

29 C.F.R. § 1926.452

Additional requirements applicable to specific types of scaffolds.

In addition to the applicable requirements of § 1926.451, the following requirements apply to the specific types of scaffolds indicated. Scaffolds not specifically addressed by § 1926.452, such as but not limited to systems scaffolds, must meet the requirements of § 1926.451.

- (a) *Pole scaffolds.* (1) When platforms are being moved to the next level, the existing platform shall be left undisturbed until the new bearers have been set in place and braced, prior to receiving the new platforms.
- (2) Crossbracing shall be installed between the inner and outer sets of poles on double pole scaffolds.
- (3) Diagonal bracing in both directions shall be installed across the entire inside face of double-pole scaffolds used to support loads equivalent to a uniformly distributed load of 50 pounds (22.7 kg) or more per square foot (929 square cm).
- (4) Diagonal bracing in both directions shall be installed across the entire outside face of all double- and single-pole scaffolds.
- (5) Runners and bearers shall be installed on edge.
- (6) Bearers shall extend a minimum of 3 inches (7.6 cm) over the outside edges of runners.
- (7) Runners shall extend over a minimum of two poles, and shall be supported by bearing blocks securely attached to the poles.
- (8) Braces, bearers, and runners shall not be spliced between poles.
- (9) Where wooden poles are spliced, the ends shall be squared and the upper section shall rest squarely on the lower section. Wood splice plates shall be provided on at least two adjacent sides, and shall extend at least 2 feet (0.6 m) on either side of the splice, overlap the abutted ends equally, and have at least the same cross-sectional areas as the pole. Splice plates of other materials of equivalent strength may be used.
- (10) Pole scaffolds over 60 feet in height shall be designed by a registered professional engineer, and shall be constructed and loaded in accordance with that design. Non-mandatory appendix A to this subpart contains examples of criteria that will enable an employer to comply with design and loading requirements for pole scaffolds under 60 feet in height.
- (b) *Tube and coupler scaffolds.* (1) When platforms are being moved to the next level, the existing platform shall be left undisturbed until the new bearers have been set in place and braced prior to receiving the new platforms.
- (2) Transverse bracing forming an "X" across the width of the scaffold shall be installed at the scaffold ends and at least at every third set of posts horizontally (measured from only one end) and every fourth runner

vertically. Bracing shall extend diagonally from the inner or outer posts or runners upward to the next outer or inner posts or runners. Building ties shall be installed at the bearer levels between the transverse bracing and shall conform to the requirements of \S 1926.451(c)(1).

- (3) On straight run scaffolds, longitudinal bracing across the inner and outer rows of posts shall be installed diagonally in both directions, and shall extend from the base of the end posts upward to the top of the scaffold at approximately a 45 degree angle. On scaffolds whose length is greater than their height, such bracing shall be repeated beginning at least at every fifth post. On scaffolds whose length is less than their height, such bracing shall be installed from the base of the end posts upward to the opposite end posts, and then in alternating directions until reaching the top of the scaffold. Bracing shall be installed as close as possible to the intersection of the bearer and post or runner and post.
- (4) Where conditions preclude the attachment of bracing to posts, bracing shall be attached to the runners as close to the post as possible.
- (5) Bearers shall be installed transversely between posts, and when coupled to the posts, shall have the inboard coupler bear directly on the runner coupler. When the bearers are coupled to the runners, the couplers shall be as close to the posts as possible.
- (6) Bearers shall extend beyond the posts and runners, and shall provide full contact with the coupler.
- (7) Runners shall be installed along the length of the scaffold, located on both the inside and outside posts at level heights (when tube and coupler guardrails and midrails are used on outside posts, they may be used in lieu of outside runners).
- (8) Runners shall be interlocked on straight runs to form continuous lengths, and shall be coupled to each post. The bottom runners and bearers shall be located as close to the base as possible.
- (9) Couplers shall be of a structural metal, such as drop-forged steel, malleable iron, or structural grade aluminum. The use of gray cast iron is prohibited.
- (10) Tube and coupler scaffolds over 125 feet in height shall be designed by a registered professional engineer, and shall be constructed and loaded in accordance with such design. Non-mandatory appendix A to this subpart contains examples of criteria that will enable an employer to comply with design and loading requirements for tube and coupler scaffolds under 125 feet in height.
- (c) Fabricated frame scaffolds (tubular welded frame scaffolds). (1) When moving platforms to the next level, the existing platform shall be left undisturbed until the new end frames have been set in place and braced prior to receiving the new platforms.

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