

MANUAL: Facilities Services
TITLE: Scaffolding
RESP: Assoc. Vice Chancellor – Facilities Services
REV. BY: Director Support Services – Facilities Services

POLICY NO:
PROC. NO: 9.17
ORIG. DATE: 02/24/2021
EFF. DATE: 02/24/2021

SCAFFOLDING

Purpose

To establish guidelines for the protection of San Jacinto College District employees who work on scaffold work surfaces to prevent injuries due to falls from elevated work areas and ensure employees and contractors are able to inspect scaffolding materials and erected scaffolds.

Scope

This program is applicable at every work area where scaffolding is erected. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers San Jacinto College District employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Definitions

- Bearer - A horizontal member of a scaffold upon which the platform rests and which may be supported by ledgers.
- Brace - A tie that holds one scaffold member in a fixed position with respect to another member.
- Coupler - A device for locking together the components of a tubular metal scaffold which shall be designed and used to safely support the maximum intended loads.
- Double pole or independent pole scaffold - A scaffold supported from the base by a double row of uprights, independent of support from the walls and constructed of uprights, ledgers, horizontal platform bearers, and diagonal bracing.
- Guardrail - A rail secured to uprights and erected along the exposed sides and ends of platforms.
- Heavy Duty Scaffold - A scaffold designed and constructed to carry a working load not to exceed 75 pounds per square foot.
- Ledger (stringer) - A horizontal scaffold member which extends from post to post and which supports the putlogs or bearer forming a tie between the posts.

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- Light Duty Scaffold - A scaffold designed and constructed to carry a working load not to exceed 25 pounds per square foot.

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- Manually Propelled Mobile Scaffold - Manually propelled mobile scaffold.
- Maximum intended load - The total of all loads including the working load, the weight of the scaffold, and such other loads as may be reasonably anticipated.
- Medium duty scaffold - A scaffold designed and constructed to carry a working load not to exceed 50 pounds per square foot.
- Mid-Rail - A rail approximately midway between the guardrail and platform, used when required, and secured to the uprights erected along the exposed sides and ends of platforms.
- Putlog - A scaffold member upon which the platform rests.
- Runner - The lengthwise horizontal bracing or bearing members or both.
- Scaffold - Any temporary elevated platform and its supporting structure used for supporting workmen or materials or both.
- Toe board - A barrier secured along the sides and ends of a platform, to guard against the falling of material.
- Tube and coupler scaffold - An assembly consisting of tubing, which serves as posts, bearers, braces, ties, and runners, a base supporting the posts, and special couplers which serve to connect the uprights and to join the various members.
- Tubular welded frame scaffold - A sectional, panel, or frame metal scaffold substantially built up of prefabricated welded sections that consist of posts and horizontal bearer with intermediate members. Panels or frames shall be braced with diagonal or cross braces.
- Working Load - Load imposed by people, materials, and equipment.

Responsibilities

SJCD Safety Manager

The SJCD Safety Manager will identify the employees affected by this safety policy and

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procedure. The Safety Manager will obtain and coordinate the required training for the affected employees and ensure compliance with this safety policy and procedure through their auditing process.

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Supervisors

Supervisors will not allow any employee who has not received the required training to perform any of the tasks or activities related to scaffold erection and/or dismantling. Supervisors will communicate appropriate needs to managers/unit heads and/or supervisors. Supervisors will ensure that employees are provided with PPE as necessary for their job. Supervisors will ensure that a competent person is in charge of scaffold erection according to the manufacturer's specifications.

Competent Person

The competent person will oversee the scaffold selection, erection, use, movement, alteration, dismantling, maintenance, and inspection. The competent person will be knowledgeable about proper selection, care, and use of the fall protection equipment. Additionally, the competent person shall assess hazards.

Employees

Employees shall comply with all applicable guidelines contained in this safety policy and procedure. Employees will report damaged scaffolds, accessories, and missing or lost components. Employees will assist with inspections as requested.

Procedure

General Requirements

1. The footing or anchorage for scaffolds shall be sound, rigid, and capable of carrying the maximum intended load without settling or displacement. Unstable objects such as barrels, boxes, loose brick, or concrete blocks shall not be used to support scaffolds or planks.
2. No scaffold shall be erected, moved, dismantled, or altered except under the supervision of competent persons or as requested for corrective reasons by Safety Personnel
3. Guardrails and toe boards shall be installed on all open sides and ends of platforms more than 10 feet above the ground or floor, except needle beam scaffolds and floats. Scaffolds 4 feet to 10 feet in height having a minimum horizontal dimension in either direction of less than 45 inches shall have standard guardrails installed on all open sides and ends of the platform.
4. Guardrails must be 2 X 4 inches, or the equivalent, not less than 36 inches or more than approximately 42 inches high, with a mid-rail, when required, of 1 X 4 inch lumber, or the equivalent. Supports must be at intervals not to exceed 8 feet. Toe board and the

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- guardrail shall extend along the entire opening.
5. Scaffolds and their components must be capable of supporting without failure at least 4 times the maximum intended load.

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6. Any scaffold, including accessories such as braces, brackets, trusses, screw legs, ladders, couplers, etc., damaged or weakened from any cause must be repaired or replaced immediately, and shall not be used until repairs have been completed.
7. All load-carrying timber members of scaffold framing shall be a minimum of 1,500 fiber (Stress Grade) construction grade lumber.
8. All planking must be Scaffold Grades, or equivalent, as recognized by approved grading rules for the species of wood used. The maximum permissible span for 2 X 9 inch or wider planks is shown in the following:
9. The maximum permissible span for 1-1/4 X 9 inch or wider plank of full thickness shall be 4 feet with medium duty loading of 50 p.s.i.
10. All planking or platforms must be overlapped (minimum 12 inches) or secured from movement. An access ladder or equivalent safe access must be provided.
11. Scaffold plank must extend over their end supports not less than 6 inches or more than 18 inches.
12. The poles, legs, or uprights of scaffolds must be plumb and securely and rigidly braced to prevent swaying and displacement.
13. Overhead protection must be provided for men on a scaffold exposed to overhead hazards.
14. Slippery conditions on scaffolds shall be eliminated immediately after they occur.
15. No welding, burning, riveting, or open flame work shall be performed on any staging suspended by means or fiber of synthetic rope. Only treated or protected fiber or synthetic ropes shall be used for or near any work involving the use of corrosive substances or chemicals.
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18. Overhead protection must be provided for men on a scaffold exposed to overhead hazards
19. Slippery conditions on scaffolds shall be eliminated immediately after they occur.
20. No welding, burning, riveting, or open flame work shall be performed on any staging suspended by means or fiber of synthetic rope. Only treated or protected fiber or synthetic ropes shall be used for or near any work involving the use of corrosive substances or chemicals.
21. Wire, synthetic, or fiber rope used for scaffold suspension shall be capable of supporting at least 6 times the intended load.
22. Scaffolds shall be provided with a screen between the toe board and guardrail, extending

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along the entire opening, consisting of No. 18 gauge U.S. Standard wire one-half inch mesh or the equivalent, when personnel are required to work or pass underneath the scaffolds.

- 23. A safe distance from energized power lines shall be maintained.
- 24. Tag lines shall be used to hoist materials to prevent contact.

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25. Suspension ropes shall be protected from contact with heat sources (welding, cutting, etc.) and from acids or other corrosive substances.
26. Scaffolds shall not be used during high wind and storms.
27. Ladders and other devices shall not be used to increase working heights on scaffold platforms.
28. Scaffolds shall not be moved while employees are on them.
29. Loose materials, debris, and/or tools shall not be accumulated to cause a hazard.
30. Employees working on suspended scaffolds shall employ a fall-arrest system.
31. Scaffold components shall not be mixed or forced to fit which may reduce design strength.
32. Scaffolds and components shall be inspected at the erection location. Scaffolds shall be inspected before each work shift, after changing weather conditions, or after prolonged work interruptions.
33. Casters and wheel stems shall be pinned or otherwise secured in scaffold legs. Casters and wheels must be positively locked if in a stationary position.
34. Tube and coupler scaffolds shall be tied to and securely braced against the building at intervals not to exceed 30 feet horizontally and 26 feet vertically.

Mandatory Signs and Tags

Signs and tags shall be visible at all times when work is being performed, and shall be removed or covered promptly when the hazards no longer exist.

Defective or unsafe equipment or conditions shall be tagged out by the competent person using a weather resistant tag secured to the scaffolding structure on all four sides and must be complied with. An example would be improper footing conditions were observed.

Danger signs shall be used only where an immediate hazard exists. Danger signs must be posted around the immediate area of the scaffold, to alert other workers of possible danger from falling objects from the scaffold.

Caution Signs and/or barricade tape shall be used to mark off a larger area around scaffolding warning other workers to use caution.

Modifications

Modification and repairs shall be performed by a qualified person, who is competent to certify the scaffolding safe to use to ensure non-qualified personnel do not create additional hazards. Employees shall not perform any modifications or repairs, unless they have been trained and certified, and failure to comply may result in disciplinary action and or termination.

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Training Requirements

San Jacinto College District is required to train all employees that work on scaffolds regarding hazards by "qualified" persons. The supervisor 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. The training shall occur before use and include the following areas:

- Basic safety information.
- Hazards including fall protection, electrical safety, falling object protection.
- Tags – types and the requirement to comply with.
- The proper use of the scaffold, and the proper handling of materials on the scaffold.
- 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.
- The maximum intended load capacity of the scaffolds used.

The supervisor shall have each employee who is involved in erecting, disassembling, moving, operating, repairing, maintaining, or inspecting a scaffold trained by a competent person to recognize any hazards associated with the work in question.

- The training shall include the following topics, as applicable:
- The nature of scaffold hazards.
- The correct procedures for erecting, disassembling, moving, operating, repairing, inspecting, and maintaining the type of scaffold in use.
- The design criteria, maximum intended load-carrying capacity and intended use of the scaffold.

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 employee so that the requisite proficiency is regained. Retraining is also required in at least the following situations:

- Where changes in scaffolding at the worksite present a hazard about which an employee has not been previously trained.
- 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.
- Where inadequacies in an affected employee's work involving scaffolds indicate that the employee has not retained the requisite proficiency.

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Tube And Coupler Scaffolds - Light Duty

Uniformly distributed load		Not to exceed 25 psf
Post Spacing (longitudinal)		10 ft. 0 in.
Post Spacing (transverse)		6 ft. 0 in.
Working Levels	Additional Planked Levels	Maximum Height
1	8	125 ft.
2	4	125 ft.
3	0	91 ft. 0 in.

Tube And Coupler Scaffolds - Medium Duty

Uniformly distributed load		Not to exceed 50 psf
Post spacing (longitudinal)		8 ft. 0 in.
Post spacing (transverse)		6 ft. 0 in.
Working Levels	Additional Planked Levels	Maximum Height
1	6	125 ft.
2	0	78 ft. 0 in.