INITIAL STATEMENT OF REASONS
OF THE
DIVISION OF THE STATE ARCHITECT

REGARDING PROPOSED CHANGES TO THE
CALIFORNIA ADMINISTRATIVE CODE
AND
CALIFORNIA BUILDING CODE
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 2

The Administrative Procedure Act (APA) requires that an Initial Statement of Reasons (ISOR) be available to the public upon request when rulemaking action is being undertaken. The following information required by the APA pertains to this particular rulemaking action:

STATEMENT OF SPECIFIC PURPOSE AND RATIONALE: The purpose of this proposed action is to adopt the 2010 California Building Code (2010 CBC) based on new information since the adoption of the 2007 CBC.

California Community Colleges

This action also adopts 2010 California Building Provisions applicable to California Community College (CCC) buildings. Pursuant to Education Code Section 81052 and 81053(a), the proposed regulations provide alternative building standards that the CCC may utilize in lieu of the Field Act. These building standards include, where appropriate, the building standards governing the construction of structures at the California State University (CSU). CSU buildings are constructed to the California Building Code base chapters. The legislative intent of SB 588 (Chapter 704, 2008) is that the CCC structures not constructed in accordance with the Field Act meet the same seismic safety performance levels as those constructed to the requirements of the Field Act.

As part of the CCC regulation development effort, all California amendments were reviewed by DSA in consultation with DSA Advisory Board and a SB 588 Technical Group formed for this purpose. California amendments deemed not to impact seismic safety performance levels were considered for repeal. Those amendments identified as relating to seismic safety performance levels were retained. Finally, amendments are proposed when the model or referenced standards are unclear or contradictory. In these cases, provisions proposed for the most current national standards are used when possible.

Currently, Chapters 16A, 17A, 18A, 19A, 20, 21A, 22A and 23 of the 2007 CBC apply to CCC structures. For ease of use and to meet the intent of the legislation, those California provisions needed for seismic performance are continued as amendments in Chapters 16, 19, 20, 21, 22, and 23. The testing and inspection requirements of Chapter 17A and the soils and foundation requirements of Chapter 18A are retained in Chapter 17A and 18A, respectively. These chapters will apply to both Field Act and CCC projects.

For the Division of the State Architect, both Structural Safety (DSA-SS) and Community Colleges (DSA-SS/CC), the specific purpose and rationale for the necessity of the proposed changes follows:

Title 24, Part 2, Volume 1
Chapter 1 – California Administration
Division I

Section 1.1.5 – Editorial clarification.

Section 1.9.2.2 – Added administrative provisions applicable to CCC structures.

Title 24, Part 2, Volume 1
Chapter 1 – California Administration
Division II

Section 102.4.1 – This amendment clarifies that substitutes references to the International Code with the California Building Standards Codes.

Section 106.1.1 – Existing amendment relocated from Section 1603A.3.1 (2007 CBC).

Title 24, Part 2, Volume 1
Chapter 14 – Exterior Walls

Section 1405.1.1 – Editorial revision.

Section 1409.1 – This section was relocated from Section 1408.1 (2007 CBC). The prescriptive requirements being repealed are covered in TMS 402-08/ACI 530-08/ASCE 5-08.

Section 1408.3 (2007 CBC) – Redundant section, which points to requirements in Chapter 17A, is deleted.

Title 24, Part 2, Volume 1
Chapter 15 – Roof Assemblies and Rooftop Structures

Section 1507.3.10 – Amendment retained.

Section 1507.7.8 – This section was relocated from Section 1507.7.7. Editorial changes to improve clarity.

Section 1511 – Amendment retained.

Section 1511.6 (2007 CBC) – This section is deleted because it is redundant. It repeats requirements that are in Section 104.11 and the roof systems testing requirements that are covered in Section 1504.3.1.

Title 24, Part 2, Volume 2
Chapter 16 – Structural Design

Section 1601.1.1 – Scope Provisions for Community College structures added.

Section 1601.1.2 –Provisions for identifying amendments applicable to Community College structures added.

Section 1601.1.3 –Provisions identifying references to other chapters added.

Section 1601.2 - Editorial revision. Section references are revised because California Chapter 1 in the 2007 CBC will be relocated to Chapter 1, Division 1 in the 2010 CBC.

Section 1601.3 - Editorial revision. Section reference is revised because Appendix Chapter 1 in the 2007 CBC will be relocated to Chapter 1 Division 2 in the 2010 CBC.

Section 1602.1 – Repealed definition. Amendment unrelated to seismic safety performance.

Section 1603.1.10 – Consolidates retained amendments from 2007 CBC Sections 1603A.1, 1603A.1.5.1, and 1604A.11.

Section 1603.3.1 – Live and snow load posting requirements are relocated to Chapter 1, Division 2.

Table 1604A.3 (2007 CBC) – Moved to 1604.3.7, Item 2. Repealed prescriptive veneer wall deflection limit and reference Chapter 14 requirement.

Section 1604A.3.7.1 (2007 CBC) – This section is deleted to avoid duplication with ASCE 7 Section 12.12.4.

Section 1604A.3.7.2 (2007 CBC) – Reference for wood diaphragm aspect ratios is changed to American Forest & Paper Association Special Design Provisions for Wind and Seismic, 2008 (AF & PA SDPWS -2008) since equivalent table in Chapter 23 is deleted in the 2009 IBC. Prescriptive reference to ICC ES AC 43 deleted.

Section 1604A.3.8 (2007 CBC) - This section is deleted to avoid duplication with Section104.11.

Table 1604A.5 (2007 CBC) – Amendment retained and clarified.

Section 1604A.11 (2007 CBC) - Relocated to Section 1603.1.10.

Section 1605.1.1.1 - This amendment is necessary for consistency with Section 1615.1.9. Stability checks in Section 1615A.1.10 (2007 CBC) are deleted.

Section 1605A.2.1.1 (2007 CBC) – This amendment is repealed, since local jurisdictions are not modifying the f_2 factor for snow loads.

Section 1605.3.2 – Amendment is repealed. Covered in ASCE 7-05 Section 13.4.2.

Section 1606.3 – Existing amendment retained.

Table 1607.1 – Footnote "o" requiring 50 psf live load for classrooms repealed. Amendment unrelated to seismic safety performance. Other editorial revisions.

Section 1607.11.5 – Existing amendment retained, relocated from CBC 2007 Section 1607A.11.2.2.

Section 1607.13 – Existing amendment is repealed. Amendment unrelated to seismic safety performance.
Section 1608.3 Existing amendment retained.

Section 1609A.1.1 and 1609A.6 (2007 CBC) – California amendment is no longer necessary because it has been incorporated into model code. Deleted California amendments are not shown; only new model code amendments are shown to avoid confusion.

Section 1609.1.1.3 – Existing amendment retained, relocated from CBC 2007 Section 1609A.1.1.2.

Section 1609.1.3 – Existing amendment retained.

Section 1609A.4 – With availability of Google maps and other internet tools, a detailed verification submittal is no longer necessary.

Section 1609A.6.2 – Editorial clarification, the importance factor variable was undefined. Reference is made to the appropriate table in ASCE 7.

Section 1612.3 - Existing amendment retained.

Section 1613.1 – Editorial revisions.

Section 1613A.1.1 (2007 CBC) – This section is deleted since requirements in the section duplicate alternative system requirements in the code.

Section 1613.1.2 – Editorial revisions.

Section 1613A.2 – Definition of "Next Generation Attenuation" (NGA) relations is added for use in Geotechnical/Geohazard reports. Definition of "Active Earthquake Fault" revised to reflect current California Geologic Survey practice. Definition "Soil-Structure Resonance" is deleted because it is no longer used in the code. Other existing definitions retained. Editorial revisions.

Section 1613.5.1 – Existing amendment retained. Editorial revisions.

Section 1613.5.6 – Editorial changes, existing amendments retained.

Section 1613.5.6.1 – Editorial changes, existing amendments retained.

Section 1613.5.6.2 – Amendments repealed. Systems listed may be used since superstructure remains essentially elastic.

Section 1613.6.3 – Existing amendment retained. Requirements that design of anchorage and bracing elements in sprinkler systems be in accordance with the 2010 CBC are added, since equivalent provisions in NFPA – 13 are not consistent with 2010 CBC.

Section 1613.6.7 – Existing amendment retained. Importance factor "I" is deleted from the denominator to ensure that buildings subjected to same forces and stiffness will have equal building separations.

Section 1613.7 (2009 IBC) – This section is not adopted to retain the minimum wall force requirements in ASCE 7-05 for high seismic areas.

Section 1614A.1.13 (2007 CBC) – Deleted requirements are redundant because of the amendments to ASCE 7-05 in Sections 1615.1.10, 1615.14, 1615.15 and 1615.1.16.

Section 1614A.1.14 (2007 CBC) – Deleted requirements are consolidated into ASCE 7-05 Section 13.6.7 amendments in Section 1615.1.15.

Section 1614A.1.20 (2007 CBC) Amendment repealed. Inspection and replacement programs in ASCE 7 Section 17.2.4.8 are adequate.

Section 1614A.1.21 (2007 CBC) – Requirements moved to Section 1708A.5.

Section 1614A.1.22 (2007 CBC) – Amendment repealed. Instrumentation not mandatory for buildings under DSA-SS jurisdiction.

Sections 1614A.1.24 (2007 CBC), 1614.1.26 (2007 CBC) through 1614A.1.31 (2007 CBC) – These sections are deleted. Base isolation is not commonly used for CCC structures and the model code provisions are deemed adequate for seismic safety performance.

Section 1615.1.1 – Existing amendment retained. This section is revised to clarify requirements for structural design criteria and peer review requirements in the 2007 CBC and ASCE 7-05.

Section 1615.1.2 – This revision limits and simplifies site-specific ground motion procedures to sites with high seismic risk.

Section 1615.1.3 – Existing amendment retained (Section 1614A.1.3, 2007 CBC)

Section 1615.1.4 – Existing amendment retained (Section 1614A.1.4, 2007 CBC). Repealed items f., g., and h. are covered in ASCE 7-05 Section 12.12.4.

Section 1615.1.5 - Existing amendment retained (Section 1614A.1.4, 2007 CBC). Based on the relative potential impact of irregularities on structure performance, restore SDC D for horizontal irregularity and soft or weak story irregularity. Maintain current limits extreme soft story

Section 1615.1.6 – Existing amendment retained (Section 1614A.1.6, 2007 CBC)

Section 1615.1.7 – Existing amendment retained (Section 1614A.1.8, 2007 CBC)

Section 1615.1.8 – Existing amendment retained (Section 1614A.1.9, 2007 CBC)

Section 1615.1.9 – Existing amendment retained (Section 1614A.1.10, 2007 CBC). Deleted requirements for stability check (overturning and sliding) in this section is picked-up by the model code in Section 1605A.1.1.

Section 1615.1.10 – This section clarifies conditions under which nonstructural components may be exempt from anchorage and bracing design requirements. It is consistent with provisions proposed for ASCE 7-10.

Section 1615.1.11 – Existing amendment retained (Section 1614A.1.11, 2007 CBC)

Section 1615.1.12 – This section clarifies the used of power actuated fasteners and is consistent with ASCE 7-10.

Section 1615.1.13 - Existing amendment retained (Section 1614.12, 2007 CBC). This section on suspended ceiling systems has been clarified and revised to make it consistent with ASCE 7-10.

Section 1615.1.14 – This section clarifies the seismic design of electrical distribution systems in a manner consistent with ASCE 7-10.

Section 1615.1.15 – This section clarifies the seismic design of ductwork in a manner consistent with ASCE 7-10.

Section 1615.1.16 – This section clarifies the seismic design of piping systems in a manner consistent with ASCE 7-

10.

Section 1615.1.17 – Existing amendment retained (Section 1614A.1.15, 2007 CBC)

Section 1615.1.18 – Existing amendment retained (Section 1614A.1.16, 2007 CBC)

Section 1615.1.19 – This amendment is added to permit the use of Next Generation Attenuation (NGA) relations for ground motions.

Section 1615.1.21 – This section clarifies the scaling of ground motions in a manner consistent with ASCE 7-10.

Section 1615.1.22 – Existing amendment retained (Section 1614A.1.18, 2007 CBC)

Section 1615.1.23 – Existing amendment retained (Section 1614A.1.19, 2007 CBC)

Section 1615.1.24 – Existing amendment retained (Section 1614A.1.23, 2007 CBC). Editorial changes.

Section 1615.1.25 - This amendment is modified to permit the use of Next Generation Attenuation (NGA) relations for ground motions.

Section 1615.1.26 – This section corrects ground motion scaling issues that can occur when the requirements of ASCE 7-05 Section 21.4 are applied.

Title 24, Part 2, Volume 2
Chapter 16A – Structural Design

Section 1601A.1 – Section references are revised because California Chapter 1 in the 2007 CBC will be relocated to Chapter 1, Division 1 in the 2010 CBC.

Section 1602A.2 – Section reference is revised because Appendix Chapter 1 in the 2007 CBC will be relocated to Chapter 1 Division 2 in the 2010 CBC.

Section 1603A.1 – Editorial correction of reference to the California Administrative Code (Part 1, Title 24, C.C.R.).

Section 1603A.1.5 - Structural irregularities (defined in ASCE-7 section 12.3) can result in restrictions on building height, prohibition of certain configurations, increased design forces, additional analytical requirements, restriction of permissible analytical procedures, greater building separations, or additional detailing requirements for certain structural elements. It is often not evident whether one or more irregularities are applicable to a structure, because many of them require structural analysis to determine their applicability. This information is useful for building officials, plan checkers, peer reviewers, and for structural engineers in future building additions and/or alterations.

Section 1603A.1.10 – This editorial change relocates amendment on construction procedures to the appropriate section.

Section 1603A.3.1 – Live and snow load posting requirements are relocated to Chapter 1, Division 2.

Table 1604A.3 – Veneer wall deflection limit is revised to be consistent with Section 1405.10.

Section 1604A.3.7 – Reference for wood diaphragm aspect ratios is changed to American Forest & Paper Association Special Design Provisions for Wind and Seismic, 2008 (AF & PA SDPWS -2008) since equivalent table in Chapter 23 is deleted in the 2009 IBC.

Section 1604A.3.7.1 – This section is deleted to avoid duplication with ASCE 7 Section 12.12.4.

Section 1604A.3.8 - This section is deleted to avoid duplication with Section104.11.

Table 1604A.5 – This amendment clarifies those structures necessary for egress of an Occupancy Category IV structure are also Occupancy Category IV.

Section 1605A.1.1 - This amendment is necessary for consistency with Section 1615A.1.10. Stability requirements in

Section 1615A.1.10 are deleted and all the requirements are consolidated into this section.

Section 1605A.2.1.1 – This amendment is repealed, since local jurisdictions are not modifying the f_2 factor for snow loads.

Section 1605A.3.2 – ASCE 7-05 Section 13.4.2 is revised in Section 1615A.1.14 of this code, making the amendment unnecessary.

Section 1605A.4 – Existing amendment deleting exception is retained.

Table 1607A.1 – Editorial change

Section 1607A.11.5 – Editorial change, amendment relocated from CBC 2007 Section 1607A.11.2.2.

Section 1607A.13 – Editorial change.

Section 1609A.1.1 and 1609A.6 (2007 CBC) – California amendment is no longer necessary because it has been incorporated into model code. Deleted California amendments are not shown; only new model code amendments are shown to avoid confusion.

Section 1609A.4 – With availability of Google maps and other internet tools, a detailed verification submittal is no longer necessary.

Section 1609A.6.2 – Editorial clarification, the importance factor variable was undefined. Reference is made to the appropriate table in ASCE 7.

Section 1613A.1.1 – This section is deleted since requirements in the section duplicate alternative system requirements in the code.

Section 1613A.2 – Definition of “Next Generation Attenuation” (NGA) relations is added for use in Geotechnical/Geohazard reports. Definition of “Active Earthquake Fault” revised to reflect current California Geologic Survey practice. Definition “Soil-Structure Resonance” is deleted because it is no longer used in the code.

Section 1613A.5.6 – Editorial changes made to the 2009 IBC. Existing amendments retained.

Section 1613A.6.3 – Requirements that design of anchorage and bracing elements in sprinkler systems be in accordance with the 2010 CBC are added, since equivalent provisions in NFPA – 13 are not consistent with 2010 CBC.

Section 1613A.6.4 – This section is deleted for consistency with Chapter 21A.

Section 1613A.6.7 – Importance factor “I” is deleted from the denominator to ensure that buildings subjected to same forces and stiffness will have equal building separations.

Section 1613.6.8 (2009 IBC) – Deleted redundant requirement that is covered in Section1615A.1.18.

Section 1613.7 (2009 IBC) – This section is deleted to retain the minimum wall force requirements in ASCE 7-05 for high seismic areas.

Section 1614A.1.13 (2007 CBC) – Deleted requirements are redundant because of the amendments to ASCE 7-05 in Sections 1615A.1.7, 1615A.18 and 1615A.1.19.

Section 1614A.1.14 (2007 CBC) – Deleted requirements are consolidated into ASCE 7-05 Section 13.6.7 amendments in Section 1615A.1.18.

Section 1614A.1.20 (2007 CBC) Amendment repealed. Inspection and replacement programs in ASCE 7 Section 17.2.4.8 are adequate.

Section 1614A.1.21 (2007 CBC) – Requirements moved to Section 1708A.5.

Section 1614A.1.22 (2007 CBC) – Amendment repealed. Instrumentation not mandatory for buildings under DSA-SS

jurisdiction.

Sections 1614A.1.24 (2007 CBC), 1614.1.27 (2007 CBC) through 1614A.1.31 (2007 CBC) – These sections are deleted, in conjunction with an amendment to Section 1614A.1.26 (2007 CBC), to permit design of buildings with base isolators and dampers without non-linear response history analysis in areas where site spectral acceleration at one second (S_1) is less than 0.6g.

Section 1615A.1.1 – This section is revised to clarify requirements for structural design criteria and peer review requirements in the 2007 CBC and ASCE 7-05.

Section 1615A.1.2 – This revision limits and simplifies site-specific ground motion procedures to sites with high seismic risk.

Section 1615A.1.4 – Repealed items f., g., and h. are covered in ASCE 7-05 Section 12.12.4.

Section 1615A.1.9 – This proposal is based on modification to ASCE 7-10 proposed by SEAOC to eliminate affect of minimum diaphragm shear on amplified loads for collector design, since minimum shear is not tied to "R" factor.

Section 1615A.1.10 (2007 CBC) – Deleted requirements for stability check (overturning and sliding) in this section is picked-up by the model code in Section 1605A.1.1.

Section 1615A.1.12 – This section clarifies conditions under which nonstructural components may be exempt from anchorage and bracing design requirements. It is consistent with provisions proposed for ASCE 7-10.

Section 1615A.1.14 – This section clarifies nonstructural anchorage requirements and makes them consistent with provisions proposed for ASCE 7-10.

Section 1615A.1.15 – This section clarifies the used of power actuated fasteners and is consistent with ASCE 7-10.

Section 1615A.1.16 (Section 1614.12, 2007 CBC) – This section on suspended ceiling systems has been clarified and revised to make it consistent with ASCE 7-10.

Section 1615A.1.19 – This section clarifies the seismic design of piping systems in a manner consistent with ASCE 7-10.

Section 1615A.1.20 – This section clarifies the seismic design of electrical distribution systems in a manner consistent with ASCE 7-10.

Section 1615A.1.21 – This section clarifies the seismic design of ductwork in a manner consistent with ASCE 7-10.

Section 1615A.1.22 – This section clarifies the seismic design of piping systems in a manner consistent with ASCE 7-10.

Section 1615A.1.25 – This amendment is added to permit the use of Next Generation Attenuation (NGA) relations for ground motions.

Section 1615A.1.26 – This section clarifies the scaling of ground motions in a manner consistent with ASCE 7-10.

Section 1615A.1.27 – This section clarifies the use of site-specific ground motions in a manner consistent with ASCE 7-10.

Section 1615A.1.31 – This section is revised to allow determination of seismic separations using different analysis approaches.

Section 1615A.1.32 – This section clarifies the use of site-specific ground motions in a manner consistent with ASCE 7-10.

Section 1615A.1.33 – This section is revised to permit linear analysis of base isolated buildings.

Section 1615A.1.34 – This section is revised to permit linear analysis of base isolated buildings.

Section 1615A.1.35 – This section is revised for consistency between analysis requirements in ASCE 7-05 Chapter 18 and the materials chapters of the 2010 CBC.

Section 1615A.1.36 – This section corrects ground motion scaling issues that can occur when the requirements of ASCE 7-05 Section 21.4 are applied.

Title 24, Part 2, Volume 2
Chapter 17A - Structural Tests and Special Inspections

Section 1701A.1 – This section is revised to include community college projects (DSA-SS/CC).

Section 1702A.1 – Definition of "Project Inspector" is added, which is referenced in multiple sections of this chapter.

Section 1704A.1 – Existing amendments retained.

Section 1704A.1.2 – Exception repealed, since Project Inspector is now defined.

Sections 1704A.2.1 and 1704A.2.2 – Since fabricators are not approved by DSA, the exception to special inspection requirements for approved fabricators and the section on fabricator approval are deleted.

Section 1704A.3.1.4 – Repealed amendments are picked-up by model code. Welder qualification is required by AWS. Added a clarification that welding inspectors are to keep daily records.

Section 1704A.4 – Portions of existing amendment requiring special inspections for nonstructural slabs, patios, driveways, and sidewalks repealed.

Section 1704A.4.2 – This amendment is deleted since requirements for welded rebar are now covered by Section 1704A.3.1.

Table 1704A.4 (CBC 2007) – California amendments in this table (Items # 3 and # 12) have been incorporated in model code in Table 1704.4 (Items # 3 & 4) and therefore are not being carried forward to 2010 CBC.

Section 1704A.4.4 – This section is revised to clarify the process for wavier of continuous batch plant inspection. The requirement for affidavit is repealed. The minimum concrete strength is revised for consistency with Table 1808A.8.1. Added a clarification that the qualified lab technician is to check the first batch of the day.

Section 1704A.4.5 – Repeal Item 2 (2007 CBC), which is redundant. Clarify that the inspector is to keep daily reports.

Section 1704A.4.6 – Repeal the redundant reference to special inspection prior to concrete placement. Clarify that observation by the registered design professional is not required prior to every concrete placement.

Section 1704A.5 – Continuing existing amendment.

Table 1704A.5.1 – Add references for special inspection of post-installed anchors in masonry.

Table 1704A.5.3 – Add references for special inspection of post-installed anchors in masonry.

Section 1704A.6.4 – Added limitations to the types of timber connections that require continuous special inspection.

Section 1704A.7 – Clarifications of the role of the geotechnical engineer during the placement of fill. Clarifies that tested materials must be in conformance with the plans and specifications, rather than the recommendations of the geotechnical report.

Section 1704A.8.1 – Revised nomenclature to be consistent with terminology of the IBC. Deleted Provisions is redundant.

Section 1704A.9.1 – Redundant amendment. Design requirement picked up by section picked-up by IBC in Section 1810A.3.9.5.

Section 1704A.16 – Requirements for reinforced gypsum inspection is deleted since it is considered an alternative system in accordance with the Chapter 19A.

Section 1704A.17 – Clarification for consistency with requirements of Section 1913A.

Section 1705A.3 – Continuing existing amendment.

Section 1707A.4 – Exception is deleted since gypsum board shear walls are not permitted by DSA. This is consistent with Section 1707A.3.

Section 1707A.6 – Continuing existing amendment.

Section 1707A.9 – This amendment provides inspection requirements for dampers and isolators that are equivalent.

Section 1708A – Note this section has been complete revised in the model code.

Sections 1708A.1.1 & 1708A.1.2 (2007 CBC) – California amendments are picked-up by model code.

Section 1708A.1.3 – Model Code Errata.

Section 1708A.1.4 – Testing requirement for damping devices which are not addressed in the model code is added.

Section 1708A.3 – Exception deleted, since Seismic Design Category C is not permitted by DSA.

Section 1708A.5 – Testing requirements for damping system, which are not currently addressed in the code, are added. Also, prototype and production testing requirements for Isolator units and damping devices, which are currently in the 2007 CBC Section 1614A.1.21 and 1614A.1.31 are consolidated into this section.

Section 1710A.2 – Continuing existing amendment (Section 1709A.2, 2007 CBC).

Section 1710A.3 – Continuing existing amendment (Section 1709A.3, 2007 CBC).

Title 24, Part 2, Volume 2
Chapter 18A – Soils and Foundations

Note: This chapter was revised in its entirety in the 2009 IBC.

Section 1801A.1 – This section is revised to include community college projects (DSA-SS/CC).

Section 1802A.2.8 (2007 CBC) – California amendment for high sulfate soils have been incorporated into the model code in Chapter 19A.

Section 1803A.1 – Amendment relocated from Section 1802A.1 (2007 CBC). Reference to California Geological Survey (CGS) is deleted since the enforcement agency can choose a consultant other then CGS and in certain cases may not require any consultant.

Section 1803A.2 - Amendment relocated from Section 1802A.2 (2007 CBC).

Section 1803A.3 - Amendment relocated from Section 1802A.4.1 (2007 CBC).

Section 1803A.5.4 - Deletion of exception continued (Section 1802A.2.3, 2007 CBC).

Section 1803A.6.1.1, Exception 1 – Editorial clarification.

Section 1803A.6.1.2 – Editorial clarifications. Deleted requirements are covered by model code Sections 1803A.5.11 and 1803A.5.12.

Section 1803A.6.2 – Section is revised to require Next Generation Attenuation (NGA) relations for site specific ground motion analysis, which are the most current accepted procedures and will be the basis of future building code.

Section 1803A.6.2.2 – Delete reference to advisors. The enforcement agency may in some cases choose not retain

advisors.

Section 1803A.7 – Editorial revisions for clarity.

Section 1805A.2 - Amendment relocated from Section 1807A.2 (2007 CBC).

Section 1806A.1 (2007 CBC) - Requirements are being deleted since they duplicate requirements in Section 1807A.2.

Section 1805A.6 – Requirements are being deleted since they duplicate provisions in Chapters 19, 22, and 23.

Section 1807A.1.1 – Section is revised to make it consistent with requirements in Section 1803.5.12.

Section 1807A.1.3 – Deleted provisions are not permitted in Seismic Design Categories D, E, and F, which are the only design categories permitted by DSA.

Section 1807A.1.4 – Existing amendments retained.

Section 1807A.1.5 – Existing amendments retained.

Section 1807A.1.6 – Existing amendments retained.

Section 1807A.2 – Amendments relocated from Section 1806A.

Section 1807A.2.2 – Section is revised for consistency with requirements in Section 1803.5.12. Deleted existing amendments are redundant since lateral soil pressure is provided by the geotechnical engineer.

Section 1808A.2 – Editorial changes made to existing provisions for clarity.

Section 1808A.8 – Existing amendment retained.

Table 1808A.8.1 – Deleted conditions not permitted by DSA.

Section 1808A.8.5 – Concrete cover requirements defined in Table 1808.8.2 and ACI 318-08 Section 7.5.2.1 added tolerance requirement for concrete cover, which removed the rationale for existing amendment.

Section 1808A.8.6 – Existing column confinement requirement for piles just below cap and free standing piles in accordance with ACI 318-08 is retained.

Section 1809A.7 – Existing amendment retained.

Section 1809A.8 – Existing amendment retained.

Section 1809A.9 – Existing amendment retained.

Section 1809A.10 – Existing amendment retained.

Section 1809A.12 – Existing amendment retained.

Section 1809A.13 (Exception) – Provision for alternative to prescriptive provisions, which are permitted on a case by case basis, is codified.

Section 1810A.2.23.2.4 (CBC 2007) – California amendment is picked-up by model code in Section 1810*A*.2.4.1.

Section 1810A.3.1.5.1 – Seismic requirements for helical piles are added. ICC AC 358, which is the basis of helical piles provisions in 2009 IBC, limited helical foundations to Seismic Design Categories A, B, and C. When helical foundation requirements were adopted in 2009 IBC, restriction for Seismic Design Categories D, E, and F were omitted accidentally.

Section 1810A.3.2.4 - Existing amendment retained.

Section 1810A.3.8.3.2 – Requirements for Seismic Design Category C are deleted since Seismic Design Category C

are not permitted by Section 1613A.

Section 1810A.3.10.2 – Minimum pipe thickness is changed to 3/8" for use in Seismic Design Categories D, E and F to provide corrosion allowance.

Section 1810A.3.10.4 – Alternative system submittal requirement in the code is removed by explicitly providing requirements for use of micropiles in Seismic Design Categories D, E or F.

Section 1810A.4.1.5 - Existing amendment retained. Timber piles are not permitted by DSA.

Section 1810A.4.7 – Revision in model code to design requirements for enlarged pile made them equivalent to other cast-in-place concrete, which removed the rationale for original amendments.

Title 24, Part 2, Volume 2
Chapter 19 – Concrete

Section 1901.1.1 – Revisions to scope Provisions to apply to Community College structures.

Section 1901.1.2 – Provisions for identifying amendments applicable to Community College structures added.

Section 1901.1.3 – Provisions identifying references to other chapters added.

Sections 1903.3.1 and 1903.3.2 – Existing amendments retained (Section 1903A.3 and 1903A.5, 2007 CBC).

Section 1903.3.3 – Discontinuous steel fibers had not yet been tested for use in high seismic regions; therefore they are prohibited in this section.

Section 1903.4 (2007 CBC) - Amendment is repealed. Covered in ACI 318 R 3.5.2

Section 1905.1.1 – Section is revised to make it consistent with Table 1808A.8.1. Requirement for prior approval of high strength concrete repealed, since it is unrelated to seismic safety performance.

Section 1905.2 - Existing amendment retained.

Section 1905.6.2 - Existing amendment retained. Editorial revisions.

Section 1905.8 – This requirement is not necessary because of changes in construction practice.

Section 1905A.10.1 (2007 CBC) - Amendment is repealed, since it is unrelated to seismic safety performance.

Section 1905A.12 (2007 CBC) - Amendment is repealed, since it is unrelated to seismic safety performance.

Section 1906.2 – Editorial changes to retained amendments.

Section 1906.3 - Editorial changes to retained amendments.

Section 1906.4 - Editorial changes to retained amendments.

Section 1907A.5.1 (2007 CBC) – Addition of tolerances for concrete cover in ACI 318 Section 7.5.2.1 removed the original rationale for this amendment.

<u>The following descriptions of the changes to Section 1908A are arranged based on the section numbers of ACI 318.</u>

Section 1908A.1.1 (2007 CBC) – (ACI 318 Section 8.11.5) Amendment is repealed, since it is unrelated to seismic safety performance.

Section 1908A.1.2 (2007 CBC) - (ACI 318 Section 8.11.6) Amendment is repealed, since it is unrelated to seismic safety performance.

Section 1908A.1.3 (2007 CBC) - (ACI 318 Section 8.11) Amendment is repealed, since it is unrelated to seismic safety performance.

Section 1908A.1.4 (2007 CBC) - (ACI 318 Section 10.5.3) Amendment is repealed, since it is unrelated to seismic safety performance.

Section 1908A.1.5 (2007 CBC) - (ACI 318 Section 12.14.3) Amendment is repealed, since it is unrelated to seismic safety performance.

Section 1908A.1.6 (2007 CBC) – (ACI 318 Section 13.5.3.3) ACI 318-08 revised this section to eliminate the rationale for this amendment.

Section 1908A.1.7 (2007 CBC) - (ACI 318 Section 14.2.6) Amendment is repealed, since it is unrelated to seismic safety performance.

Section 1908A.1.8 (2007 CBC) – (ACI 318 Section 14.3.5) Redundant section deleted.

Section 1908A.1.9 (2007 CBC) – (ACI 318 Section 14.3.8) Redundant section deleted.

Section 1908A.1.10 (2007 CBC) - (ACI 318 Section 14.5) Amendment is repealed, since it is unrelated to seismic safety performance.

Section 1908A.1.11 (2007 CBC) - (ACI 318 Section 14.6.1) Amendment is repealed, since it is unrelated to seismic safety performance.

Section 1908A.1.12 (2007 CBC) - (ACI 318 Section 14.9) Amendment relocated to Section 1908.1.11.1.

Section 1908A.1.13 (2007 CBC) – (ACI 318 Section 15.2.1) Simplification provided by this section, which were intended for hand calculations, is no longer necessary since most of calculations are now done by the computer software. If soil pressures are calculated by neglecting vertical effect of earthquake as permitted by exception to ASCE 7 Section 12.4.2.2, this simplification will give incorrect results.

Section 1908A.1.14 (2007 CBC) – (ACI 318 Section 15.2.2) California amendments adopted by 2009 IBC in Section 1605A.1.1.

Section 1908A.1.15 (2007 CBC) – (ACI 318 Section 15.8.3.2) Amendment repeal, redundant pointers.

Section 1908A.1.16 (2007 CBC) – (ACI 318 Section 16.3) Amendment is repealed, since it is unrelated to seismic safety performance.

Section 1908A.1.17 (2007 CBC) – (ACI 318 Section 16.) Prescriptive requirements are unnecessary for seismic safety performance. Structural panel design and detailing deferred to section 21.4 and 21.9, as applicable.

Section 1908A.1.18 (2007 CBC) – (ACI 318 Section 16) This amendment is no longer necessary. All requirements for precast walls in ACI 318 Chapter 16 apply to site-cast precast wall panels based on definition of precast wall in ACI 318 Section 2.2.

Section 1908A.1.19 (2007 CBC) – (ACI 318 Section 17.5.1) Amendment is repealed, since it is a prescriptive alternative to code.

Section 1908A.1.20 (2007 CBC) – (ACI 318 Section 18.2.3) Amendment is repealed, since it is unrelated to seismic safety performance.

Section 1908A.1.21 (2007 CBC) – (ACI 318 Section 18.2.4) Amendment is repealed, since it is unrelated to seismic safety performance.

Section 1908A.1.22 (2007 CBC) – (ACI 318 Section 18.2) Amendment is repealed, since it is unrelated to seismic safety performance.

Section 1908A.1.23 (2007 CBC) – (ACI 318 Section 18.2) Amendment is repealed, since it is unrelated to seismic safety performance.

Section 1908A.1.24 (2007 CBC) – (ACI 318 Section 18.9.2.2) This section is deleted because requirements in this section are not fully consistent with other code provisions and uniform force method in the ACI 318-08 made this provision unnecessary. In addition, Structural Integrity requirements are covered in new code Section 1614A.

Section 1908A.1.25 (2007 CBC) - (ACI 318 Section 18.9.2) Amendment is repealed, since it is unrelated to seismic safety performance.

Section 1908A.1.26 (2007 CBC) - (ACI 318 Section 18.12) Amendment is repealed, since it is unrelated to seismic safety performance.

Section 1908A.1.27 (2007 CBC) – (ACI 318 Section 18.21.5) Existing amendment retained and relocated to 1908.1.11.2.

Section 1908A.1.28 (2007 CBC) – (ACI 318 Section 18.23) Existing amendment retained and relocated to Section 1908.1.11.3. Editorial changes.

Section 1908A.1.29 (2007 CBC) – (ACI 318 Section 21.1) Relocated to Section 1908.1

Section 1908A.1.30 (2007 CBC) – (ACI 318 Section 21.2.1) Deleted requirements in this section is picked-up by ACI 318-08.

Section 1908A.1.33 (2007 CBC) – (ACI 318 Section 21.3) Deleted requirements in this section is picked-up by ACI 318-08.

Section 1908A.1.34 (2007 CBC) – (ACI 318 Section 21.4.4.1) ACI 318 Section 21.6.4.5, which limits maximum tie spacing to 6”, is considered to provide adequate protection, hence this amendment is deleted.

Section 1908A.1.35 (2007 CBC) – (ACI 318 Section 21.4.4) ACI 318 Section 21.6.4.5, which limit maximum tie spacing to 6” , is considered to provide adequate protection, hence this amendment is deleted.

Section 1908A.1.36 (2007 CBC) – (ACI 318 Section 21.5.4) Deleted pointer.

Section 1908A.1.47 (2007 CBC) – (ACI 318 Appendix D) Deleted requirements in this section is picked-up by Section 1908.1.11.9.

Section 1908.1.3 – (ACI 318 Section 21.4) The proposed amendment covers intermediate precast shear walls (most commonly tilt-up construction), specifying that the requirements for special concrete walls are triggered for wall piers (narrow shear wall elements). This change is needed to ensure that adequate confinement and shear strength is provided for seismic loads. The requirement is not triggered if the wall piers do not materially contribute to lateral strength.

Section 1908.1.11 – California amendments to Section 1908 are placed in this section.

Section 1908.1.11.1 (Section 1908A.1.12, 2007 CBC). Amendment retained.

Section 1908.1.11.2 (Section 1908A.1.27, 2007 CBC). Amendment retained.

Section 1908.1.11.3 (Section 1908A.1.28, 2007 CBC). Amendment retained. Editorial change to title.

Section 1908.1.11.4 (Section 1908A.1.37, 2007 CBC). Amendment retained. Editorial changes.

Section 1908.1.11.5 (Section 1908A.1.38, 2007 CBC). Amendment retained. Editorial changes.

Section 1908.1.11.6 (Section 1908A.1.41, 2007 CBC). Amendment retained.

Section 1908.1.11.7 (Section 1908A.1.42, 2007 CBC). Amendment retained. Editorial changes.

Section 1908.1.11.8 (Section 1909A, 2007 CBC). Amendment retained.

Section 1908.1.11.9 (Section 1908A.1.47, 2007 CBC). Amendment retained. Editorial changes. Section 1615A revised ACE 7-05 Sections 13.4.1 and 13.4.2, making deleted exceptions unnecessary. Section D.3.3.7 added to address issues with sill bolt capacity in wood frame construction when applying Appendix D, and is based on tests

conducted by SEAOC.

Section 1913A.1 - Existing amendment retained, relocated.

Section 1913A.7 - Existing amendment retained, relocated.

Section 1913A.10.2 – Existing amendment retained, relocated. See Section 1913.11.2.

Section 1913A.11 (2007 CBC) – California amendment has been incorporated in model code Section 1913A.5.

Section 1913.11 - Existing amendments retained and relocated.

Section 1913.11.1 - Existing amendment relocated (Section 1913A.1, 2007 CBC).

Section 1913.11.2 - Preconstruction sample panel is required, to verify that shotcrete can be adequately placed.
Section 1913.11.3 - Existing amendment relocated (Section 1913A.7, 2007 CBC).

Section 1913.11.4 - Existing amendment relocated (Section 1913A.12, 2007 CBC).

Section 1913.11.35 - Existing amendment relocated (Section 1913A.13, 2007 CBC).

Section 1914.1 - Existing amendment repealed. Reinforced gypsum concrete is not permitted by code.

Sections 1916.2 & 1916.4 – Contents of Sections 1916A.2 & 1916A.2 are consolidated into Section 1916.2. When tests of reinforcement are waived, certified mill test reports are required. Also, reference to 2500 psi concrete is deleted since it is not permitted anymore.

Section 1916.7 – This section provides revised requirements for post-installed concrete anchors, incorporating concepts currently contained in DSA IR 19-1 and OSHPD CAN 2-1916A.8.

Title 24, Part 2, Volume 2
Chapter 19A – Concrete

Section 1903A.5 – Discontinuous steel fibers had not yet been tested for use in high seismic regions; therefore they are prohibited in this section.

Section 1905A.1.1 – Section is revised to make it consistent with Table 1808A.8.1.

Section 1905A.2 - Existing amendment retained.

Section 1905A.6.2 - Existing amendment retained.

Section 1905A.8 – This requirement is not necessary because of changes in construction practice.

Section 1905A.10.1 - Existing amendment retained.

Section 1907A.5.1 – Addition of tolerances for concrete cover in ACI 318 Section 7.5.2.1 removed the original rationale for this amendment.

<u>The following descriptions of the changes to Section 1908A are arranged based on the section numbers of ACI 318.</u>

Section 1908A.1.1– (ACI 318 Section 2.2) Definition of “Design Displacement” - word “basis” is deleted to make code consistent with ASCE 7 terminology.

Section 1908A.1.2 - (ACI 318 Section 8.13.5) Existing amendment retained.

Section 1908A.1.3 - (ACI 318 Section 8.13.6) Existing amendment retained.

Section 1908A.1.4 - (ACI 318 Section 8.13) Existing amendment retained.

Section 1908A.1.5 - (ACI 318 Section 10.5.3) Existing amendment retained.

Section 1908A.1.6 (2007 CBC) – (ACI 318 Section 13.5.3.3) ACI 318-08 revised this section to eliminate the rationale for this amendment.

Section 1908A.7 - (ACI 318 Section 14.2.6) Existing amendment retained.

Section 1908A.1.8 (2007 CBC) – (ACI 318 Section 14.3.5) Redundant section deleted.

Section 1908A.1.9 (2007 CBC) – (ACI 318 Section 14.3.8) Redundant section deleted.

Section 1908A.1.13 (2007 CBC) – (ACI 318 Section 15.2.1) Simplification provided by this section, which were intended for hand calculations, is no longer necessary since most of calculations are now done by the computer software. If soil pressures are calculated by neglecting vertical effect of earthquake as permitted by exception to ASCE 7 Section 12.4.2.2, this simplification will give incorrect results.

Section 1908A.1.14 (2007 CBC) – (ACI 318 Section 15.2.2) California amendments adopted by 2009 IBC in Section 1605A.1.1.

Section 1908A.1.15 (2007 CBC) – (ACI 318 Section 15.8.3.2) Requirement equivalent to this section is adopted by IBC in Section 1613A.7.

Section 1908A.1.16 (2007 CBC) – (ACI 318 Section 16.3.3)

Section 1908A.1.18 (2007 CBC) – (ACI 318 Section 16) This amendment is no longer necessary. All requirements for precast walls in ACI 318 Chapter 16 apply to site-cast precast wall panels based on definition of precast wall in ACI 318 Section 2.2.

Section 1908A.1.16 – (ACI 318 Section 18.2.3) Existing amendment retained and relocated.

Section 1908A.1.17 – (ACI 318 Section 18.2.4) Existing amendment retained and relocated.

Section 1908A.1.18 – (ACI 318 Section 18.2) Existing amendment retained and relocated.

Section 1908A.1.23 (2007 CBC) – (ACI 318 Section 18.6) Simplification provided by this section, which were intended for hand calculations, is no longer necessary since most of calculations are now done by the computer software. In addition, changes in ACI 318-08, which changed concrete strength at which prestress can be applied, make this incorrect.

Section 1908A.1.24 (2007 CBC) – (ACI 318 Section 18.9.2.2) This section is deleted because requirements in this section are not fully consistent with other code provisions and uniform force method in the ACI 318-08 made this provision unnecessary. In addition, Structural Integrity requirements are covered in new code Section 1614A.

Section 1908A.1.25 (2007 CBC) - (ACI 318 Section 18.9.2) This section is delete because it is redundant.

Section 1908A.1.26 (2007 CBC) - (ACI 318 Section 18.12) This section is delete because it is redundant

Section 1908A.1.20 – (ACI 318 Section 18.21.5) Existing amendment retained and relocated.

Section 1908A.1.21 – (ACI 318 Section 18.23) Existing amendment retained and relocated.

Section 1908A.1.30 (2007 CBC) – (ACI 318 Section 21.2.1) Deleted requirements in this section is picked-up by ACI 318-08.

Section 1908A.1.22 – (ACI 318 Section 21.1.1) Existing amendment retained and relocated.

Section 1908A.1.33 (2007 CBC) – (ACI 318 Section 21.3) Deleted requirements in this section is picked-up by ACI 318-08.

Section 1908A.1.23 – (ACI 318 Section 21.4) relocate existing model code provision.

Section 1908A.1.35 (2007 CBC) – (ACI 318 Section 21.4.4) ACI 318 Section 21.6.4.5, which limit maximum tie spacing to 6" , is considered to provide adequate protection, hence this amendment is deleted.

Section 1908A.1.34 (2007 CBC) – (ACI 318 Section 21.4.4.1) ACI 318 Section 21.6.4.5, which limits maximum tie spacing to 6", is considered to provide adequate protection, hence this amendment is deleted.

Section 1908A.1.36 (2007 CBC) – (ACI 318 Section 21.5.4) Deleted pointer.

Section 1908A.1.23 – (ACI 318 Section 21.4) The proposed amendment covers intermediate precast shear walls (most commonly tilt-up construction), specifying that the requirements for special concrete walls are triggered for wall piers (narrow shear wall elements). This change is needed to ensure that adequate confinement and shear strength is provided for seismic loads. The requirement is not triggered if the wall piers do not materially contribute to lateral strength.

Section 1908A.1.24 – (ACI 318 Section 21.9.2.2) Existing amendment retained and relocated.

Section 1908A.1.25 – (ACI 318 Section 21.9.4) Existing amendment retained and relocated.

Section 1908A.1.26 – (ACI 318 Section 21.9) relocate existing model code provision.

Section 1908A.1.27 – (ACI 318 Section 21.10) relocate existing model code provision.

Section 1908A.1.28 – (ACI 318 Section 21.11.4) Existing amendment retained and relocated.

Section 1908A.1.29 – (ACI 318 Section 21.11.7) Existing amendment retained and relocated.

Section 1908A.1.30 – (ACI 318 21.12.1.1) This section is modified to make it consistent with amendments in Chapter 16A and 23A.

Section 1908.1.7 – (ACI 318 Section 22.6) This section is deleted because it is in conflict with Section 1909A.

Section 1908.1.8 – (ACI 318 Section 22.10) This section is deleted because it is in conflict with Section 1909A.

Section 1908A.1.31 – (ACI 318 Appendix D) Section 1615A revised ACE 7-05 Sections 13.4.1 and 13.4.2, making deleted exceptions unnecessary. Section D.3.3.7 added to address issues with sill bolt capacity in wood frame construction when applying Appendix D, and is based on tests conducted by SEAOC.

Section 1908A.1.32 – (ACI 318 Appendix D) relocate existing model code provision.

Section 1908A.1.47 (2007 CBC) – (ACI 318 Appendix D) Deleted requirements in this section is picked-up by Section 1908A.1.31.

Section 1909A – This section is deleted for consistency with Section 1908A.1.22.

Section 1911A.1.1 – This section provides criteria for the use of power actuated fasteners.

Sections 1912A.1.1– This section provides criteria for the use of specialty cast-in-place concrete inserts, which generally do not conform to requirements for cast-in-place bolts.

Section 1913A.1 - Existing amendment retained.

Section 1913A.3 **–** Aggregate size gradation for shotcrete in shear walls is specified to ensure good performance of shear walls during seismic loading.

Section 1913A.5 – Section modified to require a preconstruction sample panel.

Section 1913A.7 - Existing amendment retained.

Section 1913A.10.2 – Editorial change.

Section 1913A.11 (2007 CBC) – California amendment has been incorporated in model code Section 1913A.5.

Section 1913A.11 - Existing amendment retained and relocated.

Section 1913A.12 - Existing amendment retained and relocated.

Section 1914A.1 - Existing amendment retained.

Sections 1916A.2 & 1916A.4 – Contents of Sections 1916A.2 & 1916A.2 are consolidated into Section 1916A.2. When tests of reinforcement are waived, certified mill test reports are required. Also, reference to 2500 psi concrete is deleted since it is not permitted anymore.

Section 1916A.7 – This section provides requirements for post-installed concrete anchor, incorporating concepts currently contained in DSA IR 19-1 and OSHPD CAN 2-1916A.8.

Section 1917A.3 – This section codifies current practice for concrete strengthening for gravity frame members using externally bonded Fiber Reinforced Polymer (FRP).

Title 24, Part 2, Volume 2
Chapter 21 - Masonry

Section 2101.1.1 – Revisions to scope Provisions to apply to Community College structures.

Section 2101.1.2 – Provisions for identifying amendments applicable to Community College structures added.

Section 2101.1.3 – Provisions identifying references to other chapters added.

Section 2101.1.4 – This section consolidate existing prohibitions in various sections of Chapter 21A in the 2007 CBC with no change to current requirements.

Section 2101.2.2 – Prohibition of AAC is now in Section 2101.1.4.

Section 2101.2.3 - Prohibition of Prestressed Masonry is now in Section 2101.1.4.

Section 2101.2.4 - Prohibition of Empirical Design is now in Section 2101.1.4.

Section 2101A.2.5 (2007 CBC) - Amendment is repealed, since it is unrelated to seismic safety performance.

Section 2102A.1 (2007 CBC) – Amendment is repealed, since it is unrelated to seismic safety performance.

Section 2103A.3 (2007 CBC) - Prohibition of AAC is now in Section 2101.1.4.

Section 2103.8 – Existing amendment retained and revised. The exception will permit use of class M mortar in addition to class mortar, since both can provide equivalent performance. Deleted section is redundant. Reference to ASTM C 144 is covered in ASTM C 270.

Section 2103.11 - Prohibition of AAC is now in Section 2101.1.4.

Section 2103A.12.1 (2007 CBC) – Repeal restriction on water content, since grout slump per ASTM C476 is a better indication of workability.

Section 2103A.12.2 (2007 CBC) – Repeal restriction on coarse aggregate, since ASTM C 404 requirement is more stringent.

Section 2103A.12.3 (2007 CBC) - Repeal redundant reference to ASTM C 404, since reference to the standard is in ASTM C 476.

Section 2103.14 – Retain existing amendment items 1 through 3. Repeal amendment item 4. Model code limitations on carbon black in ACI 530 Section 2.6 A.2 are more restrictive.

Section 2104.1.1 – This exception codifies current practice, makes bed joint thickness compatible with construction tolerances.

Section 2104.1.2 – Model code revised, existing amendment in Section 2104A.1.2.4 (2007 CBC) retained, relocated.

Section 2104.1.7 – Existing amendment relocated from 2104A.1.2.7 (2007 CBC)

Section 2104A.2 (2007 CBC) – Amendments in this section for corbelled masonry are deleted, since revised provisions in the 2010 CBC (2009 IBC) Section 2104.2 is adequate.

Section 2104.5.1 – General provisions for grouted masonry (Section 2104A.6.1, 2007 CBC) are retained with extensive changes. Existing provision of 2007 CBC Section 2104.5.1.1.1 is relocated. Detailed prescriptive requirements for reinforced grouted masonry and reinforced hollow-unit masonry (Sections 2104A.6.1.1 and 2104A.6.1.2, 2007 CBC) are repealed. A requirement has been added that grouting procedures be described in construction documents.

Section 2104.5.2 – Existing amendment (Section 2104A.6.2, 2007 CBC). Deleted unenforceable provision.

Section 2104.6 – Existing amendment retained.

Section 2105.2.1 – Prohibition of AAC is now in Section 2101.1.4.

Section 2105.2.1.1 - Existing amendments retained. Increase maximum value of f'_m to 3000 psi in recognition of improved masonry design and QA standards. Requirements for additional pre-construction testing when f'_m exceeds 1500 psi repealed.

Section 2105.2.2.1.3 - Prohibition of AAC is now in Section 2101.1.4.

Section 2105.2.2.1.4 – Existing amendment retained and relocated from Section 2105A.5 (2007 CBC). Clarification added mortar and grout tests are not required when prism test method is used.

Section 2105.2.2.2.1 – Item 3 repealed for compatibility with Section 2105.2.1.1.

Section 2105.2.2.2.3 – Amendments to Section 2105.2.2.2.2 (2007 CBC) retained and moved to this section. Number of prisms required reduced from 5 to 3. This change is unrelated to seismic safety performance.

Section 2105.2.2.3 – Redundant section is deleted, since requirements are covered in ASTM C 1314.

Section 2105.3 - Existing amendments retained. Exception clarifies additional applications for prism tests.

Section 2105.4 – Existing amendment retained. Editorial revisions for clarity. Minimum core diameter reduced to reduce the probability of hitting rebar. Requirement for compression testing repealed, since materials and workmanship can be determined from shear tests.

Section 2105A.6 (2007 CBC) – Redundant section is deleted.

Section 2106.1.1 – Existing amendments retained and relocated from 2106A.5.3 (2007 CBC)

Section 2106A.5.4 (2007 CBC) - Amendment is repealed, since it is unrelated to seismic safety performance.

Section 2107A.1.1 (2007 CBC) – Design assumptions are deleted because they are not necessary for design.

Section 2107.4 – Existing Amendments Sections 2107A.4 and 2107A.5 (2007 CBC) retained.

Section 2107.5 - Existing Amendment Section 2107A.6 (2007 CBC) retained.

Section 2107.6 - Existing Amendment Section 2107A.9 (2007 CBC) retained. Reference to strength design section is deleted.

Section 2107A.10 (2007 CBC) – Existing requirements is relocated to Section 2101A.1.3.

Section 2107A.12 (2007 CBC) – Requirement is picked-up in the TMS 402 Section 2.3.3.4.

Section 2108.1 - Prohibition of AAC is now in Section 2101.1.4.

Section 2108A.2 (2007 CBC) – Existing requirements is relocated to Section 2101A.1.3.

Section 2109 - Prohibition of Empirical Design is now in Section 2101.1.4.

Section 2110.1 - Existing amendment retained. Editorial clarification.

Section 2113A.5 (2007 CBC) – California amendments picked-up by 2009 IBC in Sections 2113A.4 & 2113A.5.

Section 2113A.9.1 (2007 CBC) – California amendments picked-up by 2009 IBC

Section 2114 - Existing amendments retained.

Section 2115 – Existing amendments retained.

Title 24, Part 2, Volume 2
Chapter 21A - Masonry

2101A.1.3 – This section consolidate existing prohibitions in various sections of Chapter 21A in the 2007 CBC with no change to current requirements.

Section 2101A.2.2 - Existing amendment retained.

Section 2101A.2.3 - Existing amendment retained.

Section 2101A.2.4 - Existing amendment retained.

Section 2101A.2.5 - Existing amendment retained.

Section 2103A.3 - Existing amendment retained.

Section 2103A.8 – This amendment will permit use of class M mortar in addition to class mortar, since both can provide equivalent performance. Deleted section is redundant. Reference to ASTM C 144 is covered in ASTM C 270.

Section 2103A.11 - Existing amendment retained.

Section 2103A.12.1 – Repeal restriction on water content, since grout slump per ASTM C476 is a better indication of workability.

Section 2103A.12.2 – Repeal restriction on coarse aggregate, since ASTM C 404 requirement is more stringent.

Section 2103A.12.3 - Repeal redundant reference to ASTM C 404, since reference to the standard is in ASTM C 476.

Section 2103A.14.4 – Repeal amendment. Model code limitations on carbon black in ACI 530 Section 2.6 A.2 are more restrictive.

Section 2104A.1.1 – This section codifies current practice, makes bed joint thickness compatible with construction tolerances.

Section 2104A.1.2 – Model code revised, existing amendment in Section 2104A.1.2.4 (2007 CBC) retained, relocated.

Section 2104A.1.7 – Existing amendment relocated from 2104A.1.2.7 (2007 CBC)

Section 2104A.2 (2007 CBC) – Amendments in this section for corbelled masonry are deleted, since revised provisions in the 2010 CBC (2009 IBC) Section 2104A.2 is adequate.

Section 2104A.5 – Existing amendment for grouted masonry is retained with editorial changes. Pointers to other sections in the code, which are not necessary, have been deleted. Existing provision for vertical barriers in hollow-unit construction in 2007 CBC Section 2104.6.1.2.4 relocated.

Section 2105A.2.1 - Existing amendments retained. Increase maximum value of f'_m to 3000 psi in recognition of

improved masonry design and QA standards.

Section 2105A.2.2.1.3 - Existing amendments retained.

Section 2105A.2.2.1.4 – Existing amendment retained and relocated form Section 2105A.5 (2007 CBC). Clarification added mortar and grout tests are not required when prism test method is used.

Section 2105A.2.2.3 – Redundant section is deleted, since requirements are covered in ASTM C 1314.

Section 2105A.3 - Existing amendments retained.

Section 2105A.4 – Existing amendment retained. Editorial revisions for clarity. Minimum core diameter reduced to reduce the probability of hitting rebar. Requirement for compression testing repealed, since materials and workmanship can be determined from shear tests.

Section 2105A.6 – Redundant section is deleted.

Section 2106A.1.1 – Existing amendments retained and relocated from 2106A.5.3 (2007 CBC)

Section 2107A.1.1 (2007 CBC) – Design assumptions are deleted because they are not necessary for design.

Section 2107A.4 – Existing Amendments Sections 2107A.4 and 2107A.5 (2007 CBC) retained.

Section 2107A.5 - Existing Amendment Section 2107A.6 (2007 CBC) retained.

Section 2107A.7 - Existing Amendment Section 2107A.9 (2007 CBC) retained. Reference to strength design section is deleted.

Section 2107A.10 (2007 CBC) – Existing requirements is relocated to Section 2101A.1.3.

Section 2107A.12 (2007 CBC) – Requirement is picked-up in the TMS 402 Section 2.3.3.4.

Section 2108A.1 - Existing amendment retained.

Section 2108A.2 (2007 CBC) – Existing requirements is relocated to Section 2101A.1.3.

Section 2109A - Existing amendment retained.

Section 2110A - Existing amendment retained. Editorial clarification.

Section 2113A.5 (2007 CBC) – California amendments picked-up by 2009 IBC in Sections 2113A.4 & 2113A.5.

Section 2113A.9.1 (2007 CBC) – California amendments picked-up by 2009 IBC

Section 2114A - Existing amendments retained.

Section 2115A - Existing amendments retained.

Title 24, Part 2, Volume 2
Chapter 22 - Steel

Section 2201.1.1 – Revisions to scope Provisions to apply to Community College structures.

Section 2201.1.2 – Provisions for identifying amendments applicable to Community College structures added.

Section 2201.1.3 – Provisions identifying references to other chapters added.

Section 2204.1.1 – This section is revised to be consistent with requirements in AISC 341-10.

Section 2204.1.2 – This section is revised to be consistent with requirements in AISC 341-10.

Section 2204.1.3 – This section is revised to be consistent with requirements in AISC 341-10.

Section 2205.1.1 (2007 CBC) – Amendment repealed. Existing provisions in AISC 360 J1.8 determined to be adequate.

Sections 2205.2.1, 2205.2.2 – Existing amendments repealed, but intent remains unchanged. SDC A, B, and C are not permitted by DSA-SS/CC. Design by AISC 341 is required.

Section 2206.4 – Existing amendments retained.

Section 2209.3 – Redundant pointer to test requirement is deleted. Editorial clarifications. Reference to ICC ES AC-43 removed.

Section 2210.3.1 – Existing amendments retained.

Section 2210.3.3 – Section is revised to be consistent with the California Administrative Code (Title 24, Part 1) Section 4-317(g).

Section 2210.4 – Existing amendments retained.

Section 2210.6 – Existing amendments retained. Editorial change.

Section 2211A (2007 CBC) – Amendments for light modular steel moment frames are repealed. Steel structures complying with DSA-SS/CC shall meet the requirements of model code. Section 2211A is retained in Chapter 22A of the 2010 CBC and so these design options are still available.

Section 2212A.1 (2007 CBC) **–** California amendments incorporated in the model code (2009 IBC).

Sections 2211.1 and 2211.2 – Existing amendments retained.

Section 2212A.4 (2007 CBC) **–** Redundant test requirements (which is also covered in Section 2205A) is deleted.

Title 24, Part 2, Volume 2
Chapter 22A - Steel

Section 2204A.1.1 – This section is revised to be consistent with requirements in AISC 341-10.

Section 2204A.1.2 – This section is revised to be consistent with requirements in AISC 341-10.

Section 2204A.1.3 – This section is revised to be consistent with requirements in AISC 341-10.

Section 2205A.1.1 (2007 CBC) – Amendment repealed. Existing provisions in AISC 360 J1.8 determined to be adequate.

Sections 2205A.2.1, 2205A.2.2 – Existing amendments retained.

Section 2206A.4 – Existing amendments retained.

Section 2209A.3 – Redundant pointer to test requirement is deleted.

Section 2210A.3.1 – Existing amendments retained.

Section 2210A.3.2 – Errata.

Section 2210A.3.3 – Section is revised to be consistent with the California Administrative Code (Title 24, Part 1) Section 4-317(g).

Section 2210A.4 – Existing amendments retained.

Section 2210A.6 – Editorial change.

Section 2210A.7 – Existing amendments retained.

Section 2212A.1 (2007 CBC) **–** California amendments incorporated in the model code (2009 IBC).

Sections 2211A.1 and 2211A.2 – Existing amendments retained.

Section 2212A.4 (2007 CBC) **–** Redundant test requirements (which is also covered in Section 2205A) is deleted.

Title 24, Part 2, Volume 2
Chapter 23 – Wood

Section 2301.1.1 – Revisions to scope Provisions to apply to Community College structures.

Section 2301.1.2 – Provisions for identifying amendments applicable to Community College structures added.

Section 2301.1.3 – Provisions identifying references to other chapters added.

Section 2301.2 – Seismic design of log structures is not covered in ASCE 7 and the building code and wood design standards do not provide seismic coefficients for log structures.

Section 2303.1.3.1 – Reference to other code sections are deleted since they had been causing confusion as to exclusive nature of those requirements. Construction documents shall satisfy all the code requirements.

Section 2303.4.1.4 – Existing amendment retained.

Section 2303.4.3.1 – Revisions to Section 2303.4.1 in 2009 IBC eliminated the basis for deleted parts of the amendment.

Section 2304.3.4 – Existing amendment retained. Reference to other code sections are deleted since they had been causing confusion as to exclusive nature of those requirements. Construction documents shall satisfy all the code requirements.

Section 2304.4.1 – Existing amendment retained. Reference to other code sections are deleted since they had been causing confusion as to exclusive nature of those requirements. Construction documents shall satisfy all the code requirements.

Section 2304.6.1 – Revision is necessary to provide proper importance factors for Occupancy Category IV buildings.

Section 2304.9.1.1 – Existing amendment retained. Not adopted for DSA-SS/CC, since it is unrelated to seismic safety performance.

Section 2304.11.2.2 – Existing amendment retained. Not adopted for DSA-SS/CC, since it is unrelated to seismic safety performance.

Section 2304.11.2.4 – Existing amendment retained. Not adopted for DSA-SS/CC, since it is unrelated to seismic safety performance.

Section 2305.1.2 – 2009 IBC removed the duplicate requirements between code and SDPWS removing the basis for deleted amendments.

The use of shear walls and diaphragms that use staples for fasteners is not permitted. The design shear values for wood structural panel shear walls with staples are based on monotonic testing. Earthquakes load shear walls in a repeating fully reversible manner. Tests reviewed by the Structural Engineers Association of California indicate that shear assemblies constructed with staples deteriorate badly under cyclical loading.

Prohibition on unblocked shear walls in the CBC 2007 Section 2305.3.3 is retained for high seismic region.

Section 2305.13 – Existing amendment retained.

Section 2305.1.4 - Current design provisions require calculation of the capacity of sill plate anchor bolts using the provisions of ACI 318 Appendix D, however, those methods result in shear capacities far smaller than historical values using provisions of earlier codes and standards. Recent experiments specifically focused on this connection have revealed that the actual capacities exceed those historically used and support a return to determining the sill bolt shear capacity based upon its capacity in the wood sill plate member. The experiment by SEAOC showed that concrete failure modes do not control the capacity of these connections when certain embedment, edge and end distances are maintained. Therefore, it is proposed that Section 2305.1.4 clearly state that the minimum design capacity be based upon the lateral design value of the bolt attaching a wood sill plate to concrete, as determined using AF&PA NDS.

Section 2305.2 – This section is not adopted for consistency with 2305.1.2 Item 4.

Section 2306.3.1 – This section clarifies that structural sheathing should be installed directly to framing, since installation over other sheathing such as drywall degrades seismic performance.

Section 2306.4 – This section is prohibited for consistency with section 1615A.1.3.

Section 2306.7 – This section is prohibited for consistency with section 1615A.1.3.

Section 2308.2.8 – Existing amendment retained.

Title 24, Part 2, Volume 2
Chapter 24 – Glass and Glazing

Section 2403.1.1 - Labeling requirements in the model code is considered in adequate.

Section 2403.2.1 and Table 2403.2.1 – Amendments retained

Section 2403.6 – Redundant requirements in this section is deleted.

Section 2406.1.5 – Redundant requirements in this section is deleted.

Title 24, Part 2, Volume 2
Chapter 25 – Gypsum Board and Plaster

Section 2501.2 – Editorial.

Section 2503.2 – Editorial.

Section 2504.2 – Amendment retained.

Section 2505.3 – Amendment retained.

Section 2506.2.1.1 – Redundant requirements in this section is deleted. Section 2506.2.1 adequately covers the requirement.

Section 2507.3 – Amendment retained.

Section 2508.5.6 – Amendment retained.

Section 2510.7.1 – Amendment retained.

Title 24, Part 2, Volume 2
Chapter 33 – Safeguard During Construction

Section 3307.2 – Amendment retained.

Section 3307.3 – Amendment retained.

Title 24, Part 2, Volume 2
Chapter 34 - Existing Structures

Section 3401.1.2 – Editorial revisions.

Section 3401.1.3 – Adds provisions for establishing evaluation and rehabilitation requirements applicable to Community College structures.

Section 3415.1.2 – Editorial revisions.

Section 3415.1.3 - Adds provisions for establishing evaluation and rehabilitation requirements applicable to Community College structures.

Section 3415.3.3 - Adds provisions for applicability of evaluation and rehabilitation requirements for Community College structures.

Table 3415.5 – For public school structures, refines seismic performance criteria for Occupancy Category I (agricultural-type structures) and Occupancy Category IV (essential structures).

For community college structures, seismic performance criteria for ordinary occupancies (Occupancy Category I, II, and III) and essential occupancies (Occupancy Category IV) are established. Performance objectives are comparable to those for state-owned structures, with the exception of the use of the BSE-2 ground motions in lieu of BSE-C ground motions for a level 2 analysis. BSE-2 was chosen to more closely align with the national standards and practice, and to take advantage of the deterministic cap on ground motions that is a feature of BSE-2.

Section 3417.1.3 – Editorial revision.

Section 3417.1.5 – Revision to clarify that the shear wall and diaphragm requirements are only applicable to light frame construction.

Section 3417.2 – Revision to include requirements for community college buildings. For community college buildings constructed in accordance with the Field Act, data collection requirements are reduced to reflect the higher quality control programs associated with Field Act construction.

Section 3417.1.10 – Editorial revision.

Section 3417.1.12 – Editorial revision.

Section 3421 – Editorial revision.

Section 3421.2 – Editorial revision.

Title 24, Part 2, Volume 2
Chapter 35 - Referenced Standards

References in this chapter are revised for consistency with amendments in all other Chapters.

Title 24, Part 2, Volume 2
Appendix J – Grading

Section J107.5 – Amendment retained.

TECHNICAL, THEORETICAL, AND EMPIRICAL STUDY, REPORT, OR SIMILAR DOCUMENTS:

- 2009 IBC: International Building Code.
- ACI 318-08: Building Code Requirements for Structural Concrete and Commentary.
- ACI 506-05: Guide to Shotcrete.
- AF & PA SDPWS-2008: Special Design Provisions for Wind and Seismic.

- AISC 358-05: Prequalified Connections for Special and Intermediate Steel Moment Frames for Seismic Applications including Supplement No. 1.
- AISC 360-05: Specification for Structural Steel Buildings.
- PCI 120-10: PCI Design Handbook, 7th Edition.
- TMS 402-08: Building Code Requirements for Masonry Structures.
- TMS 602-08: Specification for Masonry Structures.

CONSIDERATION OF REASONALBLE ALTERNATIVES

The alternative to these proposed regulations would be to leave regulations as they are. This alternative was rejected, since it would leave design requirements that are outdated from the current national standards.

REASONABLE ALTERNATIVES THE AGENCY HAS IDENTIFIED THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS.

There will be no overall adverse cost impact on small business.

FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE OF NO SIGNIFICANT ADVERSE IMPACT ON BUSINESS.

The regulations proposed will have no overall cost impact on business, since they are equivalent to current requirements in the Code.

DUPLICATION OR CONFLICTS WITH FEDERAL REGULATIONS

These regulations do not duplicate or conflict with federal regulations.