

**OCCUPATIONAL SAFETY
AND HEALTH STANDARDS BOARD**

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**FINAL STATEMENT OF REASONS**

CALIFORNIA CODE OF REGULATIONS

TITLE 8: Chapter 4, Subchapter 4, Article 29, Section 1716.1(f)(1)
Construction Safety Orders

Approval of Structural Wood Framing System Erection Plans

There are no modifications to the information contained in the Initial Statement of Reasons.

SUMMARY AND RESPONSE TO ORAL AND WRITTEN COMMENTS**I. Written Comments**

Mr. C. Gary Kalian, Chairman, Construction Employer's Association (CEA) by letter dated July 24, 2000.

Comment:

Mr. Kalian stated that the safety forum committee of the CEA reviewed the proposed language modifying Section 1716.1(f) to allow a qualified person to prepare a site-specific, written erection procedure to be implemented under the direct supervision of a competent person. The CEA supports the proposal and recommends adoption of the modification by the Board. Mr. Kalian further stated that the CEA's position has been developed from an understanding of the intent of the existing regulation and participation of a CEA member on the advisory committee convened by Board staff. Mr. Kalien stated that an erection plan specific to the structure prepared by a person familiar with the erection procedures of the erector such as a "qualified person" is sufficient. Mr. Kalien also indicated that the endorsement of a registered engineer not familiar with erection procedures might not result in the fulfillment of the intent of the regulation nor enhance worker safety.

Response:

The Board acknowledges Mr. Kalian's support for the proposal and appreciates the CEA's participation in the Standards Board's rulemaking process.

Mr. Rod McCammon, Safety Director, Duke Pacific, Inc. by letter dated August 7, 2000.

Comment:

Mr. McCammon's letter offers support for Mr. Sid Hubbard's request to adjust the wording in the Cal/OSHA code regarding specific written erection procedures for structures with beams over 25 feet in length. Mr. McCammon's company has experienced difficulty in acquiring the

approval of a registered engineer for structural wood framing system erection plans. He has found that registered engineers are reluctant to sign off on such procedures from a liability standpoint. Mr. McCammon mentioned a recent case in which an engineer used by Duke Pacific, Inc. would not stamp the plan currently being used due to liability issues.

Mr. McCammon stated that in his opinion the proposal would allow the employer to have control over writing the plan while accepting liability as part of the scope of work. Mr. McCammon stated that their engineer uses the erection recommendations of the Truss Joist Institute and therefore Duke Pacific, Inc. believes it can write an erection plan that addresses all safety issues.

Response:

The Board acknowledges Mr. McCammon's support for the proposal and thanks him for his participation in the Standards Board's rulemaking process.

Mr. Sid Hubbard, President, Hubbard Structures, Inc. by letter dated August 9, 2000.

Comment:

Mr. Hubbard stated that he was one of the Petitioners (OSHSB file No. 393) and participated in the subsequent advisory committee convened by Board staff. He strongly encouraged the Board to support the proposal.

Mr. Hubbard stated that it is extremely difficult for structural wood framing contractors to find engineers that will sign an erection procedure for the placement of structural wood framing system components. The typical response is that "means and methods of construction" are the responsibility of the contractor and the contractor's insurance carrier will not cover these procedures. Mr. Hubbard stated that the American Institute of Architecture's (AIA) Document A201-1997, General Conditions of the Contract for Construction states:

"The contractor shall supervise and direct the work using the contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the work under the contract, unless the contract document gives other specific instructions concerning these matters".

Mr. Hubbard stated that there seems to be confusion in the engineering community about erection procedures versus the design of the components for erection bracing, etc. It was also stated that the erection procedures used by Hubbard Structures address the sequence of installation of components that have already been engineered. Mr. Hubbard emphasized that the proposal does not take work away from engineers as they are currently not preparing (approving) the erection procedures.

Mr. Hubbard concluded by stating that existing Title 8 definitions for "qualified person" and "competent person" are well understood by the industry through practice and legal challenge and address any concerns about "fly-by-night" operators preparing the erection procedures. The experts performing structural wood framing work on a daily basis would be preparing the erection procedures. Mr. Hubbard closed by stating that his colleagues in the structural wood

framing business believe the proposed language developed by the advisory committee can achieve a safer work site.

Response:

The Board thanks Mr. Hubbard for his comment and appreciates his participation in the Board's rulemaking process.

Mr. Lee Adler, Executive Director, Structural Engineers Association of California (SEAOC) by letter dated August 14, 2000.

Comment:

Mr. Adler explained that SEAOC is a nonprofit professional organization representing approximately 4000 structural and civil engineers in California. SEAOC recognizes the dilemma contractors appear to be facing with respect to obtaining the services of an engineer, however, the safety of the worker and the general public is the overriding concern. Mr. Adler indicated that while the subject matter of the regulation proposed for amendment applies to a specific situation and event in the construction process, SEAOC does not believe any compromise in safety should be made.

Mr. Adler expressed concern over the determination of who is a qualified and who is a competent person. Mr. Adler noted that the definition of competent person does not specify any determining authority and the definition of qualified person allows the employer to make the designation. Mr. Adler questioned the criteria used to determine who is qualified and who is competent and whether such criteria will be applied uniformly from job site to job site.

Mr. Adler is concerned that without rigorous oversight by the Standards Board or other regulatory authority there is no assurance that even a minimum standard of capability will be maintained. SEAOC is concerned that this could result in the potential for hazardous situations in the future.

While SEAOC believes that there are responsible, conscientious construction firms that will be diligent in assuring that the people selected have the necessary expertise to perform the required tasks with confidence, there is a small segment of the construction industry that is of concern. SEAOC believes some firms might be inclined to cut costs or corners and put safety concerns aside to be expedient and improve the "bottom line".

SEAOC is committed to assisting employers in acquiring the services of registered engineers. Mr. Adler stated that SEAOC will make free space available in their statewide newsletter, *Plan Review*, for articles outlining the problems and advertisement by construction firms for engineering services. In addition, Mr. Adler stated that they would encourage their four regional associations to do likewise with their monthly newsletters. SEAOC has discussed the possibility of establishing a classification register by type of engineering service on their web site wherein engineers could request a posting and construction firms could access the site to "shop" for services. Construction firms, architects, and others seeking specific kinds of engineering services could post an "engineer wanted advertisement" on the site.

Response:

With regard to Mr. Adler's questions pertaining to who is a "qualified person", who is a "competent person", what criteria is used for each, and who is the determining authority, the Board feels it is important to clarify a number of points.

Section 1504 of the Construction Safety Orders (CSO) contains various definitions used throughout the CSO which include definitions for "Qualified Person, Attendant or Operator" and for "Competent Person". The determination and selection of a "qualified person" is, by definition, made by the employer. To be a "qualified person" the individual must possess specific training, experience or instruction and demonstrate the ability to perform all assigned duties, and where applicable, is licensed in accordance with federal, state or local laws and regulations. This means that an individual selected to be the "qualified person" as described in Section 1716.1(f)(1) must possess specific training, or have specific experience in, or instruction in the safe assembly of various structural wood framing system components and would have to demonstrate that ability to the employer prior to being placed in charge of constructing a structural wood framing system.

In the above case, the employer is clearly the determining authority and the criteria for selection is the training, instruction and/or specific experience working with structural wood framing systems. The employer is responsible for devising a means of having the individual demonstrate that he/she possesses the knowledge and ability to erect a structural wood framing system safely (e.g., a test, hands-on demonstration, etc). California does not dictate to the employer how to make the selection nor does it specify criteria upon which to base the selection decision.

The definition of competent person as described in the CSO states the competent person, not normally an employee, must possess a level of expertise sufficient to enable him/her to recognize a hazardous situation and have the authority to mitigate the hazard and/or take prompt action to eliminate the hazard. Having the ability to recognize a hazard, prescribe methods to mitigate the hazard and possess the authority to take immediate corrective action are responsibilities which require a much higher level of overall competence than that which satisfies the definition of "qualified person".

The Division of Occupational Safety and Health (Division), is responsible for enforcing the regulations contained in the CSO uniformly upon all employers throughout the state to ensure compliance and a safe workplace. While there are no specific criteria established, the Division has consistently applied the preceding rationale in establishing alleged violations of safety orders in which qualified and competent persons are required.

In the course of Board staff's investigation of OSHSB Petition File No. 393, telephone calls were made to various engineering firms throughout the state. Some engineering firms contacted indicated that they were not aware of the requirement in Section 1716.1(f)(1). A number of structural wood framing system contractors contacted by Board staff (other than those listed in OSHSB Petition File No. 393), stated that they could not acquire the required approval of a registered engineer because of the liability issue, which echoes the Petitioner's concerns.

Finally, while the Board commends and supports SEAOC's proposed efforts to bring California's structural wood framing contractors relief in this matter, the Board believes the consensus language recommended by the advisory committee on March 15, 2000 upon which Board staff's proposal is based will provide a more effective and long term solution to the plan approval dilemma faced by California's structural wood framing contractors.

For these reasons the Board believes no modification of the proposed language is necessary. The Board thanks Mr. Adler for his participation in the Standards Board's rulemaking process.

Mr. Mark A. Dalton, VP, Panelized Structures, Inc. by letter dated August 16, 2000.

Comment:

Mr. Dalton stated that his company erects wood framing systems and is the largest installer of "panelized" roof systems in California. Mr. Dalton credits the success of Panelized Structures, Inc. to their ongoing and effective safety program.

Mr. Dalton stated that his company supports the comments by SEAOC with respect to the proposed amendment of CSO Section 1716.1(f)(1).

Mr. Dalton stated that the safety of the persons erecting panelized structures should not be compromised.

Response:

See the Board staff's response to the letter by Mr. Lee Adler, representing SEAOC, dated August 14, 2000.

The Board thanks Mr. Dalton for his participation in the Standards Board's rulemaking process.

II. Oral Comments

Oral comments received at the August 17, 2000 Public Hearing.

Mr. John Bobis representing Aerojet, Incorporated.

Comment:

Mr. Bobis proposed new language that states "the erection procedure shall conform to the sequence of the erection plan prepared by the design engineer whenever applicable". Mr. Bobis stated that not every building is going to have a sequence of erection plan, however, in large buildings such as arenas, schools, and cafeterias, oftentimes imbalance loading will result in the collapse of the building. Therefore, it is absolutely necessary that an erection plan be prepared and required by the building official. Mr. Bobis also stated that the erection procedure should take into account and comply with the engineer's intent.

Response:

Board staff's proposed language requires a qualified person to develop and implement a site specific erection plan (plan) under the direct supervision of a competent person. The proposal would require a specially trained individual to prepare the plan and then implement it with the competent person (i.e., registered engineer or other individual with hazard recognition skills and the authority to halt the job until any hazards are mitigated) present to supervise the implementation of the erection plan and respond as needed to any problems that might develop during erection of the various structural wood framing components.

The Board feels this process, as outlined above, is sufficient to ensure proper erection sequencing since that is what an erection plan is to assure. The Board concurs with Mr. Bobis to the extent that proper erection sequencing is crucial to preventing structural collapse that might be attributable to load imbalances. However, the Board believes the proposal as written is sufficiently clear in terms of what is required and will be effective in mitigating such hazards. It should be emphasized that this proposal would require two experienced, trained individuals with specific experience in structural wood framing system erection working together to ensure safe distribution of loads as the various system components are hoisted and set into place.

As stated in Mr. Sid Hubbard's letter to the Board dated August 9, 2000, the erection procedures address the sequence of assembly according to the pre-designed, pre-engineered tolerances for each structural wood framing system component. It would be the responsibility of the competent person to ensure that the plan developed by the qualified person takes into account those tolerances when developing the erection procedure. Consequently, the Board believes Mr. Bobis' language would not measurably improve the level of safety already provided by the proposed language.

Therefore the Board believes no modification to the proposal is necessary. The Board thanks Mr. Bobis for his comment and participation in the Standards Board rulemaking process.

Mr. Sid Hubbard, Hubbard Structures, Incorporated.

Comment:

Mr. Hubbard stated that his company and other companies have tried to obtain the approval of a registered engineer and have been unsuccessful. Mr. Hubbard added that his company has been forced to perform erection of structural wood framing systems in violation of Section 1716.1(f)(1). Mr. Hubbard emphasized that the existing CSO definitions for "qualified person" and "competent person" are used frequently and are well understood by the construction industry. Mr. Hubbard explained that the existing language only states that an engineer will prepare the erection procedure but is silent with respect to inspection or having a supervisor on-site. Mr. Hubbard believes that the proposed wording would ensure a safer work-site than you would get with an individual signing a procedure in his office and not being on-site to manage the erection process.

Response:

The Board concurs with Mr. Hubbard and thanks him for his comment and participation in the Standards Board rulemaking process.

Ms. Lynn Berman, Occupational Safety and Health Board (OSHSB) member.

Comment:

Ms. Berman asked Michael Manieri, OSHSB Principal Safety Engineer, if a representative from SEAOC was on the advisory committee.

Response:

The Board acknowledges Mr. Manieri's response that both SEAOC and the Consulting Engineers and Land Surveyors of California (CELSOC) were invited to the March 15, 2000 advisory committee. Upon further review, Board staff notes that according to the sign-in sheets in the rulemaking file, both associations sent a representative to the meeting. The minutes of the March 15, 2000 advisory committee also indicate that both association representatives felt that the committee's recommended language was acceptable. Neither association expressed any objections or concerns over the committee's recommended language.

DETERMINATION OF MANDATE

This regulation does not impose a mandate on local agencies or school districts as indicated in the Initial Statement of Reasons.

ALTERNATIVES CONSIDERED

The Board invited interested persons to present statements or arguments with respect to alternatives to the proposed regulation. No alternative considered by the Board 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 adopted action.