



Hospital Building Safety Board

STRUCTURAL AND NON-STRUCTURAL REGULATIONS COMMITTEE

February 10, 2015

by

Y. Henry Huang, Chair
Trailer Martin, Vice-Chair

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Meeting Reports

MEETING REPORTS:

- Meeting Date: 02/10/2005



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Meeting Reports

Meeting Date: 02/10/2015: OVERVIEW OF TOPICS

1. Welcome and Introductions
2. a. Review of proposed OSHPD structural amendments for the California Building Standards 5 Code, 2016 (CBSC 2016)
3. b. Overview of the new Structural Provisions
4. Discussion and Public Input
5. Committee Action
6. Adjournment



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Meeting Reports

Meeting Date: 02/10/2015:

Review of proposed OSHPD structural amendments for CBSC 2016:

1. Dr. Karim gave a presentation on the structural amendments for CBSC 2016. This committee's focus will be limited to a structural amendment in Chapter 6.
2. OSHPD is introducing a new structural performance category: SPC-4D for Nonconforming Buildings. The new category allows nonconforming buildings to be upgraded to SPC-4D.
3. Review of the new Structural Performance Category (SPC)-4D program. Expectations for SPC-4D buildings are that they control damage after an earthquake to permit return to function similar to SPC-3 or SPC-4 buildings.



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Review of proposed OSHPD structural amendments for CBSC 2016

- SPC-4D is a performance category equivalent to buildings meeting the minimum prescriptive requirements of the 1980 CBC.
- Nonconforming buildings were originally built to pre-1973 code. They can be upgraded to SPC-4D instead of SPC-5, which enables them to provide service beyond 2030.
- Currently there are about 800 SPC-4 buildings, about 500 of which were built before 1980.
- SPC-4D will perform at a midway point between Life Safety SPC-2 and Immediate Occupancy SPC-5.
- Performance expectations for SPC-4D buildings are that they control damage after an earthquake to permit return to function similar to SPC-3 or SPC-4 buildings.



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- No seismic evaluation checklist will be required to change SPC-1/SPC-2 buildings to SPC-4D.
- Proof of performance consistent with SPC-4D will be required.
- Performance objectives will be to comply with the American Society of Civil Engineers (ASCE) 41 and with International Building Code-level seismic forces for existing buildings.
- List of the required SPC-4D construction documents.
- Dr. Karim showed short-period design accelerations in Northern and Southern California cities for 2001, 2010, and 2013. Ground Motion can be based on either the 1980 CBC, or ASCE 41.



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Review of proposed OSHPD structural amendments for CBSC 2016

4. Brief Summary of Discussions and Staff Responses:

- SPC-4D uses 100% ground motion, but the acceptance category is different: it uses the Risk Category 3 acceptance criteria instead of Risk Category 4.
- **For utility services**, SPC-4D building would be treated like any SPC-3 building or higher.
- OSHPD staff is evaluating the equivalency analysis between the two options (1980 CBC or ASCE 41).
- OSHPD believes there are a significant number of SPC-2 buildings that are one and two stories; those appear to be the ones that would most benefit from this program.



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- Nonstructural Performance Category (NPC) part does not change. Even if buildings are upgraded to SPC-4D, they still need to meet NPC-2, NPC-3, and closer to 2030, NPC-5. Staff expected for buildings upgrading to SPC-4D, they need to plan their NPC retrofit as well.
- SB1953 deadlines are not changing – SPC-1 buildings go out of commission in 2020, but if they upgrade they go until 2030.



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Overview of OSHPD structural amendments for CBSC 2016:

1. In this code cycle, demand is based on **ASCE 7-10**, same as CBC 2013.
2. No change in seismic hazard maps
3. Steel Design is based on **AISC 360-10, AISC 341-10/358-10**. Same as CBC 2013. The majority of OSHPD buildings are steel.
4. New/Updated Standards are:
 - **ASCE 41-13**: Seismic Evaluation and Retrofit of Existing Buildings
 - **ACI 318-14**: Concrete Design
 - **TMS-402/602-13**: Masonry Design
 - **ADM1-15**: Aluminum Design
 - **NDS-15**: Wood Design, and **SDPWS-15**: Seismic Design of Woods.



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Overview of OSHPD structural amendments for CBSC 2016:

5. All Pre-Approvals for CBC 2013 can be used for CBC 2016.
6. Major structural change of 2015 IBC. Existing Structures, Chapter 34 of previous CBC was removed and replaced with a new Model Code – IEBC.
7. In IEBC 2015 (except Chapter 4), alterations and repairs are at 75% of the new building code force level.
8. OSHPD was proposing to keep CBC Chapter 34A, adopting IEBC 2015 Chapter 4 instead of IBC 2012 Chapter 34 as the primary basis for Chapter 34A. In CBC Chapter 34A, additions, alterations, and repairs are at a new building code force level.



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Overview of OSHPD structural amendments for CBSC 2016:

9. Staff provided reasons for not adopting IEBC 2015. Among the most important was that it would greatly increase the complexity of regulations by creating a parallel code to the CBC, otherwise much of the IEBC would have to be amended to meet the statutory mandate. It will be about 20 pages in the CBC and about 300 pages in the IEBC, with far fewer regulations to achieve the same goal.
10. Special Inspections: There are two substantial changes for special inspections. A testing agency accredited to ISO 17025 shall be deemed an Approved Testing Agency, and an inspection agency accredited to ISO 17020 shall be deemed an Approved Inspection Agency.



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Overview of OSHPD structural amendments for CBSC 2016:

11. Base isolated buildings in Seismic Design Category D can be designed by linear procedure.
12. Appendix J – Grading of 2015 IBC will no longer be adopted; it was creating the perception that entire site grading was in OSHPD jurisdiction. Provisions for earth retaining shoring and vibro stone columns for ground improvement are moved to Chapter 18A. Mr. Coleman clarified OSHPD jurisdiction.
13. Staff clarified that when OSHPD does stamp a site grading plan, it expressly writes what it is approving it for. The stamp will be accompanied by a Code Application Notice on what is under OSHPD jurisdiction, not site grading.



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14. Also in Chapter 18A is the addition of Requirements of Underpinning for protection of adjacent structures – a Model Code change. The same goes for the Provision for Steel Sheet Piles shoring. It applies to both permanent and temporary shoring.



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Meeting Reports

Meeting Date: 02/10/2015: OVERVIEW OF MOTIONS

- MOTION: (M/S/C/) [Martin/Elhassan] The committee voted unanimously to recommend that OSHPD move forward with the 2016 CBC amendments.
- Chair (Huang) adjourned the meeting at 12:21 p.m.



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Meeting Reports

Meeting Date: 02/10/2015:
CONCLUSION

- Questions and Answers
- This report constitutes a MOTION to the BOARD and must be SECONDED by a Board Member that does not serve on the Committee for further ACTION.



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CONCLUSION / DISCUSSION / Q&A