

OCCUPATIONAL SAFETY
AND HEALTH STANDARDS BOARD
2520 Venture Oaks Way, Suite 350
Sacramento, CA 95833
(916) 274-5721
FAX (916) 274-5743
Website address www.dir.ca.gov/oshsb



SECOND NOTICE OF PROPOSED FURTHER MODIFICATIONS TO

CALIFORNIA CODE OF REGULATIONS

TITLE 8; Division 1, Chapter 4, Subchapter 4, Article 22, Section 1648; and Article 25, Sections 1675 and 1678 of the Construction Safety Orders; and Subchapter 7, Article 4, Sections 3276, 3277, 3278, 3279, and 3280; Article 5, Section 3287; Article 11, Section 3413; and Article 13, Section 3458.1 of the General Industry Safety Orders

Portable Ladders

Pursuant to Government Code Section 11346.8(c), the Occupational Safety and Health Standards Board (Standards Board) gives notice of the opportunity to submit written comments on the above-named standards in which a further modification is being considered as a result of public comments and/or Board staff evaluation.

On December 17, 2009, the Occupational Safety and Health Standards Board held a Public Hearing to consider revisions to Title 8, Construction Safety Orders, Sections 1648, 1675 and 1678 and General Industry Safety Orders, Sections 3276, 3277, 3278, 3279, 3280, 3287, and 3413. The Standards Board received oral and written comments on the proposed revisions. In response to those comments, the proposal was modified, and on July 1, 2010, a 15-Day Notice of proposed modifications was issued.

The Standards Board received written comments regarding the 15-Day Notice of proposed modifications. A summary of those comments and the Board's response is attached. Federal OSHA expressed concern that a modification proposed in the 15-day Notice was not at least as effective as the federal standard. That proposed modification required that ladders be inspected periodically. This Second 15-Day Notice addresses federal OSHA's concern by modifying proposed Section 3276(e)(2) to require that ladders be inspected frequently. This proposed modification is clearly indicated in the attached text of the proposed amendments.

Any written comments must be related to this further modification and be received by 5:00 p.m. on September 13, 2010 at the Occupational Safety and Health Standards Board's Office, 2520 Venture Oaks Way, Suite 350, Sacramento, California 95833 or submitted by fax at (916) 274-5743 or e-mailed at oshsb@dir.ca.gov. This proposal will be scheduled for adoption at a future Business Meeting of the Occupational Safety and Health Standards Board.

The Occupational Safety and Health Standards Board's rulemaking file on the proposed action is open to public inspection Monday through Friday, from 8:00 a.m. to 4:30 p.m. at the Standards Board's Office, 2520 Venture Oaks Way, Suite 350, Sacramento, California.

*Portable Ladders
Second Notice of Proposed Modifications
Public Hearing December 17, 2009*

Inquiries concerning the proposed further modification may be directed to the Executive Officer, Marley Hart at (916) 274-5721.

OCCUPATIONAL SAFETY AND HEALTH
STANDARDS BOARD

Marley Hart, Executive Officer

Date: August 24, 2010

Further Modifications to the Original Proposal

(Regulatory language to be deleted is shown in ***bold italicized*** and double strike-out and new language is shown in ***bold italicized*** and double underscore.)

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1
Page 1 of 15

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

Amend Sections 1648, 1675, 1678, 3276, 3277, 3278, 3279, 3280, 3287 and 3413, as follows:

§1648. Ladder-Jack Scaffolds.

* * *

(d) All ladders used in connection with ladder jack scaffolds shall be ~~heavy-duty Type I, IA, or IAA duty rated~~ ladders and shall be designed and constructed in accordance with the General Industry Safety Orders, Sections ~~3278 and 3279~~ 3276(c). Job-built ladders shall not be used for this purpose.

NOTE: See Section 3276(d) for portable ladder types, duty ratings and working loads.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

* * *

§1675. General.

(a) General requirements. Except where either permanent or temporary stairways or suitable ramps or runways are provided, ladders described in this section shall be used to give safe access to all elevations.

~~(b) The use of ladders with broken or missing rungs or steps, broken or split side rails, or other faulty or defective construction is prohibited. When ladders with such defects are discovered they shall be immediately withdrawn from service. Inspection of metal ladders shall include checking for corrosion of interiors of open end hollow rungs.~~

(b) All portable ladders used in construction shall comply with the provisions of Section 3276 of the General Industry Safety Orders.

~~(c) Manufactured portable wood ladders provided by the employer shall be labeled as being designed and manufactured in accordance with the provisions of the American National Standards Institute, A 14.1 1982, ladders—portable wood—safety requirements. Labels are not required on portable wood ladders purchased prior to July 1, 1992.~~

(c) All fixed ladders used in construction shall comply with the provisions of Section 3277 of the General Industry Safety Orders.

~~(d) Portable metal ladders shall be of strength equivalent to that of wood ladders. Manufactured portable metal ladders provided by the employer shall be labeled as being designed and manufactured in accordance with the provisions of the American National Standards Institute, A14.2 1982, ladders—portable metal—safety requirements. Labels are not required on portable metal ladders purchased prior to July 1, 1992.~~

~~(e) Portable ladder feet shall be placed on a substantial base, and the area around the top and bottom of the ladder shall be kept clear.~~

~~(f) Planks shall not be used on the top step of stepladders.~~

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

~~(g) Portable ladders shall be used at such a pitch that the horizontal distance from the top support to the foot of the ladder is about one quarter of the working length of the ladder (the length along the ladder between the foot and the top support). Ladders shall not be used in a horizontal position as platforms, runways, or scaffolds.~~

~~(h) Ladders shall not be placed in passageways, doorways, driveways, or any location where they may be displaced by activities being conducted on any other work, unless protected by barricades or guards.~~

~~(i) The side rails shall extend not less than 36 inches above the landing. When this is not practical, grab rails, which provide a secure grip for an employee moving to or from the point of access, shall be installed.~~

~~(j) Portable ladders in use shall be tied, blocked, or otherwise secured to prevent their being displaced.~~

~~(k) No one shall be permitted to stand and work on the top 3 rungs or cleats of a ladder unless there are members of the structure that provide a firm handhold or the employee is protected by a personal fall protection system (e.g., positioning device or fall restraint system) in accordance with the requirements of Article 24 (commencing with Section 1669) of the Construction Safety Orders.~~

~~(l) Portable metal ladders shall not be used for electrical work or where they may contact electrical conductors.~~

~~(m) All fixed ladders used in construction shall comply with the provisions of Section 3277 of the General Industry Safety Orders.~~

~~(n) Stepladders. Employees shall not stand on the topeap or the step below the topeap of a stepladder.~~

~~NOTE: For the purposes of subsection (n) the topeap is not a step.~~

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

* * *

§1678. Extension Ladders.

~~(a) Extension ladders shall not exceed 44 feet in length when extended to the limit permitted by the following lap schedule.~~

~~(b) Extension ladders shall not be fully extended but shall have the following minimum laps:~~

~~(1) Two Section Ladders.~~

~~3 feet for ladders with working length up to 33 feet.~~

~~4 feet for ladders with working length 33 to 44 feet.~~

~~(2) Three Section Ladders.~~

~~4 feet for each section.~~

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

* * *

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

~~§3276.~~ §3278. Use of Fixed Ladders.-

(a) Employees shall:

- (1) be prohibited from carrying equipment or materials which prevent the safe use of ladders;
- (2) be required to face the ladder when ascending and descending;
- (3) always use both hands when climbing up or down the ladder; and
- (4) be prohibited from using single-rail ladders.

~~(b) Employees shall not stand on the topcap or the step below the topcap of a stepladder.~~

~~NOTE: For the purposes of subsection (b) the topcap is not a step.~~

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3277. Fixed Ladders.

* * *

(c) Design Considerations. All ladders, appurtenances, and fastenings shall be designed to meet the following load requirements:

* * *

(5) All wood parts of fixed ladders shall meet the design and construction requirements ~~of~~ for portable wood ladders in Section ~~3278~~ 3276(c).

(6) For fixed ladders consisting of wood side rails and wood rungs or cleats, used at a pitch in the range 75 degrees to 90 degrees, and intended for use by no more than one person per section, single ladders or cleat ladders as described in Section ~~3278~~ 3276 are acceptable.

* * *

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

~~§3278~~ §3276. Portable ~~Wood~~ Ladders.

~~Safety requirements for portable wood ladders placed in service after April 18, 1999, shall meet the requirements of ANSI A14.1-1994, which is hereby incorporated by reference. Safety requirements for portable wood ladders placed in service on or before April 18, 1999, shall be based on the ANSI A14.1 provisions in effect at the time such ladders were placed in service.~~

(a) Scope. This section is intended to prescribe rules and establish minimum requirements for the design, construction, selection, care, and use of the common types of all self-supporting and non-self-supporting portable wood ladders, in order to insure safety under normal conditions of usage. **This section does not apply to ladder type step stools or other types of step stools except for the definition of “step stool (ladder type)” in subsection (b) and the design and construction requirements of subsection (c)(5).**

* * *

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

(b) Definitions.

* * *

Step Ladder. A step ladder is a self-supporting portable ladder, nonadjustable in length, having flat steps and a hinged back. Its size is designated by the overall length of the ladder measured along the front edge of the side rails.

Step stool (ladder type). A self-supporting, foldable, portable ladder, nonadjustable in length, 32 inches or less in length, with flat steps and without a pail shelf, designed so that the ladder top cap as well as all steps can be climbed on. The side rails may extend above the top-cap but such extension is not considered as part of the step stool length.

* * *

~~(c) Materials. General Requirements. All wood parts shall be free from sharp edges, splinters, irregularities and defects which affect the ladders structural integrity.~~

Design and Construction.

(1) Portable wood ladders placed in service after [effective date] shall meet the design and construction requirements of ANSI A14.1-2007, American National Standard for Ladders – Wood Safety Requirements, which is hereby incorporated by reference. Portable wood ladders placed in service on or before [effective date], shall meet the design and construction requirements of the ANSI A14.1 standard in effect at the time such ladders were placed in service.

EXCEPTION: Portable job-made cleat ladders that are designed and constructed in accordance with the requirements of Section 1676 of the Construction Safety Orders.

(2) Portable metal ladders placed in service after [effective date], shall meet the design and construction requirements of ANSI A14.2-2007, American National Standard for Ladders – Portable Metal – Safety Requirements, which is hereby incorporated by reference. Portable metal ladders placed in service on or before [effective date], shall meet the design and construction requirements of either the ANSI A14.2 standard or the ANSI A14.10 standard, American National Standard for Ladders – Portable Special Duty Ladders, in effect at the time such ladders were placed in service.

(3) Portable reinforced plastic ladders placed in service after [effective date], shall meet the design and construction requirements of ANSI A14.5-2007, American National Standard for Ladders – Portable Reinforced Plastic – Safety Requirements, which is hereby incorporated by reference. Portable reinforced plastic ladders placed in service on or before [effective date], shall meet the design and construction requirements of either the ANSI A14.5 standard or the ANSI A14.10 standard in effect at the time such ladders were placed in service.

(4) Portable special purpose ladders that are not covered by one of the ANSI A14 standards referenced in this section shall be designed and constructed in accordance with sound engineering principles and approved per Section 3206.

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

(5) Ladder type step stools shall be designed and constructed such that the rungs, cleats, and steps are not less than 8 inches apart, or more than 12 inches apart, as measured between center lines of the rungs, cleats, and steps.

~~(d) Construction Requirements.~~

~~(1) Portable Step Ladders.~~

~~(A) Step ladders longer than 20 feet shall not be used. Step ladders as hereinafter specified shall be of three types, as follows:-~~

~~Type I—Industrial step ladder, 3 to 20 feet for heavy duty, such as utilities, contractors, and industrial use-~~

~~Type II—Commercial step ladder, 3 to 12 feet for medium duty, such as painters, offices, and light industrial use~~

~~Type III—Household step ladder, 3 to 6 feet for light duty, such as light household use.-~~

~~(B) Step Spacing. A uniform step spacing shall be employed which shall be not more than 12 inches. Steps shall be parallel and level when the ladder is in position for use.-~~

~~(C) Width and Spread. The minimum width between side rails at the top, inside to inside, shall be not less than 11 1/2 inches. From top to bottom, the side rails shall spread at least 1 inch for each foot of length of step ladder. Rungs shall be continuous members between rails.-~~

~~(D) Spreader. A metal spreader or locking device of sufficient size and strength to securely hold the front and back sections in open position shall be a component of each step ladder. The spreader shall have all sharp points covered or removed to protect the user. For Type III ladder, the pail shelf and spreader may be combined in one unit (the so-called shelf-lock ladder).~~

~~(d) Selection.~~

~~(1) Ladders shall be selected and their use restricted to the purpose for which the ladder is designed.~~

~~(A) Scaffolds or other worker positioning equipment shall be used when work cannot be safely done from ladders.~~

~~(B) Portable ladders are generally designed for one-person use to meet the requirements of the person, the task, and the environment. When selecting a ladder for use, consideration shall be given to the ladder length or height required, the working load, the duty rating, worker position to the task to be performed, and the frequency of use to which the ladder will be subjected.~~

~~NOTE: Subsection (e)(16)(D) prohibits the use of ladders that exceed specified maximum lengths.~~

~~(2) Single Ladder Length. Single ladders longer than 30 feet shall not be used. Ladders shall be used according to the following duty classifications:~~

<u>Duty Rating</u>	<u>Ladder Type</u>	<u>Working Load (Pounds)</u>
Special Duty	IAA	375
Extra Heavy-Duty	IA	300
Heavy-Duty	I	250
Medium-Duty	II	225
Light-Duty	III	200

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1
Page 6 of 15

**PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4**

~~(3) Two-Section Ladder Length. Two-section extension ladders longer than 60 feet shall not be used. All ladders of this type shall consist of two sections, one to fit within the side rails of the other, and arranged in such a manner that the upper section can be raised and lowered.~~

Ladders used in connection with ladder jack scaffolds shall be Type I, IA, or IAA duty rated ladders and shall be installed and used in accordance with the Construction Safety Orders, Section 1648.

~~(4) Trestle and Extension Trestle Ladder Length. Trestle ladders, or extension sections or base sections of extension trestle ladders longer than 20 feet shall not be used.~~

(4) Ladders used in connection with outdoor advertising structures shall be Type I, IA, or IAA duty rated and shall be used in accordance with Section 3413.

~~(5) Painter's Step Ladder. Painter's step ladders longer than 12 feet shall not be used.~~

~~(6) Mason's Ladder. A mason's ladder is a special type of single ladder intended for use in heavy construction work. Mason's ladders longer than 40 feet shall not be used.~~

~~(7) Cleat Ladder. A cleat ladder is a special type of single ladder intended for general use in construction work.~~

~~(A) Cleat ladders longer than 30 feet shall not be used.~~

~~(B) Wood side rails of ladders having cleat steps shall not be less than 1 1/2 inches thick and 3 1/2 inches deep (2 by 4 inches nominal).~~

~~(C) Wood cleats shall be inset into side rails not less than 1/2 inch or shall be attached directly to the edge of the side rails, in which case filler blocks of the thickness of the cleats shall be securely attached to the edge of the rail for the full length between cleats, or equivalent construction. The cleats shall be fastened to each rail by three 10 d wire nails or the equivalent thereof.~~

~~(8) Double Cleat Ladder. A double cleat ladder is similar to a single cleat ladder, but is wider, with an additional center rail which will allow for two-way traffic for workers in ascending and descending. The cleats shall extend the full width of the ladder.~~

~~(9) Other Types of Special Ladders. Other types of special ladders such as three-section extension ladders, fruitpicker's ladders, combination step and extension ladders, stockroom step ladders, aisle way step ladders, shelf ladders, and library ladders are not specifically covered by this code.~~

~~(10) Trolley and Side-Rolling Ladders. Trolley ladders and side-rolling ladders longer than 20 feet shall not be used.~~

~~(e) Care, and Use, Inspection and Maintenance of Ladders.~~

(1) Maintenance. Ladders shall be maintained in good condition at all times, the joint between the steps and side rails shall be tight, all hardware and fittings securely attached, and the movable parts shall operate freely without binding or undue play. Metal ladders shall not be exposed to acid or alkali materials that are capable of corroding the ladder and reducing the ladder's strength, unless the employer obtains and follows the recommendations of the ladder manufacturer or a qualified person regarding exposure to corrosive materials.

~~(2) Metal bearings of locks, wheels, pulleys, etc., shall be frequently lubricated.~~

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1
Page 7 of 15

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

Inspection. Ladders shall be inspected by a ~~competent~~ **qualified** person for visible defects ~~prior to the start of the shift periodically frequently~~ and after any occurrence that could affect their safe use.

(3) ~~Frayed or badly worn rope shall be replaced.~~

Damaged Ladders. Ladders that have developed defects shall be withdrawn from service for repair or destruction; and tagged or marked as "Dangerous, Do Not Use" or with similar language. Ladders with broken or missing steps, rungs, cleats, safety feet, side rails, or other defects shall not be used.

(4) ~~Safety feet and other auxiliary equipment shall be kept in good condition to insure proper performance.~~

Cleaning. Ladders shall be ~~cleaned~~ **free** of oil, grease, or slippery materials.

(5) ~~Ladders shall be inspected frequently and those which have developed defects shall be withdrawn from service for repair or destruction and tagged or marked as "Dangerous, Do Not Use".~~

Protective Surface Coatings.

~~(A) When metal ladders are to be subjected to deteriorating agents, a protective coating shall be applied in accordance with the manufacturer's guidelines.~~

~~(B) Wood ladders shall not be painted with other than a transparent material.~~

(6) Rungs shall be kept free of grease and oil.

Loading. Portable ladders shall not be overloaded when used.

(7) ~~Portable rung and cleat ladders shall, where possible, be used at such a pitch that the horizontal distance from the top support to the foot of the ladder is one quarter of the working length of the ladder (the length along the ladder between the foot and the top support). The ladder shall be so placed as to prevent slipping, or it shall be lashed, or held in position. Ladders shall not be used in a horizontal position as platforms, runways, or scaffolds.~~

Footing Support. The ladder base section of surface supported ladders shall be placed on a secure and level footing. When necessary, ladder levelers shall be used to achieve equal rail support on uneven surfaces. Ladders shall not be placed on boxes, barrels or other unstable bases to obtain additional height. Ladders shall not be used on ice, snow or slippery surfaces unless suitable means to prevent slippage have been employed.

(8) ~~Ladders for which dimensions are specified herein should not be used by more than one man at a time nor with ladder jacks and scaffold planks where use by more than one man is anticipated. In such cases, specially designed ladders with larger dimensions of the parts shall be procured.~~

Top Support. The top of non-self-supporting ladders such as single and extension ladders shall be placed with the two rails supported equally, unless a single support attachment is provided and used.

(9) ~~Portable ladders shall be so placed that the side rails have a secure footing. The top rest for portable rung and cleat ladders shall be reasonably rigid and shall have ample strength to support the applied load.~~

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1
Page 8 of 15

**PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4**

(9) Angle of Inclination. Non-self-supporting ladders such as single ladders and extension ladders shall, where possible, be used at such a pitch that the horizontal distance from the top support to the foot of the ladder is one-quarter of the working length of the ladder (the length along the ladder between the foot and the top support). The ladder shall be so placed as to prevent slipping, or it shall be tied, blocked, held, or otherwise secured to prevent slipping. Ladders shall not be used in a horizontal position as platforms, runways, or scaffolds unless designed for such use.

~~(10) Ladders shall not be placed in front of doors opening toward the ladder unless the door is blocked open, locked, or guarded.~~

Access to Elevated Work Areas. Except when portable ladders are used to gain access to fixed ladders (such as those on utility towers, billboards, and other structures where the bottom of the fixed ladder is elevated to limit access), when two or more separate ladders are used to reach an elevated work area, the ladders shall be offset with a platform or landing between the ladders.

~~(11) Ladders shall not be placed on boxes, barrels, or other unstable bases to obtain additional height.~~

Access to Landings. When portable ladders are used for access to an upper landing surface, the side rails shall extend not less than 36 inches above the upper landing surface to which the ladder is used to gain access; or when such an extension is not possible, then the ladder shall be secured at its top to a rigid support that will not deflect, and a grasping device, such as a grab-rail, shall be provided to assist employees in mounting and dismounting the ladder. In no case shall the extension be such that ladder deflection under a load would, by itself, cause the ladder to slip off its support.

EXCEPTION No. 1: A grasping device such as a grab-rail is not required where the employee is protected by personal fall protection system in accordance with Article 24 of the Construction Safety Orders, Article 36 of the High-Voltage Electrical Safety Orders, Article 12 of the General Industry Safety Orders, or Article 1 of the Telecommunication Safety Orders. **Operations or conditions not specifically covered by Article 36 of the High-Voltage Electrical Safety Orders, Article 12 of the General Industry Safety Orders, or Article 1 of the Telecommunication Safety Orders shall comply with the fall protection provisions of Article 24 of the Construction Safety Orders.**

EXCEPTION No. 2: **The provisions of this subsection do not apply to emergency rescue and emergency rescue training operations where it is not practical to extend a portable ladder 36 inches or more above the landing surface.**

~~(12) Ladders with broken or missing steps, rungs, or cleats, broken side rails, or other faulty equipment shall not be used.~~

Fastening Together. Ladders shall not be tied or fastened together to provide longer sections unless the ladders are designed for such use and equipped with the necessary hardware fittings.

~~(13) Short ladders shall not be spliced together to provide long sections.~~

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

Erection of Extension Ladders. Extension ladders shall always be erected so that the top section (fly section) is above and resting on the bottom section (base section) with the rung locks engaged.

~~(14) Ladders made by fastening cleats across a single rail shall not be used.~~

Ladder Placement. Ladders shall not be placed in passageways, doorways, driveways, or any location where they may be displaced by activities being conducted on any other work, unless protected by barricades or guards.

~~(15) Ladders shall not be used as guys, braces, or skids, or for other than their intended purposes.~~

Climbing and Working on Ladders.

(A) The employee shall climb or work with the body near the middle of the step or rung and shall not overreach from this position. When necessary to avoid overreaching, the employee shall descend and reposition the ladder. When it is not practical to work with the body near the middle of the step or rung, the ladder shall be secured to the top support, and the employee shall be protected by a personal fall protection system in accordance with Article 36 of the High-Voltage Electrical Safety Orders, Article 24 of the Construction Safety Orders, Article 12 of the General Industry Safety Orders, or Article 1 of the Telecommunication Safety Orders.

Operations or conditions not specifically covered by Article 36 of the High-Voltage Electrical Safety Orders, Article 12 of the General Industry Safety Orders, or Article 1 of the Telecommunication Safety Orders shall comply with the fall protection provisions of Article 24 of the Construction Safety Orders.

(B) Employees shall be prohibited from carrying equipment or materials which prevent the safe use of ladders.

(C) When ascending or descending a ladder, the user shall face the ladder and maintain contact with the ladder at three-points at all times.

NOTE: Contact with the ladder at three points means two feet and one hand, or two hands and one foot which is safely supporting the user's weight.

(D) An employee shall not be permitted to stand and work on the top 3 rungs of a single or extension ladder unless there are members of the structure that provide a firm handhold or the employee is protected by a personal fall protection system in accordance Article 24 of the Construction Safety Orders, Article 36 of the High Voltage Electrical Safety Orders, Article 12 of the General Industry Safety Orders, or Article 1 of the Telecommunication Safety Orders.

(E) Employees shall not stand on the topcap or the step below the topcap of a step ladder.

(F) Cross-bracing on the rear section of step ladders shall not be used for climbing unless the ladders are designed and provided with steps for climbing on both front and rear sections.

(G) Ladders shall not be moved, shifted, or extended while occupied, unless the ladder is designed and recommended for this purpose by the manufacturer.

~~(16) On two-section extension ladders the minimum overlap for the two sections in use shall be as follows:-~~

~~Size of Ladder~~

~~Overlap~~

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

<i>(Feet)</i>	<i>(Feet)</i>
Up to and including 36.....	3
Over 36 up to and including 48.....	4
Over 48 up to and including 60.....	5

Prohibited Uses.

(A) Ladders shall not be used as a brace, skid, guy or gin pole, gang-way, or for other uses than that for which they were intended, unless specifically recommended for use by the manufacturer.

(B) Planks shall not be used on the top step or topcap of step ladders.

(C) Step ladders shall not be used as single ladders or in the partially closed position.

(D) Ladders that exceed the following maximum lengths shall not be used:

<u>Ladder Type</u>	<u>Maximum Length (Feet)</u>
<u>Step ladder.....</u>	<u>20</u>
<u>Two-section extension ladder (wood).....</u>	<u>60</u>
<u>Two-section extension ladder (metal or reinforced plastic).....</u>	<u>72 48</u>
<u>Three-section extension ladder (metal).....</u>	<u>60</u>
<u>Two-section extension ladder (reinforced plastic)</u>	<u>72</u>
<u>Trestle ladder.....</u>	<u>20</u>
<u>Extension trestle ladder base section</u>	<u>20</u>
<u>Extension trestle ladder extension section</u>	<u>20</u>
<u>Painter's step ladder</u>	<u>12</u>
<u>Mason's ladder</u>	<u>40</u>
<u>Cleat ladder</u>	<u>30</u>
<u>Trolley ladder or side-rolling ladder</u>	<u>20</u>
<u>Single ladder</u>	<u>30</u>

(E) Two section extension ladders shall not be used when the overlap between the sections is less than the following minimum overlap:

<u>Ladder Size (Feet)</u>	<u>Minimum Overlap (Inches)</u>
<u>Up to and including 32</u>	<u>34 36</u>
<u>Over 32, up to and including 36</u>	<u>46</u>
<u>Over 36, up to and including 48</u>	<u>58</u>
<u>Over 48, up to and including 60.</u>	<u>70</u>

(17) Portable rung ladders with reinforced rails shall be used only with the metal reinforcement on the under side.

(18) ~~No ladder shall be used to gain access to a roof unless the top of the ladder extends at least 3 feet above the point of support at eave, gutter, or roof line.~~

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1
Page 11 of 15

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

Electrical Hazards. Non-conductive ladders shall be used in locations where the ladder or user may contact unprotected energized electrical conductors or equipment. Conductive ladders shall be legibly marked with signs reading "CAUTION--Do Not Use Around Electrical Equipment," or equivalent wording.

NOTE: Additional requirements for working in proximity to energized electrical equipment can be found in Article 37 of the Electrical Safety Orders.

(19) The employer shall equip all portable rung ladders with non-slip bases when there is a hazard of slipping. Non-slip bases are not intended as a substitute for care in safely placing, lashing, or holding a ladder that is being used upon oily metal, concrete, or slippery surfaces.

~~Transporting. Ladders transported on motor vehicles shall be properly supported and secured to prevent falling.~~

~~(20) Cross bracing on the rear section of stepladders shall not be used for climbing unless the ladders are designed and provided with steps for climbing on both front and rear sections.~~

~~The area around the top and bottom of a ladder shall be kept clear.~~

~~(f) Employee Training. Before an employee uses a ladder, the employee and the employee's supervisor shall be provided training in the safe use of ladders, unless the employer can demonstrate that the employee is already trained in ladder safety as required by this subsection. Supervisors of employees who routinely use ladders shall also be provided ladder safety training, unless the employer can demonstrate that the supervisor is already trained in ladder safety as required by this subsection. The training may be provided as part of the employer's Injury and Illness Prevention Program required by Section 3203. The training shall address the following topics, unless the employer can demonstrate a topic is not applicable to the safe use of ladders in the employer's workplace.~~

~~(1) Importance of using ladders safely, including: frequency and severity of injuries related to falls from ladders.~~

~~(2) Selection, including: types of ladders, proper length, maximum working loads, and electrical hazards.~~

~~(3) Maintenance, inspection, and removal of damaged ladders from service.~~

~~(4) Erecting ladders, including: footing support, top support, securing, and angle of inclination.~~

~~(5) Climbing and working on ladders, including: user's position and points of contact with the ladder.~~

~~(6) Factors contributing to falls, including: haste, sudden movement, lack of attention, footwear, and user's physical condition.~~

~~(7) Prohibited uses, including: uses other than designed, climbing on cross bracing, maximum lengths, and minimum overlap of extension ladder sections.~~

~~NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.~~

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

§3279. Portable Metal Ladders.

Safety requirements for portable metal ladders placed in service after April 18, 1999, shall meet the requirements of ANSI A14.2-1990 or ANSI A14.10-2000, which are hereby incorporated by reference. Safety requirements for portable metal ladders placed in service on or before April 18, 1999, shall be based on the ANSI A14.2 provisions in effect at the time such ladders were placed in service.

(a) Scope. This section is intended to prescribe rules and requirements for the construction, care, and use of the common types of portable metal ladders, in order to insure safety under normal conditions of usage. It does not cover special purpose ladders which do not meet the general requirements of this code.

(b) Definitions. For definitions of terms associated with metal ladders, see Section 3278(b).

(c) Requirements.

(1) General. Specific design and construction requirements are not a part of this section because of the wide variety of metals and design possibilities. However, the design shall be such as to produce a ladder without structural defects or accident hazards such as sharp edges, burrs, etc. The metal selected shall be of sufficient strength to meet the test requirements, and shall be protected against corrosion unless inherently corrosion resistant.

(A) Rung Spacing. The spacing of rungs or steps shall be on 12 inch centers.

(B) Rungs and Steps. Rungs and steps shall be corrugated, knurled, dimpled, coated with skid-resistant material, or otherwise treated to minimize the possibility of slipping.

(2) General Specifications—Straight and Extension Ladders.

(A) Ladder Width. The minimum width between side rails of a straight ladder or any section of an extension ladder shall be 12 inches.

(B) Ladder Length. The length of single ladders or individual sections of ladders shall not exceed 30 feet. Two section ladders shall not exceed 48 feet in length and over two section ladders shall not exceed 60 feet in length.

(C) Overlap. Based on the nominal length of the ladder, each section of a multi-section ladder shall overlap the adjacent section by at least the number of feet stated in the following:

<i>Nominal Length of Ladder (Feet)</i>			<i>Overlap (Feet)</i>
Up to and including 36	3
Over 36, up to and including 48	4
Over 48, up to 60	5

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1
Page 13 of 15

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

~~(D) Extension ladders shall be equipped with positive stops which will insure the overlaps specified in the table above.~~

~~(3) General Specifications—Step Ladders.~~

~~(A) Length. The length of a step ladder is measured by the length of the front rail. Step ladders shall not exceed 20 feet in length.~~

~~(B) Feet. The bottoms of the four rails are to be supplied with insulating non-slip material for the safety of the user.~~

~~(C) Spreaders. A metal spreader or locking device of sufficient size and strength to securely hold the front and back sections in the open position shall be a component of each step ladder. The spreader shall have all sharp points or edges covered or removed to protect the user.~~

~~(4) General Specifications—Trestles and Extension Trestle Ladders.~~

~~(A) Length. Trestle ladders or extension sections or base sections of extension trestle ladders shall be not more than 20 feet in length.~~

~~(5) General Specifications—Platform Ladders. The length of a platform ladder shall not exceed 20 feet. The length of a platform ladder shall be measured along the front rail from the floor to the platform.~~

~~(d) Care, Use and Maintenance of Ladders.~~

~~(1) General. Every employer using ladders shall enforce a maintenance program which includes the appropriate requirements listed below.~~

~~(2) Maintenance. Ladders shall be maintained in good usable condition at all times. Hardware fittings and accessories shall be checked prior to use and kept in good working condition.~~

~~(3) Deteriorating Agents. When ladders are to be subjected to deteriorating agents, a protective coating shall be applied to the equipment.~~

~~(4) Oil and Grease. Equipment shall be cleaned of oil, grease, or slippery materials.~~

~~(5) Damaged Ladders. Ladders having defects are to be marked and taken out of service.~~

~~(6) Loading. Portable ladders are designed as a one-man working ladder based on a 200-pound load.~~

~~(7) Footing Support. The ladder base section shall be placed with a secure footing. Safety shoes of good substantial design shall be installed on all ladders.~~

~~(8) Top Support. The top of the ladder must be placed with the two rails supported, unless equipped with a single support attachment.~~

~~(9) Fastening Together. Ladders must not be tied or fastened together to provide longer sections. They must be equipped with the hardware fittings necessary if the manufacturer endorses extended uses.~~

~~(10) Improper Use.~~

~~(A) Ladders shall not be used as a brace, skid, guy or gin pole, gangway, or for other uses than that for which they were intended, unless specifically recommended for use by the manufacturer.~~

~~(B) Cross-bracing on the rear section of stepladders shall not be used for climbing unless the ladders are designed and provided with steps for climbing on both front and rear sections.~~

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

~~(11) Electrical Hazards. Portable metal ladders shall not be used in the vicinity of electrical circuits in places where they may come in contact with them. Portable metal ladders shall be legibly marked with signs reading "CAUTION - Do Not Use Around Electrical Equipment," or equivalent wording.~~

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

§3280. Portable Reinforced Plastic Ladders.

~~Safety requirements for portable reinforced plastic ladders placed in service after April 18, 1999, shall meet the requirements of ANSI A14.5 1992 or ANSI A14.10 2000, which are hereby incorporated by reference. Safety requirements for portable reinforced plastic ladders placed in service on or before April 18, 1999, shall be based on the ANSI A14.5 provisions in effect at the time such ladders were placed in service.~~

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

* * *

§3287. Ladders.

* * *

(b) Specifications.

(1) ~~Wood Portable~~ ladders shall comply with Section ~~3278~~ 3276, ~~Portable Wood Ladders of the General Industry Safety Orders and they shall not be painted with other than a transparent material.~~

EXCEPTION: Refer to Section 3287(a)(1) for maximum length.

~~(2) Metal ladders shall meet the requirements of Section 3279, Portable Metal Ladders of the General Industry Safety Order.~~

EXCEPTION: Refer to Section 3287(a)(1) for maximum length.

~~(3) Plastic reinforced ladders shall meet the requirements of Section 3280 of the General Industry Safety Orders.~~

(4) (2) All ladders shall be equipped with nonslip bases suitable to the bearing surface. Middle and top sections shall not be used as bottom sections unless the user equips them with nonslip bases.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

* * *

§3413. Ladders.

(a) All portable ladders shall be at least Type 1 industrial heavy-duty ladders, Type 1A industrial extra heavy-duty ladders or Type 1AA special duty ladders as referred to in subsection

**STANDARDS PRESENTATION
TO
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

Attachment No. 1
Page 15 of 15

PROPOSED STATE STANDARD,
TITLE 8, CHAPTER 4

(c) of this section, and shall be designed and constructed in accordance with Sections ~~3278~~
~~and 3279~~ 3276(c) of the General Industry Safety Orders.

* * *

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

* * *

§3458.1. Ladders Attached to Date Palms.

* * *

(b) Use of date palm ladders shall be in accordance with the requirements of Section ~~3276~~ 3278
of these Safety Orders.

* * *

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

* * *

Summary and Responses to Written Comments

Summary and Response to Comments Resulting from
The Second 15-day Notice of Proposed Modifications

Mr. Jose Benavides for Mr. Ken Nishiyama Atha, Regional Administrator, Region IX, OSHA, U.S. Department of Labor, by e-mail dated July 29, 2010.

Comment: Federal OSHA does not consider proposed Section 3276(e)(2), which requires ladders to be inspected periodically, at least as effective as (ALAEA) 29CFR 1910.25(d)(1)(x), which requires ladders to be inspected frequently. (In a letter dated July 20, 2010, Mr.

Nishiyama Atha said that the State's proposal was not ALAEA in two respects, but Federal OSHA, via Mr. Benavides' e-mail, limited Federal concern to the single issue discussed here.)

Response: To be ALAEA the federal standard, the Board modified proposed Section 3276(e)(2) to require that ladders be inspected frequently. The Board thanks Mr. Atha for his comment.

Mr. Bill Taylor, President, Public agency Safety Management Association - South Chapter, by e-mail dated July 12, 2010.

Comment: Mr. Taylor expressed his support for the proposal.

Response: The Board thanks Mr. Taylor for his support and participation in the rulemaking process.

Mr. Bruce Wick, Director of Risk Management, California Professional Association of Specialty Contractors, by e-mail dated July 19, 2010.

Comment: Mr. Wick expressed his support for the proposal as modified; and, on behalf of Mr. Kevin Bland, indicated that the California Framing Contractors Association and the Residential Contractors Association also support the proposal.

Response: The Board thanks Mr. Wick and Mr. Bland for their support and participation in the rulemaking process.

Ms. Anne Katten, Pesticide and Work Safety Project Manager, California rural Legal Assistance Foundation, by e-mail dated July 20, 2010.

Comment #1: Ms. Katten stated that the standard will be clearer and will better protect workers if a ladder inspection is required at the start of each shift or prior to each day of use rather than periodically.

Response: The initial proposal noticed for public hearing required that ladders be inspected "prior to the start of the shift". Employers commented that it would not be feasible to implement the proposed inspection schedule at facilities with flexible shifts. Other employers commented that the number of inspections required, and the documentation of those inspections, would be unnecessarily burdensome. In response to those comments a 15-day Notice was issued to modify the proposal to require that ladders be inspected "periodically" to provide employers with the flexibility to establish the frequency of ladder inspections based on the use of ladders in their particular work place. Federal OSHA commented that the proposed modification was not as effective as the federal standard, which requires that ladders be inspected "frequently" (see the comment from Mr. Jose Benavides). In response to the federal opinion, the Board modified the

proposed provision a second time. Proposed Section 3276(e)(2) requires that ladders be inspected by a qualified person for visible defects frequently and after any occurrence that could affect their safe use. In addition, proposed new subsection (f) requires that employees be provided training on ladder maintenance, ladder inspection, and removal of damaged ladders from service. The Board believes that training ladder users on ladder maintenance and inspection will increase the frequency and quality of inspections. The Board believes that the proposed ladder inspection and maintenance requirements, along with employee training provisions, will prevent damaged ladders from being used and injuring employees. The Board declines to modify the proposal.

Comment #2: Ms. Katten stated that she is concerned by the deletion of the requirement for ladders transported on motor vehicles to be properly supported and secured to prevent falling. She stated the requirement is needed to prevent damage to the ladder and injury to workers who are working near a motor vehicle carrying ladders around a field or other worksite. She suggested that an alternative would be to reference Section 3704 which provides that all loads shall be secured against dangerous displacement.

Response: Section 3276(e)(19), the provision that was deleted, was vague as to the action the employer was obligated to take to comply with the requirement to properly support and secure ladders from falling when transported on motor vehicles. The provision was intended to prevent damage to ladders during transport. The Board is not aware of evidence which supports that the provision is necessary to prevent injury to employees, and the Board does not believe that a reference to Section 3704 is necessary for that purpose. Proposed Section 3276(e)(2) would require ladders to be inspected by a qualified person frequently and after any occurrence that could affect their safe use. If a ladder falls from a motor vehicle, that provision would require that the ladder be inspected by a qualified person for defects; and if the ladder is damaged, proposed Section 3276(e)(3) would require that the ladder be withdrawn from service. The Board declines to modify the proposal.

Comment #3: Ms. Katten stated that she is concerned that the proposal does not require training if the employer can demonstrate that the employee is already trained in ladder safety and does not specify how the employer will demonstrate that the employee is already trained. She asked whether the employer will be required to verify that the previous employer provided ladder training; or will the employer be allowed to have employees sign a form stating that they already received training? She expressed concerns that workers will be pressured to sign forms stating that they have been trained even if they have not. She also states that previous training may not be adequate for the new workplace if ladders are used under conditions that expose employees to new hazards, such as using ladders on uneven ground.

Response: Section 3276(f), as proposed for public hearing, required that before an employee uses a ladder, the employee and the employee's supervisor shall be provided training on the safe use of ladders. The proposed modification clarifies that, if the employer can demonstrate that an employee is already trained in ladder safety as required by the subsection, the employer is not required to repeat the training for that employee. The subsection additionally requires that the training address the topics listed in subsections (f)(1) through (f)(7), unless the employer can demonstrate that a topic is not applicable to the employer's workplace. Where ladders are used under conditions that expose an employee to a hazard that was not addressed in the training provided by a previous employer, proposed subsection (f) would require the employer to provide

the employee with additional training to address that hazard. For example, if an employee had not received instruction on using ladders on uneven ground, proposed subsection (f)(4) would require the employer to provide training on how safely to erect and secure a ladder on uneven ground. In addition, Section 3203 requires that the employer provide training to all new employees and employees given new job assignments for which training has not been received. Section 3203 also provides requirements for documentation of required safety training. To demonstrate compliance with the training requirements of proposed Section 3276(f), the employer may ask employees to sign a form stating that they have previously received training, or the employer may verify that a previous employer provided ladder training to the employee. In regards to employees feeling pressured to sign a form documenting that the employee received training even though the training was not provided, such pressure in the form of threats to lay off or discharge of employees appears to the Board to be a violation of Labor Code section 6311. The proposal comprehensively provides that all employees be trained on the safe use of ladders, and it avoids unnecessary, duplicative training. The Board declines to modify the proposal.

Comment #4: Ms. Katten expressed support for the proposal as originally noticed for public hearing, and she noted that falls from ladders are a major source of serious injuries in agriculture. She referenced a recent study which found that 31% of the 13,068 worker's compensation claims in Washington State orchards between 1996 and 2001 involving compensation for lost work time were for ladder related injuries which cost over \$21.5 million over this six year period.

Response: The Board believes that the proposal in its present form comprehensively addresses portable ladder hazards, as has been discussed in the responses to Ms. Katten's other comments, and the Board declines to reinstate the original proposal. The Board thanks Ms. Katten for her comments, support, and participation in the rulemaking process.