

WAC 296-155-687 Single post shores. (1) When checking erected single post shores with the shoring layout, the spacing between shores in either direction must not exceed that shown on the layout, and all clamps, screws, pins, and all other components must be in the closed or engaged position.

(2) For stability, single post shores must be horizontally braced in both the longitudinal and transverse directions. You must also install diagonal bracing. You must install bracing as the shores are being erected.

(3) You must securely fasten devices which attach to the external lateral stability bracing to the single post shores.

(4) All baseplates or shore heads of single post shores must be in firm contact with the footing sill and the form material.

(5) Whenever single post shores are used in more than one tier, the layout must be designed and inspected by a structural engineer.

(6) Eccentric loads on shore heads are prohibited unless the shore heads have been designed for such loading.

(7) When formwork is at an angle, or sloping, or when the surface shored from is sloping, the shoring must be designed for such loading.

(8) You must not make adjustments of single post shores to raise formwork after concrete is in place.

(9) Respecting fabricated single post shores, the following apply:

(a) The clamp used for adjustable timber single post shores must have working load ratings based on tests conducted according to the standard test procedures for fabricated single post shores in Recommended Procedure for Compression Testing of Scaffolds and Shores, Scaffolding & Shoring Institute, 1967, and on at least a 3 to one safety factor.

(b) Shoring layouts must be made using working loads which were obtained using the test procedures of (a) of this subsection, and on at least a 3 to one safety factor.

(c) You must inspect all fabricated single post shores before being used.

(d) You must not use fabricated single post shores if heavily rusted, bent, dented, rewelded, or having broken weldments or other defects. If they contain timber, they must not be used if timber is split, cut, has sections removed, is rotted, or otherwise structurally damaged.

(e) All clamps, screws, pins, threads, and all other components must be in a condition similar to that of original manufacture.

(10) Respecting adjustable timber single post shores, the following apply:

(a) The clamp used for adjustable timber single post shores must have working load ratings based on tests conducted according to the standard test procedures for fabricated single post shores in Recommended Procedure for Compression Testing of Scaffolds and Shores, Scaffolding & Shoring Institute, 1967, and on at least a 3 to one safety factor.

(b) Timber used must have the safety factor and allowable working load for each grade and species as recommended in the Tables for wooden columns in the Wood Structural Design Data Book, National Forest Products Association, 1970.

(c) The shoring layout must be made using the allowable load obtained by using the test procedure for the clamp or Tables for timber referred to in (a) and (b) of this subsection.

(d) You must inspect all timber and adjusting devices to be used for adjustable timber single post shores before erection.

(e) You must not use timber if it is split, cut, has sections removed, is rotted, or is otherwise structurally damaged.

(f) You must not use adjusting devices if heavily rusted, bent, dented, rewelded, or having broken weldments or other defects.

(g) All nails used to secure bracing on adjustable timber single post shores must be driven home and the point of the nail bent over.

(11) Respecting timber single post shores, the following must apply:

(a) Timber used as single post shores must have the safety factor and allowable working load for each grade and species as recommended in the Tables for wooden columns in the Wood Structural Design Data Book, National Forest Products Association, 1970.

(b) You must prepare the shoring layout by using working loads obtained by using the Tables referred to in (a) of this subsection.

(c) You must inspect all timber to be used for single post shoring before erection.

(d) You must not use timber if it is split, cut, has sections removed, is rotted, or is otherwise structurally damaged.

(e) All nails used to secure bracing on timber single post shores must be driven home and the point of the nail bent over.

(12) Tiered single post shores. Whenever single post shores are used one on top of another (tiered), you must comply with the following specific requirements in addition to the general requirements for formwork:

(a) The design of the shoring must be prepared by a qualified designer and the erected shoring must be inspected by an engineer qualified in structural design.

(b) The single post shores must be vertically aligned.

(c) The single post shores must be spliced to prevent misalignment.

(d) The single post shores must be adequately braced in two mutually perpendicular directions at the splice level. Each tier must also be diagonally braced in the same two directions.

(e) Adjustment of single post shores to raise formwork must not be made after the placement of concrete.

(f) Reshoring must be erected, as the original forms and shores are removed, whenever the concrete is required to support loads in excess of its capacity.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060. WSR 16-09-085, § 296-155-687, filed 4/19/16, effective 5/20/16. Statutory Authority: Chapter 49.17 RCW. WSR 89-11-035 (Order 89-03), § 296-155-687, filed 5/15/89, effective 6/30/89.]