STATE OF CALIFORNIA
STATE AND CONSUMER SERVICES AGENCY
CALIFORNIA BUILDING STANDARDS COMMISSION
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Office Use Item No. _____

PARTICIPATION COMMENTS FOR THE NOTICE DATED AUGUST 31, 2012
Written comments are to be sent to the above address.

WRITTEN COMMENT DEADLINE: OCTOBER 15, 2012

Date: 10/3/2012

From:
Ryan Huxley, CE 59763, SE 4798 — Ryan Huxley
Name (Print or type) — (Signature)

-- Individual
Agency, jurisdiction, chapter, company, association, individual, etc.

10466 Yellow Rose Lane — San Diego — CA — 92127
Street — City — State — Zip

I/We (do) (do not) agree with:

[X] The Agency proposed modifications As Submitted on Section No. ___1616.10_____

and request that this section or reference provision be recommended:

[ ] Approved [ ] Disapproved [ ] Held for Further Study [X] Approved as Amended

Suggested Revisions to the Text of the Regulations:

Add a section between the currently proposed 1616.10.11 and 1616.10.12 to modify the second paragraph of ASCE 7-10 Section 12.8.6 as follows:

12.8.6 Story Drift Determination.

The design story drift (Δ) shall be computed as the difference of the deflections at the centers of mass at the top and bottom of the story under consideration. See Fig. 12.8-2. Where centers of mass do not align vertically, it is permitted to compute the deflection at the bottom of the story based on the vertical projection of the center of mass at the top of the story. Where allowable stress design is used, Δ shall be computed using the strength level seismic forces specified in Section 12.8 without reduction for allowable stress design.

For structures assigned to Seismic Design Category C, D, E, or F ~~having horizontal irregularity Types 1a or 1b of Table 12.3-1~~, the design story drift, shall be computed as the largest difference of the deflections along any of the edges of the structure at the top and bottom of the story under consideration.

The deflection at Level x (δ_x) (in. or mm) used to compute the design story drift, Δ, shall be determined in accordance with the following equation:

$$\delta_x = C_d \delta_{xe} / I_e$$

where

C_d = the deflection amplification factor in Table 12.2-1
δ_{xe} = the deflection at the location required by this section determined by an elastic analysis
I_e = the importance factor determined in accordance with Section 11.5.1

Reason: [The reason should be concise if the request is for "Disapproval," "Further Study," or "Approve As Amend" and identify at least one of the 9-point criteria (following) of Health and Safety Code §18930.]

Depending on the seismic lateral force resisting system layout, types of lateral systems, and whether the diaphragm is flexible, rigid, or semi-rigid, the drift could be substantially more at other locations of the building than at the center of mass specified in the first paragraph of the same section (i.e. ASCE 7-10, 12.8.6) and substantially exceed the limits specified in Section 12.12.1. Prior versions of the CBC (based on the UBC) had similar provisions (the key statement is underlined for identification purposes):
2001 CBC Section 1630.9.1 Determination of Δ_s. A static, elastic analysis of the lateral force-resisting system shall be prepared using the design seismic forces from Section 1630.2.1. Alternatively, a dynamic analysis may be performed in accordance with Section 1631. Where Allowable Stress Design is used and where drift is being computed, the load combinations of 1612.2 shall be used. The mathematical model shall comply with Section 1630.1.2. <u>The resulting deformations, denoted as Δ_s, shall be determined at all critical locations in the structure.</u> Calculated drift shall include translational and torsional deflections.

The following criteria in the Health & Safety Code Section 18930(a) apply to this proposed revision: 1 and 3 (see below for further information).

HEALTH & SAFETY CODE SECTION 18930

SECTION 18930. APPROVAL OR ADOPTION OF BUILDING STANDARDS; ANALYSIS AND CRITERIA; REVIEW CONSIDERATIONS; FACTUAL DETERMINATIONS

(a) Any building standard adopted or proposed by state agencies shall be submitted to, and approved or adopted by, the California Building Standards Commission prior to codification. Prior to submission to the commission, building standards shall be adopted in compliance with the procedures specified in Article 5 (commencing with Section 11346) of Chapter 3.5 of Part 1 of Division 3 of Title 2 of the Government Code. Building standards adopted by state agencies and submitted to the commission for approval shall be accompanied by an analysis written by the adopting agency or state agency that proposes the building standards which shall, to the satisfaction of the commission, justify the approval thereof in terms of the following criteria:

(1) The proposed building standards do not conflict with, overlap, or duplicate other building standards.
(2) The proposed building standard is within the parameters established by enabling legislation and is not expressly within the exclusive jurisdiction of another agency.
(3) The public interest requires the adoption of the building standards.
(4) The proposed building standard is not unreasonable, arbitrary, unfair, or capricious, in whole or in part.
(5) The cost to the public is reasonable, based on the overall benefit to be derived from the building standards.
(6) The proposed building standard is not unnecessarily ambiguous or vague, in whole or in part.
(7) The applicable national specifications, published standards, and model codes have been incorporated therein as provided in this part, where appropriate.
    (A) If a national specification, published standard, or model code does not adequately address the goals of the state agency, a statement defining the inadequacy shall accompany the proposed building standard when submitted to the commission.
    (B) If there is no national specification, published standard, or model code that is relevant to the proposed building standard, the state agency shall prepare a statement informing the commission and submit that statement with the proposed building standard.
(8) The format of the proposed building standards is consistent with that adopted by the commission.
(9) The proposed building standard, if it promotes fire and panic safety as determined by the State Fire Marshal, has the written approval of the State Fire Marshal.