardant finishes are acceptable if the finish doesn't cover structural defects or make them hard to see.
12. A platform cannot deflect more than 1/60th of its span when loaded.
13. Items like ladders, buckets, or boxes cannot be used to increase the working height on scaffold platforms. Use ladders only on large-area scaffolds.

E. Access

1. Workers must have safe access to scaffolds and scaffold platforms. Ladders or stairways can be used to reach platforms that are more than two feet above or below the access point.
2. Cross braces cannot be used for access.
3. Other examples of safe access include integral prefabricated scaffold access frames, direct access from another scaffold, personnel hoists, ramps, or walkways.

4. Ramps and walkways six feet or more above lower levels must have guardrails. Cleats – not more than 14 inches apart – must be installed if the slope is steeper than seven degrees above horizontal (one vertical to eight horizontal). Ramps or walkways cannot be used for access if more than 20 degrees above horizontal (one vertical to three horizontal).
5. Hook-on, attachable ladders and stairway-type ladders.
 - a. The bottom step or rung of hook-on ladders, attachable ladders, and stairway-type ladders must be no more than 24 inches above or below the scaffold supporting level.
 - b. Rest platforms. Hook-on and attachable ladders on supported scaffolds more than 35 feet high must have rest platforms at 35-foot intervals. Stairway-type ladders must have rest platforms every 12 feet.
 - c. Hook-on and attachable ladders must be specifically designed for use with the type of scaffold used.
6. Integral prefabricated scaffold access frames requirements:
 - a. Designed and constructed for use as ladder rungs
 - b. Have rungs that are at least eight inches long
 - c. Not be used as work platforms when rungs are less than 11½ inches long unless workers use a fall protection or a positioning device system that meets fall protection requirements.
 - d. Have rest platforms every 35 feet on supported scaffolds more than 35 feet high
 - e. Be uniformly spaced within each frame section
 - f. Have a maximum spacing between rungs of 16¾ inches. Non-uniform rung spacing is allowed if the spacing does not exceed 16¾ inches.

F. **Stability** - Scaffolds must be erected so that stability is maintained.

1. Scaffolds must have a firm foundation. Poles, legs, posts, frames, and uprights must bear on base plates and mud sills or another firm foundation. Footings must offer full support without settling (e.g., dirt, sand, gravel, and warm asphalt are foundations that can allow settling or displacement).
 - a. A concrete slab is considered a firm foundation.
 - b. The scaffold must be plumb and braced so that it does not sway.
 - c. Supported scaffolds with a height to base-width ratio greater than 4-to-1 (including outrigger supports) must be prevented from tipping. Use ties, guys, braces, or another means that provides at least the same degree of safety.
 - d. Install guys, ties, or braces where the horizontal members support both the inner and outer legs. They must be installed according to the manufacturer's instructions (or at the closest horizontal member to the 4-to-1 height) and be repeated vertically at least every 20 feet if the scaffold is up to three feet wide, every 26 feet if the scaffold is more than three feet wide.

G. Load Capacities

1. Scaffolds are rated as light, medium, or heavy duty. They are also rated for the number of workers.
2. All personnel will ensure scaffolds are loaded beyond the manufacturer's or designer's limits.
3. Supported scaffolds and components must be able to support their own weight and at least four times the maximum intended load applied to them.
4. The maximum intended load includes workers, equipment, and supplies. Follow all manufacturer specifications.

H. Fall Protection and Falling Object Protection

1. Fall protection must be provided when fall exposure from a supported scaffold to a lower level exceeds 10 feet. Fall protection must be provided regardless of height when there is a potential to fall from a supported scaffold into or onto dangerous objects or equipment and when scaffold work platforms cannot be at least 18 inches wide. Fall protection must also be provided if a scaffold is not fully planked. Fall protection should be in the form of a guardrail system. If a guardrail system is not feasible, alternatives such as the use of a personal fall arrest system (PFAS) or other means may be required. Fall protection training including the use of a PFAS or other methods must be provided if their use is required. Fall protection for erectors and dismantlers is required unless the competent person has determined fall protection is unfeasible. Employees on a walkway located within a scaffold shall be protected by a guardrail system.
2. Falling object protection must be provided.
 - a. Toe boards must be installed to prevent materials, tools, etc. from rolling or falling from the scaffold. In some instances, nets, screens, etc. may be required. A typical example is when materials are stacked above the height of the toe board. Screens, etc. increase the effect of wind on scaffold stability.
 - b. Barricades may also be required. Barricades are required when needed to protect scaffold work activities or to keep personnel and property clear of areas adjacent to the work to provide protection from potential falling objects. Examples include vehicle and pedestrian traffic and the potential for dropped tools and materials.

V. TRAINING

- A. The College holds safety in all operations and activities to be of high importance. Accordingly, employee will be trained in the safe performance of their jobs.
- B. Safety training will be directed at developing each employee's knowledge, skill and understanding to enable them to work safely. Training will be provided through various means with primary instruction given by the immediate supervisor/manager or Environmental Health & Safety.
- C. Each employee who will work on scaffolds must receive training including the following topics:
 1. The nature of any electrical hazards, fall hazards and falling object hazards in the work area.

2. The correct procedures for dealing with electrical hazards and for erecting, maintaining, and disassembling the fall protection systems and falling object protection systems being used.
3. The proper use of the scaffold, and the proper handling of materials on the scaffold.
4. The maximum intended load and the load-carrying capacities of the scaffolds used.
5. Any employee involved in erecting, disassembling, moving, operating, repairing, maintaining, or inspecting a scaffold will receive training including the following topics:
 - a. The nature of scaffold hazards.
 - b. The correct procedures for erecting, disassembling, moving, operating, repairing, inspecting, and maintaining the type of scaffold in question.
 - c. The design criteria, maximum intended load-carrying capacity and intended use of the scaffold.
6. Additional training requirements are included when the employer has reason to believe that an employee lacks the skill or understanding needed for safe work involving the erection, use or dismantling of scaffolds, the employer shall retrain each such employee so that the requisite proficiency is regained. Retraining is required in at least the following situations:
 - a. Where changes at the worksite present a hazard about which an employee has not been previously trained; or
 - b. Where changes in the types of scaffolds, fall protection, falling object protection, or other equipment present a hazard about which an employee has not been previously trained; or
 - c. Where inadequacies in an affected employee's work involving scaffolds indicate that the employee has not retained the requisite proficiency.

VI. RECORD KEEPING

- A. Scan and attach to the Work Order, retain copies of the completed form in the departmental file. Please note, that the completed form is subject to review by personnel from the Oregon Occupational Safety and Health Administration (OR OSHA) and EH&S.