

**OCCUPATIONAL SAFETY
AND HEALTH STANDARDS BOARD**

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

**TITLE 8: Chapter 4, Subchapter 4, Article 29, Section 1710
of the Construction Safety Orders**

Column Stability for Structural Steel Erection**SUMMARY**

This rulemaking action is initiated as a result of a Division of Occupational Safety and Health (Division) memorandum dated November 15, 2004. Construction Safety Orders (CSO) Section 1710 pertains to structural steel erection activities and subsection 1710(f)(1)(A) requires that all columns for steel erection structures be anchored by a minimum of 4 anchor rods (anchor bolts). The purpose of this standard is to ensure the stability of columns for the safety of ironworkers during structural steel erection work.

Engineering calculations demonstrate that columns can be braced to provide equal or superior stability to that currently required in subsection 1710(f)(1)(B) for steel columns anchored by 4 anchor bolts. The proposal would provide an exception to subsection 1710(f)(1)(A) to permit the guying or bracing of columns when such guying or bracing provides strength and stability required of steel columns anchored by a minimum of 4 anchor bolts.

Section 1710. Structural Steel Erection.

Section 1710 sets forth the requirements to protect employees from the hazards associated with steel erection activities.

Subsection 1710(f)(1)(A)

Subsection 1710(f) provides general requirements for erection stability. Subsection 1710(f)(1)(A) requires that columns shall be anchored by a minimum of 4 anchor bolts in order to provide stability to the column during erection. Subsection 1710(f)(1)(B) provides that each column anchor rod (anchor bolt) assembly, including the column-to-base plate weld and the column foundation, shall be designed to resist a minimum eccentric gravity load of 300 pounds located 18 inches from the extreme outer face of the column in each direction at the top of the column shaft. A very small minority of steel erection structures utilize steel tube columns that by design do not utilize anchor bolts in the erection process. Instead of anchor bolts, these

columns are temporarily braced until 4 columns are erected with all beams in place to provide stability to the structural steel frame.

An “exception” is proposed to subsection 1710(f)(1)(A) that would permit the guying or bracing of columns when such guying or bracing provides strength and stability required by subsection 1710(f)(1)(B). The Division stated that the proposed amendment is not only for steel tube columns, but is also necessary for some small columns for steel erection structures that are not adaptable to the installation of 4 anchor bolts. The amendment is necessary to permit an alternative method for ensuring the stability of certain structural steel columns during the erection of steel frame structures.

DOCUMENTS RELIED UPON

Memorandum dated November 15, 2004, to Keith Umemoto, Executive Officer, Occupational Safety and Health Standards Board, from Len Welsh, Acting Chief, Division of Occupational Safety and Health recommending an amendment to CSO Section 1710(f)(1)(A).

This document is 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, Sacramento, California.

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. The proposal will provide the employer the option to use alternative methods of ensuring the stability of steel columns during the erection of structures.

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 an initial determination that this proposal will not result in a statewide, adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states. The proposal will provide an option for the employer to use an alternative method to secure and stabilize columns. The Board has determined that the proposed amendments would not adversely affect businesses because the proposal provides an alternative or option to the existing requirements for anchoring steel columns.

Cost Impact on Private Persons or Businesses

The Board is not aware of any cost impact that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

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 standard does 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 amendment will not require local agencies or school districts to incur additional costs in complying with the proposal. Furthermore, this standard does 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.)

The proposed standard does not require local agencies to carry out the governmental function of providing services to the public. Rather, the standard requires local agencies to take certain steps

to ensure the safety and health of their own employees only. Moreover, the proposed standard does 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.)

The proposed standard does not impose unique requirements on local governments. All state, local, and private employers will be required to comply with the prescribed standard.

EFFECT ON SMALL BUSINESSES

The Board has determined that the proposed amendments would not affect small businesses as the proposal provides an alternative or option to the existing requirements for anchoring steel columns.

ASSESSMENT

The adoption of the proposed amendments to this standard 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.