

DEPARTMENT OF INDUSTRIAL RELATIONS  
Occupational Safety and Health Standards Board  
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## TITLE 8. CALIFORNIA CODE OF REGULATIONS

### Construction Safety Orders Sections 1671.1, 1716.2, 1730 and 1731 (Published on December 1, 2023)

#### Fall Protection in Residential Construction

NOTICE IS HEREBY GIVEN that the Occupational Safety and Health Standards Board (Board) proposes to adopt, amend or repeal the foregoing provisions of title 8 of the California Code of Regulations in the manner described in the Informative Digest, below.

#### PUBLIC HEARING

The Board will hold a public hearing starting at 10:00 a.m. on **January 18, 2024** in the **East Theater** of the **California State Railroad Museum, 111 I Street, Sacramento, California** as well as via the following.

- Video-conference at [www.webex.com](http://www.webex.com) (meeting ID 1469 63 6425)
- Teleconference at (844) 992-4726 (Access code 1469 63 6425)
- Live video stream and audio stream (English and Spanish) at <https://videobookcase.com/california/oshsb/>

At this public hearing, any person may present statements or arguments orally or in writing relevant to the proposed action described in the Informative Digest.

#### WRITTEN COMMENT PERIOD

In addition to written or oral comments submitted at the public hearing, written comments may also be submitted to the Board's office. The written comment period commences on **December 1, 2023** and closes at 5:00 p.m. on **January 18, 2024**. Comments received after that deadline will not be considered by the Board unless the Board announces an extension of time in which to submit written comments. Written comments are to be submitted as follows:

By mail to Sarah Money, Occupational Safety and Health Standards Board, 2520 Venture Oaks Way, Suite 350, Sacramento, CA 95833, or

by e-mail sent to [oshsb@dir.ca.gov](mailto:oshsb@dir.ca.gov).

## **AUTHORITY AND REFERENCE**

Labor Code section 142.3 establishes the Board as the only agency in the State authorized to adopt occupational safety and health standards. In addition, Labor Code section 142.3 requires the adoption of occupational and health standards that are at least as effective as federal occupational safety and health standards.

## **INFORMATIVE DIGEST OF PROPOSED ACTION/POLICY STATEMENT OVERVIEW**

Federal Occupational Safety and Health Administration (Fed-OSHA) fall protection requirements for the construction industry are set forth in subpart M of title 29 Code of Federal Regulations (29 CFR) part 1926 published on August 9, 1994. Fed-OSHA residential fall protection standards are contained in subpart M at 29 CFR section 1926.501(b)(13) and require fall protection (usually conventional fall protection, i.e. guardrail systems, safety net systems or personal fall arrest systems, fall restraint and fall positioning systems) for work six feet or more above lower levels, except where employers can demonstrate that such fall protection systems are infeasible or would create a greater hazard. The comparable California standard contained in Construction Safety Orders (CSO) section 1716.2 establishes a fall protection trigger height at 15 feet for residential and light commercial framing. Title 8 residential roofing standards specify trigger heights varying from zero to 20 feet depending on the type and slope of the roof.

After Fed-OSHA promulgated subpart M in 1994, representatives of the residential construction industry argued that they needed more compliance flexibility than the standard allowed. As a result, Fed-OSHA issued Standard Instruction 3.1<sup>1</sup> on December 8, 1995, which established an interim compliance policy that permitted employers engaged in certain residential construction activities to use specified alternative procedures instead of conventional fall protection. These alternative procedures could be used without a prior showing of infeasibility or greater hazard and without a written, site specific fall protection plan. On June 18, 1999, Fed-OSHA issued Standards Directive (STD) 3-0.1A<sup>2</sup>, re-designated as STD 03-00-001 a plain language replacement for Standard Instruction 3.1. California did not adopt either of the Fed-OSHA directives and continued to enforce its established residential framing and roofing industry fall protection standards which emphasized the use of positive fall protection means, albeit at higher trigger heights than Fed-OSHA, together with employee training.

On December 16, 2010, Fed-OSHA published another instruction designated STD 03-11-002<sup>3</sup> which rescinded STD 03-00-001. In this new compliance guidance, employers engaged in residential construction must comply with 29 CFR section 1926.501(b)(13) requiring workers engaged in residential construction six feet or more above lower levels to be protected from

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<sup>1</sup> Federal Occupational Safety and Health Administration (Fed-OSHA). Interim Fall Protection Compliance Guidelines for Residential Construction. <https://www.osha.gov/enforcement/directives/std-31>

<sup>2</sup> Fed-OSHA. Plain Language Revision of OSHA Instruction STD 3.1, Interim Fall Protection Compliance Guidelines for Residential Construction. <https://www.osha.gov/enforcement/directives/std-03-00-001>

<sup>3</sup> Fed-OSHA. Compliance Guidance for Residential Construction. <https://www.osha.gov/enforcement/directives/std-03-11-002>

falls by conventional fall protection. The new guidance also stipulated that if employers are able to demonstrate that the use of such measures is infeasible or presents a greater hazard, they may implement a written, site-specific fall protection plan. As a result of the December 16, 2010 compliance guidance, Fed-OSHA began the process of reviewing all corresponding state plan standards, policies and procedures covering fall protection in residential construction. This process was performed to ensure that state plan residential fall protection standards conformed to their counterpart Fed-OSHA construction fall protection standards.

In a letter to the Division of Occupational Safety and Health (Cal/OSHA) dated May 28, 2013<sup>4</sup>, Fed-OSHA expressed concern over the non-conformity of California's residential fall protection standards with those of Fed-OSHA and asserted that California's 15 foot trigger heights for residential construction, and varying trigger heights for residential roofing operations, did not provide California workers with protection from falls equal to that provided by Fed-OSHA standards specifying a six foot trigger height. Hence the necessity for California to lower its residential construction fall protection trigger height from their present trigger heights to six feet.

In response to Fed-OSHA concerns, the Board staff convened an advisory committee meeting on November 3 and 4, 2015, to discuss California versus Fed-OSHA residential fall protection standards in terms of their effectiveness and the necessity to address any issues that may merit amendments to title 8 residential fall protection standards. Findings from this meeting were presented to the Board at their January 21, 2016 Business meeting in Costa Mesa, California. At that time the Board concluded that action to address the trigger height issue in residential construction was needed and directed staff to *"...treat as high priority and work expeditiously with stakeholder involvement, to assure California's regulatory compliance with Federal construction industry fall protection standards."*

In response to the Board's directive, Board staff convened an advisory committee on April 11, 2016, which reached consensus with Cal/OSHA and Fed-OSHA participation on proposed amendments to CSO sections 1671.1, 1716.2, 1730 and 1731. This rulemaking proposal reflects the committee's consensus and addresses the central issue, consisting of a reduction in the fall protection trigger heights for residential construction and residential roofing from their present trigger heights to six feet consistent with the Fed-OSHA standard. The proposal also addresses new and amended residential framing and roofing definitions and a reorganization/clarification of the roofing standards with regard to roof slope and required fall protection. The proposal expands its scope to include custom home construction as well as production style housing, roofing and re-roofing operations. Furthermore, the proposal addresses Fed-OSHA's concern over the non-conformity of California's residential fall protection plan, namely that it should clarify to employers that they must be able to demonstrate that the use of conventional fall

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<sup>4</sup> Letter from Fed-OSHA to Cal/OSHA Chief, dated May 28, 2013.

<https://www.dir.ca.gov/oshsb/documents/Federal-Fall-Protection-Trigger-Heights-for-Residential-Construction-AC-Letter-5-28-13.pdf>

protection measures is infeasible or presents a greater hazard, before implementing a site-specific fall protection plan.

The Board evaluated the proposed regulations pursuant to Government Code section 11346.5(a)(3)(D) and has determined that the regulations are not inconsistent or incompatible with existing state regulations. This proposal is part of a system of occupational safety and health regulations. The consistency and compatibility of that system's component regulations is provided by such things as: (1) the requirement of the federal government and the Labor Code that the State regulations be at least as effective as their federal counterparts, and (2) the requirement that all state occupational safety and health rulemaking be channeled through a single entity (the Board).

The Board has evaluated the comparable federally-mandated standards [Federal Register, Volume 59, No. 152, beginning on page 40,672, Safety Standards for Fall Protection in the Construction Industry, August 9, 1994] and has found no substantial difference from existing federal rules (See California Government Code 11346.5(a)(3)(D)).

### **Anticipated Benefits**

- California will continue to meet its statutory obligation set forth in Labor Code section 142.3(a)(2) to adopt standards that are at least as effective as those promulgated by Fed-OSHA for all occupational safety and health issues addressed by Fed-OSHA standards.
- The Cal/OSHA program will avoid the possibility of Fed-OSHA imposing concurrent jurisdiction and enforcing the Federal standard upon California employers, thus creating regulatory and enforcement liability confusion.
- This proposal is expected to generate both benefits in terms of improved worker safety, as well as benefits for residential roofing and framing contractors. The benefits of the proposed regulation are the reduction in fatalities and injuries at heights below the current trigger height and above the proposed six foot trigger height. Roofing and framing workers would be the primary beneficiaries of this proposed regulatory change.
- A safer residential construction workplace contributes to improved worker health, morale, and may increase productivity.
- The proposed amendments are also anticipated to provide benefits to businesses by a reduction in accident/fatality rates as well as a reduction in health care expenditures and lower workers' compensation (WC) rates.
- Incentives to innovate new products, materials or processes could help businesses find more innovative ways to meet the standards at lower costs, thus slightly reshaping how framing and roofing activities under 15 feet are conducted.

The specific changes are as follows:

**Section 1671.1. Fall Protection Plan.**

This section contains requirements which pertain to the development and administration of fall protection plans at construction jobsites. Subsection (a) is essentially a scope and application subsection and explains the circumstances when a fall protection plan may be used in lieu of conventional fall protection methods. Amendments are proposed to clarify, consistent with Fed-OSHA standards, when a fall protection plan may be used; and make clear that the employer has to demonstrate that the use of conventional fall protection systems is infeasible as opposed to impractical as currently worded. This is necessary to address Fed-OSHA's concern and ensure that section 1671.1 will be commensurate with the Fed-OSHA standard, as required by Labor Code section 142.3.

In addition, an informative Note is proposed, which is verbatim of Fed-OSHA fall protection plan language<sup>5</sup>, to clarify that the employer has the burden of establishing that conventional fall protection methods are not feasible or create a greater hazard, prior to implementing a fall protection plan. These proposed amendments will ensure complete protection for employees engaged in construction activities and render California standards commensurate with those of Fed-OSHA.

The proposal follows the existing title 8, CSO format and organization as far as how the State's fall protection standards are displayed. Residential framing is contained within section 1716.2 and residential roofing standards are contained within sections 1730 and 1731. The most profound amendments in this proposal are the elimination of the 15 and 20 foot residential construction fall protection trigger heights in favor of the federal six foot trigger height.

**Section 1716.2. Wood and Light Gage Steel Frame Construction, Residential/Light Commercial.**

This existing section addresses standards pertaining to the framing of residential and light commercial structures which include but are not limited to: scope and application, definitions, construction methods during various stages of construction such as raising walls, stabilization of structures, working on floors and walking/working surfaces and the use of fall protection at elevations 15 feet above the level below.

Amendments are proposed to change the section title to delete the words "Residential/Light Commercial" at the end of the title for replacement by the words "Residential-type Framing Activities" at the beginning of the title consistent with the amended content of section 1716.2.

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<sup>5</sup> Federal Register, Volume 59, Issue No. 152, Tuesday, August 9, 1994, Safety Standards for Fall Protection in the Construction Industry (120 pages). <https://www.govinfo.gov/content/pkg/FR-1994-08-09/html/94-19000.htm>

An editorial amendment is proposed for subsection (a) adding the words “and light commercial” to the scope and application, consistent with the intent and content of section 1716.2. The proposed amendments will aid the regulated public in understanding that this standard also applies to framing activities associated with light commercial structures. Light commercial framing involves wood frame construction materials and methods identical to residential-type construction.

Further amendments are proposed to the definition of residential-type framing activities in subsection (b)(7) to add Fed-OSHA language from STD 03-11-002 defining residential-type construction in terms of the use of structural steel and clarifying that residential-type framing activities include commercial structures that use wood frame construction materials and methods. The definition will aid the regulated public in understanding the scope of the regulation and will ensure clarity and consistency with Fed-OSHA residential construction enforcement policy.

It is also proposed to delete subsection (b)(10) which defines slide guards, as the use of such devices as a means of fall protection is not permitted by Fed-OSHA standards. Additionally, it is proposed to renumber the remaining Definitions subsections for title 8 format consistency. The former proposed change will ensure California’s framing standards are commensurate with comparable federal standards and the latter is editorial in nature.

Amendments are proposed for subsection (e)(1) with regard to lowering the fall protection trigger height from 15 feet to six feet for employees working on top plate, joists and roof structure during framing. The proposed amendment will require employers to provide positive fall protection when employees work above the lower, six foot, trigger height, consistent with what is required by Fed-OSHA in 29 CFR section 1926.501(b)(13). In addition, amendments are proposed to list each type of permissible fall protection method to help employers understand what is explicitly required, yet give employer choices on how to ensure compliance. Additional language is proposed to clarify to the employer that the use of fall protection plans is permitted only when the employer has demonstrated that the use of conventional fall protection methods is infeasible. It is proposed to remove the phrase that cites CSO article 24, to address Fed-OSHA’s concern of referencing less protective fall protection measures. These proposed amendments will ensure complete protection for employees engaged in residential framing and render California standards commensurate with those of Fed-OSHA.

Amendments are proposed to delete subsection (A) of the exception to (e)(1) pertaining to walking/working on joists, rafters or roof trusses, to address Fed-OSHA’s concern and to ensure that the use of conventional fall protection methods will be explicitly required. The deletion of this exception will ensure California’s framing standards are commensurate with Fed-OSHA standards and the requirement to use fall protection.

Further amendments are proposed to delete subsection (B) of the exception to (e)(1) pertaining to joists laid upon top plates, to address Fed-OSHA’s concern and to ensure that the use of conventional fall protection methods will be explicitly required. The deletion of this exception

will ensure California's framing standards are commensurate with federal standards and the requirement to use fall protection.

Amendments are proposed for subsection (f) to lower the fall protection trigger height from 15 feet to six feet for floor work and other walking surfaces to ensure California fall protection standards conform to counterpart federal residential construction language. The proposed amendment will require the employer to implement a method of positive fall protection at a reduced working elevation. Amendments are also proposed to relocate the phrase "the surrounding grade or floor level below" earlier in the subsection for clarity. In addition, amendments are proposed to list each type of conventional fall protection method to help employers understand what is explicitly required, yet give employers choices on how to ensure compliance. Additional language is proposed to clarify to the employer that the use of fall protection plans is permitted only when the employer has demonstrated that the use of conventional fall protection methods is infeasible. It is proposed to remove the phrase that cites CSO article 24, to address Fed-OSHA's concern of referencing less protective fall protection measures. These proposed amendments will ensure complete protection for employees engaged in residential framing and render California standards commensurate with those of Fed-OSHA.

A new subsection is proposed to be added following subsection (f) to clarify to the employer that fall protection requirements for work around floor, roof or wall openings are found in CSO section 1632. Proposed subsection (f)(1) will aid the regulated public in understanding that employees need to be protected against falls from temporary floor and roof openings and will ensure that the employer knows which types of fall protection measures must be utilized. This proposed change is to provide consistency with existing title 8 regulations.

Amendments are proposed for subsection (g)(1) pertaining to work on starter board, roof sheathing and fascia board, to clarify to the employer that the employees are to be protected at all times from falls to the surrounding grade or level below when working at elevations above six feet. In addition, amendments are proposed to list each type of conventional fall protection method to help employers understand what is explicitly required, yet give employers choices on how to ensure compliance. Additional language is proposed to clarify to the employer that the use of fall protection plans is permitted only when the employer has demonstrated that the use of conventional fall protection methods is infeasible. It is also proposed to remove the phrase that cites CSO article 24, to address Fed-OSHA's concern of referencing less protective fall protection measures. These proposed amendments will ensure complete protection for employees engaged in residential framing and render California standards commensurate with those of Fed-OSHA.

Further amendments are proposed to delete subsection (g)(1)(A) relating to a 15 foot trigger height, (g)(1)(B) which refers to sloped roofs greater than 7:12, and an exception to (g)(1)(B) which permits the use of slide guards in lieu of fall protection. These proposed deletions will ensure complete protection for employees engaged in residential framing and render California standards commensurate with those of Fed-OSHA. These proposed modifications will also

ensure consistency with the other changes proposed in these amendments associated with the trigger height, roofing and the use of slide guards.

It is also proposed to delete subsection (g)(2) as this is not a conventional means of fall protection and is therefore not commensurate with Fed-OSHA standards. This deletion will ensure California's framing standards are commensurate with Fed-OSHA standards and the requirement to use fall protection.

Existing subsection (g)(3) is editorially renumbered as (g)(2) consistent with title 8 format. Additional revisions are proposed to add language in the new (g)(2) to address the requirement to use conventional means of fall protection to protect employees working at six feet or more above the surrounding grade or floor level below, and to list each type of conventional fall protection method allowed. Additional amendments are proposed to clarify to the employer that the use of fall protection plans is permitted only when the employer has demonstrated that the use of conventional methods is infeasible. It is also proposed to remove the phrase that cites CSO article 24, to address Fed-OSHA's concern of referencing less protective fall protection measures. These proposed amendments will ensure complete protection for employees engaged in residential framing and render California standards commensurate with those of Fed-OSHA.

The exception to existing (g)(3) is proposed to be deleted as it is inconsistent with federal residential fall protection standards which do not contain such an exception. California proposes to not allow employers to bypass residential fall protection requirements for employees working at or above six feet by use of the short duration exception. This deletion will ensure California's framing standards are commensurate with Fed-OSHA standards and the requirement to use fall protection.

Amendments are proposed for subsection (i) which contains requirements for the use of scaffolds during residential-type construction. Subsection (i)(2) pertains to the use of scaffolds and permits the omission of the interior railing when the scaffold is placed next to a wall (on the wall side of the scaffold) to install joists, rafters or trusses under certain specified conditions relating to scaffold platforms that are 15 feet or less from the interior floor below. It is proposed that the 15 foot trigger height be changed to six feet. The proposed amendment will avert confusion and ensure that subsection (i)(2) is consistent with the rest of section 1716.2 which is proposed to be based upon a six foot fall protection trigger height rather than 15 feet. The proposed amendments will also ensure that employees are protected from a fall whenever they work at elevations at six feet or higher.

### **Section 1730. Roof Hazards.**

This section contains standards that address roof hazards associated with the roofing and non-residential structures which include but are not limited to: fall protection methods as a function of roof slope and the hazards associated with the use of equipment on the roof.



Subsection (a) refers the employer to sections 1509 and 1510, regarding accident and injury prevention. A sentence for (a) is added to inform the employer that section 1730 does not apply to residential-type roofing activities defined in section 1731. This amendment will clarify and differentiate to the employer the scope and application of the two title 8 roofing safety orders; one commercial, one residential.

Further amendments are proposed to convert the Note found after subsection (f), which determines how the employee's working measurement is to be taken, into a new subsection (g). This proposed revision makes clear to employers how the employee's height working measurement is to be taken, and deletes the words "lowest edge of the roof or eaves", which could cause misunderstandings. The proposed amendments are necessary to clarify to the employer how this critical measurement is to be taken, and fall protection is to be implemented, consistent with the comparable Fed-OSHA standard.

It is also proposed to delete the exception to section 1730, which follows revised subsection (g), since this clarification has been incorporated into the proposed amendments of subsection (a). This deletion will ensure consistency with other amendments in this proposal and compliance with Fed-OSHA fall protection standards.

### **Section 1731. Roof Hazards - New Production-Type Residential Construction.**

This section contains safety standards addressing hazards associated with residential construction. To be consistent with the proposed amendments described below which would address both new residential and existing residential roofing operations, it is proposed that the section title be reworded to simply read: "Residential-type Roofing Activities" for consistency with the section 1716.1 title which refers to residential-type framing activities.

Subsection (a) pertains to Scope and Application. Subsection (a)(1) applies to work on new production-type residential construction with roof slopes 3:12 or greater. Amendments are proposed to reword existing subsection (a)(1) to read that it pertains to residential-type roofing activities regardless of roof slope and whether it is new production type residential construction. Amendments are also proposed to delete subsection (a)(1) and make the proposed text part of subsection (a). The proposed amendment is necessary to ensure the California standard conforms with the Fed-OSHA standard which pertains to all types of residential roofing operations: new, existing and regardless of roof slope.

It is further proposed to delete existing subsection (a)(2), which states that "this section does not apply to custom-built homes, re-roofing operations, roofing replacements or additions on existing dwelling units", since the comparable Fed-OSHA standards have no such limitations. The proposed amendments will ensure that the California standard conforms to Fed-OSHA standards.

The Note following existing subsection (a)(2) is also proposed for deletion to ensure employers are clear about the amended scope applying to all forms of residential roofing activities without

regard to slope as the amended section 1731 standards would apply to all residential roofing activities.

### **Subsection (b) Definitions.**

Existing subsection (b) contains six definitions for terms used in section 1731. The definitions for “custom-built home”, “eaves”, “production-type residential construction”, and “roof work” are proposed to be deleted. Deletion of the terms custom-built home and production-type residential construction are necessary to ensure that it is clear to the employer that the amended section 1731 applies to all types of residential construction activities. The definition of “eaves” is proposed to be deleted since the term is no longer used in this section. The definition of “roof work” is proposed to be deleted but consolidated under the new proposed definition of “residential-type roofing activities” a new term proposed for subsection (b) which defines roofing and re-roofing work for various types of residential habitation as well as the other structures called out in section 1716.2. The proposed definition includes various other residential roofing operations including, but not limited to, loading and installation of roofing materials. These proposed amendments will ensure that California’s residential roofing standards are inclusive and hence commensurate with the comparable Fed-OSHA standard.

### **Subsection (c) Fall protection for roofing work.**

Existing subsection (c) contains standards segregated into two subsections (c)(1) and (c)(2) that are designed to prevent falls from heights during roofing activities. They are based upon the slope (steepness) of the roof and the working elevation above the grade or level below. The slope of the roof determines the actions employers are to take to protect their employees from a fall when they work at elevations above 15 feet which include, but are not limited to: personal fall protection, guardrails and scaffolds. Amendments are proposed to create a new subsection (c)(1) to address protecting employees against falling from roofs with slopes 0:12 up to and including 7:12, and reduce the trigger height to when the employee fall distance is six feet or more above the grade or level below. In addition, amendments are proposed to list each type of conventional fall protection method to help employers understand what is explicitly required, yet give employers choices on how to ensure compliance. Additional language is proposed to clarify to the employer that the use of fall protection plans is permitted only when the employer has demonstrated that the use of conventional methods is infeasible. These proposed amendments will ensure complete protection for employees engaged in residential roofing activities and render California standards commensurate with those of Fed-OSHA.

Further amendments are proposed to delete existing subsection (c)(1)(A) through (c)(1)(F) pertaining to the types of fall protection to be used according to a roof slope greater than 3:12, which is no longer needed given the proposed amendments to subsection (c)(1) which addresses fall protection and roof slopes from 0:12 to 7:12 (inclusive of 3:12). These proposed amendments will improve clarity and ensure title 8 residential roofing standards are commensurate with Fed-OSHA standards in terms of the use of conventional fall protection and fall protection plans.

Subsection (c)(2) addresses roof slopes greater than 7:12. Amendments are proposed to replace the term “steeper” with “greater”, and clarify that this paragraph addresses roof slopes greater than 7:12. Further amendments are proposed to clarify that personal fall protection is to be used as prescribed in subsection (c)(1) regardless of height (essentially a zero trigger height).

These proposed amendments will continue to permit the employer selective discretion as far as which fall protection method(s) to use per their site and construction circumstances, thereby ensuring that the most effective method is utilized or combination of methods to prevent employee falls. Reorganizing the slope ranges into two distinct groups conforms to the recommendation of the advisory committee and will simplify the proposed standard by aiding the employer in recognizing when and what types of fall protection actions need to be taken according to their situation and provide conformity with Fed-OSHA standards.

### **Subsection (e).**

Amendments are proposed to add a new subsection (e) following subsection (d), which explains and clarifies to the employer how the roof-to-ground measurement is to be taken. These proposed amendments will also clarify that the height of parapets shall not be included in the roof height measurement. These proposed amendments will aid the regulated public in understanding how this critical measurement is to be taken and how fall protection is to be implemented, consistent with California standards, proposed amendments in section 1730, and comparable Fed-OSHA standards.

## **DISCLOSURES REGARDING THE PROPOSED ACTION**

**Mandate on Local Agencies or School Districts:** None.

**Cost or Savings to State Agencies:** None.

The proposed regulations are not expected to have a significant fiscal impact on state and local governments. However, there are several areas where minor fiscal impacts could occur. For example, state and local governments both own and develop property for administrative use. If any new properties are constructed that meet the definition of residential construction in the proposed regulation, then the framing and roofing costs of such projects would increase by the incremental amount outlined in the direct cost section. This could apply to any single-story residences constructed by state and local governments, or the first-story of any multi-story residential dwellings. Data was not available to complete a detailed quantitative assessment of these impacts; however, after consultation with the Department of General Services (DGS), there are not expected to be many units built by the State that would be subject to the lower trigger height.

**Cost to any Local Government or School District which must be Reimbursed in Accordance with Government Code Sections 17500 through 17630:** None.

**Other Nondiscretionary Cost or Savings Imposed on Local Agencies:** None.

The proposed regulations are not expected to have a significant fiscal impact on local agencies.

**Cost or Savings in Federal Funding to the State:** None.**Cost Impacts on a Representative Private Person or Business:**

The proposed amendments are expected to primarily affect residential framing operations (North America Industry Classification System (NAICS) code 238130), and roofing/re-roofing operations (NAICS code 238160) in California. These businesses will be required to provide fall protection to all employees working at heights greater than six feet above the surrounding level, in conformance with Fed-OSHA's residential construction regulations. The current California standards require fall protection only for heights of 15 feet and above.

The additional compliance costs are the incremental costs necessary to provide workers additional fall safety protections, including the costs of harness systems, scaffolding, and fall protection plans. These costs are expected to ultimately be passed along to consumers, and roofing and framing businesses are likely to raise their prices for services marginally.

The California legislature defines small businesses as businesses that have fewer than 100 employees, are not dominant in their field, and are independently owned and operated. Both of the roofing and framing businesses are predominately comprised of small businesses. According to U.S. Census Bureau data, in 2015 95.3% of framing contractors and 99.1% of roofing contractors, respectively, had fewer than 100 employees. This suggests that small businesses will bear nearly all of the compliance costs of the proposed regulation.

Direct compliance costs identified in the 2019 SRIA were revised to account for inflation (using the Department of Finance (DOF) Consumer Price Index for All Urban Consumers (CPI-U) forecast and long term projections values) and are estimated to be on average \$84 million per year for 2023 and \$104 million per year for 2030. Compliance costs for residential framers are expected to range from \$54-\$66 million per year. Compliance costs for residential roofers are expected to range from \$30.5-\$38 million per year.

Direct benefits for workers in residential framing and roofing are estimated to total approximately \$84 million per year once these amendments are fully implemented. Avoided mortality is expected to account for 39% of these benefits (\$32.6 million) and avoided injuries account for 61% of the benefits (\$51.2 million). Roofing and framing workers would be the primary beneficiaries of this proposed regulatory change.

The Board also expects that the proposed amendments will provide benefits to businesses by a reduction in accident/fatality rates, a reduction in health care expenditures and lower WC rates.

While there are no direct impacts on housing costs expected, there is a potential for indirect impacts to the extent that developers choose to pass on compliance costs to their customers. If developers pass on all costs to their customers, the impact would be the equivalent of about \$536 per housing unit, or 0.1% of the July 2023 median home sales price of \$832,340.<sup>6</sup>

**Statewide Adverse Economic Impact Directly Affecting Businesses and Individuals: Including the Ability of California Businesses to Compete:**

The proposed amendments will require that businesses engaged in residential roofing and framing activities provide fall protection to all employees working at heights of six feet or greater, in conformance with Fed-OSHA's residential construction regulations. The proposed amendments are based on performance standards rather than prescriptive standards and California Labor Code section 142.3 requires California occupational safety and health regulations to be at least as effective as Fed-OSHA standards. The current California standards require fall protection for heights of 15 feet and above, thus, the Board has determined that this proposal will not result in a significant, statewide adverse economic impact directly affecting businesses and individuals.

The Board does not anticipate that California businesses will be at a competitive disadvantage with framing or roofing businesses outside of the state, because the six feet trigger height is based on existing Fed-OSHA performance standards and California Labor Code section 142.3 requires California occupational safety and health regulations to be at least as effective as Fed-OSHA standards. Likewise, companies seeking to do business in California are likely to incur, on average, identical costs.

**Significant Effect on Housing Costs:**

The compliance costs discussed in the 2019 SRIA are the incremental costs of compliance for roofing and framing activities conducted at heights between six feet and 15 feet, and will primarily affect single-story residential housing units, since work done at heights 15 feet and above are already covered under the current California rules. These incremental costs include the costs of harness systems, scaffolding, and fall protection plans.

The 2019 SRIA analysis assumed that complying with the lower trigger height would result in an additional compliance cost for providing scaffolding for re-roofing projects to be on average \$320 per dwelling. For roofing projects, the 2019 SRIA estimated an incremental unit cost for providing fall protection with scaffolding systems to be on average of \$500 per unit/dwelling. The average incremental cost for providing scaffolding for framers working on single-story, single-family units is \$1,176 per unit. For the first story of multi-story, single-family units, the incremental cost is on average \$1,279 per unit. The incremental cost of providing scaffolding for multi-family homes is expected to be approximately \$125 per unit. This cost is considerably

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<sup>6</sup> Source: California Association of Realtors (July 2023 median home sales price).

lower because of the higher dwelling density and the lower number of exterior walls that require framing.

While there are no direct impacts on housing costs expected, there is a potential for indirect impacts to the extent that developers choose to pass on compliance costs to their customers. If developers pass on all costs to their customers, the impact would be the equivalent of about \$536 per housing unit, or 0.1% of the July 2023 median home sales price of \$832,340.

### **SMALL BUSINESS DETERMINATION**

The Board has determined that the proposed amendments may affect small businesses, primarily independent residential framers and roofers, and there will be a cost impact attributable to the reduction in fall protection trigger heights from their present thresholds.

Direct compliance costs identified in the 2019 SRIA were revised to account for inflation (using CPI-U forecast and long term projection values) and are estimated to be on average \$84 million per year for 2023 and \$104 million per year for 2030. Compliance costs for residential framers are expected to range from \$54-\$66 million per year. Compliance costs for residential roofers are expected to range from \$30.5-\$38 million per year. Costs vary primarily due to differences in assumed growth rates of the residential construction sector. These slight adverse economic impacts assume that the incremental fall protection costs in residential construction are passed along to consumers and thus raise the prices of framing and roofing operation services marginally.

The proposed amendments are also anticipated to provide benefits to businesses by a reduction in accident/fatality rates as well as a reduction in health care expenditures and lower WC rates.

### **RESULTS OF THE STANDARDIZED REGULATORY IMPACT ANALYSIS (SRIA)**

California Labor Code section 142.3 requires California occupational safety and health regulations to be at least as effective as Fed-OSHA standards. The Board is proposing to amend fall protection rules for residential construction activities. The proposed changes would lower the height at which fall protection is required for residential framing from 15 feet to six feet and for residential roofing from 15 feet to six feet to conform to Fed-OSHA's six foot trigger height for residential construction.

The 2019 SRIA conducted by Berkeley Economic Advising and Research (BEAR) LLC provides an economic analysis of the Board's proposed revisions to the residential framing and roofing fall protection standards. The analysis identifies the affected industries, potential direct compliance costs for each industry, and expected direct benefits from improved worker safety.

The proposed regulation is expected to primarily affect businesses and employees in two industries: residential framing and residential roofing. Under current regulations, for most

residential framing and roofing activities, employees working on a single-story dwelling, or the first story of a multi-story dwelling, are not required to have fall protection. The compliance costs discussed in the 2019 SRIA are the incremental costs of compliance for roofing and framing activities conducted at heights between six feet and 15 feet, since work done at heights 15 feet and above are already covered under the current California rules. Residential framing and roofing businesses would be affected primarily by incurring increased compliance costs. Direct compliance costs identified in the 2019 SRIA were revised to account for inflation (using the CPI-U forecast and long term projections values) and are estimated to be on average \$84 million per year for 2023 and \$104 million per year for 2030. The updated direct benefits are estimated to be approximately \$84 million per year.

### **The Creation or Elimination of Jobs in the State.**

The proposed regulation is expected to primarily affect businesses and employees in two industries: residential framing and residential roofing. Businesses engaged in residential roofing and framing activities will be required to provide fall protection to all employees working at heights greater than six feet above the surrounding level, in conformance with Fed-OSHA's residential construction regulations. According to Fed-OSHA, California is the only state in the nation currently not complying with the mandate to provide fall protection at heights greater than six feet. The current California standards require fall protection only for heights of 15 feet and above. No jobs creation or elimination is expected among employees working in roofing and framing activities due to decreasing the trigger height for providing fall protection from 15 feet down to six feet. While the point estimate of jobs lost is zero, the range is up to 84 full-time equivalent (FTE) lost economy wide (or 0.0005% of total nonfarm jobs) if all 84 FTE translate to full-time jobs lost. However, businesses may instead reduce hours of employees without layoffs.

Workers in the residential framing and roofing industry would be affected primarily through the reduction in fall-related fatalities and non-fatal injuries.

### **The Creation of New Businesses or the Elimination of Existing Businesses in the State.**

Although the proposed amendments to the fall safety standards will apply to residential framing operations (NAICS code 238130), and roofing/re-roofing operations (NAICS code 238160) in California, no business loss or creation is expected from lowering the requirement to six feet. The amendments will provide safety equivalent to that provided by the comparable Fed-OSHA regulation as it applies to residential construction and related roofing operations.

According to the 2019 SRIA, compliance costs in the residential construction sector are expected to have a negligible impact on the California economy.

**The Expansion of Businesses Currently Doing Business in the State.**

Businesses engaged in residential roofing and framing activities are already required to provide fall protection. The proposed regulation could create new demand for scaffolding and harness systems, however, existing firms are likely to absorb any new demand.

**The Competitive Advantages or Disadvantages for Businesses Currently Doing Business in the State.**

The proposed amendments will require that businesses engaged in residential roofing and framing activities provide fall protection to all employees working at heights of six feet or greater, in conformance with Fed-OSHA's residential construction regulations. In addition, the current Cal/OSHA standards require fall protection for heights of 15 feet and above.

Since all residential roofing and framing activities in the state are covered by the proposed amendments, the Board does not expect the proposed regulation to put California businesses at a competitive disadvantage relative to framing and roofing businesses outside of the state. All companies seeking to do business in California would incur, on average, identical costs.

Additionally, the slight adverse macroeconomic impacts observed in the 2019 SRIA assume that the incremental fall protection costs in residential construction are passed along to consumers and thus raise the prices of these services marginally.

**The Increase or Decrease of Investment in the State.**

The proposed amendments will require that businesses engaged in residential roofing and framing activities provide fall protection to all employees working at heights of six feet or greater, in conformance with Fed-OSHA's residential construction regulations. The current Cal/OSHA standards require fall protection for heights of 15 feet and above, so the proposed regulation is not expected to have a considerable impact on the increase or decrease of investment in the state.

**The Incentives for Innovation in Products, Materials, or Processes.**

The proposed regulation is not expected to have a considerable impact on innovation in the state. It is plausible that businesses will find more innovative ways to meet the standards at lower costs, thus slightly reshaping how framing and roofing activities under 15 feet are conducted. It is also plausible that the increased demand for fall protection equipment (both scaffolding and harness systems) could induce some innovation in those fields, but it is difficult to predict a priori what the innovation, if any, would look like. It is also impossible to say if such innovations would actually represent an enhancement to worker safety and be found to be acceptable for use as a true fall protection method by Cal/OSHA.



Another possible incentive would be a reduction in the employer's WC rates. All employers are required under the California Labor Code to purchase WC insurance for their employees. WC rates are influenced by metrics such as the experience modification or x-mod (the x-mod is a loss-based comparison of a given employers WC claims experience to other employers of a similar size operating in the same business and is used to tailor insurance costs to the characteristics of a given business). Any reduction brought about by the proposal resulting in a reduction in accident/fatality rates would have the effect of lowering the employer's x-mod and the employer's WC premium.

A safer residential construction workplace contributes to improved worker health, morale, and may increase productivity. The economic implications of a fall, injury or fatality upon a California residential framing and roofing business can be very significant. The avoidance of fatalities and severe injuries due to falls will save money, which will in turn benefit California businesses and residents.

### **Costs to Employers to Comply with Proposed Regulations.**

The proposed regulation is expected to primarily affect businesses and employees in two industries: residential framing and residential roofing. Under current regulations, for most residential framing and roofing activities, workers working on a single-story dwelling, or the first story of a multi-story dwelling, are not required to have fall protection. The compliance costs discussed in the 2019 SRIA are the incremental costs of compliance for roofing and framing activities conducted at heights between six feet and 15 feet, since work done at heights 15 feet and above are already covered under the current Cal/OSHA rules. These estimates include costs necessary to provide workers additional fall safety protections, including the costs of harness systems, scaffolding, and fall protection plans.

The California legislature defines small businesses as businesses that have fewer than 100 employees, are not dominant in their field, and are independently owned and operated. The proposed amendments to the residential fall protection standards are expected to primarily affect residential framing operations (NAICS code 238130), and roofing/re-roofing operations (NAICS code 238160) in California. Both of the industries are predominately comprised of small businesses. According to U.S. Census Bureau data, in 2015 95.3% of framing contractors and 99.1% of roofing contractors, respectively, had fewer than 100 employees. This suggests that small businesses will bear nearly all of the compliance costs of the proposed regulation.

Direct compliance costs identified in the 2019 SRIA were revised to account for inflation (using CPI-U forecast and long term projections values) and are estimated to be on average \$84 million per year for 2023 and \$104 million per year for 2030. Compliance costs for residential framers are expected to range from \$54-\$66 million per year. Compliance costs for residential roofers are expected to range from \$30.5-\$38 million per year. Costs vary primarily due to differences in assumed growth rates of the residential construction sector.

**Fiscal Impacts to Local and State Government.**

The proposed regulations are not expected to have a fiscal impact on state and local governments. State and local governments both own and develop property for administrative use. However, these new properties are neither directly built nor overseen/managed by local and state government while being built. Representatives from California Department of General Services (DGS) Real Estate Division – Project Management Development Branch and California Department of Housing and Community Development (HCD) stated that they either go through a bidding process to hire a contractor or third party inspectors to develop the property or check for code violations.

**Enforcement Costs.**

Under current conditions there is no reason to expect that the proposed regulations will have a fiscal impact on the implementing agency. Cal/OSHA will implement the propose regulations using currently approved resources and staffing levels.

**The Benefits of the Regulations, Including, but not Limited to, Benefits to the Health, Safety, and Welfare of California Residents, Worker Safety, Environment and Quality of Life, and any Other Benefits Identified by the Agency.**

The Board's proposal to lower the trigger height at which fall protection is required for residential construction is expected to generate both benefits in terms of improved worker health, safety, and welfare, as well as benefits for residential roofing and framing contractors. The benefits of the proposed regulation are the reduction in fatalities and injuries at heights below the current trigger height and above the proposed six foot trigger height. Roofing and framing workers would be the primary beneficiaries of this proposed regulatory change.

The proposed amendments are also anticipated to provide benefits to businesses by a reduction in accident/fatality rates as well as a reduction in health care expenditures and lower WC rates.

The proposed amendments will also allow the state of California to comply with Labor Code section 142.3, which requires that California have a system of occupational safety and health regulations that at least mirror the equivalent Fed-OSHA regulations, and avoid Fed-OSHA imposing concurrent jurisdiction (as the State of Arizona faced in 2015)<sup>7</sup>.

The additional compliance costs are the incremental costs necessary to provide workers additional fall safety protections, including the costs of harness systems, scaffolding, and fall

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<sup>7</sup> Fed-OSHA. Federal Register, Volume 80. Issue No. 25. Friday February 6, 2015. Rejection of Arizona's Standard for Fall Protection in residential construction. <https://www.osha.gov/laws-regs/federalregister/2015-02-06>

protection plans. These costs are expected to accrue to framing and roofing contractors, and ultimately would be passed along to consumers.

Incentives to innovate new products, materials or processes could help businesses find more innovative ways to meet the standards at lower costs, thus slightly reshaping how framing and roofing activities under 15 feet are conducted.

A safer residential construction workplace contributes to improved worker health, morale, quality of life, and may increase productivity. The economic implications of a fall, injury or fatality upon a California residential framing and roofing business can be very significant. The avoidance of fatalities and severe injuries due to fall, will save money, which will in turn benefit California residents. No significant environmental impact is anticipated from the proposed action.

### **Department of Finance (DOF) Comments on 2019 SRIA and Occupational Safety and Health Standard Board (Board) Responses.**

There were two concerns raised in DOF's comments on the 2019 SRIA.

**DOF Comment 1.** *"First, the benefits from avoided incidents should also increase over time in conjunction with increased permits. The estimates of costs are appropriately scaled by the amount of construction, but the benefits are assumed to be static."*

**Board Response to DOF Comment 1.** The benefits reflected in Table 6 (page 16 of the 2019 SRIA) have been revised to be scaled by the amount of actual construction, to account for inflation (using DOF CPI-U forecast and long term projections), to reflect the COVID-19 Recession, and take into account DOF's recent projections. For the revision, OSHSB utilized the [DOF California Economic Forecast – Annual & Quarterly](#), and [the DOF Consumer Price Index Forecast](#). Updated information from Table 6. Summary of Expected Benefits (Revised) is listed below:

#### **Avoided Mortality Benefits (in millions)**

Original Estimates = \$24.72

2023 Estimates (revised to account for inflation) = \$32.58

2030 Estimates (revised to account for inflation) = \$40.43

#### **Avoided Injuries Benefits (in millions)**

Original Estimate = \$38.87

2023 Estimates (revised to account for inflation) = \$51.22

2030 Estimates (revised to account for inflation) = \$63.58

#### **Total Benefits (in millions)**

Original Estimates = \$63.59

2023 Estimates (revised to account for inflation) = \$83.80

2030 Estimates (revised to account for inflation) = \$104.01

**DOF Comment 2.** *“Second, the SRIA must add and analyze a second alternative to the proposed standards, as a “no change” alternative is merely the baseline.”*

**Board Response to DOF Comment 2.** Table 13 (page 26 of the 2019 SRIA) has been revised to detail the second alternative that the OSHSB identified. Fall protection plans, a cheaper and less stringent alternative was considered. This alternative was originally rejected by the Board because fatalities and injuries would remain high and worker safety benefits would not be realized, and because fall protection plans are not at least as effective as the federal standard, as required by Labor Code 142.3. [The SRIA’s initial costs in 2015 dollar values were converted to 2023 dollar values by multiplying the initial cost by the ratio of CPI-U 2023 to CPI-U 2015. For example, 2023 value = (2015 value)\*(CPI for 2023 / CPI for 2015).] Updated information from Table 13. Compliance Costs by Sector for the Proposed Regulation, More Stringent and Less Stringent Alternatives (in millions) is listed below:

**Sector: New Roofs (revised dollar values in millions)**

- a) Proposed Regulation (2023) = \$5.26; (2030) = \$6.53
- b) Stricter Alternative (2023) = \$11.73; (2030) = \$14.56
- c) Less Stringent Alternative (2023) = \$0.32; (2030) = \$0.40

**Sector: Re-Roofing (revised dollar values in millions)**

- a) Proposed Regulation (2023) = \$25.25; (2030) = \$31.34
- b) Stricter Alternative (2023) = \$61.59; (2030) = \$76.45
- c) Less Stringent Alternative (2023) = \$0.76; (2030) = \$0.94

**Sector: Framing (revised dollar values in millions)**

- a) Proposed Regulation (2023) = \$53.54; (2030) = \$66.45
- b) Stricter Alternative (2023) = \$128.97; (2030) = \$160.08
- c) Less Stringent Alternative (2023) = \$0.55; (2030) = \$0.68

**Total for All Sectors (revised dollar values in millions)**

- a) Proposed Regulation (2023) = \$84.05; (2030) = \$104.32
- b) Stricter Alternative (2023) = \$202.30; (2030) = \$251.10
- c) Less Stringent Alternative (2023) = \$1.63; (2030) = \$2.02

**CONSIDERATION OF ALTERNATIVES**

The Board considered two regulatory alternatives, a less stringent alternative and a more stringent alternative.

First, a more stringent regulatory alternative (stricter) considers an alternate approach to mandating the trigger height requirement. Instead of allowing framing and roofing contractors the option to utilize either scaffolding or personal fall protection equipment, the stricter approach would mandate scaffolding for all work that would be covered under the new regulations. Therefore, the 2019 SRIA assumed that employers would comply with the lower trigger height requirement by using more expensive scaffolding systems rather than personal fall protection systems (i.e., harness systems).

The Board rejected the stricter alternative because the benefits would be similar to those estimated under the proposed regulation, suggesting that the regulatory alternative was not a cost-effective approach.

Second, a less stringent regulatory alternative was analyzed, where it was assumed that employers would use fall protection plans. However, this alternative was rejected because: fall protection plans do not provide a physical or positive means of protection against falls; fatalities and injuries would remain high; and worker safety benefits would not be realized. Similarly, fall protection plans would not comply with California Labor Code section 142.3(a)(2), which requires the Board to adopt regulations that are at least as effective as Fed-OSHA standards.

In accordance with Government Code section 11346.5(a)(13), the Board must determine that no reasonable alternative it considered to the regulation or that has otherwise been identified and brought to its attention would either 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 or would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provision of law than the proposal described in this Notice (see also Reasonable Alternatives to the Proposal and the Board's Reasons for Rejecting Those Alternatives, contained in the Initial Statement of Reasons).

The Board considered proposed alternatives that would lessen any adverse economic impact on business and invites interested persons to submit proposals at the scheduled public hearing or during the written comment period.

### **CONTACT PERSONS**

Inquiries regarding this proposed regulatory action may be directed to Autumn Gonzalez (Chief Counsel) or the back-up contact person, Amalia Neidhardt (Principal Safety Engineer) at the Occupational Safety and Health Standards Board, 2520 Venture Oaks Way, Suite 350, Sacramento, CA 95833; (916) 274-5721.

**AVAILABILITY OF STATEMENT OF REASONS, TEXT OF THE PROPOSED REGULATIONS AND  
RULEMAKING FILE**

The Board will have the entire rulemaking file available for inspection and copying throughout the rulemaking process BY APPOINTMENT Monday through Friday, from 8:00 a.m. to 4:30 p.m., at the Board's office at 2520 Venture Oaks Way, Suite 350, Sacramento, California 95833. Appointments can be scheduled via email at [oshsb@dir.ca.gov](mailto:oshsb@dir.ca.gov) or by calling (916) 274-5721. As of the date this Notice of Proposed Action is published in the Notice Register, the rulemaking file consists of this Notice, the proposed text of the regulation, the Initial Statement of Reasons and supporting documents. Copies may be obtained by contacting Autumn Gonzalez or Amalia Neidhardt at the address or telephone number listed above.

**AVAILABILITY OF CHANGED OR MODIFIED TEXT**

After holding the hearing and considering all timely and relevant comments received, the Board may adopt the proposed regulations substantially as described in this Notice. If the Board makes modifications which are sufficiently related to the originally proposed text, it will make the modified text (with the changes clearly indicated) available to the public at least 15 days before the Board adopts the regulations as revised. Please request copies of any modified regulations by contacting Autumn Gonzalez or Amalia Neidhardt at the address or telephone number listed above. The Board will accept written comments on the modified regulations for at least 15 days after the date on which they are made available.

**AVAILABILITY OF THE FINAL STATEMENT OF REASONS**

Upon its completion, copies of the Final Statement of Reasons may be obtained by contacting Autumn Gonzalez or Amalia Neidhardt at the address or telephone number listed above or via the internet.

**AVAILABILITY OF DOCUMENTS ON THE INTERNET**

The Board will have rulemaking documents available for inspection throughout the rulemaking process on its web site. Copies of the text of the regulations in an underline/strikeout format, the Notice of Proposed action and the Initial Statement of Reasons can be accessed through the Board's website at <http://www.dir.ca.gov/oshsb/proposedregulations.html>.