



INTEROFFICE MEMORANDUM

Oregon Occupational Safety & Health Division

September 5, 1991

Reviewed: December 6, 2007

TO: All OR-OSHA Staff

FROM: Marilyn K Schuster, Manager
Standards & Technical Resources

SUBJECT: Ladder Code

The Standards & Technical Resources Section has received a number of calls and memos regarding the changes resulting from the conversion from Oregon initiated rules to the federal codes for ladders and stairways. A comparison has been made between the two standards for those sections causing the most concern. The following discussion is provided to help you when applying the new codes. Please call the Technical section at (503) 378-3272 if there are additional questions.

Question: Does the new code allow the use of shorter ladders which could be less safe?

Answer: 1926.1053(b)(1) allows shorter ladders to be used, but only when the ladder can not extend above the landing 36 inches. The code requires the shorter ladder to be secured to the structure. Grab rails or bars must be provided to compensate for the shorter ladder length. The old code required the ladder to be tied off or otherwise secured where the new code requires only that the ladder be placed on a stable, level surface or secured.

Question: What is considered an adequate grab rail?

Answer: 1926.1053(b)(1) requires gripping handles or bars when the ladder does not extend at least 36 inches above the landing. The gripping bars must be a vertical rod closely in line with the ladder side rails and extend at least 36 inches above the landing. This vertical rod could be the support column of a guardrail system around the landing. One could also use grab handles attached to a wall above the landing provided the handles are closely in line with the ladder side rails. The

grab handle should start at the 3 foot height and extend downward a sufficient distance to afford a safe gripping surface (12 to 18 inches).

Question: The old code required ladders to be tied, blocked or otherwise secured. Why the change?

Answer: If the ladder is setting on a stable and level surface and at the proper angle it is considered stable and need not be tied or blocked.

Secured means stable, not likely to fail or give way, safe.

Under the old code, a ladder on level and stable ground extending above the landing with ladder feet, would have been acceptable without being tied as is now permitted in the new code 1926.1053(b) (6). Some compliance officers interpreted the code to require all ladders to be tied off.

Question: On a slippery surface are slip-resistant feet okay or do we require lashing and holding also?

Answer: 1926.1053(b) (7) requires ladders to be secured or provided with slip-resistant feet. Therefore, either method may be used. If the feet of the ladder are not stable with the slip resistant foot pads, then the ladder must be otherwise secured to prevent it from slipping.

Question: Is it okay to place a ladder in a doorway or driveway if it is tied or secured at the top?

Answer: Yes, if the area is barricaded off to prevent access.

Question: Must both hands be used when ascending or descending a ladder? (1926.1053(b) (21)

Answer: An employee can carry small items up and down a ladder provided the second hand is partly free to allow the person to grip the ladder when releasing his/her free hand to move up or down the ladder. At least one hand must be on the ladder at all times to stabilize the person. The code states, "At least one hand must be used to grip the ladder when moving up or down the ladder."

Question: Why did we change the height of stair rails to 36 inches?

Answer: Studies have shown that the present rail height is unsafe. When standing on a stairway next to the stair guardrail an average person's height is above his/her center of gravity and a small force can topple the person over the rail. Studies have shown that the ideal height to prevent this is 39 inches. The 36 inch height

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was chosen over the 39 inch height because the stair rail is also used as a hand rail. A 39 in height is too high for proper gripping, especially when descending a stairway. To compensate for both the problem of guarding and the use as a handrail the 36 inch height was selected (1926.1052(c) (3) (i)).