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 2013 California Building Code (2012 IBC) based on new information since the adoption of the 2010 CBC.

For the Division of the State Architect, both Structural Safety (DSA-SS) and Community Colleges (DSA-SS/CC) and DSA/BSC (Sections 3417-3423), 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 1.9.2.1.1, Item 2 – Editorial correction and updating of Division I and Division II section references.

Section 1.9.2.1.3, Exception 2 – Editorial correction and updating of Chapter 34 section references.

Section 1.9.2.2.1, Item 2.2 – Editorial correction and updating of Division I and Division II section references.

Section 1.9.2.2.2, paragraph 2 – Editorial correction to Chapter 22 reference.

Section 1.9.2.2.3, Exception 2 – Editorial correction and updating of Chapter 34 section references.

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

Section 102.1.1 – Redundant pointer is deleted.

Section 102.4.3 and 102.4.4 – Editorial only, correcting section references which have changed due to IBC adding Sections 102.4.1 and 102.4.2.

Section 104.10 – Adopting model building code language and new model code language related to flood hazards.

Section 104.11 – New Amendment. Alternative system requirements in CAC and ASCE 7 is incorporated by reference.

Title 24, Part 2, Volume 1
Chapter 2 – Definitions

Section 202 – Definitions that affect multiple chapters are relocated from other chapters to Chapter 2 for consistency with new format of the CBC 2013. Definition of active equipment/component, rugged equipment, and significant loss of function needed for special seismic certification requirements in Chapter 17A.

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

Section 1405.1.1 – Editorial revision to update section references.

Section 1410.1 – 1410.2 – Editorial revisions to update section references.

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

Section 1507.3.10 – Amendment retained. Editorial revision to update section reference.

Section 1509.7.1 - Exception – New Amendment. Exception added to clarify the effective wind area shall be based on definition in ASCE 7, not area of a single frame. Solar panel racking systems and structural attachments can have much larger effective wind areas due to the wind pressure averaging affects over larger areas.

Section 1512 – All amendments retained unchanged, except editorial revisions to update section numbers.

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

Section 1601.1.4 – Editorial revision; corrects section reference due to IBC adding Section 1614 Atmospheric Loads.

Section 1616 (2010 CBC Section 1615) – Editorial revisions; all section numbers in this section are corrected, due to IBC adding Section 1614 Atmospheric Loads. All existing amendments retained (Section 1615, 2010 CBC) unless otherwise noted.

Sections 1615.10.7, 1615.10.11, 1615.10.12, 1615.10.19, 1615.10.25, and 1615.10.26 (2010 CBC) – These existing sections are deleted because the model building code had been revised to match DSA amendments.

Section 1616.2.1.1 – Reference to Table 2305.2 is from 2007 CBC and is deleted. Diaphragm span-width ratios are specified in SDPWS reference standard.

Section 1616.2.1.3 – Existing amendment retained (Section 1615.1.3, 2010 CBC) with revision due to IBC change from “Occupancy” to “Risk” category terminology.

Section 1616.2.2 – New amendment to retain the 280 plf minimum strength level force for concrete and masonry wall anchorage design to diaphragms as given in ASCE 7-05. A similar provision has been in the CBC since 1979.

Section 1616.5.1.1 - Existing amendment retained (Section 1615.5.1, 2010 CBC) with revisions to align with model code language. Also, strike out misplaced sentence related to press box loading that is addressed in 1616.5.1.2.

Section 1615.5.1.2 (2010 CBC) – Amendment deleted and relocated to Section 1616.5.1.4 since amendment is applicable to all storage racks and wall-hung cabinets and not related to specific uses.

Section 1615.5.1.3 (2010 CBC) – Amendment deleted and is now covered by Section 1616.5.1.4 since amendment is applicable to all storage racks and wall-hung cabinets and not related to specific uses.

Sections 1616.5.1.2, 1616.5.1.3 and 1616.5.1.4 – Existing amendments retained (Sections 1615.1.4, 1615.1.5, and 1615.1.6 2010 CBC) with editorial revision to correctly align references to items in Table 1607.1, as modified in 2012 IBC. Also, in 1616.5.1.4, to add text from 1615.5.1.2, 2010 CBC

Section 1615.7.1 (2010 CBC) – Amendment deleted since it is duplicated in 1609.3.

Section 1616.7.1 –Editorial to convert nominal design wind speed factors to factors based on ultimate design wind speed. Exception added to not require wind drift limit for single-story open structures since similar provisions are located in ASCE 7 Table 12.12-1 footnote c for seismic drift.

Section 1616.9.2 – Definition of “Next Generation Attenuation (NGA)” relocated to Chapter 2.

Sections 1616.9.3, 1616.9.4, 1616.9.4.1, and 1616.9.4.2 – Existing amendment retained (Sections 1615.9.3, 1615.9.4, 1615.9.4.1, and 1615.9.4.2, 2010 CBC), with editorial revisions to correct Chapter 16 section references.

Section 1615.9.6 (2010 CBC) – Amendment deleted because referenced model code section deleted, hence amendment no longer needed.

Section 1616.10 – Existing amendment retained (Section 1615.10, 2010 CBC) with editorial revisions to correct Chapter 16 section references.

Section 1616.10.1 – ***(ASCE 7 – 1.3)*** The requirements for a Structural Design Criteria has been revised to incorporate wind loading based upon wind tunnel testing and moved to Chapter 1 of ASCE 7 since it no longer is strictly seismic related.

Section 1616.10.2 – ***(ASCE 7 – 11.4.7)*** Amendment revised to simplify ground motion hazard analysis requirements to be aligned with that required for DSA-SS and OSHPD.

Section 1616.10.3 – ***(ASCE 7 – Table 12.2-1)*** Amendments continued with editorial modification to align with renumbering in ASCE 7. The Cold-formed steel-Bolted Moment Frame system is not permitted in buildings since it is not included in AISC 341-10, and it was developed and tested specifically for non-building structures, where the developed lateral strength at the more stringent building drift limit levels was not considered and, as a result, is overestimated. In addition, permitted configuration for moment frame goes beyond the test parameters to be considered applicable.

Section 1616.10.4 – ***(ASCE 7 – 12.2.3.1)*** (Requirements for the R, C_d and Ω_o values in vertical combinations provisions in ASCE 7-05 Section 12.2.3.1 are retained, since ASCE 7-10 Section 12.2.3.1 essentially permits a two stage analysis without the requirements of Section 12.2.3.2. ASCE 7-10 Section 12.2.3.1 will encourage the use of different and possibly deformation incompatible seismic force resisting systems near the mid-height of the building.

Section 1616.10.5 - ***(ASCE 7 – 12.2.3.2)*** Editorial revision to update ASCE 7 section references.

Section 1616.10.6 – ***(ASCE 7 – 12.2.5.6.1)*** New amendment. DSA does not permit Exception after first paragraph since exception allows unlimited height for ordinary moment frames with no reduction in response modification coefficient (R) as would be required for equivalent non-building structures per ASCE 7 Table 15.4-1.

Section 1616.10.7 – ***(ASCE 7 – 12.2.5.7.1)*** New amendment. DSA does not permit Exception after first paragraph since exception allows unlimited height for intermediate moment frames with no reduction in response modification coefficient (R) as would be required for equivalent non-building structures per ASCE 7 Table 15.4-1.

Section 161610.8 - ***(ASCE 7 – 12.2.5.7.2)*** New amendment. DSA does not permit Exception after first paragraph since exception allows unlimited height for intermediate moment frames with no reduction in response modification coefficient (R) as would be required for equivalent non-building structures per ASCE 7 Table 15.4-1.

Section 1616.10.9 - ***(ASCE 7 – 12.3.3.1)*** Editorial revision to update ASCE 7 section reference.

Section 1616.10.10 - ***(ASCE 7 – 12.7.2)*** Editorial to update ASCE 7 Item number.

Section 1616.10.11 – ***(ASCE 7 – 12.8.1.3)*** New Amendment - Maximum mapped short period acceleration (S_s) in California is about 3.73 and site specific short period acceleration are sometimes even higher. Permitting an S_s = 1.5, will mean a reduction of more than 60% from the mapped value. Most of these regular structures are designed with a Redundancy Factor, ρ = 1.0, compared with 1.3 for most irregular structures. This mean irregular structure may potentially be designed for a force of about 3.2 times that of a regular structure at the same site. Historical records of building performance don't to justify such a large advantage for the regular structures. A 25% maximum reduction in short period acceleration seems to be more appropriate. Recent ATC – 58 project analysis suggested higher R values for low rise buildings, which also justify the proposed amendment.

Section 1615.10.7 (2010 CBC) **-** ***(ASCE 7 – 12.8.7)*** Amendment deleted because ASCE 7 had been revised to essentially match this amendment.

Section 1616.10.12 – ***(ASCE 7 – 12.9.4)*** This 2010 amendment (1615A.1.8) continues with editorial revision to coincide with ASCE 7 changes which separates forces and drifts.

Section 1616.10.13 – ***(ASCE 7 – 12.10.2.1)*** This 2010 CBC amendment (1615A.1.9) has been revised to incorporate ASCE 7-10 Section 12.10.2.1, which is similar to the previous amendment, but the upper bound limit is modified to remain the same as in the 2010 CBC amendment. Added language to clarify that transfer forces need to be in addition to maximum diaphragm force.

Section 1616.10.14 - ***(ASCE 7 – 12.13.1)*** This 2010 amendment (1615A.1.10) is retained, but Exception 3 has been revised to clarify that cold-formed steel framing reference standards may require forces higher than this exception permits.

Section 1616.10.15 - ***(ASCE 7 – 13.1.4)*** The exemption for distributed systems have been modified, so that where these systems are subject differential displacements within structures or cross seismic separation joints between adjacent buildings, adequate flexibility to accommodate the movements without failure is provided.

Section 1615.10.11 (2010 CBC) - ***(ASCE 7 – 13.3.2)*** Amendment deleted because ASCE 7 had been revised to essentially match this amendment.

Section 1615.10.12 (2010 CBC) - ***(ASCE 7 – 3.4.5)*** Amendment deleted because ASCE 7 had been revised to essentially match this amendment.

Section 1616.10.16 - ***(ASCE 7 – 13.5.6)*** This 2010 amendment is retained, but language of Item 4 under ASCE 7, Section 13.5.6.2.2 has been revised since not addressed in ASTM E 580 and language added matches that from prior CBC.

Section 1616.10.17 - ***(ASCE 7 – 13.6.5)*** Portions of this 2010 CBC (Section 1615.10.14) amendment are being repealed because provisions are now addressed by ASCE 7-10. The exemptions for small raceways and conduit have been modified, so that where these systems are subject to differential displacements within structures or cross seismic separation joints between adjacent buildings, adequate flexibility to accommodate the movements without failure is provided.

Section 1615.10.18 – ***(ASCE 7 – 13.6.7)*** Portions of this 2010 CBC (Section 1615.10.15) amendment are being repealed because provisions are now addressed by ASCE 7-10. The exemptions for small ducts have been modified, so that where these systems are subject differential displacements within structures or cross seismic separation joints between adjacent buildings, adequate flexibility to accommodate the movements without failure is provided.

Section 1616.10.19 – ***(ASCE 7 – 13.6.8 - 13.6.8.2)*** This 2010 CBC amendment is removed since ASCE 7-10 Section 13.6.7 contains provisions similar to those removed. Only the Exception is retained.

Section 1616.10.20 ***– (ASCE 7 – 13.6.8.3)*** Portions of this 2010 CBC (Section 1615.10.16) amendment are being deleted because provisions are addressed now by ASCE 7-10. The exemptions for small pipes have been modified, so that where these systems are subject differential displacements within structures or cross seismic separation joints between adjacent buildings, adequate flexibility to accommodate the movements without failure is provided.

Section 1615.10.19 (2010 CBC) – ***(ASCE 7 – 16.1.3.2)*** This 2010 CBC amendment deleted because ASCE 7 had been revised to essentially match this amendment.

Section 1616.10.23 - ***(ASCE 7 – 16.1.4)*** Portions of this 2010 CBC amendment are removed since ASCE 7-10 Section 16.1.4 is similar to the previous amendment and this section also modified to be consistent with that amendment in ASCE 7 Section 12.9.4

Section 1616.10.25 - ***(ASCE 7 – 17.2.1)*** Editorial revision to reflect IBC change from “Occupancy” to “Risk” category terminology.

Section 1615.10.25 (2010 CBC) - ***(ASCE 7 – 17.3.2)*** This 2010 amendment deleted because ASCE 7 had been revised to essentially match this amendment.

Section 1615.10.26 (2010 CBC) - ***(ASCE 7 – 21.4)*** This 2010 amendment deleted because ASCE 7 had been revised to essentially match this amendment.

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

Section 1602A.1 – Revised to allow terms defined for use only in this chapter to be defined here.

Section 1603A.1 – Editorial revision to update chapter section references. Also, 2010 DSA amendment retained without change.

Section 1603A.1.5 – Items renumbered due to changes in IBC. Also, 2010 amendments continue without change. Item 14 added since base used in analysis is critical criteria for future building analysis.

Section 1603A.1.10 – 2010 amendment continues. Revised to registered design professional to align with definitions in chapter 2.

Section 1603A.2 – This section will require the Registered Design Professional (RDP) to submit a description of project for which site data reports are submitted, so that relevance and adequacy of the report can be verified as required by Education Code Section 17212.5.

Section 1603A.3 – This section is added to comply with Education Code Section 17299.

Table 1604A.3 – Editorial, limit is shown explicitly instead of referring to another section.

Section 1604A.3.7 – For easy reference, diaphragm span to width ratio requirements are shown explicitly in Table 1604A.4, instead of referring to ICC-ES AC 43.

Table 1604A.4 - For easy reference, Table added to show diaphragm span to width ratio requirements explicitly, instead of referring to ICC-ES AC 43.

Table 1604A.5 – 2010 CBC amendments continue without change.

Section 1604A.8.2 – This section has been modified to retain the 280 plf minimum strength level force for concrete and masonry wall anchorage design to diaphragms as given in ASCE 7-05. A similiar provision has been in the CBC since 1979.

Table 1607A.1 – Editorial revisions to align with model code changes to footnote letters and item numbers. Footnote P modified to disallow live load reduction for classrooms classified as assembly occupancies in order to align provisions with other assembly occupancies.

Section 1607A.14 – This 2010 amendment (1607A.13) is retained with revision to clarify that stipulated load is a working load, not ultimate load.

Section 1608A.2 – 2010 CBC amendments continued without change, including deletion of Table 1608.2.

Section 1609A1.1.3 – This 2010 amendment is removed since it is duplicated in 1609A.3.

Section 1609A.1.3 – Editorial to convert nominal design wind speed factors to factors based on ultimate design wind speed. Exception added to not require wind drift limit for single-story open structures since similar provisions are located in ASCE 7 Table 12.12-1 footnote c for seismic drift.

Section 1612A.3 – This 2010 amendment, removing model code language, is continued without change. Model code shown stricken for clarity.

Section 1613A.3.1 – 2010 amendments, removing model code language, are continued without change. Model code shown stricken for clarity.

Section 1613A.2 – Revised to allow terms defined for use only in this chapter to be defined here rather than Chapter 2. “Next Generation Attenuation (NGA)” definition moved to chapter 2 since term used in other chapters.

Section 1613A.3.1 – 2010 amendment continues without change, Including deletion of Tables 1613.3.5.1(1) and 1613.3.5(2) [Tables 1613.5.6(1) and 1613.5.6(2) in 2009 IBC].

Figures 1613.3.1(1) through 1613.3.1(6) – Figures were stricken from Chapter 16A in 2010 CBC and this amendment is brought forward. Figures are shown in Chapter 16 and, to see the figures, reader is directed by Section 1613A.3.1 to the non-A Chapter

Section 1613A.3.5.1 – 2010 prohibition against alternative seismic design category determination (1613A.5.6.1) continues without change.

Section 1613A.3.5.2 - 2010 prohibition against simplified design procedure (1613A.5.6.2) continues without change.

Section 1613A.4.1 – Editorial to update section reference to AISC 341-10. Also reference, in the Exception, to intermediate moment frames, from 2010 CBC (1613A.6.2), continues without change.

Section 1615A – Revised to allow terms defined for use only in this chapter to be defined here rather than Chapter 2.

Section 1616A (1615A in 2010 CBC) Modifications to ASCE 7 – 2010 CBC Sub Sections 1615A.1.7, 1615A.1.13, 1615A.1.15, 1615A.1.25, 1615A.1.35, & 1615A.1.39 – These existing sections are deleted because the model building code had been revised to match with DSA amendments.

Section 1616A.1 – Editorial revision to update section references.

Section 1616A.1.1 – ***(ASCE 7, Section 1.3)*** The requirements for a Structural Design Criteria has been revised to incorporate wind loading based upon wind tunnel testing and moved to Chapter 1 of ASCE 7 since it no longer is strictly seismic related.

Section 1616A.1.2 – ***(ASCE 7, Section 11.1.3)*** New Amendment. This amendment will ensure ductile detailing for the central utility plants for continuous operation as part of the total physical plant.

Section 1615A.1.2A – ***(ASCE 7, Section 11.4.7)*** DSA amendment removed since 1616A.1.3 is being co-adopted with OSHPD for ground motion hazard analysis requirements.

Section 1616A.1.3 – ***(ASCE 7, Section 11.4.7)*** This 2010 amendment (1615A.1.2B) is revised to include SDC E since section is co-adopted with DSA to include school buildings.

Section 1616A.1.4 – ***(ASCE 7, Table 12.2-1)*** The EBF and BRBF systems in AISC 341-10 and ASCE 7-10 are no longer specifically categorized as to the type of beam-to-column connections. Therefore, these ASCE 7-05 system names are removed. The Cold-formed steel-Bolted Moment Frame system is not permitted in buildings since it is not included in AISC 341-10, and it was developed and tested specifically for non-building structures, where the developed lateral strength at the more stringent building drift limit levels was not considered and, as a result, is overestimated. In addition, permitted configuration for moment frame goes beyond the test parameters to be considered applicable.

Section 1616A.1.5 – ***(ASCE 7, Section 12.2.3.1)*** New amendment. Requirements for the R, C_d and Ω_o values in vertical combinations provisions in ASCE 7-05 Section 12.2.3.1 are retained, since ASCE 7-10 Section 12.2.3.1 essentially permits a two stage analysis without the requirements of Section 12.2.3.2. ASCE 7-10 Section 12.2.3.1 will encourage the use of different and possibly deformation incompatible seismic force resisting systems near the mid-height of the building.

Section 1616A.1.6 - ***(ASCE 7, Section 12.2.3.2)*** this 2010 amendment (1615A.1.4) continues, but revised to update ASCE 7 section reference and section headings.

Section 1616A.1.7 - ***(ASCE 7, Section 12.2.5.6.1)*** New amendment. DSA does not permit Exception after first paragraph since exception allows unlimited height for ordinary moment frames with no reduction in response modification coefficient (R) as would be required for equivalent non-building structures per ASCE 7 Table 15.4-1.

Section 1616A.1.8 - ***(ASCE 7, Section 12.2.5.7.1)*** New amendment. DSA does not permit Exception after first paragraph since exception allows unlimited height for intermediate moment frames with no reduction in response modification coefficient (R) as would be required for equivalent non-building structures per ASCE 7 Table 15.4-1.

Section 1616A.1.9 - ***(ASCE 7, Section 12.2.5.7.2)*** New amendment. DSA does not permit Exception after first paragraph since exception allows unlimited height for intermediate moment frames with no reduction in response modification coefficient (R) as would be required for equivalent non-building structures per ASCE 7 Table 15.4-1.

Section 1616A.1.11 - ***(ASCE 7, Section 12.7.2)*** This 2010 amendment (1615A.1.6) continues with editorial revision to update ASCE 7 section references.

Section 1616A.1.12 – ***(ASCE 7, Section 12.8.1.3)*** New amendment. Maximum mapped short period acceleration (S_s) in California is about 3.73 and site specific short period acceleration are sometimes even higher. Permitting an S_s = 1.5, will mean a reduction of more than 60% from the mapped value. Most of these regular structures are designed with a Redundancy Factor, ρ = 1.0, compared with 1.3 for most irregular structures. This mean irregular structure may potentially be designed for a force of about 3.2 times that of a regular structure at the same site. Historical records of building performance don't to justify such a large advantage for the regular structures. A 25% maximum reduction in short period acceleration seems to be more appropriate. Recent ATC – 58 project analysis suggested lower R values for low rise buildings, which also justify the proposed amendment.

Section 1616A.1.13 – ***(ASCE 7, Section 12.9.4)*** This 2010 amendment (1615A.1.8) continues with editorial revision to coincide with ASCE 7 changes which separates forces and drifts.

Section 1616A.1.14 – ***(ASCE 7, Section 12.10.2.1)*** This 2010 CBC amendment (1615A.1.9) has been revised to incorporate ASCE 7-10 Section 12.10.2.1, which is similar to the previous amendment, but the upper bound limit is modified to remain the same as in the 2010 CBC amendment. Added language to clarify that transfer forces need to be in addition to maximum diaphragm force.

Section 1616A.1.16 - ***(ASCE 7, Section 12.13.1)*** This 2010 amendment (1615A.1.10) is retained, but Exception 3 has been revised to clarify that cold-formed steel framing reference standards may require forces higher than this exception permits.

Section 1616A.1.18 - ***(ASCE 7, Section 13.1.4)*** The exemption for distributed systems have been modified, so that where these systems are subject differential displacements within structures or cross seismic separation joints between adjacent buildings, adequate flexibility to accommodate the movements without failure is provided.

Section 1616A.1.19 - ***(ASCE 7, Section 13.4)*** (1615A.1.14) Portions of this 2010 CBC amendment are removed since ASCE 7-10 Section 13.4.2 contains provisions similar to those removed. Use of screw anchors are limited to interior conditions based on installation problems observed in the field. Thread of screw anchors do not hold and keep spinning & do not permit a proper installation.

Section 1616A.1.20 - ***(ASCE 7, Section 13.5.6)*** This 2010 amendment (1615A.1.16) is retained with editorial corrections and language of Item 4 under ASCE 7, Section 13.5.6.2.2 has been revised since not addressed in ASTM E 580 and language added matches that from prior CBC.

Section 1616A.1.23 – ***(ASCE 7, Section 13.6.5)*** Portions of this 2010 CBC (Section 1615A.1.20) amendment are being repealed because provisions now addressed by ASCE 7-10. The exemptions for small raceways and conduit have been modified, so that where these systems are subject differential displacements within structures or cross seismic separation joints between adjacent buildings, adequate flexibility to accommodate the movements without failure is provided.

Section 1616A.1.24 – ***(ASCE 7, Section 13.6.7)*** Portions of this 2010 CBC (Section 1615A.1.21) amendment are being repealed because provisions now addressed by ASCE 7-10 Section 13.6.7 contains provisions similar to those removed. The exemptions for small ducts have been modified, so that where these systems are subject differential displacements within structures or cross seismic separation joints between adjacent buildings, adequate flexibility to accommodate the movements without failure is provided.

Section 1616A.1.25 - ***(ASCE 7, Section 13.6.8.2)*** A portion of this 2010 amendment (1615A.1.22) is retained, but text is removed since ASCE 7-10 Section 13.6.8.2 contains provisions similar to those removed.

Section 1616A.1.26 – ***(ASCE 7, Section 13.6.8.3)*** Portions of this 2010 CBC (Section 1615A.1.22) amendment are being repealed because provisions now addressed by ASCE 7-10 Section 13.6.8.2 contains provisions similar to those removed. The exemptions for small pipes have been modified, so that where these systems are subject differential displacements within structures or cross seismic separation joints between adjacent buildings, adequate flexibility to accommodate the movements without failure is provided.

Section 1616A.1.27 – ***(ASCE 7, Section 13.6.10.1)*** – This 2010 amendment is continued without change.

Section 1616A.1.28 – ***(ASCE 7, Section 13.6.10.4)*** – This 2010 amendment is continued without change.

Section 1616A.1.29 - ***(ASCE 7, Section 16.1.4)*** Portions of this 2010 CBC amendment (1615A.1.26) are removed since ASCE 7-10 Section 16.1.4 is similar to the previous amendment and this section also modified to be consistent with that amendment in ASCE 7 Section 12.9.4.

Section 1616A.1.30 – ***(ASCE 7, Section 16.2.2)*** – This 2010 amendment is continued without change.

Section 1616A.1.31 – ***(ASCE 7, Section 16.2.3)*** – This 2010 amendment is continued without change.

Section 1616A.1.32 – ***(ASCE 7, Section 16.2.4)*** – This 2010 amendment is continued without change.

Section 1616A.1.35 - ***(ASCE 7, Section 17.2.4.7)*** This 2010 amendment (1615A.1.32) is retained with editorial revision to align with CBC change from "Occupancy" to "Risk" terminology.

Section 1616A.1.36 – ***(ASCE 7, Section 17.2.4.7)*** – This 2010 amendment is continued without change.

Section 1616A.1.37 – ***(ASCE 7, Section 17.2.5.2)*** – This 2010 amendment is continued with editorial change.

Section 1616A.1.38 – ***(ASCE 7, Section 17.4)*** – This 2010 amendment is continued without change.

Section 1616A.1.39 – ***(ASCE 7, Section 17.6)*** – This 2010 amendment is continued without change.

Section 1616A.1.40 – ***(ASCE 7, Section 18.3.1)*** This 2010 amendment is retained with revisions. The criteria for when members can be modeled as linear in the nonlinear response history procedure is further clarified as the maximum response from any single ground motion. Otherwise, the average response of member deformations is underestimated when using multiple ground motions due to a lack of appropriate nonlinear member modeling.

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

Section 1701A.5 – This amendment is continued with editorial change

Section 1702A.1 – Definitions specific to this chapter are retained and not moved to Chapter 2.

Section 1704A.2 – Deletion of model code language continues a 2010 amendment. Exceptions 2 and 3 are deleted because DSA-SS jurisdiction project inspectors are required on all projects, and they provide comprehensive inspection of these aspects of work, so special inspection is not required, and the Exceptions are superfluous.

Section 1704A.2.3 – Amended for clarity and because DSA does not issue permits. Also, Exception deleted because DSA SS jurisdiction project inspectors are required and provide comprehensive inspection of these aspects of work, so special inspection is not required and the Exception is superfluous.

Section 1704A.2.5.1 Exception – Deletion of Exception carried forward from 2010 CBC

Section 1704.2.5.2 – Deletion of section carried forward from 2010 CBC

Section 1704A.3.2 – Amended to reflect terms in use by DSA.

Section 1704A.4 - Amended to reflect terms in use by DSA.

Section 1704A.5 – This section replaces 2010 CBC Sections 1710A.2 and 1710A.3, which are equivalent.

Section 1705A.2.1 – Inspection requirements provided in the AISC 360 Chapter N, which is new to the code, is revised to maintain inspection requirements consistent with the CBC 2010 requirements. This action would prescribe non-adoption of quality assurance provisions contained in AISC 360 and 341, and would adopt quality control and non-destructive testing (NDT) provisions contained in AISC 360 and 34. The quality assurance provisions are applicable to the owner-employed materials testing lab and special inspectors, while the contractor is responsible for conformance to the quality control provisions.

Table 1705.2.2 (2012 IBC) – Table deleted and replaced with Table 1705A.3 from 2010 CBC.

Table 1705A.2.1 – Table brought back from 2010 CBC as a CA amendment. This action would retain current code provisions that prescribe conditions for which periodic and continuous inspection are required, consistent with current practice/ The referenced standards do not use these terms, and use the terms "observe," "perform," and "document." DSA cannot correlate the terms used in the AISC standards with the current code-prescribed special inspection requirements and practice.

Section 1705A.2.2 – "Other than structural steel" removed to be consistent with current DSA practice.

Sections 1705A.2.2.3 – 1705A.2.2.5 – Amendments retained with editorial revisions to section numbers.

Section 1705A.3 – The Exceptions to required Special Inspections in this section are removed since the minimum concrete compressive strength for new hospital buildings is 3000 psi and the referenced Tables in this section in Chapter 18A are deleted.

Sections 1705A.3.2 – 1705A.3.6 - Editorial.

Table 1705A.3 - The proper installation of adhesive anchors in horizontal and overhead conditions have been known to be difficult. To preclude potential failures, as illustrated by a recent catastrophic failure associated with the use of these anchors in the overhead position, an ACI/CRSI Certified Adhesive Anchor Installer is required for the installation in accordance with ACI 318-11 Section D.9.2.2.

Sections 1705A.4 & 1705A.4.1 – Testing and inspection requirements for post-installed anchors in Masonry is clarified.

Section 1705A.4.1 – Amendments carried forward from 2010 CBC. Addition of Categories I and II continues a 2007 CBC and corrects an error in the 2010 CBC.

Section 1705A.5 – Editorial revision to coordinate with following sections.

Sections 1705A.5.3 – 1705A.5.6 – Amendments retained with editorial updates to section numbers.

Section 1705A.6.1 - Editorial

Section 1705A.7.1 – Editorial.

Section 1705A.10.1 – Exception removed because DSA requires inspection of these elements by the project or special inspector.

Section 1705A.10.2 – Exception removed because DSA requires inspection of these elements by the project or special inspector.

Section 1705A.11 – Amended to reflect terminology in use at DSA and deletion of the Exception is carried forward from 2010 CBC.

Section 1705A.11.1 – Editorial revisions, and Exception removed because DSA does not permit any reduction in special inspections for structural steel, and does not permit structures to be assigned to Seismic Design Category C.

Section 1705A.11.2 – Exception removed because DSA-SS jurisdiction project inspectors are required on all projects, and they provide comprehensive inspection of these aspects of work, so special inspection is not required, and the Exception is superfluous.

Section 1705A.11.3 – Deletion of the Exception is carried forward from 2010 CBC.

Section 1705A.11.4 - Amended to reflect terminology in use at DSA.

Section 1705A.11.5 – Periodic Special Inspection of ceilings are added to the other non-structural components which require Special Inspection to assure proper installation of seismic bracing, grid runner continuity and perimeter edge detailing in order to maintain ceiling functionality under earthquake forces and deformations.

Exception – deleted because DSA-SS jurisdiction project inspectors are required on all projects, and they provide comprehensive inspection of these aspects of work, so special inspection is not required, and the Exception is superfluous.

Section 1705A.12 – Editorial.

Section 1705A.12.3 – Amended to reflect terminology in use at DSA, and because FM 1950 is adopted for seismic sway brace testing to codify current DSA practice, consistent with requirements of NFPA 13.

Section 1705A.12.4 – This section is separated from Section 1705A.12.3 for manufacturer's certification for clarity. Certain equipment which are considered to be critical for hospital operations have been added to the list of equipment requiring special seismic certification.

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

Section 1803A.1 – 2010 amendments retained with some editorial revisions to reflect DSA terminology.

Section 1803A.2 – Editorial to clarify that existing geotechnical reports that satisfying the current code requirements are acceptable.

Section 1803A.5.4 – Deletion of model code Exception continues 2010 amendment.

Section 1803A.6 - All requirements beyond the model code geotechnical report and basic geohazard reports are deleted. Revisions to model code Section 1803A.5.1 through 1803A.5.12 adequately address the deleted amendments.

Section 1803A.6.2 – This 2010 CBC provision's site specific probabilistic and deterministic site hazard requirements have been removed since similar provisions are now contained under ASCE 7-10 Section 21.2.

Section 1803A.7 – Editorial, for the purposes of renaming the engineering geologic reports.

Section 1803A.8 – New DSA amendment added to require peer review when alternate foundation types or ground improvement methods are proposed and require geotechnical engineer review since enforcement agency may need additional technical expertise to perform review.

Section 1805A.2 – 2010 amendments carried forward.

Section 1807A.1.1 - 2010 amendments carried forward

Sections 1807A.1.3 – 1807A.1.5 - 2010 amendments carried forward

Sections 1807.1.6 - 1807.1.6.3.2 (2012 IBC – Deletion of these sections continues DSA amendments.

Tables 1807.1.6.2, 1807.1.6.3(1), 1807.1.6.3(2), 1807.1.6.3(3), and 1807.1.6.3(4) (2012 IBC) – Deletion of these tables continues DSA amendments.

Section 1807A.2.2 – The lateral soil pressures determined by the geotechnical investigation are revised to incorporate a minimum value of 80% of the presumptive lateral soil pressures determined by Section 1610A. This minimum value concept is similar to that used for other site-specific procedures, such as for ground motion. The site-specific value should not be significantly less than the code table based values for the typical condition.

Section 1808A.8 – Deletion of model code Exception continues 2010 amendment.

Table 1808A.8.1 – Changes to table carried forward from 2010 CBC.

Section 1808A.8.6 – Deletion of model code Exception continues 2010 amendment.

Table 1809.7 (2012 IBC) – Deletion of this table continues 2010 amendment

Sections 1809A.7 – Amendments carried forward from 2010 CBC

Section 1809A.12 - Amendment carried forward from 2010 CBC

Section 1809A.15 – New DSA amendment added to require grade beam design with shallow foundations to align with those for deep foundations. There are currently no provisions in 1809A to address grade beams in shallow foundations.

Section 1810.3.2.1.2 (2012 IBC) – Deletion of this section continues 2010 amendment.

Section 1810A.3.2.4 – Amendment brought forward from 2010 CBC.

Section 1810A.3.3.1.2 – This section is revised to add the Procedure G: Cyclic Loading in ASTM D 1143 to the pile compression testing. Procedure G will account for the cyclic loading that is inherent with piles under the Design Earthquake loading in Seismic Design Categories D through F.

Section 1810A.3.3.1.5 – This section is revised to add the Cyclic Loading procedure in ASTM D 3689 to the pile tension testing. The Cyclic Loading procedure will account for the cyclic loading that is inherent with piles under the Design Earthquake loading in Seismic Design Categories D through F.

Section 1810A.3.3.2 – This section is revised to add ASTM D 3966 - Standard Test Method for Piles Under Lateral Loads which has been omitted by the model building code. The Cyclic Loading procedure in ASTM D 3966 is also added to the pile lateral load testing. The Cyclic Loading procedure will account for the cyclic loading that is inherent with piles under the Design Earthquake loading in Seismic Design Categories D through F.

Section 1810A.3.8.3.2 - Amendment brought forward from 2010 CBC.

Section 1810A.3.8.3.3 – Language dropped from model code being brought back as a CA amendment. Amendment brought forward from 2010 CBC to delete last sentence of Item 5.

Section 1810A.3.9.4.2.1 – Editorial, the transverse confinement reinforcing for the pile is located at the bottom of the pile cap.

Section 1810A.3.9.4.2.2 – Editorial, the transverse confinement reinforcing for the pile is located at the bottom of the pile cap.

Section 1810A.3.10.4 – Model code being deleted and 2010 amendment carried forward without change.

Section 1810A.4.1.5 – 2010 amendment carried forward.

Section 1811A.4, Item 6 – Editorial to correct error in 2010 CBC.

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

Section 1901.1.4 – Editorial revision to align with 2012 IBC changes to section numbers.

Section 1913.1 – 2010 CBC 1916.3.2.1 retained and relocated here.

Section 1913.2.2 – ***(ACI 318, Section 3.2.2)*** This 2010 amendment (1916.1.2) is retained. Items 2 and 3 are revised to reference ACI 318 sections since 2012 IBC removed Section 1905 – Concrete Quality, Mixing and Placing.

Section 1913.2.11.2 - This 2010 amendment (1916.1.11.2) is retained. Items 1 and 2 are revised so as not to appear to prefer any one evaluation service.

Section 1913.2.11.4 - This 2010 amendment (1916.1.11.4) is retained and revised so as not to appear to prefer any one evaluation service.

Section 1913.2.11.5 - This 2010 amendment (1916.1.11.5) is retained with revisions so as not to appear to prefer any one evaluation service and to clarify when torque testing of post installed anchors is permitted versus tension testing of the anchors.

Section 1916.2 (2010 CBC) – 2010 CBC amendments in this section are deleted since IBC 2012 removed Section 1905 – Concrete Quality, Mixing and Placing. Similar provisions in ACI 318-11 are deemed adequate except 1916.2.2 was retained and relocated to 1913.3.1.

Sections 1916.3 through 1916.3.3.2 (2010 CBC) - 2010 CBC amendments in these sections are deleted since 2012 IBC removed Section 1906 – Formwork, Embedded Pipes and Construction Joints. Similar provisions in ACI 318-11 are deemed adequate. Section 1916.3.2.1 (2010 CBC) continued and relocated to 1913.1.

Section 1913.3 Modifications to ACI 318 – 2010 CBC amendments in this section are retained, unless noted otherwise below, with editorial revisions to align Chapter 19 section numbers with changes in model code.

Section 1913.3.1 - ***(ACI 318, Section 5.6.2.1)*** Relocated amendment from 1916.2.2.

Section 1916.4.2 – ***(ACI 318, Section 18.21) T***his 2010 CBC section is deleted since the content is similar to ACI 318 Sections 18.3, 18.4 and 21.5.2.5.

Section 1916.4.3 - ***(ACI 318, Section 18)*** This 2010 CBC section is deleted since the content is similar to ACI 318 Sections 18.12 and 18.14.

Section 1916.4.4 - ***(ACI 318, Section 21.4)*** This 2010 amendment is removed since ACI 318-11 contains similar provisions.

Section 1916.4.10 - ***(ACI 318, Section D.3.3)*** This 2010 amendment is removed since ACI 318-11 and the 2012 IBC has been modified. Section 1913.3.8 has been modified to reflect ACI 318 Appendix D amendments under 2013 CBC cycle.

Section 1913.3.8 – New amendment. – The proposed change revises Chapter 19 of the 2012 IBC so that it is consistent with ACI 318-11. Although 2012 IBC Chapter 35 references ACI 318-11, the text in 2012 IBC Chapter 19 erroneously reflects modifications to ACI 318-08. This code change is absolutely critical if the 2013 IBC continues to reference ACI 318-11.

a. Sections D.3.3.4, D.3.3.5, D.3.3.6 and D.3.3.7, as added by 2012 IBC Section 1905.1.9, are deleted because they are not consistent with ACI 318-11 Appendix D.

b. In the exception to ACI 318-11 Section D.3.3.4.2, "need not satisfy" is changed to "shall be deemed to satisfy" to convey the message it is not that the relevant provisions are not necessary, but that the design forces already incorporate the requirement.

c. Exception 2 to D.3.3.4.2, which was included in the original proposal, is deleted because, unlike ASCE 7-05, ASCE 7-10 Section 13.4.2 does not impose overstrength factors on anchor forces or require calculation of anchor forces based on the maximum expected strength of the connected members.

d. The second sentence of D.3.3.4.3(d) is revised to make it consistent with that used in D.3.3.4.3(b) and D.3.3.4.3(c).

e. Exceptions for anchors in wood sill plates and cold-formed steel tracks are revised for better clarity. In addition to the concrete breakout in shear, anchor pryout in shear is also included in the exception now. For in-plane shear in a sill plate or a cold-formed steel track, anchor pryout is not a concern.

f. Exception 3 to D.3.3.5.2, which was included in the original proposal, is deleted because, unlike ASCE 7-05, ASCE 7-10 Section 13.4.2 does not require the use of multiplying factor of 1.3 on anchor forces or calculation of anchor forces based on the maximum expected strength of the connected members.

g. Section D.3.3.8, which was added by 2012 IBC Section 1905.1.9, is deleted. The provision is covered by Item e above.

Section 1913.4 – Amendments carried forward. Editorial change to align with model code section numbering.

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

Chapter 19A Heading note – Editorial update to section references, due to changes in IBC.

Section 1901A.1.2 – Item 12 added. Existing amendment in 2010 CBC Section 1906A.3.1 is relocated to item #12.

Section 1903A.1 - Editorial correction and update to section references, due to changes in IBC.

Sections 1903A.4 through 1903A.8 – Modifications to ACI 318 – All 2010 CBC DSA amendments retained with minor editorial revision to align section numbers with IBC. Other revisions as noted below.

Section 1903A.4 – ***(ACI 318, Section 3.2.1)*** Editorial correction and update to section references, due to changes in IBC. Also formatting correction. Amendment continues without change, but fully underlined.

Section 1903A.5 – ***(ACI 318, Section 3.2.2, Items 2 and 3)*** - Replace CBC reference with ACI 318 reference since Section 1905 is eliminated in 2012 IBC.

Section 1903A.6 – ***(ACI 318, Section 3.3.2)*** – The 2010 amendment (1903A.5) is continued and updated with currently used ASTM standards and current practice.

<u>2010 CBC</u> Sections 1905A.1.1, 1905A.2, 1905A.6.2, 1905A.10.1, and 1905A.12 – 2010 CBC amendments in these sections are deleted since IBC 2012 removed Section 1905 – Concrete Quality, Mixing and Placing. Similar provisions in ACI 318-11 are deemed adequate.

<u>2010 CBC</u> Section 1905A.6.2.1- Relocated to 1905A.1.2 since IBC removed Section 1905 – Concrete Quality, Mixing and Placing.

<u>2010 CBC</u> Section 1906A.3.1 – Relocated to 1901A.3 item 12 since IBC removed Section 1906 – Formwork, Embedded Pipes and Construction Joints.

2010 CBC Sections 1906A.2, 1906A.3.2, 1906A.4 and 1906A.4.1. – 2010 CBC amendments in these sections are deleted since 2012 IBC removed Section 1906 – Formwork, Embedded Pipes and Construction Joints. Similar provisions in ACI 318-11 are deemed adequate.

2010 CBC Section 1907A.5.1 – 2010 CBC amendment is deleted since 2012 IBC removed Section 1907 – Details of Reinforcement. Provisions in ACI 318-11 are deemed adequate.

Sections 1905A.1.1 through 1905A.1.21 reflect 2010 CBC amendments with only editorial revisions to correct section references. Other revisions as noted below.

2012 IBC Sections 1905.1.1, 1905.1.2, 1905.1.4, 1905.1.6, 1905.1.10 – These sections from IBC 2012 model code are deleted because ACI 318 requirements are almost identical to deleted sections due to adoption of ACI 318-11 after the adoption of the IBC 2012

Section 1905A.1 – Editorial revisions to correct and update Chapter 19A section references.

Section 1905A.1.1 – ***(ACI 318, Section 5.1.1)*** – This 2010 CBC amendment (1905A.1.1) is retained with editorial change and moved to this location.

Section 1905A.1.2 - ***(ACI 318, Section 5.6.2.1)*** – This 2010 CBC amendment (1905A.6.2.1) is retained without change and moved to this location.

Section 1905A.1.3 - ***(ACI 318, Section 8.13.5)*** This 2010 CBC amendment (1908A.1.3) is retained with editorial revision to correct Chapter 19A section reference.

Section 1908A.1.11 – ***(ACI 318, Section 14.6.1)*** This 2010 amendment is removed because it is a prescriptive requirements. ACI 318-11 requires serviceability checks.

Section 1905A.1.15 – ***(ACI 318, Section 18.2)*** The existing amendment (1908A.1.18) for span-to-depth ratios for pre-stressed concrete members is retained with editorial changes to account for the deleted 2010 CBC Section 1908A.1.21 reference.

Section 1908A.1.20 - ***(ACI 318, Section 18.21)*** This 2010 CBC section is deleted since the content is similar to ACI 318 Sections 18.3, 18.4 and 21.5.2.5.

Section 1908A.1.21 - ***(ACI 318, Section 18.23)*** This 2010 CBC section is deleted since the content is similar to ACI 318 Sections 18.12 and 18.14.

Section 1905A.1.16 - ***(ACI 318, Section 21.1.1)*** This amendment is retained from 2010 CBC (1905A.1.23) and revised to correspond with ACI 318-11 provisions. Clarificated added that panel to foundation connections shall comply 1616A1.16.

Section 1905A.1.17 - ***(ACI 318, Section 21.9.2.2)*** This amendment is retained from 2010 CBC (1905A.1.24) with editorial revision to update and correct ACI 318 section reference.

Section 1908A.1.27 - ***(ACI 318, Section 21.10*** This 2010 CBC amendment is deleted because ACI 318 requirements are almost identical to deleted sections due to adoption of ACI 318-11 after the adoption of the IBC 2012.

Section 1905.1.7 - ***(ACI 318, Section 22.6)*** This section of 2012 IBC Model code is not adopted because ACI 318 requirements are almost identical to this sections due to adoption of ACI 318-11 after the adoption of the IBC 2012.

Section 1905.1.8 - ***(ACI 318, Section 22.10)*** This section of 2012 IBC Model code is not adopted because plain concrete is not permitted by DSA per 1906A.

Section 1908.1.31 - ***(ACI 318, Section D.3.3)*** This 2010 CBC amendment, and this section of 2012 IBC Model code are not adopted because these amendments do not apply to ACI 318-11 due to adoption of ACI 318-11 after the adoption of the IBC 2012.

Section 1905A.1.21 - ***(ACI 318, Section D.3.3)*** New amendment – The proposed change revises Chapter 19 of the 2012 IBC so that it is consistent with ACI 318-11. Although 2012 IBC Chapter 35 references ACI 318-11, the text in 2012 IBC Chapter 19 erroneously reflects modifications to ACI 318-08. This code change is absolutely critical if the 2013 IBC continues to reference ACI 318-11.

h. Sections D.3.3.4, D.3.3.5, D.3.3.6 and D.3.3.7, as added by 2012 IBC Section 1905.1.9, are deleted because they are not consistent with ACI 318-11 Appendix D.

i. In the exception to ACI 318-11 Section D.3.3.4.2, “need not satisfy” is changed to “shall be deemed to satisfy” to convey the message it is not that the relevant provisions are not necessary, but that the design forces already incorporate the requirement.

j. Exception 2 to D.3.3.4.2, which was included in the original proposal, is deleted because, unlike ASCE 7-05, ASCE 7-10 Section 13.4.2 does not impose overstrength factors on anchor forces or require calculation of anchor forces based on the maximum expected strength of the connected members.

k. The second sentence of D.3.3.4.3(d) is revised to make it consistent with that used in D.3.3.4.3(b) and D.3.3.4.3(c).

l. Exceptions for anchors in wood sill plates and cold-formed steel tracks are revised for better clarity. In addition to the concrete breakout in shear, anchor pryout in shear is also included in the exception now. For in-plane shear in a sill plate or a cold-formed steel track, anchor pryout is not a concern.

m. Exception 3 to D.3.3.5.2, which was included in the original proposal, is deleted because, unlike ASCE 7-05, ASCE 7-10 Section 13.4.2 does not require the use of multiplying factor of 1.3 on anchor forces or calculation of anchor forces based on the maximum expected strength of the connected members.

n. Section D.3.3.8, which was added by 2012 IBC Section 1905.1.9, is deleted. The provision is covered by Item e above.

Section 1906A – DSA Amendment not permitting this section being carried forward.

Section 1908A.1.1 – Editorial changes to remove reference to International Code Council – Evaluation Service Report (ICC-ESR).

Section 1909A.1 – Editorial revisions to update section references.

Section 1910A.1 – Revision to model code language because DSA does not permit plain concrete.

Section 1913A.7.2 – 2010 CBC amendment (1916A.7.3) retained but revised so as not to appear to give preference to any one evaluation service.

Section 1913A.7.5 – 2010 CBC amendment (1916A.7.5) retained but revised so as not to appear to prefer any one evaluation service and to clarify when torque testing of post installed anchors is permitted versus tension testing of the anchors.

Section 1914A.2 – New amendment – remove OSHPD 1 & 4 banner to co-adopt with DSA provisions for epoxy injection.

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

Section 2101.1.2 – Editorial revision to eliminate redundancy.

Section 2114.1.1 - Adds “direct design of masonry” to the list of prohibitions. TMS 403 is not permitted, since it is not consistent with the rest of CBC 2013 DSA-SS/CC provisions. TMS 403 is based on ASCE 7-05 and TMS 402-08, which are superseded by newer standard in the CBC 2013.

Section 2114.2 - Deleted first sentence of amendment since it is picked-up by TMS 402-10 Section 1.18.4.4.2.2.

Section 2114.6.1 through 2114.6.2 – Editorial. Section is reorganized for ease of use in accordance with recommendation by Masonry Industry Association. Amendment added to disallow new TMS provision for anchor bolts installed in tight fitting holes in face shells since there is no definition of tight fitting in TMS and conflicts with DSA amendment requiring embedded items to be fully embedded in grout.

Section 2114.8 - Editorial

Section 2114.9.1 – Editorial revisions to update section references. Also, “during construction” added for clarity.

Section 2114.9.2.2 – Amendment removed since identical to IBC language in 2105.3.

Section 2114.9.3 – Proposed amendment would modify masonry core testing requirements by adding a provision to address cases where cores cannot be taken that exclude vertical reinforcing steel, and will allow a project specific decision by the design team to waive testing with concurrence of the enforcement agency. Also proposed changes would require shear test of all cores, which would provide additional data to validate construction compliance, without significant cost impact (expenses are in taking not testing the samples). There have been recent projects where additional testing has been required as a result of current practice.

Section 2114.10 – Editorial to standardize reference to masonry reinforcement. Item 4 relocated and editorial change to be applicable to both Allowable Stress Design and Strength Design.

Section 2114.11 (2010 CBC) –This section is deleted because TMS 402 addressed the edge distance and bolt spacing in a comprehensive way. Portion of amendment not covered by TMS 402 relocated to be applicable to both Allowable Stress Design and Strength Design.

Section 2114.11.2(2010 CBC) – Amendment deleted since support anchor requirements are addressed in ASCE 7 and bearing length is more stringent in TMS 402. Bearing stress checks are addressed in TMS 402.

2114.11.1 - Editorial

2114.11.2 - TMS 402-11 Section 2.3.3.1 increased the allowable tensile stress for reinforcing steel to include 1.33 increase factor which resulted in an unattended consequence in 2012 IBC Section 2107.2.1 to increase the lap splice lengths. This was an oversight in 2012 IBC. The limitation on maximum lap splice length will now be aligned with the strength design provision limitation in 2012 IBC Section 2108.2.

2114.13 – Editorial

2114.14 - Section is revised for consistency with TMS Sections 7.2.2, 7.3.3, and 7.7.

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

Section 2101A.1.3 – Adds “direct design of masonry” to the list of

Section 2101A.2 – Section revised for consistency with Section 2101A.1.3 and 2101A.2.7.

Sections 2101A.2.2 through 2101A.2.5 - Deletions of model code continues CA amendments from 2010.

Section 2101A.2.6 - Current IBC language incorrectly suggests that veneer could be designed and installed bypassing Chapter 14. Deleting reference to Chapter 6 of TMS 402 requires user to comply with the requirements of Chapter 14, then the user is required to go to TMS 402, Chapter 6 for any additional veneer requirements. This deletion is being proposed for the 2015 IBC.

Section 2101.2.7 – TMS 403 is not permitted, since it is not consistent with the rest of CBC 2013 provisions. TMS 403 is based on ASCE 7-05 and TMS 402-08, which are superseded by newer standard in the CBC 2013.

Section 2102A.1 - Revised to allow terms defined for use only in this chapter to be defined here.

Section 2103A.3 – Amendment retained.

Section 2103A.9 – Deleted amendment is picked-up by TMS 402-10 Section 1.18.4.4.2.2.

Section 2103A.13.1 – Amendment retained.

Section 2103A.13.2 – Deleted part of amendment is covered by ASTM C476, Table 1 and ASTM C476 is referenced by TMS 602, Article 2.2 A.

Section 2103A.13.3 - Amendment retained.

Section 2104A.1 - Amendment retained with editorial update to section reference.

Section 2104A.1.2 – Amendment and deletion of model code carried forward.

Section 2104A.1.7 (CBC 2010) – This section, which is a pointer to Section 2405A.5, is deleted because Section 2104.5 is included in the scope covered by Section 2104A.1.

Section 2104A.5 & 2104A.6 – Section is editorially reorganized for ease of use in accordance with recommendation by Masonry Industry Association. Amendment added to disallow new TMS provision for anchor bolts installed in tight fitting holes in face shells since there is no definition of tight fitting in TMS and conflicts with DSA long standing amendment requiring embedded items to be fully embedded in grout.

Section 2105A.2.1 (Exception) – Requirement that masonry design be based on maximum tolerance is deleted since this is integrated into TMS 402 with phi factors and allowable stresses. Construction testing requirement language clarified indicating that prism testing or unit strength method can be used, while core testing is always required.

Section 2105A.2.2.1.3 – Amendment and deletion of model code carried forward.

Section 2105A.2.2.1.4 – Amendment retained with editorial updates to section references. Also, "during construction" added for clarity.

Section 2105A.2.2.2.2 - Amendment and deletion of model code carried forward.

Section 2105A.5 – New amendment modifying 2105A.4 in 2010 CBC by adding a provision to address cases where cores cannot be taken that exclude vertical reinforcing steel, and will allow a project specific decision by the design team to waive testing with concurrence of the enforcement agency. Also proposed changes would require shear test of <u>all</u> cores, which would provide additional data to validate construction compliance, without significant cost impact (expenses are in taking not testing the samples). There have been recent projects where additional testing has been required as a result of current practice.

Section 2106A.1.1.1 - Editorial to standardize reference to masonry reinforcement. In Item 3, second paragraph deletes since TMS 402 is more stringent. Also, Item 4 relocated and editorial change to be applicable to both Allowable Stress Design and Strength Design.

Section 2107A.1 – Editorial.

Sections 2107A.2 through 2107A.3 – Editorial to correct section references that are in error in 2012 IBC.

2107A.2.1 - TMS 402-11 Section 2.3.3.1 increased the allowable tensile stress for reinforcing steel to include 1.33 increase factor which resulted in an unattended consequence in 2012 IBC Section 2107.2.1 to increase the lap splice lengths. This was an oversight in 2012 IBC. The limitation on maximum lap splice length will now be aligned with the strength design provision limitation in 2012 IBC Section 2108.2.

Section 2107A.6 (CBC 2010) – This section is deleted because TMS 402 addressed the edge distance and bolt spacing in a comprehensive way. Portion of amendment not covered by TMS 402 relocated to be applicable to both Allowable Stress Design and Strength Design.

Section 2107A.5 – Amendment retained with minor editorial revisions.

Section 2107A.7 (CBC 2010) – Amendment deleted since support anchor requirements are addressed in ASCE 7 and bearing length is more stringent in TMS 402. Bearing stress checks are addressed in TMS 402.

Section 2108A.1 – Deletion of Exception carried forward from 2010.

Section 2109A – Deletion of section carried forward from 2010.

Section 2110A.1 - Amendment and deletion of model code carried forward.

Section 2110.1.1 (2010 CBC) – Deletion of section carried forward.

Section 2114A.1 – Amendment retained with minor editorial updates to section references.

Section 2115A.1 – Section is revised for consistency with TMS Sections 7.2.2, 7.3.3, and 7.7.

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

Section 2201.1 through 2201.1.4 – All amendments retained. One small editorial correction to section reference.

Sections 2212.1.1, 2212.1.2, and 2212.1.3 (2010 CBC) – These amendments are deleted since they are picked-up by model code

Section 2212.2.1 – New amendment to provide specific provisions to address steel braces used as diaphragm since AISC 341-10 eliminated general requirement for connections to have a ductile limit state for members of the seismic load resisting system. New amendment provides similar requirements to those for ordinary braced frames.

Section 2212.2.2 – New amendment to require ductility at column bases of moment frames to prevent fracture. Inelastic rotational demands on column base occur even when designed for amplified loads.

Section 2212.2.3 – New amendment to address connections of steel braces used as diaphragm to coincide with Section 2205A.3.1 amendment above.

Section 2212.2.4 – New amendment to correct oversight in AISC 341-10 regarding column design for braced frames.

Section 2212.2.5 – New amendment to clarify that the AISC 341-10 post-buckled analysis for braced frames shall include the beams connecting adjacent frames when frame bays have single diagonal braces at each level.

Section 2212.3 - New amendment to permit the use of the ConXtech ConXL bolted moment connection as given in Chapter 10 of AISC 358-10 Supplement No. 1 with the amendments shown. The amendments are based upon the limits of the cyclic test specimens used to meet the acceptance criteria as set forth in Section 2205A.3.

Section 2212.4 (2010 CBC) – Amendment removed since AISC 341-10 addresses composite diaphragm design and ANSI/SDI addresses metal deck diaphragms.

Sections 2212.4 through 2212.5.2 – Amendments retained with editorial updates to section references.

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

Sections 2204A.1.1, 2204A.1.2, and 2204A.1.3 – These sections are deleted since they are picked-up by model code.

Section 2204A.2.2 – Amendment retained without change.

Section 2205A.2 – Editorial

Section 2205A.2.1 – Amendment and deletion of model code carried forward.

Section 2205A.2.2 – Model code and 2010 CBC amendment language deleted.

Section 2205A.3.1 – New amendment to provide specific provisions to address steel braces used as diaphragm since AISC 341-10 eliminated general requirement for connections to have a ductile limit state for members of the seismic load resisting system. New amendment provides similar requirements to those for ordinary braced frames.

Section 2205A.3.2 – New amendment to require ductility at column bases of moment frames to prevent fracture. Inelastic rotational demands on column base occur even when designed for amplified loads.

Section 2205A.3.3 – New amendment to address connections of steel braces used as diaphragm to coincide with Section 2205A.3.1 amendment above.

Section 2205A.3.4 – New amendment to correct oversight in AISC 341-10 regarding column design for braced frames.

Section 2205A.3.5 – New amendment to clarify that the AISC 341-10 post-buckled analysis for braced frames shall include the beams connecting adjacent frames when frame bays have single diagonal braces at each level.

Section 2206A.2 – The Exception has been added to permit the use of the ConXtech ConXL bolted moment connection as given in Chapter 10 of AISC 358-10 Supplement No. 1 with the amendments shown. The

amendments are based upon the limits of the cyclic test specimens used to meet the acceptance criteria as set forth in Section 2205A.3.

Section 2207A.4 and 2207A.6 – Amendments are retained with editorial updates to section numbers.

Section 2208.2 (2012 IBC) – Deleted for consistency with ASCE 7-10 Supplement # 1 and ASCE 19-10.

Section 2210A.1.1.2 – Existing language relocated here from 2010 CBC 2209A.3 to continue minimum deck thickness. Exception added to not require minimum deck thickness where deck is not supporting non-structural attachments or being used as a diaphragm.

Section 2210A.1.1.3 (CBC 2010 Section 2209.3) – ANSI/SDI C-2012 is adopted for consistency with IBC 2015. SDI C will replace ICC-ES AC 43, which is not an ANSI approved standard, in the CBC 2010 Section 2209A.3

2210A.2 – New amendment to strike cold formed steel special bolted moment frames since not permitted per Section 1616A.1.4.

Section 2209A.3(2010 CBC) – Amendment stricken and replaced with Section 2210A.1.1.3.

Sections 2211A.3, 2211A.3.2, and 2211A.4through 2211A.7 – 2010 amendments retained without change.

Section 2212A – All DSA amendments retained with minor editorial updates to section numbers and section references.

Sections 2213A.1 & 2213A.2 – Editorial changes to clarify amendments and make them more specific. This will limit the scope of field tests, consistent with current practice.

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

Section 2301.2 – Editorial

Section 2302.1 - IBC errata.

Section 2303.1.3.1 – Amendment retained with editorial update to section references.

Section 2303.4.1.4.1 – Amendment retained

Section 2303.4.3.1 – Amendment retained with editorial corrections and updates to section references.

Section 2304 – All DSA amendments are retained without change.

Section 2305.1.2 – Amendment is retained without change and items 6 and 7 are added. Item 6 contains language relocated from 2010 CBC 2305.1.3 and diaphragm requirement dropped since same requirements exist in AF&PA SDPWS 4.2.7.1. Item 7 is relocated from 2010 CBC 2306.4 since model code deleted section and amendment dropped reference to SDC D since it applicable to all SDC's accepted by DSA.

Section 2305.1.3 – Section is relocated to item # 6 in Section 2305A.1.2. Exception is stricken because same requirements exist in AF&PA SDPWS 4.2.7.1.

Section 2305.1.4, 2306.4, and 2306.7 – Deleted amendments are picked-up by model code.

Section 2305.2 and 2305.3 – Exceptions are retained without change.

Section 2306.2 – Exception is added because staples are not permitted per 2305.1.2 item 4.

Section 2306.3 - Exception is added because staples are not permitted per 2305.1.2 item 4.

Section 2306.3.1 (2010 CBC) – Amendment removed because redundant with 2305.1.2, Item 6.

Table 2306.3(1) – Footnote “m” removed because table revised in model code to be applicable to only staple fasteners which are not permitted per 2305.1.2 item 4.

Section 2308.2, Items 8 – 2010 amendment retained without change.

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

Section 2410 – Provisions for use of Structural Sealant Glazing (SSG), which is currently not addressed in the model building code, is added so that they will not be considered as an alternative system requiring structural design criteria.

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

Section 2503.2 – Editorial.

Section 2504.2 – Amendment retained with editorial revisions for clarity and to remove redundancy.

Section 2510.7.1 – Amendment removed since standard is outdated and now addressed in Table 2507.2, ASTM C932.

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

Sections 3307.2 and 3307.3 – These amendments are deleted since requirements in Sections 3307 and J106.2 adequately addresses this subject.

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

Section 3402 – DSA proposes to adopt this section (see Matrix Adoption table) to address definition of dangerous condition.

“Retrofit” relocated to Chapter 2 as it is used in other chapters.

Section 3419.1 – Editorial revision to correct section references. Update code year in exception for use of 2007 CBC for seismic evaluation in lieu of 1998 CBC. Since the adoption of the 1998 CBC, there have been significant developments in the seismic ground motions used in buildings design, the effects of irregularities and redundancy in building design, and changes to the design coefficients and factors used for the design of seismic force-resisting systems of buildings.

Section 3419.2 – Revisions to reduce existing material testing to ‘usual’ level for field act schools buildings since the testing during construction was under DSA’s jurisdiction. Reference added to chapter 19 existing concrete material requirements.

Section 3419.4 - Editorial revision to align with model code terminology of risk category instead of occupancy category.

Section 3423.1 – Editorial revision to cite both Part 1 sections dealing with rehabilitation of buildings for school use. Also to correct section references.

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 J106.2 – DSA co-adopts this amendment with OSHPD since amendments in 3307.2 and 3307.3 are deleted.

Section J112 – This section is added to permit vibro stone column for ground improvement.

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

- 2012 IBC: International Building Code.
- ASCE 7-10: Minimum Design Loads for Buildings and Other structures.
- ACI 318-11: Building Code Requirements for Structural Concrete and Commentary.
- AISC 360-10: Specification for Structural Steel Buildings
- AISC 341-10: Seismic Provisions for Structural Steel Buildings
- AISC 358-10/358S1-11: Prequalified Connections for Special and Intermediate Steel Moment Frames for Seismic Applications including Supplement No. 1
- TMS 402-11: Building Code Requirements for Masonry Structures.
- TMS 602-11: Specification for Masonry Structures.
- AWC NDS-11: National Design Specification (NDS) for Wood Construction.
- AWC SDPWS-2008: Special Design Provisions for Wind and Seismic.

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.