

**OCCUPATIONAL SAFETY
AND HEALTH STANDARDS BOARD**

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Attachment No. 3

INITIAL STATEMENT OF REASONS**CALIFORNIA CODE OF REGULATIONS**

TITLE 8: Division 1, Chapter 4, Subchapter 7, Article 4, Section 3277
of the General Industry Safety Orders (GISO)

Fixed Ladders**SUMMARY**

This proposed rulemaking is the result of a Division of Occupational Safety and Health (Division) Form 9, Request for Change in Existing Safety Order, which was prompted by a fatal accident in a mining operation where an employee fell from an elevated location. It is thought that the victim lost his grip and fell while descending a caged ladder, striking the landing and falling back over the guardrail to his death 30 feet below. The Division believes that a back guard at this location would have prevented this type of accident from occurring; however, it had not been provided apparently due to a lack of clarity in General Industry Safety Orders (GISO) Section 3277.

GISO Section 3277 addresses a variety of ladder safety issues, including, but not limited to, design of ladder cages, wells and landing platforms, counterweighted hatch covers, use of ladder safety devices, and contains a number of diagrams depicting fixed ladder installations.

The Division has requested changes and clarifications, including fall protection at caged ladder landings and maximum clearances for ladder wells.

SPECIFIC PURPOSE AND FACTUAL BASIS OF PROPOSED ACTION**Section 3277. Fixed ladders.****Subsection (b). Definitions.**

Existing subsection (b) defines terms specific for the application of Section 3277, Fixed Ladders. It is proposed to add definitions for two new terms: "Carrier" and "Safety Sleeve." These definitions are taken from American National Standards Institute (ANSI) Standard A14.3-2002, American National Standard for Ladders – Fixed – Safety Requirements, and are necessary in order to clearly define the definition for "Ladder Safety System" which will replace the existing definition for "Ladder Safety Device." The purpose of these proposed additions and

amendments is to add clarity and to harmonize Section 3277 definitions with industry standard terminology.

Subsection (f)(7). Clearance.

The existing subsection prescribes requirements for counterweighted hatch covers and the relationship of a fixed ladder to a counterweighted hatch cover. A proposed modification will make these requirements applicable to all hatch covers. The purpose and necessity of this modification is to prescribe equivalent safety for all types of hatch covers.

Subsection (g)(2). Dimensions and maximum length for (cages and wells).

The existing subsection prescribes that “cages or wells (except as provided under (5)) conforming to the dimensions shown in Figs. 1, 10, and 11 shall be provided on ladders of more than 20 feet to a maximum unbroken length of 30 feet.” The cross-reference to subsection (5) is incorrect [it appears to be verbatim of the cross-reference in the federal standard 1910.27(d)(1)(ii)]. It is proposed to correct the cross-reference to subsection (m) which is the state subsection corresponding to the federal cross-reference. The purpose and necessity for this modification is to clarify requirements for ladder safety systems.

Subsection (g)(2), Exception 2.

The existing exception pertains to fixed ladders on outdoor advertising structures, where employees wear and use approved safety belts and lanyards which can be utilized if a rest period is required. It is proposed to change the exception to apply to outdoor advertising structures covered by GISO Article 11. The purpose and necessity for this modification is to harmonize this exception with recently adopted changes to requirements for fall protection for outdoor advertising structures, Section 3416.

Subsection (g)(4). Bottom of cage.

The existing subsection provides that “Cages shall extend down the ladder to a point not less than 7 feet nor more than 8 feet above the base of the ladder, with bottom flared not less than 4 inches, or portion of cage opposite ladder shall be carried to the base.” It is proposed to delete “or portion of cage opposite ladder shall be carried to the base” and to clarify that where the ladder base terminates on a landing platform or walkway at an elevation greater than 30 inches above the ground, a ladder cage extension shall be provided from the bottom of the cage to the guardrail when the distance from the plane of the ladder rungs to the guardrail is equal to or less than that shown in Figure 11, “Ladder Cages at Elevated Locations.” The purpose and necessity for this modification is to clarify the requirements for cage extensions to prevent workers from falling over a guardrail should they fall down a cage-enclosed ladder.

Subsection (g)(4)(A).

This new subsection is proposed in order to clarify that a ladder cage extension is not required when the guardrail is located at a distance greater than that shown in Figure 11.

Subsection (g)(4)(B).

This new subsection is proposed to describe construction criteria for a ladder cage extension or equivalent.

The purpose and necessity for these amendments is to protect workers from the hazard of falling out of the cage and over the guardrail should they lose their footing and/or handhold on the ladder. These provisions will apply when the cage terminates on a platform more than 30 inches above the ground.

Subsection (g)(6). Ladder wells.

The existing subsection specifies a 27 inch minimum dimension for ladder wells, but does not specify a maximum dimension, thus it is possible for a well to be so large and so high as to not provide fall protection equivalent to that provided by ladder cages. It is proposed to specify that wells shall not exceed 30 inches from the center line of the rungs to the well wall on the climbing side of the ladder. The purpose and necessity for this amendment is to provide fall protection for wells equivalent to that for ladder cages.

Subsection (j)(1). Landing platforms.

The existing subsection (j)(1) concerns the provisions of landing platforms. Modifications are proposed to clarify requirements as follows:

- The existing parenthetical clause “except on chimneys” is proposed to be relocated to Exception 2 for consistent formatting.
- The other parts of the existing subsection are relocated to new subsections (j)(1)(A), (C) and (D) with minor clarifications.
- A new subsection (j)(1)(B) is added to clarify where landing platforms are required when a cage or well is provided.

The purpose and necessity for these amendments and modifications is to clarify requirements for ladder cages, wells, and landing platforms.

Subsection (j)(1). Exception 1.

Existing Exception 1 provides an exception from the provisions of subsection (j)(1) for ladders in underground mines, those used primarily in construction operations, fire escape ladders, and ladders equipped with treads. It is proposed to move the exception for underground mines to a new separate Exception 3 and clarify that the exception applies only to mines covered by the

Mine Safety Orders. The purpose and necessity for this change is to clarify requirements for ladders in underground mines.

Subsection (j)(1). Exception 2.

Existing Exception 2 excludes from the provisions of subsection (j)(1) a number of types of ladders, which are used either infrequently or for emergency only provided the employee who uses the ladder is “supplied with and wears an approved belt, with safety straps attached”. It is proposed to relocate the exception for chimneys from (j)(1) for consistency. It is also proposed to change “approved belt, with safety straps attached” to “approved personal fall protection equipment.” The purpose and necessity for these modifications is to harmonize with changes that have taken place elsewhere in Title 8 requirements for fall protection equipment (Construction Safety Orders, Article 24).

Subsection (j)(1). Exception 3.

This new exception takes “underground mines” from existing Exception 1 and clarifies that the exception applies only to underground mines covered by the Mine Safety Orders. The purpose and necessity for this change is to clarify the application of this exception to requirements for landing platforms for underground mines.

Subsection (m). Ladder safety devices.

The existing subsection uses the terminology “ladder safety devices.” It is proposed to update this to “ladder safety systems.” The purpose and necessity for this modification is to harmonize Title 8 terminology with industry standard ANSI A14.3-2002. It is also, proposed to delete the phrase “such as those that incorporate life belts, friction brakes, and sliding attachments” from the existing subsection, since the phrase overlaps and is inconsistent with the definition of “ladder safety systems” in subsection 3277(b). The purpose and necessity for this modification is to eliminate inconsistencies and to clarify where and how ladder safety systems may be used.

Figure 11. Cages – Special Applications.

It is proposed to rename this figure “Ladder Cages at Elevated Locations.” The following changes are also proposed:

1. On the right-hand illustration of this diagram, change “4'-0” or More” to “More than 4'-0”.”
2. Right-hand diagram, make “Location” plural.

The purpose and necessity for these modifications is to clarify applicability of the diagrams to ladder cages and extensions as required by other parts of the standard.

DOCUMENTS RELIED UPON

ANSI A14.3-2002, American National Standard for Ladders – Fixed – Safety Requirements. Approved by American National Standards Institute. Published by American Ladder Institute, 401 N. Michigan Avenue, Chicago, IL 60611.

USA Standard A14.3-1956, Safety Code for Fixed Ladders. Approved October 4, 1956. Sponsors: American Ladder Institute, American Society of Safety Engineers, National Association of Mutual Casualty Companies. Published in 1965 by U.S.A. Standards Institute (since renamed American National Standards Institute).

Standard Interpretation 05/27/2004 – “Fixed ladders must be retrofitted to meet 1910.27 design requirements; maximum horizontal spacing requirements for extensions.” Issued by U.S. Department of Labor, Occupational Safety and Health Administration, in response to an inquiry from Mr. Bryan Gormley, Colorado Springs, CO. Interpretation dated May 27, 2004.

These documents are available for review Monday through Friday from 8:00 a.m. to 4:30 p.m. at the Standards Board Office located at 2520 Venture Oaks Way, Suite 350, Sacramento, California.

DOCUMENTS INCORPORATED BY REFERENCE

None.

REASONABLE ALTERNATIVES THAT WOULD LESSEN ADVERSE ECONOMIC IMPACT ON SMALL BUSINESSES

No reasonable alternatives were identified by the Board and no reasonable alternatives identified by the Board or otherwise brought to its attention would lessen the impact on small businesses.

SPECIFIC TECHNOLOGY OR EQUIPMENT

This proposal will not mandate the use of specific technologies or equipment.

COST ESTIMATES OF PROPOSED ACTION

Costs or Savings to State Agencies

No costs or savings to state agencies will result as a consequence of the proposed action.

Impact on Housing Costs

The Board has made an initial determination that this proposal will not significantly affect housing costs.

Impact on Businesses

The Board has made a determination that this proposal will not result in a significant, statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states.

Cost Impact on Private Persons or Businesses

Due to the large number of fixed ladders in-use in many industries in California the cost impact cannot be estimated with any degree of certainty, although anecdotal evidence indicates that most employers are already in compliance. However, some existing fixed ladders may pre-date the consensus standard (ASME A14.3-1956) upon which 29 CFR 1910.27 and Section 3277 are based. Furthermore, it is possible that some fixed ladders may have been installed without the required back guards due to lack of clarity in the current standards.

The petroleum production and refining industry is likely to be the most affected by this clarification due to a large number of fixed ladders at refineries, some of which date back to the turn of the 20th Century. Conversations with an industry representative, the Western States Petroleum Association (WSPA), indicate that perhaps no more than 20% of ladders at each refinery might require retrofit. Costs for retrofitting should not be significant since the retrofit will usually consist of extending the existing ladder cage to the guardrail, thus attachments to pressure vessels are not anticipated.

Costs or Savings in Federal Funding to the State

The proposal will not result in costs or savings in federal funding to the state.

Costs or Savings to Local Agencies or School Districts Required to be Reimbursed

No costs to local agencies or school districts are required to be reimbursed. See explanation under "Determination of Mandate."

Other Nondiscretionary Costs or Savings Imposed on Local Agencies

This proposal does not impose nondiscretionary costs or savings on local agencies.

DETERMINATION OF MANDATE

The Occupational Safety and Health Standards Board has determined that the proposed standards do not impose a local mandate. Therefore, reimbursement by the state is not required pursuant to Part 7 (commencing with Section 17500) of Division 4 of the Government Code because the proposed amendments will not require local agencies or school districts to incur additional costs in complying with the proposal. Furthermore, these standards do not constitute a "new program or higher level of service of an existing program within the meaning of Section 6 of Article XIII B of the California Constitution.

The California Supreme Court has established that a “program” within the meaning of Section 6 of Article XIII B of the California Constitution is one which carries out the governmental function of providing services to the public, or which, to implement a state policy, imposes unique requirements on local governments and does not apply generally to all residents and entities in the state. (County of Los Angeles v. State of California (1987) 43 Cal.3d 46.)

These proposed standards do not require local agencies to carry out the governmental function of providing services to the public. Rather, the standards require local agencies to take certain steps to ensure the safety and health of their own employees only. Moreover, the proposed standards do not in any way require local agencies to administer the California Occupational Safety and Health program. (See City of Anaheim v. State of California (1987) 189 Cal.App.3d 1478.)

These proposed standards do not impose unique requirements on local governments. All state, local and private employers will be required to comply with the prescribed standards.

EFFECT ON SMALL BUSINESSES

The Board has determined that the proposed amendments may affect small businesses. However, no economic impact is anticipated.

ASSESSMENT

The adoption of the proposed amendments to these standards will neither create nor eliminate jobs in the State of California nor result in the elimination of existing businesses or create or expand businesses in the State of California.

ALTERNATIVES THAT WOULD AFFECT PRIVATE PERSONS

No reasonable alternatives have been identified by the Board or have otherwise been identified and brought to its attention that would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action.